



# The Realities of Learning through Failure in Entrepreneurship: Results of Qualitative Research

**Nizar Mtibaa\*, Sami Boudabbous**

Governance, Finance and Accounting, Faculty of Economic Sciences and Management of Sfax, University of Sfax, Tunisia.

\*Email: [nizar.mtibaa@isgis.usf.tn](mailto:nizar.mtibaa@isgis.usf.tn)

**Received:** 02 January 2023

**Accepted:** 05 March 2023

**DOI:** <https://doi.org/10.32479/irmm.14239>

## ABSTRACT

In this research work, we sought to conceptualize the existing relationship between entrepreneurial learning and failure. By exploring the theoretical models of entrepreneurial learning, particularly those of Cope (2005) and Politis (2005), we identified three major research proposals that we confronted with reality by conducting an exploratory qualitative study with 10 Tunisian entrepreneurs who had experienced failure during their entrepreneurial activity. Through this study, we retained that failure constitutes an opportunity for entrepreneurial learning that manifests itself as a continuous process where the emotions of the entrepreneur play an important role. This learning depends on the nature of the failure, the emotions and the emotional regulators.

**Keywords:** Entrepreneurial Learning, Entrepreneurial Failure, Entrepreneurial Learning through Failure, Emotions

**JEL Classifications:** L26

## 1. INTRODUCTION

Hmida (2021); Seckler et al. (2017); Lattacher and Wdowiak (2020); Schwab et al. (2022) consider entrepreneurship as a remedy to the economic problems that countries are experiencing. Several authors, including Pinto (2013); Oberoi et al. (2022); Kim et al. (2020); Amankwah-Amoah et al. (2019), in addition to the European Commission (2007), have highlighted the role that entrepreneurship plays in the economic growth of a country. In the same sense, Bachiri (2016); Toumi and Smida (2018); Besra and Rahman (2020); Par sanejad et al. (2019) argue that entrepreneurship is a real economic and social phenomenon. Pinto (2013, p. 102) on the other hand, highlights the importance of entrepreneurship for countries that were able to escape the 2008 financial crisis.

However, it should be noted that the reality is quite different since companies often face difficulties (Rezaee et al., 2021). Note in this sense, as Fang he et al. (2017); Van Trang et al. (2019) and Safari and Das (2022), that entrepreneurial activity is unstable and risky

in nature and often lead firms to failure. Indeed, it is well known that several major entrepreneurial clusters experience thousands of business disappearances every day (Amankwah- Amoah et al., 2022; Yousafzai et al., 2020; Lin et al., 2019). Also, we will have to quote Leger-Jarniou, (2013) and, Pan et al. (2022), for whom learning from failure is one of the greatest lessons of the philosophy of these large entrepreneurial clusters. Hmida (2021) adds that in Tunisia, entrepreneurship is not immune to failure, being often associated with risk-taking, and therefore with a high probability of failure.

This prompted us to explore this topic and to ask ourselves how failure can be a vehicle for entrepreneurial learning. This will be our research question.

This approach will be articulated around two sections. The first will be a review of the literature on entrepreneurial learning through failure. The second section will be devoted to the presentation and interpretation of our results. We conclude with a general conclusion

in which we present the main lessons learned from this work, as well as future research perspectives.

## 2. REVIEW OF THE LITERATURE

Throughout this section, we will discuss the theoretical approaches used to study entrepreneurial learning through failure, and then present the definitions of the key concepts: entrepreneurial learning and entrepreneurial failure. We end by highlighting the process of entrepreneurial learning through failure.

In this research, and to answer our research problem, we will rely on two theories mobilized by Kolb (1984), and by Corbett (2005) and Cope (2011), considered as the authors of entrepreneurial learning. These are the experiential learning theory and the transformational learning theory.

Indeed, Kolb (1984) suggests that three mechanisms come into play for learning to take place: a mechanism of experimentation, another of transformation and a last one of socialization. Corbett (2005) and Cope (2011) add that research on entrepreneurial learning is based primarily on experiential and transformative learning theories.

In the first theory, the experiential theory, the emphasis is placed on experience in the learning process (Kong et al., 2020). In this sense, Cope (2005) maintains that the knowledge produced refers to a continuous modification of the reference schemas previously constructed by the individual. It is therefore a matter of learning at an individual level that requires the involvement and interaction of the individual with his environment (Montiel-Campos, 2022). According to Ngijol (2013, p.60), "It is therefore a theory of learning that couples reflection and action as inseparable elements of the process of increasing knowledge. In this regard, let us note that the work of Kolb (1984) has greatly inspired the contents of experiential learning theory. Indeed, Kolb (1984, 1999), quoted by Corbett (2005), based on a clinical observation, identified four individual learning styles: divergent, assimilative, convergent and accommodating.

Transformational learning is a theory that suggests a type of learning for adults. It was developed by Mezirow (1990).

When the answer to a problem seems impossible, transformational learning is an appropriate solution (Rahman and Amalia, 2020; Crews, 2022; Zunino et al., 2022). Leading to radical change, this learning is considered superior since it is a transformation preceded by a discontinuous sequence of events characterized as crisis (Hao et al., 2021; Westerlund et al., 2020; Hu et al., 2017; Amankwah-Amoah et al., 2018). Thus, and as Duchesne (2010) argues, we can view transformational learning theory as a cognitive process during which problems will be faced by an adult learner in a transformational way. As he or she tries to turn the situation to his or her advantage, new, rich, and better ideas emerge (Walsh and Cunningham, 2017; Othman et al., 2020; Lin and Chou, 2022).

