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Invest in Success or Failure?

How early-stage investors evaluate an investment opportunity based on the previous entrepreneurial failures or successes of the entrepreneur

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Foreword

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Abstract

Investments are essential for new ventures to accelerate their growth and scale up. However, convincing and receiving investments can be challenging as early-stage investors base their decisions on multiple factors. One of these factors is prior entrepreneurial experience. The investor's perception of the role of previous entrepreneurial success is clear. In contrast, researchers have shown conflicting views regarding the role of entrepreneurial failure and the final funding decisions. On the one hand, some support that failure results in valuable learnings that will be an asset for funding future ventures. On the other hand, some argue that investors perceive failure negatively. Although the learning outcomes of failure can be considered a positive effect, the research on how investors perceive it is still limited. This research sheds light on the interplay between prior success & failure and investigates how investors perceive it. A between-subjects experiment was performed on early-stage investors. The results present a clear relationship between prior entrepreneurial success and the funding decision and show that investors value more the variety of experiences (success and failure) compared to only success experiences. In addition, another finding is that experienced entrepreneurs are more likely to receive more funding than novice entrepreneurs. The findings contribute to the theories of investing decision & sense-making and have implications for the broader understanding of investor cognition. Finally, the domain of prior entrepreneurial experience is examined in light of the entrepreneurial learning field.

Key Words: entrepreneurial failure, entrepreneurial experience, venture financing, investment evaluation, investor sense-making

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Introduction

“It is fine to celebrate success but it is more important to heed the lessons of failure.” said Bill Gates (co-founder of Microsoft). Entrepreneurship is moving from failure to success and vice versa. According to Eisenmann (2013), entrepreneurship is the pursuit of opportunities beyond what you can control with your resources. Resource constraints lead to considerable risks such as demand, technology, execution, and financial risks (Eisenmann, 2013). In that respect, investments are essential, if not necessary, for new ventures in order to accelerate their growth and scale-up (Guariglia & Liu, 2014). One of the ways to receive external financing is through investors (Kotler et al., 2004). However, convincing and receiving investments can be challenging as potential investors face the "unknown unknowns" (Diebold et al., 2010). Indicatively, these may include both uncertainty and noise due to a large amount of unsystematic risk and conditions of evolving certainty around systematic risk when making early-stage entrepreneurial investment decisions (Knight, 1921; Foss & Klein, 2012). In particular, early-stage investors base their decisions not on the market and financial data but rely on other less-explicit social factors such as their gut feel about the entrepreneur or the new venture idea (Huang & Pearce, 2015). For example, high-status relationships (Burton et al., 2002), entrepreneur quality (MacMillan et al., 1987), and the quality of an entrepreneur's narrative (Martens et al., 2007) all of which help investors make sense of an investment opportunity (Navis and Glynn, 2011). In addition, researchers provide additional factors of consideration, such as management and marketing experience (Gosling and Barge, 1986) and prior industry experience (Shepherd et al., 2011) of the entrepreneur. Therefore, investors assess entrepreneurs' experiences in order to inform the likelihood of their future success (Clough et al., 2019).

However, the experience itself cannot drive investment decisions; instead, the knowledge gained through experience is the key (Cope & Watts, 2000). In this regard, entrepreneurs frequently confront various situations and gain significant insights for building their entrepreneurial learning (Nguyen, 2019). Hence, serial entrepreneurs have an advantage over novice entrepreneurs with no experience and learning (Kirschenhofer & Lechner, 2012). The multiple entrepreneurial attempts lead to both failures and success.

It is interesting to note that while success stories are sometimes used to infer the quality of entrepreneurs, serial entrepreneurs are just as likely, if not more likely, to have suffered failures (Ucbasaran et al., 2010). The problem lays in that failure is a crucial component of success (Crampton, 2019).

Investors are positively predisposed to invest in an entrepreneur with previous success in their portfolio. As Zacharakis and Meyer (1998) suggest, venture capitalists can be biased and overlook the warning signs that the company may fail because the lead entrepreneur is the same as a past successful investment. Moreover, they state that investors may become attached to the entrepreneur due to the individual's record of accomplishment and vibrant personality (Zacharakis & Meyer, 1998). According to statistics, successful entrepreneurs who start a new business have a success percentage of 34%, whereas first-time and failing entrepreneurs have a success rate of 23% (Gompers et al., 2006). As a result, investors profit more frequently by investing in businesses with a track record of success (Zacharakis & Meyer, 1998). Furthermore, this increased chance of success has a beneficial impact on investors' returns (Track Record, 2020).

But why do investors many times underestimate failure? Serial entrepreneurs have multiple failures due to many entrepreneurial attempts (Klimas et al., 2021). According to Forbes magazine (Otar, 2018), half of the new enterprises fail within the first five years, and two out of every three survive for less than a decade. Recent statistics indicate that up to 90% of start-ups fail in nearly all industries (Howarth, 2022). The typical first-year failure rate is 10%. However, a shocking 70% of new enterprises fall between years two and five (Howarth, 2022). Even though failure is a dominant feature of the entrepreneurial environment, it is generally perceived negatively (McGrath, 1999). Failure appears to be a negative thing to avoid, and many studies continue to focus on the elements that contribute to business survival and success rather than failure (Shane, 2001). The majority of studies examine the reasons for failures; specifically, they interpret failure as misfortune, bad luck, or mistakes (Cardon et al., 2011). Many researchers do not focus on the entrepreneurial learning that derives from such experiences. Although the learning outcomes of entrepreneurship failure can be considered a positive effect, the research on how investors perceive it is still

limited. The learning effects are considered an indirect effect of failure (Klimas et al., 2021). The views on failure are conflicting; in many cases, entrepreneurial failure is considered valuable and even "a badge of honor" (Cardon et al., 2011), whereas, in others, it is connected with shame and social marginalization (Yamakawa, 2008) and even stigma (He & Krähenmann, 2021).

Interestingly, studies suggest that failure plays a pivotal role in entrepreneurial learning. According to Minniti & Bygrave (2001), entrepreneurs gain valuable knowledge through learnings-by-doing when they choose between actions whose payoffs are uncertain and, therefore, risky. The learning process leads to a reflection of the entrepreneur and ultimately enables the entrepreneurs to re-emerge stronger after a failure. The entrepreneurs' benefits are well explained in the literature and in the real world. As Henry Ford said, "The only real mistake is the one from which we learn nothing". However, this is an unexamined place from the investor's perspective. Will investors fund entrepreneurs more due to their experiences? How do investors perceive those lessons learned, and will these experiences translate into more trust in entrepreneurs?

Consequently, this research aims is to examine the interplay between success and failure and evaluate the mediating role of learning effects in the investment decision. Additionally, we investigate how learning can swift the investor's perception of the negative effect of failure and view failure as an alternative success. The entrepreneurial learning gained through a failure can counteract the negative perception of the situation and positively perceive it as a success. Taking all of the above into account, this research aims to answer below research question:

"How do early-stage investors evaluate an opportunity based on the signal of previous entrepreneurial failures or successes of the entrepreneur?"

To address the above question, we proceeded to empirical analysis. We constructed a between-subject experiment to evaluate the investment decision of the investors and capture the differences in their decision per the different entrepreneurial backgrounds of an individual. This paper offers several

contributions to the sense-making literature, the role of prior entrepreneurial experience in terms of investor's perception. The topic of the interplay between failure and success is novel and immersing from an academic perspective; there is plenty of space to elaborate (Adler, 2000). Investors look for experienced entrepreneurs with a record of high performance and leadership in previous ventures (Gompers et al., 2006). However, the existing literature primarily focuses on successful or non-successful entrepreneurs and tries to distinguish the reasons (Rauch & Frese, 2000). The additional value of this research is the combinational factor of failure and success in a portfolio experiment where the entrepreneur's performance is evaluated holistically and not separately per venture. This potential research is relevant because more and more investors use the industry experience as a vital driver of the investment decision (Zach, 2017). For instance, potential investors use human capital, such as professional credentials and accolades, as screening devices (Markman & Baron, 2003).

Additionally, this research contributes to the work of entrepreneurial investment decision-making and shows that the early-stage investment is dependent upon the entrepreneur's prior related experiences (failures & success) (Sandberg & Tsoukas, 2015). We add to the research related to understanding investor behaviors. It is a common truth that investors are not as rational as they deem to be when it comes to money and investing, so it would be interesting to validate this.

Besides that, the contributions of this research are practical, and more specifically, the added value is threefold. Firstly, entrepreneurs receive practical insights regarding the crucial elements of their prior work experience. Secondly, novice entrepreneurs grasp the importance of a complete entrepreneurial experience and debunk the failure stigma of entrepreneurship. Thirdly, from the investor perspective, this research is valuable of recognizing the fundamental investment decision point. It assists investors and financial practitioners reduce and overcoming behavioral factors-based investment decision-making mistakes, perhaps resulting in improved market stability.

Theoretical Framework

Investors' sense-making & decisions

Investments are defined as an expenditure made today to receive future financial benefits (Avram et al., 2009). The interpretation of Virlics (2013) supports the above view as he defines investment as the use of resources for the medium or long term with the goal of returning investment expenses and generating a significant profit. In the course of the idea evaluation process, investors examine the potential value of the commercialization of the new venture's idea (Mittiness et al., 2012). Laopodis (2020) defines investments as the sacrifice of your resources (time, money, and effort) today in exchange for the promise of obtaining more resources tomorrow. Of course, it is essential to understand that investment decision is a sense-making process. In other words, it is the process by which investors rationalize what the venture is doing and provide meaning to its assessment as an investment opportunity (Navis & Glynn, 2011). Concluding, investments are the deployment of resources with the optimal goal of recovering expenses and creating benefits. In contrast, the decision is whether or not to invest; in other words, the pragmatic decision.

