THE INFLUENCE OF THE ENTREPRENEURS' BACKGROUND ON DIGITAL STARTUPS ATTAINING INVESTMENT MILESTONES IN INDONESIA

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Abstract: This study delves into the importance of knowledge and information integration within entrepreneurship and its impact on the growth of digital startups in Indonesia. Specifically, the research focuses on the human capital derived from college education and the work experiences of entrepreneurs. By examining the educational background and professional experience of 207 digital startup entrepreneurs' in Indonesia, the study employs various regression techniques to analyze the data collected between February and June 2021. The findings reveal that entrepreneurs' who pursued higher education abroad significantly increased their chances of securing higher levels of investment. On the other hand, factors such as discipline, education level, and prior work experience demonstrate limited influence. These results contribute to our understanding of the factors that drive digital startups to achieve different investment milestones, emphasizinag the varying effects of different types of higher education and professional experience. These insights can be valuable for evaluating entrepreneurship programs in higher education institutions and guiding initiatives like student exchange programs and overseas training to foster human resource development in entrepreneurship. By enhancing our knowledge of human capital, this study contributes to the existing body of research and informs strategies for nurturing successful startups in the digital industry.

Keywords: digital startups, entrepreneurship, series funding, higher education, human capital

Abstrak: Studi ini menggali pentingnya integrasi pengetahuan dan informasi dalam kewirausahaan dan dampaknya terhadap kesuksesan startup digital di Indonesia. Secara khusus, penelitian ini berfokus pada sumber daya manusia yang berasal dari pendidikan perguruan tinggi dan pengalaman kerja pengusaha. Dengan memeriksa latar belakang pendidikan dan pengalaman profesional dari 207 pendiri startup digital di Indonesia, penelitian ini menggunakan berbagai teknik regresi untuk menganalisis data yang dikumpulkan antara Februari dan Juni 2021. Temuan ini mengungkapkan bahwa para pendiri yang menempuh pendidikan tinggi di luar negeri secara signifikan meningkatkan peluang mereka untuk mendapatkan pendidikan yang lebih tinggi. tingkat investasi. Di sisi lain, faktor-faktor seperti disiplin, tingkat pendidikan, dan pengalaman kerja sebelumnya menunjukkan pengaruh yang terbatas. Hasil ini berkontribusi pada pemahaman kami tentang faktor-faktor yang mendorong startup digital mencapai tonggak investasi yang berbeda, menekankan berbagai efek dari berbagai jenis pendidikan tinggi dan pengalaman profesional. Wawasan ini dapat bermanfaat untuk mengevaluasi program kewirausahaan di institusi pendidikan tinggi dan memandu inisiatif seperti program pertukaran pelajar dan pelatihan di luar negeri yang bertujuan untuk membina pengembangan sumber daya manusia di bidang kewirausahaan. Dengan meningkatkan pengetahuan kita tentang sumber daya manusia, penelitian ini berkontribusi pada badan penelitian yang ada dan menginformasikan strategi untuk memelihara startup yang sukses di industri digital.

Kata kunci: startup digital, kewirausahaan, pendanaan seri, pendidikan tinggi, sumber daya manusia

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INTRODUCTION

With the recognition of startups as vital contributors to economic growth, scholars and practitioners are increasingly interested in understanding their origins and expansion. Digital startups, specifically, hold great appeal due to their potential to deliver significant value to people, setting them apart from other economic achievements following the Industrial Revolution (Dean et al. 2012). It is well acknowledged that the growth of a startup hinges on securing appropriate financing and support, with the amount of investment raised playing a pivotal role. While previous studies have highlighted the importance of the entrepreneur's role in attaining funding, recent studies recognized the entrepreneur's contribution to the growth, development, and scalability of digital startups through their knowledge and expertise (Spiegel et al. 2015). As a result, higher education institutions are increasingly seen as valuable sources of knowledge, particularly for aspiring entrepreneurs, and considered significant contributors to various qualities within startups (Ratzinger et al. 2017; Cowdean et al. 2018).