### 2.1. Entrepreneurial Learning

The concept of entrepreneurial learning is so complex that, in the literature, there is a complete lack of consensus on a precise

definition of this phenomenon (Pan et al., 2022; Kong et al., 2020). For Minniti and Bygrave, (2001);

Erdélyi (2010), studies on this concept are at the intersection of research on learning and entrepreneurship. It should be noted, however, that Cope (2003; 2005) has emphasized the importance of learning as an integral part of the entrepreneurial process. Parker (2006) defined entrepreneurial learning in terms of its objectives, types and means of implementation. Rae (2000), on the other hand, limited himself to the definition of entrepreneurship. For Bagheri and Pihie (2010), entrepreneurial learning constitutes the whole of the knowledge acquired during the two phases of development of the company, pre and post creation. Thus, according to the authors, entrepreneurial learning represents what is learned during the entrepreneurial activity (Rahman et al., 2020; Fisch and Block, 2021; Siebrand and Kruse, 2022; Shepherd and Patzelt, 2017), but this point of view has been strongly criticized by many authors such as Gartner (1985), and Bygrave and Hofer (1991), for whom, entrepreneurial learning is the set of knowledge acquired by the entrepreneur only at the time of the creation of a company (Pittaway and Cope, 2007). Admittedly, we have noted a number of discrepancies in the definitions of these different authors (D'Acunto et al., 2018; Chapman and Phillips, 2022). However, they are all based on the idea that entrepreneurial learning is at the heart of entrepreneurial activity (Kindermann et al., 2022). For their part, Wang and Chugh, (2014) consider that entrepreneurial learning results in a change in old ideas or attitudes or an adoption of new knowledge or behavior. Therefore, entrepreneurial learning is not only presented as a process of creating new knowledge, but also encompasses the acquisition of skills that can help the entrepreneur in his or her activity (Ferreto et al., 2018; Dias and Martens, 2019). Certainly, Minniti and Bygrave (2001) and Wang and Chugh (2014), agreed on the emergence of the notion of entrepreneurial learning that constitutes a cross between organizational learning and entrepreneurship. Nevertheless, it remains difficult to provide a universal definition for this concept. Nevertheless, we note several common points in the definitions of entrepreneurial learning that we have already cited. Indeed, it is presented as a continuous process that allows for the creation of new knowledge whose objective is to ensure the success of the entrepreneurial project (Zhang et al., 2018; Jenkins, 2022; Omorede, 2021).

### 2.2. Entrepreneurial Failure

In the literature, we note that this concept of entrepreneurial failure is based on three main theories. These are the theory based on resources, the theory of population ecology and the theory of divergence that integrate respectively, according to Khelil (2016), the three dimensions of failure: the voluntaristic dimension, the deterministic and the emotional.

Entrepreneurial failure is, therefore, a difficult concept to define. It is of relative appreciation since it is strongly related to the perception that we can give him (Walsh and Cunningham, 2017; Holienka et al., 2022; Morrison, 2018; Thumiki, 2017). Singh et al. (2007) came close to a number of concepts such as that mortality, discontinuity, insolvency, bankruptcy, closure, failure, inefficiency. To define the entrepreneurial failure, Arasti, (2011) adds that it is a

deficit result, consequence of an anomaly during the entrepreneurial process. For Liao et al. (2009); Rezaee et al. (2021), failure occurs when the entrepreneur decides not to make any more effort for the continuation of the entrepreneurial adventure. Thus, quitting is synonymous with failure, just as selling one's business to avoid bankruptcy constitutes entrepreneurial failure (Arasti, 2011; Yasir and Majid, 2018; Shepherd and Patzelt, 2017; Jung et al., 2022).

Nevertheless, a good number of authors have focused only on the economic and financial aspect, to define the entrepreneurial failure, using the term "bankruptcy" to define it (Arasti, 2011; Ucbasaran et al., 2013; Amenta and Stagnaro, 2022; Patzelt et al., 2021; Kollmann et al., 2017; Ferreto et al., 2018). Other authors, such as Cannon and Edmonson (2005), McGrath (1999), Singh et al. (2007), Smida and Khelil (2010), Ucbasaran et al. (2013), Hephherd and Patzelt (2017), Li et al. (2021), and Chapman and Phillips (2022) have simply dismissed this view of failure as too simplistic to define this entrepreneurial failure. "Insofar as it amounts to considering the entrepreneur as a fallen hero because guilty and to simplify a complex reality" (Philippart, 2017, p. 14). In the same sense, Ucbasaran et al. (2013); Li and Chen (2021); Engel et al. (2021), and Montiel-Campos (2022) argue that the term entrepreneurial failure goes beyond the economic aspect (failure), but takes into account the gap between the set objectives and the results (inefficiency). Wennberg et al. (2010) add that the bankruptcy is not the only reason that forces the entrepreneur to leave his company, and put forward the personal expectations of entrepreneurs.

As far as we are concerned, and taking into account this plurality of definitions proposed above, we have opted for our empirical investigation to adhere to the approach that assumes that entrepreneurial failure is not limited only to the simple notion of bankruptcy, and takes into account other aspects such as entrepreneurial dissatisfaction, abandonment or even failure to meet deadlines in the realization of a project (De Hoe and Janssen, 2016; Lin and Chou, 2022; Zhang et al., 2019).

### 2.3. Entrepreneurial Learning through Failure

We can consider, as Shepherd (2003), that entrepreneurial learning through failure corresponds to the entrepreneur's ability to detect the causes of failure and to exploit his or her knowledge. It is then a dynamic process of knowledge construction, preceded by the two mechanisms of collecting and interpreting information (De Hoe and Janssen, 2015; Amankwah-Amoah et al., 2019; Schwab et al., 2022).

To understand the phenomenon of entrepreneurial learning, several theoretical models have been developed (Lin and Chou, 2022; Eklund et al., 2020; Walsh and Cunningham, 2017). For our purposes, we have chosen to focus on the two most commonly used models in the academic literature. These are Cope's (2005) and Politis' (2005) models.

For Cope (2005), there are three dynamic temporal phases for an entrepreneur's learning. The first is the one that precedes the creation of the enterprise. It is a long journey during which the entrepreneur builds his or her knowledge capital (Amankwah-

Amoah et al., 2018; Lattacher and Wdowiak, 2020). The second phase takes place when the business is actually created. Learning is then presented as a dynamic process that takes place in parallel with the entrepreneurial activity. The third phase is accomplished following failure. These three phases are conducive to double-loop or generative transformational learning; emphasizing that each type of learning has its own set of characteristics (Schwab et al., 2022; Kroeger and Wright, 2021; Greenhill, 2019). For Politis (2005), there is a link between the success (or failure) of an entrepreneur and the results of previous events that have a definite impact on the entrepreneur's future choices. The latter tends to reproduce the same actions responsible for his success while trying to adjust them according to the context. In the case of failure, the entrepreneur will seek to identify the reasons for his or her failure in order to avoid repeating them in the future (Simmons et al., 2019; Rezaee et al., 2021; Wilson and Perepelkin, 2022). In any case, success as well as failure are considered as learning stimulators since they trigger the transformational process that generates new knowledge (Villanueva and Martins, 2022; Williams et al., 2020; Ng and Jenkins, 2018). For Byrne and Shepherd (2015); Amankwah-Amoah et al., (2019), the consequences of failure are negative on the entrepreneur. They manifest themselves in the form of psychological, economic, and social costs. Cope (2011) adds that learning can be paralyzed by the negative emotions that emerge as a result of the consequences of failure costs. For their part, Walsh and Cunningham (2017); Dias and Martens (2019); D'Acunto et al. (2018); Fisch and Block (2021), and Whitbeck and Gerasymenko (2022) argue that entrepreneurs who do not take responsibility for their failures and seek to attribute them to external causes, will not be able to learn from their failure.