The role of entrepreneurial experience

The entrepreneur's experience plays a catalytic role in investment decisions as investors rely on expertise to forecast future performance—the amount of financial success in new businesses (Toft-Kehler et al., 2014). Entrepreneurial experience, in its simplest form, can be defined as the prior engagement in forming a business (Toft-Kehler et al., 2014). Dixon (1991) confirms that an experienced management team is the most significant factor venture investors look for in a proposed investment. His study elaborates the reasoning behind that behavior and reveals that a team like this decreases the danger of the investment failing and enhances its potential profits. In addition, this study claims that an entrepreneur who lacks management experience in a particular industry is unlikely to get their idea considered, let alone funded.

Similarly, Zhang (2011) suggests that entrepreneurs with prior firm-founding experience are likely to be more skilled and have more social contacts than beginner entrepreneurs. Those abilities and social connections may give experienced entrepreneurs an advantage when raising venture financing. Other

studies link investors' interpretation of entrepreneurial learning and the investment decision process with the attribution theory. The theory of attribution concerns how people interpret events (in this case, entrepreneurial experience) and how these affect their thinking and behavior. This theory focuses on the cognitive biases that influence the causal explanation of positive and negative outcomes (Weiner, 1985; Mantere et al., 2013). For example, studies suggest that people are prone to run to conclusions about the personality of someone based on their appearance, behavior, or actions (Sjovall & Talk, 2004). In that context, investors create a hypothesis based on the entrepreneur's prior actions (i.e., prior entrepreneurial attempts). This bias is known as the 'fundamental attribution error,' as people frequently erroneously attribute others' behavior that is actually based on situational factors (Heider, 1958; Jones & Nisbett, 1972; Ross, 1977). Attribution is based on a three-stage process: (1) perceiving or observing the behavior, (2) believing that the behavior was performed intentionally, and (3) deciding whether the other person was compelled to execute the behavior (in which case the situation is blamed) or not (in which case the cause is attributed to the other person)(Weiner, 1985). Therefore, it is valuable to examine how early-stage investors interpret these elements of the entrepreneur's actions and if they can distinguish the situational constraints in the prior experience of the entrepreneur and not make internal attribution.

The role of entrepreneurial success

Various researchers in various fields (Sarasvathy et al., 2013) have extensively studied entrepreneurial success, both in terms of the firm and the entrepreneur. The definition of success in this economic approach to entrepreneurship primarily depends on organizational performance metrics such as firm survival, sales, earnings, employee growth, market share, or return on investment (Chandler & Hanks, 1998). Entrepreneurial success can be found in the tactics that connect the organization to its surroundings, whether these organizations are large or small enterprises, start-ups, or established businesses (Osborne, 1995). In previous studies, two types of measures of business success were considered: financial indicators of firm performance (McGee et al., 1995; Murphy et al., 1996; Zhou et al., 2013) and indicators of entrepreneur satisfaction with running a firm (Gorgievski et al., 2011; Fodor & Pintea, 2017). The

entrepreneur's success is also strongly influenced by several entrepreneurial factors. These factors include the ability of entrepreneurs to access information, their leadership styles, and their support from others (Makhbul & Hasun, 2011). Popular wisdom holds that entrepreneurs with more experience will create higher-performing businesses, a connection consistent with the experience curve idea (Argote and Todorova, 2007).

Entrepreneurial success can be interpreted in different ways in terms of both the entrepreneur's and the investor's perspectives. In this study, the focus is on the investor's perspective of entrepreneurial success. Investors tend to choose entrepreneurs with a track record of success (Zacharakis & Meyer, 1998). The reasoning lies in the trust they have acquired and the good reputation on the market. According to Gambetta (2000), a commonly accepted definition of trust is "the subjective probability with which an agent assesses that another agent or group of agents will perform a particular action"(p.4). Based on numerous research, trust is an important consideration when understanding the relationship between the early-stage investors and the entrepreneur (Shepherd & Zacharakis, 2001). According to Bhattacharya et al. (1998), trust is not a behavior or a choice but rather a psychological state that can be explained in terms of perceived probabilities, confidence (Das & Teng, 1998), and positive expectations (Hagen & Choe, 1998). It has been proven that trust significantly impacts venture capital firms' investment decisions even after controlling for a variety of other variables such as geographic controls, differences in information, languages, legal systems, and taste-based preferences (Bottazzi et al., 2016).

Early-stage investors, particularly venture capitalists (VCs), place greater trust in entrepreneurs with higher qualifications, mainly if those qualifications result from prior entrepreneurial experience and/or evidence of dependability in their relationships with investors (Shepherd & Zacharakis, 2001). Trust is an essential element of the relationship between the early-stage investor and the entrepreneur. It creates strong ties that bind individuals with similar or complementary interests in the long term (Welter, 2012). Besides the significance of trust in initial investments, it has been argued that trust is a crucial element for networking at any stage of business development (Jack et al., 2008, 2010; Smith & Lohrke, 2008). The

trustworthy image of an entrepreneur is definitely an element that investors base their decision on (Maxwell & Lévesque, 2014).

The role of entrepreneurial failure

Entrepreneurial failure has been linked to a variety of factors, ranging from broad to restrictive and narrow (Ucbasaran et al., 2013). In the broadest sense, studies present the concept of business exit from the market (Singh et al., 2007; Watson & Everett, 1996). Jenkins & McKelvie (2016) provide a more detailed description of entrepreneurial failure. Specifically, they examine entrepreneurial failure conceptualizations based on two analysis levels (firm and individual) and perspectives of failure (objective and subjective). They propose a framework consisting of four types of entrepreneurial failure. More precisely, objective firm-level criteria (i.e., bankruptcy or insolvency) relate to the firm's financial performance and imply poor profitability and/or extremely high expenses.

Additionally, this definition suggests that the individual has not failed. Subjective firm-level criteria correlate entrepreneurial failure to an entrepreneur's exit. These conceptualizations are less confining regarding the objective financial performance of exit. Firms that have reached their goals yet have had lousy performance may be included here. Objective individual-level criteria rely on assessing human capital returns in alternative employment options (threshold performance theory). In other words, an entrepreneur's human capital affects the lowest level of performance they are willing to accept. These conceptualizations are quite broad and potentially capture failures of the firm. Finally, subjective individual-level criteria are interpreted as the entrepreneur's failure due to personal hardships. These have a negative impact on the entrepreneur related to personal and emotional challenges.

Moreover, another study by Lattacher & Wdowiak (2020) argues that the core concept of entrepreneurial failure can be interpreted on three levels. First, the disappearance of the firm from a market; second, failure in an organizational concept; and third, failure as defined by the entrepreneur's perception. However, studies of failures illustrate that failure experiences can take a wide range of differentiation

(Khelil, 2016). For the same failure, multiple stories can be provided (Corbett, 2007) from different perspectives (Cardon et al., 2013).

Generally, failure is perceived with a skeptical attitude towards entrepreneurs; in the majority of cases, negatively. In recent years, some scholars have started investigating how investors evaluate past failure and its role (Zunino et al., 2021). Failure is considered, in some cases, a lack of capabilities of the entrepreneur and in others as a result of external factors (Cardon et al., 2011; McGrath, 1999). Researchers present conflicting views regarding the investment decision for the entrepreneur with previous failures. For instance, Cope et al. (2004) suggest that venture capitalists are frequently interested in entrepreneurs with a variety of experiences, including failure, rather than simply investing in entrepreneurs with a track record of success. One reason could be the positive effects of entrepreneurial failure in terms of learning effects (Cope, 2011). As a matter of course, failure is challenging and complex, yet a beneficial learning situation. Entrepreneurs who have encountered failure are arguably better prepared for the rigors of entrepreneurship than those who have only experienced success or prospective entrepreneurs who have not yet encountered the often harsh realities and intense "pressure points" of the entrepreneurial process (Cope, 2011). Consequently, entrepreneurs may benefit from failure's solid and positive lessons by developing a renewed understanding of their capabilities and a more sophisticated knowledge base.

However, only a few studies have focused on the interplay between success and failure and how this interplay can shift investors' decisions. It is commonly accepted that there are positive success outputs in trust, learning, and experience. Nevertheless, a negative perception of failure can be altered if we consider the beneficial effects of learning through failure. Therefore, the aim is to investigate how the combination of failure and success can change investors' perceptions. The in-depth analysis of the "lessons learned" from failure can prove a valuable asset for the entrepreneur's future and be equally compared to a successful prior venture.

Hypothesis Development

Experience or no experience?

Finding investments and convincing investors is challenging, not only for serial entrepreneurs with previous experience but even more for novice entrepreneurs that have not proven their value in the marketplace. According to the study by Zhang (2011), there is a significant relationship between the prior founding experience of an entrepreneur and the new venture capital acquisition. More specifically, experienced entrepreneurs are able to access VC quicker and raise more money than less experienced ones. As previously stated, experienced entrepreneurs have acquired valuable abilities and social connections that may provide an advantage when seeking venture financing (Zhang, 2011). In addition, successful ventures provide valuable learning to entrepreneurs in a conventional way. Successful entrepreneurs have tested different approaches and techniques and know what works. Hence, they can implement them in their future entrepreneurial attempts.