In this research, we refer to Kamm et al. (1990), who define entrepreneurs' as a collection of people who jointly form a business and hold ownership interests. A startup's single founder is likewise regarded as a entrepreneurs' for the purposes of comparative analysis. Composition of the entrepreneurs' has long been recognized as a critical factor in the success of a startup, with diversity often considered beneficial for performance. Since, academic spinoffs typically have homogeneous teams with valuable insights, which can result in less than ideal results, even if diversity among startup' founding entrepreneurs is frequently advantageous (Vanaelst et al. 2006). In contrast to exclusively focusing on clinical results, previous studies on high-tech entrepreneurial spinoffs have indicated that team building in emerging startup settings is influenced by experience and trust (Ruef et al. 2003; Clarysse et al. 2004). While the majority of work on the influence of human capital on the growth of digital startups has been focused on Western regions, the ASEAN region has seen relatively little research. However, a new study demonstrates the significant potential of Indonesia's startup ecosystem, positioning Jakarta as the second-ranked city among 100 cities, missing out from first place to Mumbai (Genome,

2021). The educational backgrounds of startup entrepreneurs' in Indonesia are known to be diverse, encompassing both local and higher international education. Despite the acknowledgment of a rising digital startup ecosystem within Indonesia, little to no research has been conducted on the influence of different educational backgrounds and the professional journeys of entrepreneurs, specifically the sectors of employment they have experienced after graduating, before establishing their own startups. Most studies on entrepreneurs focus on non-high-tech companies that operate in a variety of settings. Given the wide range of companies and operations that make up the startup ecosystem (Wennberg et al. 2014), it is crucial to consider both the influence of higher education on the human capital of capable startup entrepreneurs' as well as the valuable knowledge that entrepreneurs' have gained from their prior work experiences. entrepreneurs'.

Entrepreneurial success depends heavily on the capacity of human capital possessed by the entrepreneurs, which includes information, experience, skills, and education that enhance a person's aptitudes. According to the human capital hypothesis, education is important for finding and developing business possibilities, obtaining financial support, starting new businesses, and acquiring new knowledge. Scholars indicate that higher levels of human capital may result in improved productivity, and efficiency and are more likely to identify opportunities for development and revenue (Bradley, 2012; Ratzinger et al. 2017). Moreover, A diversified range of skills from a variety of sectors, including finance, management, and information technology, are also necessary for the growth of digital businesses in today's competitive climate (Kromydas, 2017). This is particularly true for well-known technological enterprises which draw significant venture capital investments. Therefore, the primary objective of this study is to fill the void in current research by investigating the influence of the background of digital-startup entrepreneurs in attaining different levels of investment in Indonesia. Through this examination, the study seeks to offer novel perspectives in this field specifically emphasizing the knowledge and expertise acquired through international higher education, as well as the career dynamics that play a role in Indonesian graduates reaching significant investment milestones during the seed and series stages of their startups.

This study can help better understand the elements that stimulate digital entrepreneurs, including their factors to attract financial investments, by revealing the distinctive effects of different backgrounds. Additionally, it can provide a thorough understanding of the dynamics, patterns, and elements that affect the careers of entrepreneurs. Based on the provided background information, the following research questions can be formulated: 1) To what extent does having higher international education influence the likelihood of digital startup entrepreneurs' attaining investment milestones compared to those with local education? 2) In comparison to startup entrepreneurs' with various majors, to what extent does the particular combination of majoring programs and educational levels affect their likelihood of different investment milestones? 3) In comparison to entrepreneurs' from other sectors, how likely are digital startup entrepreneurs' with specific industry experience to different investment milestones? The findings from the study can be used to evaluate initiatives related to entrepreneurship within governments and higher education institutions, such as programs for student exchange and international training that support the growth of human capital.