In any case, the literature reveals three research propositions:

- Failure is a vehicle for entrepreneurial learning
- Negative emotions paralyze entrepreneurial learning through failure.
- An internal attribution of failure is necessary for learning

In what follows, an empirical exploration will allow us to deepen these ideas.

## 3. RESEARCH METHODOLOGY

Our objective is to understand the phenomenon of entrepreneurial learning through failure in Tunisia, through exploration. To do this, we have chosen to use a qualitative methodology. We will present, in what follows, the characteristics of the sample. We will talk about the data collection and finally proceed to the analysis of the collected data.

It should be noted that in order to provide elements of an answer to our research problem, we conducted a qualitative exploratory study, especially since research on entrepreneurial learning through failure remains at an embryonic stage (De Hoe and Janssen 2016; Siebrand and Kruse, 2022; Yousafzai et al., 2020). Furthermore, and according to Cusin and Maymo (2016), the stigma of failure makes the topic difficult to address, necessitating a qualitative exploration.

### 3.1. Characteristics of the Sample

Our study focuses on small entrepreneurs who have experienced failure during their entrepreneurial journey. Small entrepreneurs are, indeed, more vulnerable to failure. Also, according to Hmida (2021), Tunisia is experiencing a rise in growth of small entrepreneurs, which explains the choice to conduct a study on small Tunisian entrepreneurs. Our sample is composed of 10 Tunisian entrepreneurs (Table 1).

### 3.2. Data Collection

For our investigation, we chose the semi-structured interview technique to conduct interviews with our sample. Blanchet and Gotman, (2007, p. 59) consider that “it is a matter of letting the interviewee express himself as freely as possible while taking up the significant points.” To reach the individuals in our sample, we used our informal networks to contact and set up appointments with the entrepreneurs. The interviews took place in a variety of spaces: offices, cafeterias and the entrepreneur’s home. Each interview lasted an average of one hour, during which time we used the Tunisian dialect to avoid any ambiguity and to ensure that the questions we asked were understood.

### 3.3. Content Analysis

Content analysis was chosen to analyze the responses collected. In this sense, Bardin, (2013, p.93) argues that “the use of qualitative content analysis to take advantage of a so-called qualitative material is essential survey interview, psychotherapy....giving rise to a rich and complex verbal material.”

## 4. INTERPRETATION OF THE RESULTS

In what follows, we will proceed to the analysis and interpretation of the information we have collected based on the matrices of Miles and Huberman (2003).

### 4.1. Entrepreneurial Learning through Failure

It is important to note that there are different types of entrepreneurial learning, such as learning from oneself, learning

from the environment and learning from the company and its management.

#### 4.1.1. Learning from oneself

This type of learning has three categories of learning: learning about one’s strengths and weaknesses, learning about one’s goals and interests, and a third that is part of personal development.

##### 4.1.1.1. Strengths and weaknesses

Generally, practice allows the entrepreneur to test his or her skills and to deal with a crisis situation. Nonetheless, failure offers the entrepreneur an opportunity to experience a situation that cannot be taught otherwise (Fisch and Block, 2021; Zhu, 2022). In this sense, one entrepreneur states: “No theory can tell us what failure is.” Let us note, moreover, that almost all of the entrepreneurs we interviewed stated that they discovered qualities in themselves that they could never otherwise explore. They maintained that failure allowed them to strengthen their self-image. One interviewee even said, “You become bolder and have more energy.” Another added; “During the hard times, I was made to work hard and be punctual, something I didn’t do before and thought I could never do.”

In any case, failure is an opportunity to test one’s abilities, and gives the entrepreneur the chance to identify and adjust his or her goals and interests according to the situation (Yousafzai et al., 2020; D’Acunto et al., 2018). One of our interviewees argued in this sense: “Besides this has sown in me the desire to learn more and evolve.”

On the other hand, failure teaches one to behave better, to be patient, to be responsible and more optimistic.

Indeed, in entrepreneurship success is not a given. Consequently, it is up to the entrepreneur to be patient in order to reach his or her goal (Toumi and Smida, 2018; Kim et al., 2021). Very often, the entrepreneur considers that the abandonment of the project more beneficial as it allows them to avoid stress and risk taking (Morrison, 2018).

**Table 1: Classification of the sample**

Number	Age	Type	Degree/level of study	Company data
E1	36	F	No diploma	Sector: textile; Company: a small sewing workshop; Employees: 1
E2	34	F	Baccalaureate level	Sector: food industry; Company: a small workshop of traditional confectionery with two points of sale in Tunis; Employees: 10
E3	36	F	Research Master In management	Sector: sports; Company: a sports hall; Employees: 5
E4	45	F	No diploma	Sector: textile; Company: one Small sewing workshop; Employees: 2
E5	36	F	Professor Dephilosophie	Sector: Education; Company: kindergarten and school day care Employees: 13
E6	25	H	Licensed In management	Sector: commercial; Company: hardware store; Employees: 5
E7	54	H	Agricultural engineer	Sector: food industry; Company: oil production and packaging plant olive oil; Employees: 40
E8	36	H	Thésard	Sector: Artistic; Company: Conservatory of Music
E9	27	F	Professional training	Sector: Services Company: hairdressing; Employees: two
E10	40	H	Engineer In computer science	Sector: Technology of Communication



In all cases, and for our interviewees, patience is a form of resistance. One of our interviewees maintains that “Patience is best learned at a difficult time.” Another adds: “I have learned to be patient;” a third retorts: “You have to be patient and never give up, go to the end of your dreams because the beginning of each project is always difficult, it is normal.”

With respect to accountability, it is important to note that failures are not given importance after a success, whereas failure provides palpable evidence of the presence of some anomaly (Holiienka et al., 2022; Rezaee et al., 2021). Nevertheless, the entrepreneur must accept the consequences of his or her choices and assume responsibility for failure; this is likely to help him or her behave in a more mature and objective manner (Chua, 2022; Boso et al., 2019). Hence its importance. “Failure makes us more responsible, we learn to take responsibility for our choices,” says one of our interviewees.