Moreover, it makes sense for investors to finance a more significant amount to somebody they trust and have evidence of their capabilities. Similarly, entrepreneurs who have failed can recognize the approaches and techniques that do not work, and they can avoid pitfalls that they have encountered in the past. These learnings are significant, and many investors value the experience independently of the outcome (Cardon et al., 2011). By definition, novice entrepreneurs lack past business expertise and are unfamiliar with the challenges a new venture may encounter. The lack of experience signals to investors that they would not be able to comprehend and address these challenges. Investors are more likely to invest more money in an entrepreneur with either a success or failure experience than in an entrepreneur with no experience, as they interpret the experience as a valuable asset regardless of the end result. At the same time, they interpret the lack of experience as a lack of capability. Therefore, we hypothesize that:

Hypothesis 1: Serial entrepreneurs with either a success or failure in their portfolio will receive more funding than novice entrepreneurs with no experience.

Experience from success or experience from failure?

Following the above reasoning on the role of experience in the funding decision, it would be interesting to investigate the differences in the learning between the success or failure experiences. Moreover, how these learnings and experiences relate to the level of funding received. Analyzing the errors might reveal the reasons for failure and what entrepreneurs could have done differently. It can also assist individuals in avoiding making the same mistakes and failing in the future. In that respect, investors will value the entrepreneur's lessons learned from failure. Similarly, analyzing success may be the same or even more effective. Because, unlike examining failures, it reveals what went well and what worked in the business's favor. What entrepreneurs learn from their mistakes is what not to do; nonetheless, there is no clear road map to success. They know what they should avoid but do not know what they should do in order to succeed. Studies suggest that we learn more from success than failure (Rettner, 2009). It is interesting to note that after success, learning-related brain neurons may process information more efficiently than after a failure.

Consequently, investors interpret the signal of success as more substantial than the failure signal. Success is commonly accepted and perceived only positively by the investors, whereas an investor can perceive failure negatively and positively. Investors are inclined to choose an entrepreneur with success as they value their experience more; they trust him/her more. The prestige and the confidence of a successful entrepreneur are higher and this translate into their resume. Therefore, we hypothesize that:

Hypothesis 2: Entrepreneurs with a successful experience will receive more funding than entrepreneurs with a failure experience do.

The interplay between entrepreneurial success and entrepreneurial failure

We argue that the more entrepreneurial experience, the merrier. Considering the existing literature about potential learning effects, success and failure signals are interactive, thus a complementary effect of failure on success. This entrepreneurial experience, when it includes both success and failure, is preferred to only success or only failure. According to Macmillan et al. (1987), no venture investor will support an

entrepreneur or venture team with an uninspiring track record of experiences. As a consequence, these ventures will fail to get finance. A work also supports this view by a work by Cope et al. (2004), where an intriguing finding was that previous start-up experience, whether positive or negative, is a key factor in the investment decision of the venture investor. Failure can be interpreted both negatively and positively (Cope, 2011). Indicatively, many investors prefer collaborating with entrepreneurs who have experienced failures due to their valuable learnings (Zach, 2017). In that context, the effect of failure when combined with success on the investors decision is strong and even stronger than the effect of success. In other words, the investors' perception can be changed because of the learning due to failure and the proof of a successful experience. Therefore, combining those two elements can strengthen the perception that the entrepreneur has learned more and investors will fund them more. The literature validates the importance of relevant experience and its role in an investment decision. Both failures and successes provide advantages in the expenditure of knowledge and learning, and investors interpret this learning as a key feature of their investment decision. That is because in both cases, the entrepreneurs learn what works (in the case of success) and what does not work (in the case of failure).

Moreover, venture capitalists are frequently interested in entrepreneurs with various experiences rather than simply investing in those with a track record of success (Büscher, 2014). So, we can conclude that failure combined with success is most favorable, as long as the entrepreneur has not encountered a failure consistently (Cope et al., 2004). Therefore, we hypothesize that:

Hypothesis 3: Entrepreneurs with both successes and failures in their portfolio will receive more funding than those with only successes.

The mediating role of entrepreneurial learning

Entrepreneurial learning occurs in the process of knowledge based on business experiences (Cope, 2005; Minniti & Bygrave, 2001; Politis, 2005). In general, the learning process may be represented as a series of choices among conflicting beliefs or behaviors. The entrepreneur gains valuable knowledge from a given experience through direct action and personal reflection (Politis & Gabrielsson, 2009). In that

respect, entrepreneurs acquire multiple lessons and, as a result, learn as part of their entrepreneurial activities and experience. These learnings are being evaluated by the investors and consequently influence their decision to invest or not.

Interestingly, the more challenging the experience, the more potential high-level learning is for the individual (Cope, 2003). Entrepreneurs benefit from both their successes and failures: Entrepreneurs' knowledge is shaped by a combination of good and bad experiences, which influences the order in which their choices are made (Minniti & Bygrave, 2001). Additionally, due to experience, entrepreneurs will be more aware of what to do or not do in order to succeed in their new entrepreneurial attempts. Specifically, entrepreneurs with previous experiences will learn valuable lessons regarding different aspects of starting and operating a business. In other words, they have encountered multiple challenges that lead to the enrichment of their perception of business elements. Therefore, they will be able to address the different business requirements more effectively in the future. Because of this process, entrepreneurs will know how to handle investors, and vice versa, investors will base their investment decision on the entrepreneurs' learning. Besides the outcome of the prior venture, investors will value the entrepreneur's capabilities as a consequence of their experience and learnings. So, there is a mediating mechanism between the prior experience and the final funding decision. Thus, in the next venture, s/he will have an extra "asset" that potential investors will evaluate. Therefore, we hypothesize that:

Hypothesis 4a: Learning mediates the relationship between success and investment decision

Hypothesis 4b: Learning mediates the relationship between failure and investment decision

Hypothesis 4c: Learning mediates the interaction between success and failure in investment decision

Methods

A quantitative research methodology is chosen to enhance existing literature within entrepreneurial decision-making. The objective of this study is to provide evidence for our four aforementioned hypotheses. An empirical experiment was performed where the unit of analysis was the early-stage investors. The aim is to measure the likelihood of investing in an entrepreneur based on his/her prior entrepreneurial failure and/or success. Therefore, quantitative research would be appropriate as it employs deductive reasoning that uses the theory to formulate the hypotheses that need to be tested. The conceptual model of the research could be described as follow:

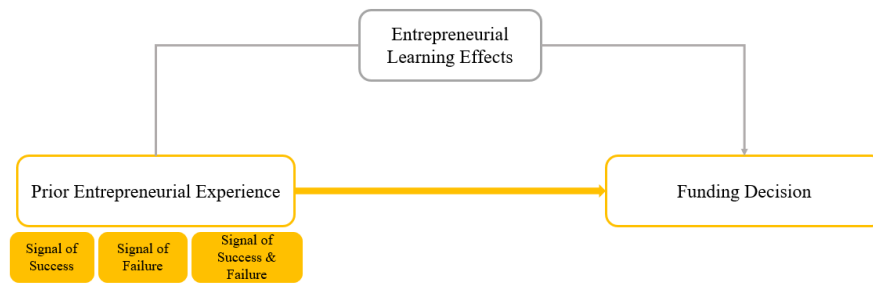


Figure 1: Conceptual Map

The general outline of the research structure sets as the dependent variable the funding decision and as the independent variable the entrepreneur's prior experiences (signal of failure or success or the interplay between them). Additionally, the research includes one mediating variable and several control variables, which are described in the following paragraphs. The best-suited methodology for the research at hand is a scenario/vignette experiment. This experiment seeks to measure the dynamics between prior entrepreneurial failure and prior entrepreneurial success and the likelihood of an investor investing more funds in an entrepreneur with previous failures. Considering the quantitative nature of this study, the design is set up as an experiment where the responders were guided through an online questionnaire. The questionnaire was developed in Qualtrics. A preliminary design of the experiment can be found below:

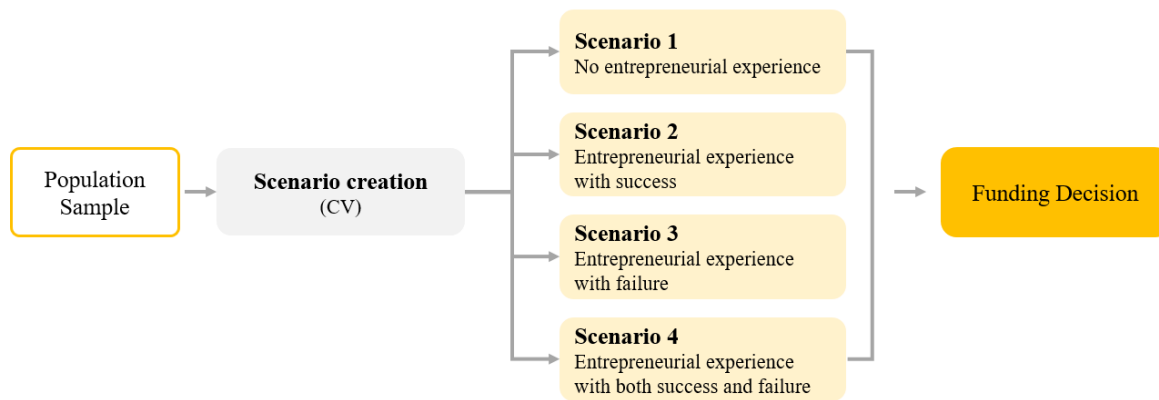


Figure 2: Experiment Design

Population Sample

The population sample that was examined consisted of 171 early-stage investors, at least 40+ people per scenario/condition. In order to ensure that the sample is representative, the population source included participants from corporate ventures, angel investors, and other applicable investing backgrounds. The sample size was validated through sample scales with factors for power checks from the website (<http://powerandsamplesize.com/Calculators/>). Participation was voluntary, and there was no monetary reward for participating in this study. The participants were identified through LinkedHelper, an automation tool that assist users to identify profiles based on specific characteristics and send bulk messages. Another source of participants was personal connections. Of the initial 171 respondents, 27 participants were rejected as they did not meet attention questions and 30 participants were rejected as they had not completed the whole questionnaire. The final sample consisted of 114 responders comprising 47% male, 52% female, and 1% Non-binary/third gender.