METHODS

The dataset utilized in this study was gathered between February and June 2021 and consisted of 207 digital startups in Indonesia. CrunchBase, a well-known and frequently updated database of startups and their entrepreneurs', served as the source of the data used in this study. CrunchBase is renowned for its dependability, particularly when it comes to financial figures. It offers rich information on a vast scale, spanning more than a million people and their connections to various organizations. The information available in CrunchBase includes details on startups, entrepreneurs', major milestones, funding stages, and investments. Before being approved, the crowd-sourced data undergoes validation to ensure accuracy and credibility. This dataset enables us to compare and analyze the performance of graduate and non-graduate entrepreneurs who have successfully raised financing or taken their companies public. Information regarding the entrepreneurs' was sourced from CrunchBase and verified through LinkedIn. CrunchBase contains information about startups, entrepreneurs', major milestones and financing stages. Before being

authorized, the crowdsourced data is validated to confirm its veracity and accuracy. The performance of graduate and non-graduate entrepreneurs who have successfully obtained funding or floated their companies may be compared and analyzed using this dataset. CrunchBase was additionally used to get the entrepreneurs' information, and LinkedIn was utilized for verification.

In order to investigate the research inquiries, the researchers employed several regression techniques using the Stata software. The cross-sectional study utilized a dataset comprising 207 digital startups located in Indonesia. This dataset included information on the field of study for college degrees, their level of education, and the country where the educational institution was located. A variety of named entity clarification and recognition techniques were used to arrange and categorize the data points. Based on predetermined criteria, the information collected from CrunchBase was filtered and organized. The chosen startups mostly worked in digital sectors including blockchain, advertising, e-commerce, agrotechnology, financial technology, gaming platforms, network hosting, renewable energy, banking technology, artificial intelligence (AI), and mobile development. The final dataset, which included 207 startups after data cleaning and categorization operations were finished, was then analyzed.

Using a two-stage computation, this study will evaluate the effects of higher education, majoring programs, and professional experience variables on the funding phases of startups. A binary stage is given to each startup in the first computation. The seed funding stage is given a number of 0, whereas the series stages, such as Series A, Series B, and so forth, are given a value of 1. This classification reflects the significant change in investment and progression from the seed phase to the series phases that are frequently seen. The goal is to analyze how these factors affect the amount of funding that companies receive.

(1) First computation model:

$$M_1 Stage = \alpha + \beta_1 Abroad + \beta_2 masters + \beta_3 business + \beta_4 engineering + \beta_5 Wfinance + \beta_6 Wconsultant + \beta_7 WIT + \beta_8 Gender + \beta_9 founders + \beta_{10} founded + \varepsilon \quad (1)$$

To examine the model in this research, the Stata logistic regression tool was utilized. The logistic or logit model, which gives each component of the model a probability between 0 and 1, was used to determine particular categories of probabilities. The variable M_1 Stage, which separates the seed stage (zero) and the series stage (one), illustrates the binary classification of investment phases in the situation at hand. The startup's entrepreneurs'prior study abroad experience is indicated by the first independent variable, β_1 Abroad. Whether the entrepreneurs' have a master's or PhD degree is indicated by the second independent variable, β_2 Masters. The variable β_3 Business records whether any of the entrepreneurs have a degree in business. A founding team member with an engineering degree is represented by the variable β_4 Engineering. Should any of the entrepreneurs have prior experience in the financial sector is indicated by the variable β_5 Finance. The β_6 Consultant and β_7 IT variables represent the entrepreneurs' prior expertise as consultants or IT specialists, respectively. The variable β_8 Gender controls for the genders of the startup's entrepreneurs', β_9'controls for the amount of entrepreneurs' on the startup, and β_{10} Founder controls for the year the startup's was established.