In terms of optimism, it must be said that learning to be optimistic is learning to see the bright side of things (Walsh and Cunningham, 2017; Parsanejad et al., 2019; Lin and Chou, 2022). Indeed, optimism prevents the entrepreneur from the idea of focusing solely on failure to find solutions and keep moving forward: “Failure makes you strong, solid, allows you to learn to stay optimistic despite problems so you can move forward.”

#### 4.1.1.2. Learning from the environment

Let us remember that the Tunisian market has specificities that only failure allows to understand the way this market works and to acquire the necessary social know-how. In all cases, failure allows entrepreneurs to acquire knowledge and skills to manage their relational network (Oberoi et al., 2022; Cacciotti et al., 2020; Wyrwich et al., 2019). For them, the failure represented an opportunity to be able to integrate into a professional relational network. “During the difficult time I decided to be upfront with my clients and I was surprised to find a lot of support and sympathy from them,” said one interviewee. Another added: “I understood how the market works in Tunisia, how to establish contacts with customers and suppliers, I learned how to negotiate with them” or: “Socially, I learned how to manage my relationships with customers.”

#### 4.1.1.3. Learning from the company

It is about gathering the necessary knowledge about the strengths and weaknesses of the company and its needs (Kong et al., 2020; Amenta and Stagnaro, 2022). One of our interviewees states, “After the difficult times, I understood that to succeed, you have to know yourself well and know your limits, I was more realistic I was able to assess my value in the market, I made sacrifices with very low prices compared to the market, that’s what allowed me to get by, it’s good to dream but you always have to keep your feet on the ground;” another adds: “You have to know that a project is not a sum of money that you are going to earn, on the contrary it is an expense. You also have to know that returns are not always stable. You also have to realize that you are always faced with difficulties.”

#### 4.1.2. Learn to manage

Management is a problem for some entrepreneurs in our sample. It generally represents the cause of their failure, which pushes

them to revise their managerial choices to avoid these failures and to manage their budgets and time better. From this point of view, failure constitutes an opportunity to acquire managerial knowledge (Li et al., 2021; Thumiki, 2017; Kong et al., 2020; Oberoi et al., 2022). In this sense, one interviewee argues, “Especially I will not have a partner anymore, I absolutely need to find someone to take care of the managerial aspect, because I am finally convinced that hiring a manager is not a choice it is a necessity especially since I just discovered that I am not a good manager specifically money management).”

## 4.2. Emotional Regulators

The intensity of the negative emotion that emerges following an entrepreneurial failure varies from one entrepreneur to another. To overcome this situation, the entrepreneur relies on emotional regulators that act as triggers for positive emotions (Toumi and Smida, 2018; Hu et al., 2017b). These are often classified into three types: faith, addiction to extreme situations, and mithridatization.

### 4.2.1. Faith

Several researchers have highlighted the importance of the spiritual aspect in the professional world as it provides mental comfort and satisfaction to employees (Lattacher and Wdowiak, 2020; Pan et al., 2022). Nevertheless, the literature has made a distinction between the notion of spirituality and that of religion. For Antal and Frémeaux (2013), one has an affective aspect that is intimate to the individual, and the other takes on the role of a guide and directs his or her behavior, it is more explicit.

On this question of faith, one respondent said: “You have to believe in God and in yourself...you have to love because if you love what you do you will always find a way out sooner or later. “Another added: “But I believe in God. Sometimes God takes one thing and gives you another,” you have to be patient.

Note that in difficult times, every person has a support on which he or she can rely to be able to get through (Schwab et al., 2022; Ha and Park, 2021; Morrison, 2018). Some entrepreneurs interviewed used the term faith in god several times for faith in god allows them to stay strong, resilient and face difficulties. Since, for them, everything happens by the will of god and that success is, certainly, the fruit of their work, but also of the will of god. It should also be noted that risk-taking is considered an addiction to extreme situations. Indeed, a good number of authors have cited the notion of risk-taking to define entrepreneurship. For them, entrepreneurship means facing a hostile environment (Kong et al., 2020; Schwab et al., 2022; Zheng et al., 2022).

Thus, an entrepreneur who works under these conditions is a person who has the ability to accept uncertainty (Filon, 1997 p. 5). “The entrepreneur is above all a risk taker since he invests his own money.”

Among our interviewees, only one entrepreneur declared that he was not willing to take risks. He says he finds pleasure in taking on challenges. For him, these situations represent an opportunity to test his abilities and to try to exceed his limits. For the sake of adventure, he very often opts for the riskiest choices. This taste for

adventure provides him with the strength and solidity necessary to continue working. His refusal of routine leads him to accept difficulties and to enjoy facing them. “But it’s always better to be able to bounce back from failure.” He adds: “What helped me was my personality, I like to take risks, I hate routine, and above all I like what I do....I sometimes refused promoter contracts because it became routine.”

#### 4.2.2. The mithridatization

It is a technique that consists of facing fear instead of running away from it. The objective is to acquire a certain immunity that allows the individual to face unpredictable situations. This technique is generally used by police officers to face their fear.

In any case, for many entrepreneurs, failure leads to success (Wilson and Perepelkin, 2022; Kroeger and Wright, 2021; Ha and Park, 2021; Dias and Martens, 2019). Thus, it becomes imperative for them to confront and learn to better manage it. Thus, an entrepreneur who is aware of the mithridatization goods of a failure manages better than others to overcome his fear and thus regulate his emotions. “One must fail.” “You can’t be successful without failure, you have to face it or you won’t evolve”. “You have to adapt because it’s everyday life, every day you find difficulties.”

#### 4.2.3. The passion

According to the literature, it is an individual’s sense of commitment to his or her work. This commitment involves three variables. First, the affective aspect, which represents the love for this activity, then the time and finally the energy.

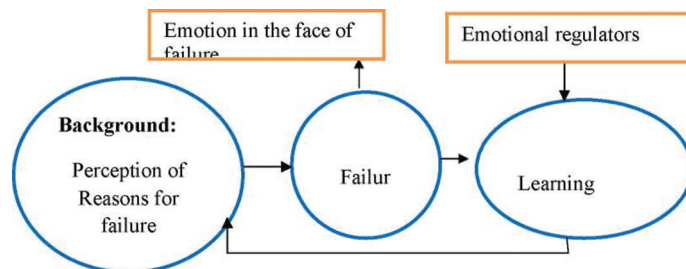
For many researchers, the passionate man is a man who has managed to build some balance between his passion and his private life (Van Trang et al., 2019; Zhang et al., 2018; Schwab et al., 2022). Finding time and energy for one’s work is not necessarily synonymous with passion; passionate people are beings who seek to engage in an activity that gives them pleasure despite the results. Generally, passionate people are not obsessed with success. This is likely to motivate them to work even in difficult times (Lemoine, 2023; Cacciotti et al., 2020; Dias and Martens, 2019).