Experiment Design

The research design is a randomized between-subject experiment consisting of four manipulated conditions as presented above. In each scenario, a different one-pager Curriculum Vitae was presented (please refer to Appendix B for the detailed CVs). In addition, the previous experience in terms of failures and success was presented (project, duration, failed business reason). As a success, we define a profitable venture that was successfully sold, whereas as a failure, we define the closure of the business due to limited

cash flows and low demand for the service/product. In CV, first, a small “golden paragraph” for the entrepreneur's persona, including studies and certifications, was introduced. Additionally, business skills and the new venture idea was presented. All the aforementioned information as well as the new venture opportunity was the same for all four scenarios. The prior professional experience changed respectively per scenario. Then, a questionnaire was formulated with targeted questions; that takes approximately 10 minutes on average to complete (please refer to Appendix C for the detailed questionnaire). The questionnaire was developed using Qualtrics, as it is time and cost-efficient, as well as the automated data input and output, allowing easy collection of data. The questions on the questionnaire came from a careful review of previous empirical and theoretical work on experiential learning and investment decision found in literature and research. The questionnaire was pilot tested on a group of ten entrepreneurship students/scholars. Based on the feedback, the questions were altered and updated for the final survey.

Experiment Procedure

The data collection procedure started with a brief explanation of the study, the aim & purpose, and clarification that all answers were treated strictly anonymous and confidential. Next, the new venture idea was introduced (please refer to Appendix A for the detailed pitch deck), then one of the four manipulation conditions was assigned to the object of study, and lastly the questionnaire followed. The questionnaire included some general and sociodemographic questions about the sample, attention questions, and manipulations checks. The first series of questions were designed to assess their impressions and the effectiveness of the manipulations. Moreover, we employed manipulation checks to establish that respondents have been treated, i.e. they have observed and comprehended the treatment (e.g. if the presented entrepreneur had or had not entrepreneurial experience). The questions were related to their perception of the entrepreneur and their relative entrepreneurial experience. Then questions assessing investing attitudes followed. In particular, questions assessing the participant's proclivity and willingness to invest. Following the attitude assessments, participants asked questions that aided in developing our mediation (learning) and control variables. Finally, we collected some last control demographic information and sent a final message

verifying the successful answer, and a thanks note. The optimal goal is for the investors to state if they are willing to invest in each individual.

Measures

Independent Variable – Manipulated Conditions

The manipulations consist of four conditions in which participants receive one of four formats of the entrepreneur’s resume (please refer to Appendix B for the detailed CVs). The independent variable was distinguished between the different scenarios of entrepreneur experience (i.e. no entrepreneurial experience, the signal of success, of failure and their interplay) as presented in the below figure.

Condition 1	<ul style="list-style-type: none">• No entrepreneurial experience• Experience in Business Consulting & Strategy Design
Condition 2	<ul style="list-style-type: none">• Entrepreneurial experience with success• One successful venture on the CV
Condition 3	<ul style="list-style-type: none">• Entrepreneurial experience with failure• One failed venture on the CV
Condition 4	<ul style="list-style-type: none">• Entrepreneurial experience with both success and failure• One successful and one failed venture on the CV

Figure 3: Scenario Description

Condition 1: No entrepreneurial experience

In the first condition of no relevant entrepreneurial experience, the potential entrepreneur was presented as a manager at a Big4 consultancy firm, with prior experience in Business Consulting and Strategy Design. In this condition, the potential entrepreneur was pictured as an experienced and energetic manager with over ten years of experience effectively managing various strategic projects from conception to completion. Additionally, she had strong problem-solving skills and the ability to think strategically and creatively about different business problems. Together with some additional skills (entrepreneurial spirit, analytical thinking, management & communication skills, etc.) we created a balanced and promising profile of an entrepreneur.

Condition 2: Entrepreneurial experience with success

In the success condition, the entrepreneur had prior entrepreneurial experience, where she was a CEO of a start-up that was successfully sold for €50mill. Alongside the venture's success, she was presented as an experienced and successful entrepreneur with over ten years of experience effectively managing a business. Innovator and entrepreneur that always succeeds where others fail. Experienced in every aspects of business formation, finance, operation, and management. Visionary product developer with extensive training in analytics and research. Therefore, the overall profile of the entrepreneur was promising and provided a positive signal to investors.

Condition 3: Entrepreneurial experience with failure

In the failure condition, the entrepreneur was presented as an experienced entrepreneur; however, her business closed as a result of limited cash flows and the lack of demand in the new markets. The career objectives were described an experienced and energetic entrepreneur with over ten years of experience effectively managing a business. Emphasis has been given to the element that she is an entrepreneur who is not afraid to fail. A relentless optimist who believes there is no failure, only feedback. In that respect, the profile provided the signal of failure without being too clear in order to avoid biases from the investors.

Condition 4: Entrepreneurial experience with both success and failure

In the final condition, the entrepreneur was presented as an experienced entrepreneur with one successful and one failed venture. The successful and the failed scenario was the same as those presented in the success, and failure scenario respectively. Similarly, the entrepreneur description was a combination of the two scenarios mentioned above. More emphasis was given to her experience in all aspects of a business, again with over ten years of experience effectively managing a business. The overall scenario pictured the entrepreneur as well experienced and capable professional.

Dependent Variable

The dependent variable aims to measure the funding decision and the percentage of potential funding. The research focuses on the investment decision and the variable is measured using a mutually exclusive answering option (i.e., 'yes, I would invest', 'no, I would not invest'). For each scenario, we

measured the participant's willingness to invest a percentage of their funds. In other words, the equity individuals are willing to invest as well as the required equity for investing a specific amount. The attitude measures were recorded with a 5-point Likert scale. The vignette, and the specific investing questions, can be found in Appendix C.

Mediating Variables

The selected mediation factor is the learning effects and can act as possible explanations for the relationship between an entrepreneur's prior experience and the funding decision. The aim is to understand how investors rate and interpret entrepreneurial learning that the entrepreneur has acquired due to her experience. We base our learning-related questions on two studies one by Souitaris et al. (2007) and one by Zunino et al. (2021). In total, a set of 3 questions were presented with sub-questions aiming to understand how investors value the prior experience and the in which field they think the entrepreneur had gained the more experience (i.e. to recognize opportunities or pitfalls, to know the industry or technical skills, and more). The measures are evaluated using a 5-point Likert scale (strongly disagree to strongly agree), the whole set of questions is displayed in Appendix C. In order to build a concrete measurement of the learning that would assist in the analysis, we took the average measurement of the two most significant results. The reliability of this measure lays to its consistency of the results.

Control Variables

It is essential to control for several elements surrounding the object of study, also known as investors. As previously mentioned, we controlled for the investor's experience in evaluating funding opportunities (in years) and for their familiarity with these kind of procedures. Moreover, each investor's risk preferences were included as a control variable. Risk-averse behaviors can impact how they interpret the previous background of the entrepreneur. To measure risk tolerance, we use a lottery-style question in which we ask respondents, "Imagine you had the option of earning \$1,000 with certainty or \$2,000 with a 50 percent probability. Please mention your preferred selection." (Roach, & Sauermann, 2015). Respondents were given a 10-point scale ranging from "strongly prefer a 100% probability of winning

\$1,000" to "strongly prefer a 50% chance of winning \$2,000." We also include controls for participant variables such as age categories (The Silent Generation: born 1928-1945, Baby Boomers: born 1946-1964, Generation X: born 1965-1980, Millennials: born 1981-1996, Generation Z: born 1997-2012), gender (female, male, third gender/non-binary), and education (ISCED - International Standard Classification of Education scale) and employment status (employee, contractor/self-employed, entrepreneur, student, unemployed, retired, other). The control variables indicated above are essential to distinguish between the different outcomes of the study, once again, to rule out any external causative influences. No questions requiring names or other connectable data were included in the questionnaire to maintain anonymity and confidentiality.

Analytical Techniques

Following the data collection, we analyzed the data through regression analysis to predict the dependent variable. First, we calculated some general statistics and then estimated the relationship between the dependent variable (funding decision) and the independent variable (the entrepreneur's prior entrepreneurial failure or success). Next, a pairwise correlation was presented to determine the relationship among all variables. Then a Logistic regression along with an OLS (Ordinary Least Squared) regression analysis within STATA (Stata/IC 16.1) was used to estimate the effects of the manipulation conditions on the dependent variable. Lastly, a mediation analysis followed in order to measure the direct and the indirect effect of the mediator (learning effects) in our model. Below the model of this research is presented:

$$\text{Model: } y_i = \beta_0 + \beta_1 \text{No.Entre.Expr}_i + \beta_2 \text{E.Success} + \beta_3 \text{E.Failure}_i + \beta_4 \text{E.Success\&Failure}_i + \beta_5 \text{LearningEffect}_i + \varepsilon_i$$

Results

In the results section, we analyze the collected data in order to clarify general conclusions with a particular focus on finding evidence for the proposed hypotheses. We begin by giving broad descriptive statistics that aid in understanding the acquired data. Then, a pairwise correlation matrix is added for further understanding. Following, manipulation checks were conducted to investigate the intended effects within the four manipulated conditions. Next, the first three hypotheses are tested using OLS (Ordinary Least Squared) and Logistic regression and finally, the potential mediation effect from H4 was examined.