To further explore the influence of independent variables on the amount of investment received, the investment milestones were divided into three distinct phases: the seed financing stage (0), the early venture stage (1), and the late venture stage (2). This split makes it possible to examine factors' effects on the amount of capital investment attained at various stages in greater depth. The early venture stage includes the series A and B stages, while the seed funding phase is the first step of fundraising. The series C stage and later stages are considered to be in the late venture stage. We can analyze how factors like studying abroad, educational background, and work experience affect the amount of investment acquired at each step of the startup's lifecycle by classifying the investment milestones in this manner. This categorization's incorporation offers insights into the precise effects of independent factors on various investment milestone stages, allowing for a better understanding of how these variables affect the funding startups receive at various stages of their growth.

(2) Second computation model:

$$M_1 Stageoffund = \alpha + \gamma_1 Abroad + \gamma_2 masters + \gamma_3 business + \gamma_4 engineering + \gamma_5 Wfinance + \gamma_6 Wconsultant + \gamma_7 WIT + \gamma_8 Gender + \gamma_9 founders + \gamma_{10} founded + \varepsilon \quad (2)$$

Calculations using ordinal regression are used to evaluate the model and look at the relationship between the independent variables and the degree of investment milestones. When a classification scale with hierarchical segments serves as the dependent variable in data analysis, ordinal regression is appropriate. The dependent variable in this situation, which is divided into three stages seed financing stage (0), initial venture stage (1), and later venture stage (2) is the degree of the investment milestone. Educational background and work experience are examples of independent variables that are consistent with the previous model. Through the utilization of ordinal regression, we are able to determine how these independent variables influence the dependent variable's ordinal character, helping us to understand how these factors influence the degree of attaining different investment milestones that startups' at various stages. By determining the importance and the trajectory of the correlations among the independent variables and the amount of investment received, this research offers important new information about the elements that affect the course of startups' funding.

A pair of distinct approaches were used in the computations to account for the presence of several entrepreneurs' within a startups' founding team. The initial strategy used a dummy variable method in which each startup was represented by just one entrepreneur. For instance, it would be assumed that the firm has an entrepreneur with such expertise if the team has numerous entrepreneurs' and at least one of them has a prior background in international education. By taking into account the presence or lack of particular qualities inside the startup, this method simplifies the study. For the subsequent approach, the startup's contribution to particular entrepreneurs' factors was assessed using a weighting mechanism. This approach takes into consideration the percentage of entrepreneurs' who possess a specific trait among the team. For instance, if a team of five entrepreneurs' contains three who have a prior background in international education, the startup would give this feature a weight of 3/5, or 0.6. This weighting formula enables a more detailed comprehension of the influence of particular team

members. The research takes into account the various characteristics of startup entrepreneurs' by using simultaneously the dummy variable and weighting methodologies, and it offers insights into the influence of particular traits or experiences on the startup's attaining different milestones.

Building Hypothesis

Understanding the variables which influence startup entrepreneurs' ability to reach funding milestones in the context of digital startups is the main goal of this study. We intend to find out how an entrepreneur's educational background and professional experiences affect their ability to raise capital for their firm. We specifically look into how having prior international education experience affects the growth of digital startups. Subsequently, it is generally accepted that entrepreneurs' who have attended school abroad bring important expertise, extensive networks, and a variety of perspectives to their endeavors, potentially improving their prospects of securing investment. Furthermore, we look at how education level and the subject of study influence startup growth. We concentrate on both engineering and business majors primarily since the digital sector views these fields as being extremely relevant and valuable. We believe that entrepreneurs with higher degrees, such as master's or PhDs, in these areas may have specialized expertise and abilities that improve their capacity to deal with the difficulties of starting and expanding a startup. Additionally, we investigate the impact of prior work experience in particular industries, specifically in Consulting, Finance, and Information and Technology organizations. We suggest that entrepreneurs' with prior experience in these fields may have industry-specific information, contacts, and perceptions that are extremely important in the ecosystem of digital startups. Their chances of obtaining different stages of investment milestones may increase as a result of this experience. Consequently, we developed three possible hypotheses.

Hypothesis 1: Our hypothesis suggests that startup entrepreneurs' who have received international education will have a higher probability of attaining higher investment milestones. this hypothesis is based on the understanding that studying abroad provides entrepreneurs' with valuable exposure to international environments, a cross-cultural perspective, and access to global networks that may become more credible and attract more investment possibilities as a result of these qualities.