In our research, we found that, according to the entrepreneurs we interviewed, passion is a reason for success. In this sense, one entrepreneur said: “It is a passion for me, the love of my work has pushed me to continue and to be patient.” A second added: “You have to love it if you don’t love it, so why do I spend sleepless nights working?”

### 4.3. Proposed Models of Entrepreneurial Learning through Failure

- Proposition 1: Through our empirical approach, we have highlighted a concordance between the nature of entrepreneurial learning and the cause of failure. The entrepreneurs interviewed mentioned that failure was an entrepreneurial learning opportunity for them. This proposition corroborates that of Cardon and McGrath (1999). It has been confirmed.
- Proposition 2: According to the literature, learning through failure requires a certain ability to control one’s emotions on the part of the entrepreneur. In our approach, we identified

**Figure 1:** Entrepreneurial learning through failure



certain elements that can play the role of emotional regulators by generating positive emotions that can mitigate the negative effect of failure. This proposal has been confirmed. It is consistent with the idea of De Hoe and Janssen (2014).

- Proposition 3: According to the literature, if the causes of failure emanate from the entrepreneur’s environment, then the probability of learning from failure is low. The entrepreneur will project his failure onto external factors, and will not modify his behavior, whereas, in the opposite case, he will try to identify and analyze closely the causes of his failure. The study we conducted pointed to the presence of learning through failure among entrepreneurs who attributed their failures to external causes. This proposition has been refuted.

The exploratory study we conducted with a sample of entrepreneurs allowed us to identify the nature of the learning acquired following a failure. The resilience of entrepreneurs to failure gives an unconscious character to this learning. Our approach revealed that failure generates emotional reactions in the entrepreneur who relies on emotional regulators to learn from failure (Figure 1).

## 5. CONCLUSION

In an interaction between organizational learning and entrepreneurship is entrepreneurial learning, which, according to the literature, corresponds to a continuous process of knowledge creation.

We have emphasized the role of emotion in the entrepreneurial learning process through failure, since in order to learn from failure, the entrepreneur must master negative emotions.

In any case, in this research work, we have taken as our objective to help demonstrate the nature of the links between failure and entrepreneurial learning. The choice of a particular research field constitutes the main empirical contribution of this research. Indeed, being in a post-revolutionary phase, Tunisia lives in a critical context making companies more vulnerable to failure.

We have been able to demonstrate, through this approach, that failure is an emotionally rich experience, especially for female entrepreneurs. We have also put forward that in order for there to be an entrepreneurial learning process, it is necessary to attenuate the intensity of negative emotions, thanks to emotional regulators such as faith, addiction to extreme situations and mithridatization.

Nevertheless, this research work would benefit from being more dense if variables such as emotional intelligence, risk-taking or life skills were added to our research problem in order to elucidate the role they may play in entrepreneurial learning through failure. It would be equally judicious to conduct a comparative study with entrepreneurs from different cultures and genders to look for possible divergences in the nature of the emotional regulators used during the process of entrepreneurial learning through failure.