Descriptive Statistics

Below Table 1a. presents the general descriptive statistics for the population sample (n=114). We observe that the responders were divided nearly equally on the investment decision question (Yes, I would invest=1, No I would not invest=0). The average investment percentage was exactly 21% (SD=18.2%). The venture attractiveness showed that more than half of the people found the new venture attractive (five-point Likert, 5= Very attractive).

Table 1a. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Investment Decision	0.52	0.5	0	1
Investment Percentage (%)	21.00	18.2	0	90
Requested Equity (%)	29.57	20.7	0	100
Venture Attractiveness	3.45	0.88	1	5

n=114

In Table 1b. the descriptive statistics for the categorical variables are presented. The sample is well distributed with 53 males, 59 females, and 2 non-binary/ third gender. The age includes 5 categories of which age category 25-34 is the largest group (38%). The majority of our responders have 0-5 years of investing experience (64%) and 5-10 years (20%).

Table 1b. Descriptive Statistics (frequencies)

Variable		Frequency	Percent	Cumulative Percentage
Gender	Male	53.00	46.49	46.49
	Female	59.00	51.75	98.25
	Non-binary/third gender	2.00	1.75	100.00
Age Category	18-24	23.00	20.18	20.18
	25-34	43.00	37.72	57.89
	35-44	23.00	20.18	78.07
	45-54	13.00	11.40	89.47
	55-64	12.00	10.53	100.00
Risk-Taking	None at all	3.00	2.63	2.63
	A little	21.00	18.42	21.05
	A moderate amount	57.00	50.00	71.05
	A lot	24.00	21.05	92.11
	A great deal	9.00	7.89	100.00
Investment Experience (Years)	0-5	73.00	64.03	64.03
	5-10	23.00	20.19	84.22
	10-20	12.00	10.53	94.75
	20-25	2.00	1.75	96.50
	25-30	3.00	2.64	99.14
	30-35	1.00	0.88	100.00

n=114

In table 1c. the descriptive statistics regarding the responder's investment decision per manipulation condition were displayed. It is interesting to investigate the effectiveness of prior experience. More specifically, the success scenario was the most effective one with an effective mean of 0.59 along with the success and failure scenario with an effective mean of 0.56. However, the investment percentage (26.00%) and the requested equity percentage (32.22%) in the combination scenario (entrepreneurial success & failure) were higher compared to the entrepreneurial success only scenario 22.22%, 29.09% respectively. The entrepreneurial failure scenario was the least attractive one with a mean of 0.40 and an investment percentage of 14.80% whereas the requested equity percentage was up to 31.48%.

Table 1c. Descriptive Statistics

Condition	Investment Decision	Investment Percentage %	Requested Equity %
No entrepreneurial experience	0.48	19.28	24.88
Entrepreneurial Success	0.59	22.22	29.09
Entrepreneurial Failure	0.40	14.80	31.48
Entrepreneurial Success & Failure	0.56	26.00	32.22
Total	0.52	21.01	29.57

n=114

Correlation Analysis

Table 2. Correlation Analysis

Variables	1	2	3	4	5	6	7	8	9	10	11	12
(1) Entrepreneurial Success	1.000											
(2) Entrepreneurial Failure	0.000	1.000										
(3) Investment Decision	0.137	-0.053	1.000									
(4) Investment Percentage %	0.193*	0.004	0.395***	1.000								
(5) Requested Equity %	0.060	0.113	0.034	0.376***	1.000							
(6) Years of investing experience	0.044	0.003	0.038	0.112	0.059	1.000						
(7) Risk	-0.068	0.010	0.162†	0.254**	0.049	0.157†	1.000					
(8) Age Categories	0.017	0.114	0.113	-0.061	-0.109	0.489***	-0.017	1.000				
(9) Gender	0.054	0.083	0.046	0.037	-0.075	-0.079	-0.079	0.023	1.000			
(10) Education	0.040	-0.065	-0.103	-0.013	-0.077	-0.021	-0.097	0.138	-0.019	1.000		
(11) Employment	-0.144	-0.118	-0.153	-0.077	-0.004	0.022	0.017	-0.031	-0.229*	0.002	1.000	
(12) Learning	0.102	0.147	0.427***	0.228*	-0.011	-0.097	0.123	-0.003	0.002	0.100	-0.004	1.000

† p<0.1, * p<0.05, ** p<0.01, *** p<0.001

A pairwise correlation was performed for all the applicable variables in our model. First, we considered the correlation between the conditions and the investment decision, investment percentage, and requested equity percentage. Besides the fact that none of the conditions is significantly correlated with the investment decision, the direction of the relationship gives interesting insights. By this, we mean that the success scenario is positively correlated with the investment decision whereas the failure scenario is not. The investment percentage is highly correlated with the success scenario ($r=0.193, p<0.05$). These results are aligned with table 1c. as presented in the part of the descriptive statistics. Additionally, the investment percentage is correlated with the investment decision ($r=0.395, p<0.001$), and with the investment equity percentage ($r=0.376, p<0.001$) and this suggests that perhaps investors ask for higher equity for higher percentages. Interestingly, the investment decision is not correlated with the investment equity percentage. Then, we observed the correlation between the investment decision and the control variables. Results showed a positive correlation between the risk variable and the investment decision ($r=0.162, p<0.1$), and the investment percentage ($r=0.254, p<0.01$). Generally, control variables have a positive correlation with the manipulation conditions, except for the employment variable where we observed negative correlation with the conditions. Furthermore, we observed the correlations for the mediation variable. In specific, the learning effects is highly correlated with the investment decision ($r=0.427, p<0.001$), and investment percentage ($r=0.228, p<0.05$). Lastly, we discovered a number of control factors with significant correlations. Meaning that, risk ($r=0.157, p<0.1$) and age ($r=0.489, p<0.001$) variables are correlated with the years of investing experience, and the employment variable has a negative relationship with gender ($r=-0.229, p<0.05$).

Manipulation Analysis

We conducted a manipulation check among our respondents. In the questionnaire, there were different sets of questions per condition to capture the perception of the participants. The questions were phrased in a 5-point Likert scale (strongly disagree to strongly agree) and were about on how much they agree with these statements: “Olivia’s previous venture named Kry Co. was a success” and “Olivia’s

previous venture named Homejoy was a failure”. We performed a One-way ANOVA analysis to test whether the difference between the manipulations is significant. Results from table 3 suggest that all three conditions are significant. In specific the entrepreneurial success condition ($F(3,110)=27.58, p=0.000$), the entrepreneurial failure ($F(3,110)=454.86, p=0.000$), and the interaction condition ($F(3,110)=206.24, p=0.000$). Therefore, we can conclude that participants pay close attention to manipulations. This indicates that the experimental design produced the desired results as the participants identified all planned changes between the conditions.

Table 3. Manipulation Analysis

	Manipulation Check Analysis One-way ANOVA				
	SS	DF	MS	F	Prob > F
Entrepreneurial Success					
Between Groups	28.07	3	9.36	27.58	0.000***
Within Groups	0	110	0		
<u>Total</u>	28.07	113	0.25		
Entrepreneurial Failure					
Between Groups	28.50	3	9.5	454.86	0.000***
Within Groups	0	110	0		
<u>Total</u>	28.50	113	0.25		
Entrepreneurial Success & Failure (Interaction)					
Between Groups	23.02	3	7.67	206.24	0.000***
Within Groups	0	110	0		
<u>Total</u>	23.02	113	0.20		

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Regression Analysis

Table 4a. Logistic Regression

	Investment Decision (Logistic Regression)				
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>
	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)
Entrepreneurial Success		1.75 (0.67)	1.82 (0.74)	1.90 (1.11)	1.49 (0.97)
Entrepreneurial Failure		0.81 (0.31)	0.64 (0.26)	0.68 (0.41)	0.39 (0.27)
Entrepreneurial Success & Failure (Interaction)				0.92 (0.75)	0.98 (0.89)
Years of investing experience	0.97 (0.037)		0.97 (0.04)	0.97 (0.04)	0.99 (0.05)
Risk	1.50(0.340)		1.57(0.37)	1.57 (0.37)	1.33 (0.36)
Age Categories	1.32 (0.253)		1.38 (0.27)	1.39 (0.28)	1.53 (0.38)
Gender	1.07 (0.403)		1.09 (0.42)	1.10 (0.43)	1.12 (0.49)
Education	0.69 (0.216)		0.65 (0.21)	0.65 (0.21)	0.50 (0.19)
Employment	0.82 (0.103)		0.83 (0.11)	0.83 (0.11)	0.78 (0.11)
Learning					4.21*** (1.45)
Intercept	0.54 (0.79)	0.87 (0.30)	0.40 (0.62)	0.38 (0.61)	0.01* (0.02)
Log-likelihood	-74.39	-77.71	-72.67	-72.67	-60.00
LR chi2	9.11	2.47	12.55	12.56	37.9***

* p<0.05, ** p<0.01, *** p<0.001

Table 4a. summarizes all the models employed in the hypothesis analysis. To begin we performed 5 different logistics regression analyses. Model 1 only included the control variables, and the overall model is not statistically significant ($chi^2= 9.11, p=0.17$). Model 2 included two experimental conditions (success scenario & failure scenario) and implied a positive effect on the likelihood of funding for the success scenario, as the odds ratio is greater than one. However, the failure condition has a negative relationship with the dependent variable (investment decision) as the odds ratio is less than one. The overall effect of Model 2 is not significant ($chi^2=2.47, p=0.30$). Model 3 included both conditions (success & failure) as well as the control variables and it is not significant ($chi^2=12.55, p=0.13$). Similarly, the success condition showed a positive relationship with the investment likelihood (1.82), whereas the failure condition a negative one (0.64). Following in model 4 we included the interaction condition (both success and failure condition) along with the control variables. This model is not statistically significant ($chi^2=12.56, p=0.18$). Additionally, we proved that the interaction condition has a negative relationship with the likelihood of receiving funding (0.92). All variables from the previous model (Model 4) were included in Model 5, as well as the mediator (i.e. learning effects from previous experience). As expected, Model 5 is statistically significant ($chi^2=37.90, p=0.000$). Entrepreneurial learning has a highly significant mediation effect on the investment decision ($\beta=4.21, S.E.=1.45, p<0.001$).