Hypothesis 2: We assume that startup entrepreneurs' with advanced degrees, such as master's or PhDs, and backgrounds in engineering or business majors are more likely in attaining investment goals. This theory is based on the idea that the specialized expertise and skills gained through advanced education in these fields positively affect entrepreneurs' capacity to create novel products or services, manage their startups successfully, and convince investors of the market potential.

Hypothesis 3: We hypothesize that startup entrepreneurs' with prior expertise in Consulting, Finance, and Information and Technology organizations are more likely to attain higher investment milestones than entrepreneurs' from other industries. This theory is supported by the idea that working in these industries gives entrepreneurs access to professional networks, expertise of the relevant industries, and problem-solving abilities. These qualities can increase their reputation and draw in investors who are aware of the potential for expansion and financial success of startups' working in these industries.

By putting these hypotheses to the test, we hope to learn more about the correlation between entrepreneurs' educational and professional backgrounds and their ability to raise capital and gain knowledge of the elements that influence a startup's capacity to attain different levels of investment milestones.

RESULTS

Descriptive Statistics

Table 1 provides descriptive statistics for the entire sample in addition to each skillset category. The statistics reveal the number of samples for the variables being examined, with 0 and 1 denoting various sample conditions. For instance, the "Abroad" variable's 0 and 1 values denote local studies and international studies, respectively. Although there are certain exceptions for the control variables, the same pattern holds for other variables. One to six entrepreneurs' can be found in each startup, according to the "entrep" variable. The "estab" variable, which spans from 1972 to 2019, records the period of a startup's founding. The "Gender" variable utilizes 0 for females and 1 for males. It is significant to highlight that the conclusions from the provided dummy computations are the main focus of this research.

Seed to Series Calculation Results

Four different models are shown in Table 2 for analysis. The first column examines how the entrepreneurs' educational background whether they attended school locally or abroad influences the level of investment milestones they are able to attain. The second model, which is discussed in the second column, takes into account important factors and examines the influence of entrepreneurs' who have backgrounds in business, engineering, or other professions, as well as those who have earned a master's or a PhD. The third model, which adds variables for job experience, is represented by the third column. This model examines the influence of entrepreneurs' prior employment history, particularly in industries like Consulting, Finance, Information and Technology, and others. The fourth model, which includes all of the previously described variables, is presented in the last column. This thorough approach seeks to pinpoint the elements that significantly influence a startup's capacity to obtain the series stage of invesment. It is crucial to remember that each model includes control variables to allow for other variables that could affect the outcomes.

Table 1. Descriptive data for both the entire sample and individual skill set groups

Variable	Sample	Min	Max	Mean	Std. dev.
Finance	348	0	1	.5756677	.4950984
Consultant	348	0	1	.3569322	.3757687
IT	348	0	1	.4866469	.4689416
Engineering	337	0	1	.4272997	.495422
oth	348	0	1	.2433234	.4195032
Abroad	337	0	1	.4252874	.4949762
Mastersphd	339	0	1	.1695402	.4798027
Business	337	0	1	.6752874	.5005649
others	337	0	1	.7729885	.4297268
entrep	379	1	6	2.416.887	1.215.129
estab	368	1972	2019	2.014.761	3.698.794
Gender	383	0	1	.9112272	.2847876

Table 2. Multiple models for analysis

Dummy Variable	Education	Dicipline	Work Experience	Combine
Int ed	3.7705513***			5.2252184***
female	.77328643	.81621438	.71874832	.72329012
entrep	13.197.532	1.4026086*	13.014.295	10.439.075
estab	.96220466	.98560127	.99329718	.97838455
business		.85271134		.61433783
engineerin		11.481.232		13.676.758
masters		2.3255518*		14.958.494
others		.47085038		.41582347
fin			.52436613	.38680058*
const			11.749.625	.64661988
IT			10.240.251	.83872545
oth			.80705787	.8167334
_cons	1,23E+36	2,17E+15	553099.24	7,32E+21
N	207	207	207	2077
r2_a				