## REFERENCES

- Amankwah-Amoah, J., Adomako, S., Berko, D.O. (2022), Once bitten, twice shy? The relationship between business failure experience and entrepreneurial collaboration. *Journal of Business Research*, 139, 983-992.
- Amankwah-Amoah, J., Boso, N., Antwi-Agyei, I. (2018), The effects of business failure experience on successive entrepreneurial engagements: An evolutionary phase model. *Group and Organization Management*, 43(4), 648-682.
- Amankwah-Amoah, J., Hinson, R.E., Honyenuga, B., Lu, Y. (2019), Accounting for the transitions after entrepreneurial business failure: An emerging market perspective. *Structural Change and Economic Dynamics*, 50, 148-158.
- Amenta, C., Stagnaro, C. (2022), The failures of the entrepreneurial state: Subsidies to renewable energies in Europe. In: *Questioning the Entrepreneurial State*. Cham: Springer. p233-250.
- Antal, A.B., Fremeaux, S. (2013), Don gratuit et spiritualite au travail, sens travail, trois theories pour un management non instrumental du travail. *Revue Interdisciplinaire Management, Homme and Entreprise*, 8(4), 3-18.
- Arasti, Z. (2011), An empirical study on the causes of business failure in Iranian context. *African Journal of Business Management*, 5(17), 7488-7498.
- Bachiri, M. (2016), Les determinants de l'intention entrepreneuriale des etudiants, quels enseignements pour l'universite marocaine ? *Management and Avenir*, 7(89), 109-127.
- Bagheri, A., Pihie, Z.A.L. (2010), Entrepreneurial leadership learning: In search of missing links. *Social and Behavior Sciences*, 7, 470-479.
- Bardin, L. (2013), *L'Analyse de contenu*. Quadrigemanuels. Paris: Presses Universitaires de France.
- Bellihi, H., El Agy, M. (2014), Le risque d'echec entrepreneurial: Crise individuelle prelude de crise collective. *Essai d'exploration des facteurs et des effets critiques*. *Revue De Gestion Et D'Economie Automne*, 1(2), 1-12.
- Besra, E., Rahman, H. (2020), How do we perceive failure? Introducing the integrative model of entrepreneurial failure. In: *Advances in Business, Management and Entrepreneurship*. Boca Raton: CRC Press. pp1006-1014.
- Blanchet, A., Gotman, A. (2007), *L'Entretien Serie L'enquete et ses Methodes*. Paris: Armand Colin.
- Boso, N., Adeleye, I., Donbesuur, F., Gyensare, M. (2019), Do entrepreneurs always benefit from business failure experience? *Journal of Business Research*, 98, 370-379.
- Bygrave, W.D., Hofer, C.W. (1991), Theorizing about entrepreneurship. *Entrepreneurship Theory and Practice*, 16(2), 13-22.
- Byrne, O., Sherphed, D.A. (2015), A different strokes for different folks entrepreneurial narratives of emotion cognition and making sense of business failure. *Entrepreneurship Theory and Practice*, 39(2), 375-405.
- Cacciotti, G., Hayton, J.C., Mitchell, J.R., Allen, D.G. (2020), Entrepreneurial fear of failure: Scale development and validation. *Journal of Business Venturing*, 35(5), 106041.
- Cannon, M.D., Edmondson, A.C. (2005), Failing to learn and learning to fail (intelligently). *Long Range Planning*, 38(3), 299-319.
- Cardon, M.S., McGrath, R.G. (1999), When the Going Gets Tough... toward a Psychology of Entrepreneurial Failure and Re-Motivation. In: *Paper Presented at the Frontiers of Entrepreneurship Research Conference*. United States: Babson College.
- Chapman, P., Phillips, R.A. (2022), Entrepreneurial fear of failure: An international comparison of antecedents and impact on venture creation. *Journal of the International Council for Small Business*, 3(4), 281-291.
- Chua, C. (2022), Successful failure: The marketisation of failure in an entrepreneurial economy. *Journal of Consumer Culture*, 22(3), 711-728.
- Commission Europeenne. (2007), *Surmonter Les Stigmates de la Faillite D'entreprise-Pour une Politique de la Deuxieme Chance*. Bruxelles: Commission Europeenne.
- Cope, J. (2003), Entrepreneurial learning and critical reflection discontinuous events as triggers for higher-level learning. *Management Learning*, 34(4), 429-450.
- Cope, J. (2005), Toward a dynamic learning perspective of entrepreneurship. *Theory and Practice*, 29(4), 373-397.
- Cope, J. (2011), Entrepreneurial learning from failure: An interpretative phenomenological analysis. *Journal of Business Venturing*, 26(6), 604-623.
- Corbett, A.C. (2005), Experiential learning within the process of opportunity identification and exploitation. *Entrepreneurship Theory and Practice*, 29(4), 473-491.
- Crews, M. (2022), *Essays on Entrepreneurial Failure: A Subjective Career Perspective* (Doctoral Dissertation, Rutgers University-Graduate School-Newark).
- Cusin, J., Maymo, M. (2016), Stigmatisation de l'entrepreneur post-faillite et decision de financement du banquier. *Management*, 19(4), 305-329.
- D'Acunto, F., Tate, G., Yang, L. (2018), *Correcting Market Failures in Entrepreneurial Finance*, Working Paper. Massachusetts: National Bureau of Economic Research.
- De Hoe, R., Janssen, F. (2015), *L'echec Entrepreneurial Comme Voie de Succes Futur*. Le Grand Livre de L'economie PME. 2<sup>nd</sup> ed. Issy-Les-Moulineaux, France: Gualino, Lextenso. pp177-195.
- De Hoe, R., Janssen, F. (2016), Le capital psychologique permet-il d'apprendre et de rebondir face a un echec entrepreneurial ? *Management International*, 20(2), 18-28.
- Dias, T.R.F.V., Martens, C.D.P. (2019), Business failure and the dimension of entrepreneurial learning: Study with entrepreneurs of micro and small-sized enterprises. *Revista de Administração da Universidade Federal de Santa Maria*, 12(1), 107-124.
- Duchesne, C. (2010), L'apprentissage par transformation en contexte de formation professionnelle. *Education et Francophonie*, 38(1), 33-50.
- Eklund, J., Levratto, N., Ramello, G.B. (2020), Entrepreneurship and failure: Two sides of the same coin? *Small Business Economics*, 54(2), 373-382.
- Erdelyi, P. (2010), The Matter of Entrepreneurial Learning: A Literature Review. In: *International Conference on Organizational Learning, Knowledge and Capabilities (OLKC)*. Boston, MA, USA: Northeastern University.
- Fangh He, V., Siren, C., Singh, S., Solmon, G., George, S., Von Krogh, G. (2017), Keep calm and carry on: Emotion regulation in entrepreneurs' learning from failure. *Entrepreneurship Theory and Practice*, 33(1), 167-192.
- Ferreto, E., Lafuente, E., Leiva, J.C. (2018), Can entrepreneurial role models alleviate the fear of entrepreneurial failure? *International Journal of Business Environment*, 10(2), 160-173.
- Filion, L.J. (1997), *Le champ de l'entrepreneuriat: Historique, evolution,*