Table 4b. OLS Regression

	Investment Percentage % (OLS)				
	<i>Model 6</i>	<i>Model 7</i>	<i>Model 8</i>	<i>Model 9</i>	<i>Model 10</i>
	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)
Entrepreneurial Success		7.07 * (3.41)	5.36 (3.18)	2.06 (4.54)	1.98 (4.56)
Entrepreneurial Failure		0.16 (3.38)	1.65 (3.16)	-1.94 (4.73)	-2.26 (4.80)
Entrepreneurial Success & Failure (Interaction)				6.50 (6.37)	6.48 (6.40)
Years of investing experience	0.50 (0.29)		0.47(0.29)	0.48 (0.29)	0.49 (0.29)
Risk	3.52 (1.80)		3.77*(1.80)	3.51 (1.82)	3.44 (1.83)
Age Categories	-2.92 (1.49)		-2.92 (1.50)	-3.01 (1.50)	-2.98 (1.51)
Gender	1.63 (3.02)		1.44 (3.01)	0.94 (3.05)	0.96 (3.06)
Education	2.04 (2.36)		1.94 (2.37)	2.07 (2.37)	1.86 (2.42)
Employment	-0.23 (0.98)		0.03 (0.99)	-0.06 (0.99)	-0.10 (1.00)
Learning					0.96 (2.09)
Investment Decision	13.99*** (3.23)		13.41***(3.26)	13.44*** (3.26)	12.68*** (3.66)
Intercept	2.55 (11.54)	16.96 ***(3.06)	-1.70 (11.76)	1.85 (12.26)	-0.33 (13.18)
R-squared	0.23	0.04	0.25	0.26	0.26
F-statistics	4.51***	2.15	3.89**	3.61***	3.28***

* p<0.05, ** p<0.01, *** p<0.001

Table 4c. OLS Regression

	Requested Equity Percentage % (OLS)				
	<i>Model 11</i>	<i>Model 12</i>	<i>Model 13</i>	<i>Model 14</i>	<i>Model 15</i>
	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)
Entrepreneurial Success		2.48 (3.92)	-0.51 (3.82)	2.18 (5.39)	2.59 (5.39)
Entrepreneurial Failure		4.65 (3.89)	5.48 (3.73)	8.46 (5.63)	9.21 (5.66)
Entrepreneurial Success & Failure (Interaction)				-5.40 (7.61)	-5.53 (7.60)
Years of investing experience	0.24 (0.34)		0.28 (0.34)	0.27 (0.35)	0.21 (0.35)
Risk	-1.74 (2.16)		-1.84 (2.17)	-1.66 (2.19)	-1.39 (2.20)
Age Categories	-1.90 (1.76)		-2.25 (1.77)	-2.17 (1.78)	-2.04 (1.78)
Gender	-3.40 (3.57)		-3.65 (3.57)	-3.24 (3.62)	-3.31 (3.62)
Education	-1.98 (2.78)		-1.61 (2.78)	-1.72 (2.80)	-1.37 (2.81)
Employment	0.02 (1.15)		0.17 (1.17)	0.24 (1.17)	0.30 (1.17)
Learning					-2.57 (2.25)
Investment Percentage %	0.43*** (0.11)		0.44***(0.11)	0.44*** (0.11)	0.47*** (0.11)
Intercept	41.68** (13.59)	25.86*** (3.52)	39.56** (13.91)	36.60** (14.55)	42.84** (15.53)
R-squared	0.17	0.02	0.19	0.19	0.20
F-statistics	3.06**	0.91	2.63**	2.41*	2.31**

* p<0.05, ** p<0.01, *** p<0.001

Moving on, Models 6 to 10 in Table 4b. present the ordinary least square regression (OLS) on the investment percentage. Additionally, they provide results for testing Hypotheses 1, 2, and 3 of our study. Model 6 shows the effect of the control variables on the investment percentage. Note that in these regression models we also control for the investment decision variable. We conclude that only the “Investment decision” is statistically significant ($\beta=13.99$, $S.E. =3.23$, $p=0.000$), and the overall model is significant ($F=4.51$). Model 7 includes two experiment conditions (success scenario and failure scenario) and the overall model is not significant ($F=2.15$). This model explains 4% of the independent variable ($R^2= 0.04$). The success condition has a significant effect on the investment percentage ($\beta =7.07$, $S.E. =3.41$, $p= 0.04$) meaning that prior entrepreneurial success leads to a higher investment percentage compared to the failure condition. In that respect, we can accept H2, which assumes that entrepreneurs with a successful experience would receive more funding than entrepreneurs with a failure experience do. In more detail, we can imply that the magnitude of the positive effect in the success scenario is bigger than in the failure scenario. Model 8 included the experiment conditions (success scenario & failure scenario) as well as the control variables. The model is significant ($F=3.89$, $R^2=0.25$). From the control variables risk ($\beta=3.77$, $S.E.=1.80$, $p= 0.039$) and investment decision ($\beta= 13.41$, $S.E.=3.26$, $p= 0.000$) variables are significant. Following, in Model 9 we added the interaction of success and failure (combination scenario) as well as the control variables. The overall model is significant ($F=3.61$, $R^2=0.26$). Results show that investment decision ($\beta=13.44$, $S.E.=3.26$, $p=0.000$) is the only significant variable. Furthermore, Model 9 implies that although the success and the interaction scenario are not statistically significant, the coefficients of success ($\beta= 2.06$, $S.E.=4.54$) and the interaction ($\beta= 6.50$, $S.E.=6.37$) are positive. Unfortunately, as the statistical results are insignificant, we cannot accept H3, in which we had hypothesized that entrepreneurs with both success and failure in their portfolio will receive more funding than entrepreneurs with only successes, based on the regression. However, in order to add to the understanding of the relationship between the investment percentage and those two conditions, we formulated the below Figure 4.

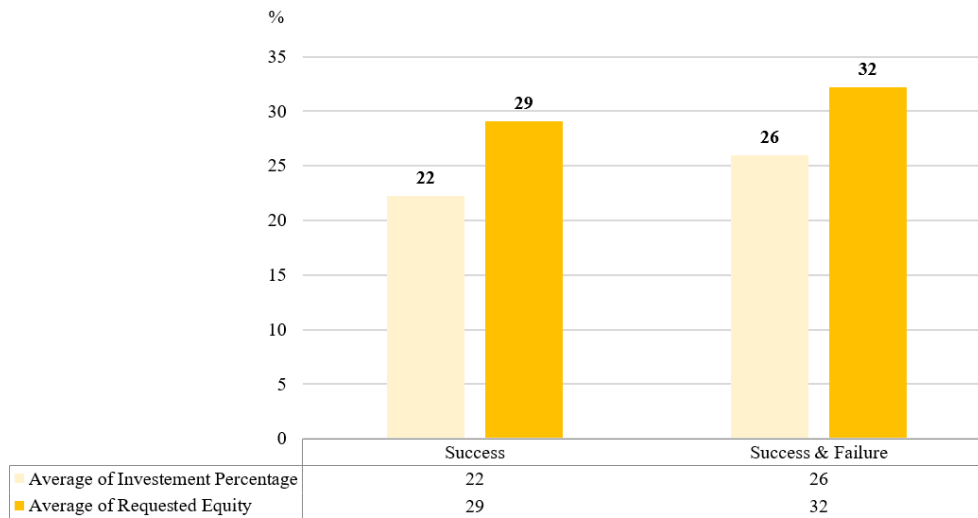


Figure 4: Average Investment Percentage & Average Requested Equity Percentage per Condition

We observed that the investors are willing to invest more when the entrepreneur has both success and failure. The average investment percentage in the success & failure scenario is 26%, whereas in the only success scenario is 22%. At the same time, investors also ask for more equity, probably because they feel that the company is more likely to succeed when the entrepreneur has a success & failure experience. In that respect, we have indications that investors are keener to invest more money when the entrepreneur has a combined experience rather than only success experience and potentially can accept H3. One reason behind the insignificant results could be that our sample was limited. Overall, in the context of this thesis, we can accept H3.