*) ***)Impact level

Table 2 shows that when compared to other variables, "int end" appears as the most important factor in securing higher levels of investment. Although their impact is not as consistent as that of the "int ed" variable, the second column also sheds light on the influence of the "entrep" and "master" factors. The findings show that there is a significant 420% or 5.2 times increase in the likelihood of startups acquiring series funding when the "studying abroad" variable is present. The final model also shows that the "fin" variable significantly increases the likelihood of startups receiving series financing by a factor of 0.38. The "entrep" variable also exhibits a substantial influence in the second model, which focuses solely on major and education level variables.

Table 3 shows that digital startups that reached to the seed stage typically include entrepreneurs' who attended domestic colleges and universities. Particularly, almost 55% (62 entrepreneurs') of startups at this stage pursued schooling in their own country. Table 4 shows that startups that have progressed to the series stage are primarily led by entrepreneurs' who have who have prior international education experience. Particularly, 71 of the entrepreneurs' at this point, or almost 74%, had gone abroad to study. This result implies that, when compared to other factors, studying abroad has the biggest influence in attaining higher levels of investment milestones. Further investigation is done to ascertain how much these factors influence the possibility that startups will enter the early venture stage and late venture stages in order to acquire a deeper understanding.

Stage of Fund Calculations Results

As a starting point for evaluating the progression of startups through the early and late venture stages, the earlier stage (stage 0) is not included in the conclusions of this analysis. Similar to the logistic regression analysis, the findings of the ordinal regression calculations are shown in Table 5. These calculations examine the factors that affect the stages of investment that startups reach. The results from Table 5 show that, when compared to other parameters, the "int ed" variable has a considerable impact on reaching investment goals. The findings show that compared to local studies, studying abroad enhances the possibility of obtaining early-stage funding by 3.47 times. Furthermore, those

with prior expertise in international education had a significantly 17 times higher chance of securing late venture-stage investment. In the disciplinary variable-accounting model, the "entrep" control variable also exhibits a negligible but significant effect, suggesting that the addition of one entrepreneurs' boosts the likelihood of securing funding in the late venture stage.

Table 6 shows that entrepreneurs' who have completed international education make up the majority of startups' that make it to the series stage. Particularly, 68% (51 entrepreneurs') of those in the early stages of a startups' have studied overseas. Similar to Table 6, Table 7 shows that the trend persists for firms that make it to the series stage, with 90% (18 entrepreneurs) having studied abroad during the late venture stage.

Previous research conducted by Cumming et al. (2016) and Ratzinger et al. (2017) has explored how the relationship between startup entrepreneurs' education to their ability to attract startup funding. These studies, however, have failed to take into account several very important criteria, such as the entrepreneurs' educational backgrounds and their prior work experience before establishing their startups'. The current research employs a thorough strategy that includes each of these traits to fill this gap. Through the use of logistic regression and ordinal regression analyses, having prior international education is regularly found to have the greatest influence on a startup's chances of landing a significant amount of investment, according to this analysis. The logistic regression analysis reveals that an impressive 74% of startups that have successfully reached the series stages are established by individuals who pursued their education abroad. These results align with the findings of the ordinal regression analysis, which further confirms the strong impact of variables associated with studying abroad on startups' progression to the early and late stages of investment. One potential explanation for this phenomenon could be the perceived disparity in quality between local education in Indonesia and education obtained abroad. Given these findings, investors and venture capital firms may consider studying abroad as a crucial factor when making investment decisions. The confirmation of Hypothesis 1 based on these results solidifies the notion that having prior international education significantly influences startups' ability to attract substantial investment.