- tendances. *Cahier de recherche n 1997-01. Revue Internationale PME*, 2(10), 130-172.
- Fisch, C., Block, J.H. (2021), How does entrepreneurial failure change an entrepreneur's digital identity? Evidence from twitter data. *Journal of Business Venturing*, 36(1), 106015.
- Gartner, W.B. (1985), A conceptual framework for describing the phenomenon of new venture creation. *Academy of Management Review*, 10(4), 696-706.
- Greenhill, R. (2019), Managed decline, headlong retreat or entrepreneurial failure? British nitrate producers and the withdrawal from Chile, 1920-1930. In: *Capitalists, Business and State-Building in Chile*. Cham: Palgrave Macmillan. pp97-138.
- Ha, K.S., Park, B.J. (2021), A study on the burdens of business failure and entrepreneurial intention. *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 16(1), 87-97.
- Hao, X.L., Liu, Y.R., Du, J.J., Zheng, F. (2021), The formation of fear of failure and its influence on entrepreneurial behavior. *Advances in Psychological Science*, 29(9), 1551.
- Klai, H. (2021), Tunisie: Le besoin d'un nouveau Modèle de Développement. *Revue Française d'Economie et de Gestion*, 2, 11.
- Holienka, M., Suchankova, D., Psenak, P. (2022), Who feels no fear? Exploring the drivers of entrepreneurial fear of failure among non-entrepreneurs in Slovakia. *Central European Business Review*, 11(2), 41-60.
- Hu, R., Mao, Y., Ye, Y. (2017), Dean A. Shepherd, Trenton Williams, Marcus Wolfe: Learning from entrepreneurial failure: Emotions, cognitions, and actions. *International Entrepreneurship and Management Journal*, 13(3), 985-988.
- Hu, Y., Mcnamara, P., Piaskowska, D. (2017), Project suspensions and failures in new product development: Returns for entrepreneurial firms in co-development alliances. *Journal of Product Innovation Management*, 34(1), 35-59.
- Jenkins, A. (2022), Understanding entrepreneurial failure: Conceptualizing failure, taking stock, and broadening the scope of failure research. *Foundations and Trends in Entrepreneurship*, 18(3), 159-211.
- Jung, H., Kim, D., Kim, W. (2022), Entrepreneurial Failure and Reentry: The Role of Prior Financing Experience. In: *Academy of Management Proceedings*. Vol. 2022. Briarcliff Manor, NY: Academy of Management. p15750.
- Khelil, N. (2016), The many faces of entrepreneurial failure: Insights from an empirical taxonomy. *Journal of Business Venturing*, 1, p.72-94.
- Kim, D., Kim, W., Chatterji, A. (2021), When does Entrepreneurial Failure Help the Next Tech-Based Start-Up? In: *Academy of Management Proceedings*. Vol. 2022. Briarcliff Manor, NY: Academy of Management. p14920.
- Kim, N., Lee, J., Kim, D. (2020), The effects of entrepreneurs' failure experience and re-education on subsequent venture: Moderating effect of entrepreneurial motivation. *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 15(2), 33-45.
- Kindermann, B., Schmidt, C.V.H., Pulm, J., Strese, S. (2022), The double-edged sword of entrepreneurial orientation: A configurational perspective on failure in newly public firms. *Entrepreneurship Theory and Practice*, <https://doi.org/10.1177/10422587221111724>
- Kolb, D. (1984), *Experiential Learning*. Englewood Cliffs, NJ: Prentice-Hall.
- Leger-Jarniou, C. (2013), *Le Grand Livre De L'Entrepreneuriat*. Paris: DUNOD.
- Kollmann, T., Stöckmann, C., Kensbock, J.M. (2017), Fear of failure as a mediator of the relationship between obstacles and nascent entrepreneurial activity-an experimental approach. *Journal of Business Venturing*, 32(3), 280-301.
- Kong, F., Zhao, L., Tsai, C.H. (2020), The relationship between entrepreneurial intention and action: The effects of fear of failure and role model. *Frontiers in Psychology*, 11, 229.
- Kroeger, T., Wright, G. (2021), Entrepreneurship and the racial wealth gap: The impact of entrepreneurial success or failure on the wealth mobility of black and white families. *Journal of Economics, Race and Policy*, 4(3), 183-195.
- Lattacher, W., Wdowiak, M.A. (2020), Entrepreneurial learning from failure. A systematic review. *International Journal of Entrepreneurial Behavior and Research*, 26, 1093-1131.
- Lemoine, C. (2023), Motivation, engagement et sens du travail. *Le Journal des Psychologues*, 1, 30-34.
- Li, J., Huang, J., Li, J. (2021), Overview of entrepreneurial failure: From an attributional perspective. *Journal of Investment and Management*, 10(1), 17.
- Liao, J., Welsch, H., Moutray, C. (2009), Start-up resources and entrepreneurial discontinuance: The case of nascent entrepreneurs. *Journal Small Business Strategy*, 19(2), 1-15.
- Lin, M.H., Chou, H.H. (2022), Collapse of better place: A managerial cognition perspective on the failure of an entrepreneurial initiative. *Frontiers in Psychology*, 13, 846434.
- Lin, S., Yamakawa, Y., Li, J. (2019), Emergent learning and change in strategy: Empirical study of Chinese serial entrepreneurs with failure experience. *International Entrepreneurship and Management Journal*, 15(3), 773-792.
- Mcgrath, R.G. (1999), Falling forward: Real options reasoning and entrepreneurial failure. *Academy of Management Review*, 24(1), 13-30.
- Mezirow, J. (1990), How critical reflection triggers transformative learning. In: *Fostering Critical Reflection in Adulthood: A Guide to Transformative and Emancipatory Learning*. San Francisco: Jossey-Bass. pp1-20.
- Miles, M.B., Huberman, M. (1991), *Méthodes en sciences humaines*. In: *Analyse des Données Qualitatives*. Belgium: De Boeck Université.
- Minniti, M., Bygrave, W. (2001), A dynamic model of entrepreneurial learning. *Entrepreneurship Theory and Practice*, 25(3), 5-16.
- Montiel-Campos, H. (2022), Entrepreneurial alertness of founder-managers and the moderating effect of their fear of failure. *Serbian Journal of Management*, 17(2), 289-302.
- Morrison, R. (2018), Entrepreneurial cognition in serial and parallel entrepreneurs: The necessity to segregate success and failure. *Global Journal of Entrepreneurship*, 2(1), 12.
- Ng, L., Jenkins, A.S. (2018), Motivated but not starting: How fear of failure impacts entrepreneurial intentions. *Small Enterprise Research*, 25(2), 152-167.
- Ngijol, J. (2013), Les styles d'apprentissage de l'entrepreneur: Une analyse en termes de dynamique de changement. *RIMHE, Revue Interdisciplinaire Management, Homme and Entreprise*, 1(5), 58-77.
- Oberoi, S., Srivastava, S., Gupta, V.K., Joshi, R., Mehta, A. (2022), Crowd reactions to entrepreneurial failure in rewards-based crowd funding: A psychological contract theory perspective. *Journal of Risk and Financial Management*, 15(7), 300.
- Othman, A., Ng, W.K., Mohamad, N. (2020), Factors of entrepreneurial personality characteristics on business failure of SMEs. *International Journal of Human and Technology Interaction (IJHATI)*, 4(2), 23-30.
- Pan, L.Y., Tsai, I.C., Popan, S.H., Chang, S.C. (2022), Entrepreneurial business start-ups and entrepreneurial failure: How to stand up after a fall? *Frontiers in Psychology*, 13, 943328.
- Parker, S.C. (2006), Learning about the unknown: How fast do entrepreneurs adjust their beliefs? *Journal of Business Venturing*, 21(1), 1-26.
- Parsanejad, M., Mostafa, R.S., Oroutan, Z. (2019), Integrated modeling of entrepreneurial failure antecedents and its financial, social and psychological consequences. *Journal of Entrepreneurship Development*, 12(1), 41-59.
- Patzelt, H., Gartzia, L., Wolfe, M.T., Shepherd, D.A. (2021), Managing