Following, if we compare Model 9 with Model 6 we can find sufficient evidence in order to accept H1 (assumes that serial entrepreneurs with either a success or failure in their portfolio will receive more funding than novice entrepreneurs do with no experience. Both models, Model 9 ($F=3.61$, $R^2=0.26$) and Model 6 ($F=4.51$, $R^2=0.23$) are significant. We can observed that Model 9 explains better the independent variable ($R^2= 26\%$) compared to Model 6 ($R^2=23\%$). Furthermore, in order to compare those two nested models we performed the Wald F test (Wald, 1943), where we concluded that there is a significant improvement in Model 9. Therefore, we can accept H1. Finally, in Model 10, we added the mediator (learning effects), and the overall model results to a significant model ($F=3.28$, $R^2=0.26$). The outcomes in

terms of the mediator role is not statistically significant. However, the significant level for the learning variable changes if we do not control for the investment decision. A more detailed analysis of the mediator will follow in order to test the last hypothesis, H4.

Lastly, Models 11 to 15 present the ordinary least square regression (OLS) on the requested equity percentage. Overall, all the Models are significant except for Model 12. Those regressions were performed for the completion of the analysis; however, they do not provide valuable information.

Mediation Analysis

Table 5. OLS Regression

	Learning Effects (OLS)			
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>
	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)	Estimate (S.E.)
Entrepreneurial Success		0.18 (0.16)	0.10 (0.15)	0.09 (0.22)
Entrepreneurial Failure		0.25 (0.16)	0.34* (0.15)	0.33 (0.22)
Entrepreneurial Success & Failure (Interaction)				0.03 (0.30)
Years of investing experience	-0.02 (0.01)		-0.01 (0.01)	-0.01 (0.01)
Risk	0.08 (0.09)		0.08 (0.08)	0.08 (0.09)
Age Categories	-0.01 (0.07)		-0.03 (0.07)	-0.03 (0.07)
Gender	-0.01 (0.14)		-0.03 (0.14)	-0.03 (0.14)
Education	0.20 (0.11)		0.22 (0.11)	0.22 (0.11)
Employment	0.03 (0.05)		0.05 (0.05)	0.05 (0.05)
Investment Decision	0.77*** (0.15)		0.79*** (0.15)	0.79*** (0.15)
Intercept	2.48*** (0.55)	3.38	2.25***(0.55)	2.26*** (0.58)
R-squared	0.23 (0.04)	0.03	0.27	0.27
F-statistics	4.43***	1.83	4.21***	3.76***

* p<0.05, ** p<0.01, *** p<0.001

The mediating role of entrepreneurial learning is investigated using an OLS and mediation analysis. The aim was to provide evidence for the mediation of learning effects from previous entrepreneurial attempts on investor willingness to support the venture idea and to test the hypotheses H4a, H4b, and H4c. First, we conducted an OLS regression analysis on the Learning effects as presented in Table 5. We observe that all Models are significant except for Model 2. It is interesting to note that in Model 3 the entrepreneurial

failure experience is statistically significant ($\beta=0.34$, $S.E.=0.15$, $p=0.023$). Following this, we performed a causal mediation analysis based on Hicks & Tingley (2012). Each condition (success, failure, success & failure) was examined independently for the mediation results. To begin with, we tested the entrepreneurial success scenario. We concluded that there is no ground for mediation. The effect of successful experience on learning (X->M) ($\beta=0.18$ and $p=0.281$) is not statistically significant, however, the effect of learnings on investment decision (M->Y) ($\beta=0.24$ and $p=0.000$), is significant. The direct effect of success on investment decision is also not significant (X->Y) ($\beta=0.10$, $p=0.27$). The Average Causal Mediation Effect (ACME) is 0.04 within 95%CI (-0.40493, 0.13923). Additionally, the percentage of the total effect mediated is 0.29. Taking all of the above into account, we cannot accept H4a.

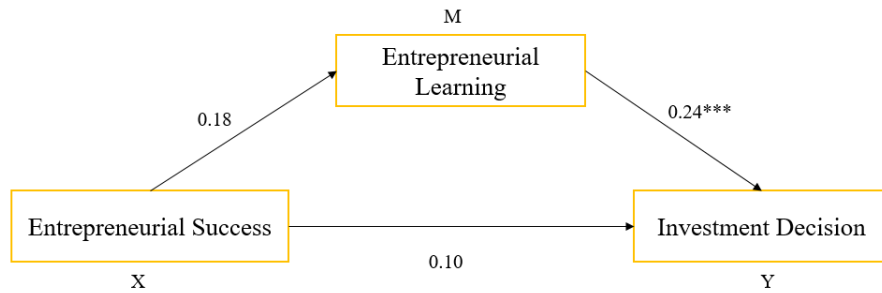


Figure 5: Mediation Effect – Entrepreneurial Success

Moving on to the mediation effect through the entrepreneurial failure, we found that there is no mediation. The effect of failure experience on the learnings (X->M) ($\beta=0.25$, $p=0.11$) is not significant. Nevertheless, the effect of learnings to the investment decision (M->Y) ($\beta=0.26$, $p=0.000$) is significant. The direct effect is not significant ($\beta=-0.12$, $p=0.17$). The Average Causal Mediation Effect (ACME) is 0.06 within 95%CI (-0.19844, 0.17153). Additionally, the percentage of the total effect mediated is 0.29. Therefore, we cannot accept H4b.

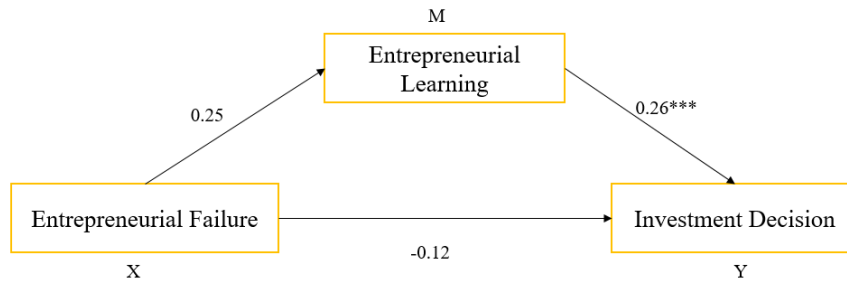


Figure 6: Mediation Effect – Entrepreneurial Failure

Lastly, we tested the mediation effect of entrepreneurial learning for the interaction scenario (both success & failure scenario). In order to perform such a mediation, we run two different models. The first model is with Success as the main predictor/ treatment for the data subset when Failure dummy=0 and the second, with Success as the main predictor/ treatment for data subset when Failure dummy=1. The results revealed no mediation. In more detail, the first model has not a significant effect on the learning outcomes for the entrepreneur (X->M) ($\beta=0.15$, $p=0.54$). In spite of that, the effect of learning on the investment decision is significant (M->Y) ($\beta=0.17$ and $p=0.02$). The direct effect on the investment decision is not statistically significant (X -> Y) with $\beta=0.09$ and $p=0.50$. The Average Causal Mediation Effect (ACME) is 0.28 within 95%CI (-0.06979, 0.14715). Additionally, the percentage of the total effect mediated is 0.15. In the second model, the results are similar. In other words, the effect of learning on the investment decision is significant (M->Y) ($\beta=0.34$ and $p=0.00$). Again, the effect of learning on the investment decision is significant (M->Y) ($\beta=0.34$ and $p=0.000$). The direct effect on the investment decision is not statistically significant (X -> Y) with $\beta=0.09$ and $p=0.50$. The Average Causal Mediation Effect (ACME) is 0.07 within 95%CI (-0.08859, 0.25062). Lastly, the percentage of the total effect mediated is 0.36. Therefore, we cannot conclude there is a mediation between the learning gained through prior success and failure experience, so, we cannot accept H4c.

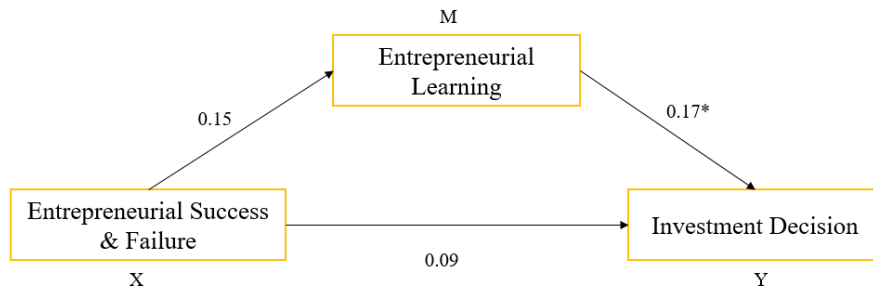


Figure 7: Mediation Effect – Entrepreneurial Success & Failure (First Model)

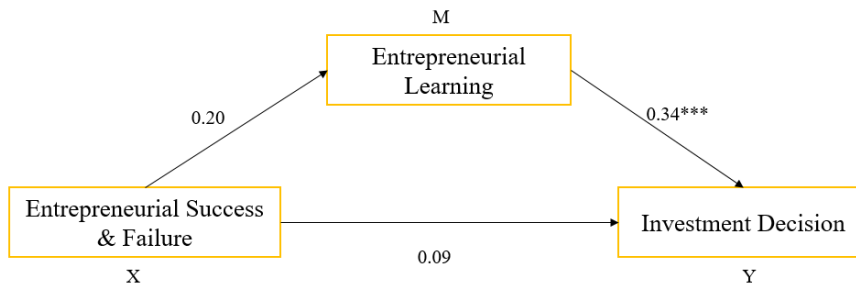


Figure 8: Mediation Effect – Entrepreneurial Success & Failure (Second Model)

Discussion

This research aimed to examine how early-stage investors evaluate an entrepreneur based on his/her prior experience and how the learning effects from prior experiences can shift the investor's perceptions about the investment decision. After our analysis, we concluded significant results, either validating our initial hypothesis or not. The empirical findings are presented in a more detail below:

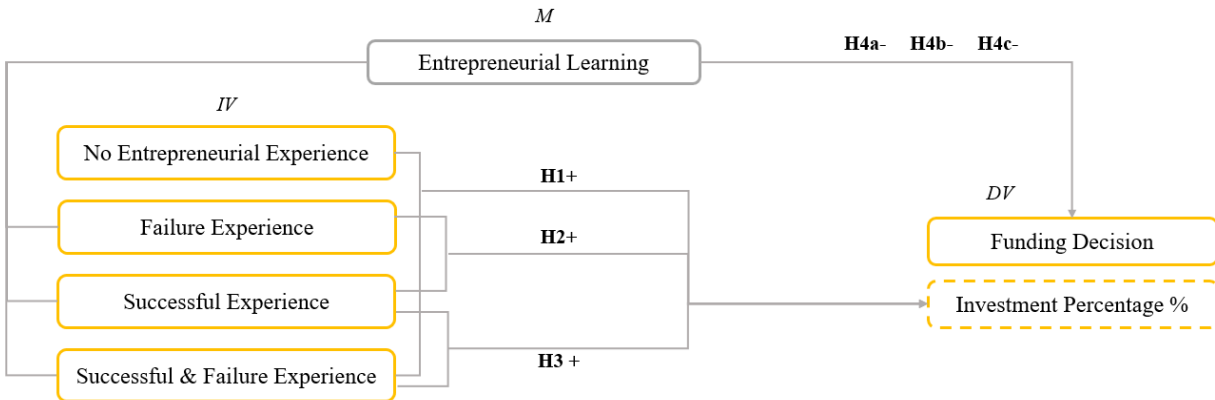


Figure 9: Hypothesis Model Overview

As previously mentioned, the goal of this study was to validate that prior entrepreneurial experience plays a critical role in the perception of the investors and the funding decision process. The differentiation aspect of this research was that the focus was not only on prior success or failure but also on the interplay between those conditions. As a result, the outcomes introduced new insight regarding the preferences between success and failure.

Firstly, we found sufficient evidence in order to accept H1. As expected, we validated that early-stage investors prefer investing more money in experienced entrepreneurs than novice ones. Interestingly, the investor's perceptions are influenced by the experiences of the entrepreneurs, and that is in line with previous literature (Toft-Kehler et al., 2014). That is because entrepreneurs have gained valuable knowledge, skills, and social connection. All of these are elements that investor's value and appreciate when making investment decisions (Zhang, 2011).

Secondly, we also add to the existing literature by validating that entrepreneurs with successes will receive more funding than failure entrepreneurs do (acceptance of H2). The effect of success in funding decisions is substantially more prominent than in the failure scenario. In other words, more people were positively inclined to invest in an entrepreneur with success rather than an entrepreneur with failure, which is aligned with prior research (Shepherd & Zacharakis, 2001). One possible reason is that investors trust an individual with a record of accomplishment (Zacharakis & Meyer, 1998). Therefore are more confident that the investment will be successful and they will make a more significant profit

Thirdly, although our results were not statistically strong to provide evidence that the combined experience (interplay of success & failure) leads to more funding, the descriptive statistics in our research favor that hypothesis, and we can accept H3. Prior literature supports that investors value more a variety of experiences rather than only success (Cope et al., 2004; Macmillan et al., 1987). A combination of experience can strengthen the investor's perception that the entrepreneur has more capabilities and knowledge of different aspects of the business.

Lastly, we identified some interesting insights about the mediating role of prior entrepreneurial learning. Unfortunately, our research, did not find a significant mediation between prior experience and entrepreneurial learnings for all scenarios. More specifically, we cannot accept H4a, H4b, and H4c. In more detail, in all three scenarios (success, failure, success & failure), the only significant effect was the learning outcomes on the investment decision (M->Y). Our results are in contrast with the existing literature as, according to Politis & Gabrielsson (2009), the entrepreneur gains knowledge from a given experience, and this experience acts as a future asset for them in terms of seeking and receiving funding. Similarly, a study by Minniti & Bygrave (2001) also supports this view and argues that entrepreneurs' knowledge is shaped by a combination of good and bad experiences, influencing investors' perception of them. One reason behind our insignificant result is that our sample was limited, and perhaps the observations were insufficient to grasp the investor's perception fully

Overall, this research was successful and built upon prior work. The findings provided us with important insights into this field of study. Consequently, the purpose of this investigation appears to have been achieved. We discovered a correlation between prior entrepreneurial experience and investment decisions which entrepreneurs, and investors should be aware of this result. Failure and success will always be a part of the entrepreneurial and real life. As Winston Churchill said, "Success is the ability to go from failure to failure without losing your enthusiasm".

Implications

Theoretical Implications

The findings of this research imply a link between the prior entrepreneurial experience and the funding decision for an entrepreneur's future venture. The existing evidence for this relationship is limited (Chen et al., 2009), as the literature focuses on the role of failure in entrepreneurship (Zunino et al., 2021). So far, the majority of studies focus either on prior failures and aim to recognize the impact of failure on both the entrepreneur and his/her future career (Ronstadt, 1988) or on prior success and how these successes are influenced the investor's decision (Gompers et al., 2006). The benefit of this study is that it focuses on investor sense-making (Sandberg & Tsoukas, 2015). The differentiation aspect was the multiple manipulations presented to interpret the investors' different perceptions in a portfolio experiment. The results provide valuable insights into how early-stage investors evaluate a potential entrepreneur based on his/hers prior experiences, successes, or failures. The interplay of success and failure is novel and exciting (Adler, 2000). Valuable new information was provided on how investors interpret diverse entrepreneurial backgrounds differently. Additionally, through this research, we provide a deeper understanding of the potential effect of prior experience on investment judgments and encourage academics to study this effect further.

Practical Implications

The practical implications in this study lay firstly on the entrepreneurs and secondly on the investors. It is crucial to stress the need for entrepreneurial experience to get more funding from early-stage investors. More specifically, we proved that the more experience an entrepreneur has, the better his/her overall profile. The investors pay great attention to the entrepreneur's resume and evaluate how s/he handled past ventures. This signals entrepreneurs not to be afraid to fail and embrace their experience independently of the outcome as the investors evaluate both success and failure. This is not difficult to implement, especially for entrepreneurs with little experience. Interestingly, our experiment was based on a simple CV structure with only one success or failure per scenario. In that respect, entrepreneurs with even

only one entrepreneurial attempt can still benefit from their experience with the aim to receive more funding.

Additionally, the failure or success presentation can still be essential to the final investment decision. As entrepreneurs raise awareness of the importance of their experience, they will also increase their control and influence the investor's impressions. Furthermore, since this study confirms that investors prefer to place a high value on entrepreneurial experience, entrepreneurs should use this information to their advantage by attempting to demonstrate their experience within their presentation. By combining these implications with the decision-making criteria of investors as described in the existing research, entrepreneurs may be able to boost their funding prospects. Moreover, from the investor's point of view, the practical implication is that they should be aware that besides the experience, there are more other aspects that they can rely on their opinion. For example, they should consider the individuals with no entrepreneurial experience and ensure they provide the same opportunities to everyone. Finally, of course, the venture idea and the skills are other crucial factors they consider during the funding evaluation.

Societal Implications

Overall, the societal implication of this research is significant for all the involved stakeholders and, as a sequence, the public. From a broader point of view, the entrepreneurs will be encouraged to pursue new ventures and not be afraid to fail as they will know that what matters is experience. That leads to higher entrepreneurship tiers and, as a result, higher economic growth. It is a common truth that entrepreneurs are essential to market economies because they can act as wheels of economic growth. By developing new products and services, businesses promote new employment, which eventually accelerates economic growth. Lastly, entrepreneurship fosters innovation as through entrepreneurship, we create opportunities, add value, and sustain value growth throughout time. It is well established that in order to innovate, multiple attempts should be performed, as innovation is not an easy predefined process. Therefore, embracing experience in the entrepreneurial context will benefit society in multiple ways.

Limitations and directions for future research

Besides the noteworthy contribution of this survey on a theoretical, practical, and societal level, the study includes several limitations, some of which can be translated into improvements for future research. In the first place, our experimental design has reduced all investment decisions to a single-step procedure. Of course, in the real world, early-stage investors follow a multi-step process (Eckhardt et al., 2006; Mitteness et al., 2012). Therefore, our experiment is not a completely realistic representation. Nevertheless, the results of our study give evidence of the effect of success and failure experience in the funding decision and the funding amount. Future research could examine the multi-stage funding process and analyze how experience influences all aspects of the investment decision process in the later stages. Potential research like this can give further insights to entrepreneurs on how to utilize their experiences and, additionally, how to promote them or present them to investors.

Secondly, another limitation is the investment pitch presented in our experiment. An existing venture inspired the new venture idea in the same funding phase. Of course, the appropriate changes were performed (alterations in names, purpose, markets, etc.). Considering that almost half of the responders answered negatively about the investment decision, we should also consider how appealing the pitch deck to the participants was. A suggestion can be that future research can use a venture idea that is undoubtedly appealing and attractive to the majority of early-stage investors, for example, a prior venture that was indeed a success. In that way, the manipulations can have more effect independently of the venture idea.

Thirdly, a limitation of our research is that the participants were all from Europe, and the sample size was limited. Therefore, our results perhaps represent the European market investors' perception. Future research could include a more diverse pool of investors from different markets. In that way, the outcomes would be broader and could be generalized for a more significant sample of investors. Lastly, a final suggestion for future research could be to use a larger population sample of investors in combination with the different geographies.

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