Table 3. Seed stage entrepreneurs' with domestic education

dummy		
y	Frequency	Percentage (%)
1	49	44.14
0	62	55.86
Total	111	100.00

Table 4. Entrepreneurs' with prior experience from international education in the series stage

dummy		
y	Frequency	Percentage (%)
1	71	74.74
0	24	25.26
Total	95	100.00

Table 5. Calculations using ordinal regression

Dummy Variable	Education	Dicipline	Work Experience	Combine
1				
Int ed	2.568621**			3.4719652**
female	.76948398	.81465928	.71723883	.69931725
entrep	13.545.103	1.332.894	12.914.973	10.409.461
estab	.97431061	.99495324	10.038.387	.99459201
business		.68601871		.53373851
engineerin		10.055.002		11.774.859
Masters		23.319.087		16.979.966
others		.35284238		.31788506*
finance			.53473729	.43351989*
consultant			.9944538	.60640565
IT			.90499793	.7569978
oth			.86144508	.93133323
_cons	1,34E+25	11491.24	.00025637	32.236.279
2				
abroad_dummy	14.157535**			17.187718**
female_dummy	.56887324	.64656441	.57098874	.52510099
entrep	1.543.437	2.0272911**	1.6359204*	15.490.662
estab	.9041683*	.94550342	.95180823	.91156796
business_dum		13.580.337		10.438.031
engineerin_dum		19.028.141		30.680.569
masters_dum		3.9577404*		19.687.562
others_dum		.62146366		.58112241
finance_dum			.64316756	.42255249
Consultant_dum			22.679.591	10.987.842
IT_dum			.99278322	.79485871
oth_dum			.98182594	.79097585
_cons	1.621e+86*	2,91E+50	1,28E+45	1,10E+82
Statistics				
N	207	207	207	207
r2_a				

*) ***)Impact level

Table 6. Early-stage entrepreneurs' that have completed an international education

dummy		
y	Frequency	Percentage (%)
1	51	68.92
0	23	31.08
Total	74	100.00

Table 7. Entrepreneurs' at the late venture that have completed an international education

abroad_dumm		
y	Freq.	Percentage (%)
1	18	90.00
0	2	10.00
Total	20	100.00

The findings of this study challenge the conventional notion that only business and technological backgrounds are significant in the early and late stages of startups. While there is some influence on the outcomes, it is not as strong or consistent as initially believed. The study also reveals that higher levels of education do not necessarily guarantee superior startup growth. Different degree levels have varying influences, highlighting the importance of considering the specific level of education rather than treating it as a binary variable or measuring it solely in terms of years. These results contradict the assertions made by Ratzinger et al. (2017) that an engineering education significantly influences the ability of startups to secure funding. However, in the Indonesian context, this idea is less prevalent. In Indonesia, there are startups with entrepreneurs' exclusively from engineering backgrounds that still manage to secure funding up to the series stage. Therefore, Ratzinger et al.'s (2017) research highlights the limitations of using a single metric to capture the multifaceted aspects of human capital and knowledge. As a result, Hypothesis 2, which suggests that majors and educational level significantly affect the investment stage of digital startups, is rejected. Furthermore, the study finds that factors related to prior experience in sectors like consulting, finance, and information and technology, do not have a significant influence on the level of investment acquired by digital startups in Indonesia. Even though the financial services industry has some influence on startups reaching the series stages, this influence is not constant. The background of entrepreneurs' in the consulting, financial services, and information and technology sectors does not play a significant role in determining the growth of startups in Indonesia. Consequently, Hypothesis 3, which proposes that prior work experience in these sectors influences the chances of attaining higher investment milestones, is disproved. It is crucial to remember that a startup's growth may not be completely attributable to the entrepreneurs' themselves; it may also be influenced by other essential personnel within the startup, such as the chief technological officer (CTO) or chief financial officer (CFO), as well as outside forces like venture capital. The variables utilized in this study to characterize the field of employment are also rather broad and do not offer any information about the precise position or duties held by the entrepreneurs' inside the organizations in question. More precise calculations should be used in future studies to analyze the precise roles and labor divides within startups.

Managerial Implications

The findings of this research have important implications for policymakers and practitioners seeking to promote the growth of digital startups in Indonesia. The study highlights the significance of certain aspects of human capital and suggests recommendations for governmental policies and industry practices. One key finding is that having at least one entrepreneur within a startup that has prior international education experience is crucial for the growth of digital startups. This highlights the importance of international college scholarships and programs in fostering the growth of startups. Policymakers may consider continuing and expanding such initiatives to provide more opportunities for aspiring entrepreneurs to gain international exposure and knowledge. The research also emphasizes the value of diversity in entrepreneurship training. By involving students from diverse regions and educational backgrounds, policymakers can enhance the overall pool of skills and knowledge available for startups. Investors and practitioners should actively seek teams with a wide range of skills, as these teams have demonstrated a better track record in achieving significant investment milestones. This suggests that practitioners should go beyond traditional business and technology skills and consider the potential advantages of higher education in other subjects. However, it is important to note that extensive subject knowledge, such as that gained through advanced degrees, does not guarantee a successful startup establishment. While higher education can contribute to entrepreneurial success,

practitioners should be mindful that it is not the sole determinant. A holistic assessment of the entrepreneurs' educational backgrounds and their alignment with the startup's goals and needs is necessary. Policymakers should also reevaluate how they measure the output of entrepreneurial universities, taking into account the indirect economic impact of higher education. This research demonstrates the potential of utilizing public datasets to assess the academic backgrounds and career paths of entrepreneurs in Indonesia, opening up new avenues for understanding and supporting the startup ecosystem.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This research sheds light on the relationship between higher education, entrepreneurial experience, and the growth of digital startups in attaining different investment milestones. The findings reveal that entrepreneurs' with prior higher international education experience play a significant role in developing digital startups in Indonesia. Specifically, having an entrepreneur with a background of studying abroad increases the chances of securing higher funding levels for digital startups. This study goes beyond a simplistic approach to human capital and delves into the specific dimensions of education and professional experience in the digital economy. It examines factors such as the location of knowledge acquisition, field of study, and career trajectories of entrepreneurs. By taking this multidimensional approach, the research provides a more comprehensive understanding of the impact of education and professional experience on startup success.

Interestingly, the findings challenge the common belief that a startup entrepreneur with an engineering education leads to higher investment levels. The study suggests that in the context of Indonesia, the background of the entrepreneurs' does not have a significant impact on investment outcomes. This highlights the need to reconsider the traditional assumptions about the relationship between specific educational backgrounds and startup success. Furthermore, the research explores the influence of prior experience at consultancy, financial services firms, and information and technology firms on investment outcomes. The findings indicate that such professional expertise does not have

a notable impact on the level of investment obtained by startups. This suggests that in the Indonesian context, the entrepreneurs' backgrounds in these sectors do not significantly influence investment outcomes. Overall, this research contributes valuable insights into the role of higher education and entrepreneurial experience in the success of digital startups. It highlights the importance of studying abroad and provides a nuanced understanding of the impact of different educational backgrounds and professional experiences. By considering these findings, policymakers and practitioners can make more informed decisions to support the growth and development of digital startups in Indonesia.

Recommendations

This research aimed to assess the probabilities of achieving specific outcomes in the context of digital startups. While the study identified an increased likelihood of attaining different investment milestones, the timing of attaining these milestones was also deemed important. CrunchBase, a publicly available dataset, was utilized for the analysis, showcasing the value of such datasets in entrepreneurial education. However, it is important to acknowledge the limitations of the crowd-sourced nature of the dataset, which may impact the generalizability of the findings. The focus of this research was to analyze the combined effects of various factors, and interestingly, the results contradicted previous studies conducted by other researchers. These contrasting findings emphasize the need to further explore the composite elements of human capital and the investigation of additional relevant factors to deepen our understanding of the dynamics within the startup ecosystem.

CONFLICT OF INTEREST: The author declares that there is no conflict of interest

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