- negative emotions from entrepreneurial project failure: When and how does supportive leadership help employees? *Journal of Business Venturing*, 36(5), 106129.
- Philippart, P. (2017), L'accompagnement de l'entrepreneur en difficulté: Questions autour d'un phénomène complexe. *Projectics/Projectica/Projectique*, 16(1), 11-29.
- Pinto, D. (2013), *Le Choc Des Capitalismes, Comment Nous Avons Ete Depossedes de Notregenie Entrepreneurial et Comment le Reinventer*. Paris: Odile Jacob.
- Pittaway, L., Cope, J. (2007), Entrepreneurship education: A systematic review of the evidence. *International Small Business Journal*, 25(5), 477-506.
- Politis, D. (2005), The process of entrepreneurial learning: A conceptual framework. *Entrepreneurship Theory and Practice*, 29(4), 399-424.
- Rae, D. (2000), Understanding entrepreneurial learning: A question of how? *International Journal of Entrepreneurial Behaviour and Research*, 6(3), 145-159.
- Rahman, H., Besra, E., Nurhayati, N. (2020), Too much passion kills you? The evidence of individuals' passion in entrepreneurial failure. *Asia Pacific Management and Business Application*, 8(3), 239-254.
- Rahman, H., Amalia, S. (2020), Narcissism, entrepreneurial learning and entrepreneurial failure. *Jurnal Dinamika Manajemen*, 11(2), 139-153.
- Rezaee, B., Naderi, N., Soleimani, M., Bahrami Nia, B., Rostami, S. (2021), Effectiveness of entrepreneurial inspirational stories (success and failure) on entrepreneurial intention. *Karafan Quarterly Scientific Journal*, 19, 163-186.
- Safari, A., Das, A. (2022), Entrepreneurial failure analysis using quality management approaches. *Total Quality Management and Business Excellence*, 34, 1-26.
- Schwab, A., Parhankangas, A., Gang, H. (2022), Impact of Age and Gender on Entrepreneurial Self-Efficacy and Fear of Entrepreneurial Failure. In: *Academy of Management Proceedings*. Vol. 2022. Briarcliff Manor, NY: Academy of Management. p15261.
- Seckler, C., Funken, R., Gielnik, M.M. (2017), Learning from Entrepreneurial Failure: Integrating Emotional, Motivational, and Cognitive Factors. In: *Autonomous Learning in the Workplace*. England: Routledge. pp54-77.
- Shepherd, D.A. (2003), Learning from business failure: Propositions of grief recovery for the self-employed. *Academy of Management Review*, 28(2), 318-328.
- Shepherd, D.A., Patzelt, H. (2017), *Researching entrepreneurial failures*. In: *Trailblazing in Entrepreneurship*. Cham: Palgrave Macmillan. pp63-102.
- Siebrand, M., Kruse, S. (2022), Engaged or addicted? Exploring the Effects of Entrepreneurial Fear of Failure on Work Investment. In: *Academy of Management Proceedings*. Vol. 2022. Briarcliff Manor, NY: Academy of Management. p13228.
- Simmons, S.A., Wiklund, J., Levie, J., Bradley, S.W., Sunny, S.A. (2019), Gender gaps and reentry into entrepreneurial ecosystems after business failure. *Small Business Economics*, 53(2), 517-531.
- Singh, S., Corner, P., Pavlovich, K. (2007), Coping with entrepreneurial failure. *Journal of Management and Organization*, 13(4), 331-344.
- Smida, A., Khelil, N. (2010), Repenser l'échec entrepreneurial des petites entreprises émergentes. Proposition d'une typologie s'appuyant sur une approche intégrative. *Revue Internationale P.M.E.*, 23(2), 65-106.
- Thumiki, V.R.R. (2017), Ishikawa (fishbone) analysis for understanding root cause of entrepreneurial failure in sultanate of Oman. *Ahead International Journal of Recent Research Review*, 1, 135-137.
- Toumi, M., Smida, A. (2018), Entrepreneurship education: Understanding the failure of entrepreneurial act for learners. *International Journal of Technology Management and Sustainable Development*, 17(3), 275-294.
- Ucbasaran, D., Shepherd, D.A., Lockett, A., Lyons, J. (2013), Life after business failure: The process and consequences of business failure for entrepreneurs. *Journal of Management*, 39(1), 163-202.
- Van Trang, T., Do, Q.H., Luong, M.H. (2019), Entrepreneurial human capital, role models, and fear of failure and start-up perception of feasibility among adults in Vietnam. *International Journal of Engineering Business Management*, 11, 1847979019873269.
- Villanueva, E., Martins, I. (2022), Overconfidence, fear of failure, risk-taking and entrepreneurial intention: The behavior of undergraduate students. *Tec Empresarial*, 16(3), 16-33.
- Walsh, G.S., Cunningham, J.A. (2017), Regenerative failure and attribution: Examining the underlying processes affecting entrepreneurial learning. *International Journal of Entrepreneurial Behavior and Research*, 23(4), 688-707.
- Wang, C.L., Chugh, H. (2014), Entrepreneurial learning: Past research and future challenges. *International Journal of Management Reviews*, 16(1), 24-26.
- Wennberg, K., Wiklund, J., Detiennet, D.R., Cardon, M.S. (2010), Reconceptualizing entrepreneurial exit: Divergent exit routes and their drivers. *Journal of Business Venturing*, 25(4), 361-375.
- Westerlund, M., Isabelle, D.A., Leminen, S. (2020), A Machine-Learning Analysis of Videos on Entrepreneurial Fear of Failure. In: *ISPIM Conference Proceedings*. United Kingdom: The International Society for Professional Innovation Management. pp1-13.
- Whitbeck, J., Gerasymenko, V. (2022), A Tug of War: Attribution Bias and Problemistic Search in Entrepreneurial Responses to Failure. In: *Academy of Management Proceedings*. Vol. 2022. Briarcliff Manor, NY: Academy of Management. p16954.
- Williams, T.A., Thorgren, S., Lindh, I. (2020), Rising from failure, staying down, or more of the same? An inductive study of entrepreneurial reentry. *Academy of Management Discoveries*, 6(4), 631-662.
- Wilson, G.A., Perepelkin, J. (2022), Failure learning orientation, entrepreneurial orientation, and financial performance among us biotechnology firms. *Journal of Small Business Management*, 60(4), 786-804.
- Wywich, M., Sternberg, R., Stuetzer, M. (2019), Failing role models and the formation of fear of entrepreneurial failure: A study of regional peer effects in German regions. *Journal of Economic Geography*, 19(3), 567-588.
- Yasir, M., Majid, A. (2018), Refining the relationship between entrepreneurial skills and start-up-behavior: The role of fear of failure and age-based self-image. *Pakistan Journal of Commerce and Social Sciences*, 12(3), 710-731.
- Yousafzai, M.T., Mateen, A., Ali, S. (2020), Learning the entrepreneurial craft from narratives of emotional setbacks and failures of serial entrepreneurs. *Journal of Managerial Sciences*, 14, 1-10.
- Zhang, J.J., Groen, A.J., Belousova, O. (2018), Innovation Failure and Innovation Direction Change in Entrepreneurial Firms. In: *Academy of Management Proceedings*. Vol. 2018. Briarcliff Manor, NY: Academy of Management. p11224.
- Zheng, X., Chen, Y., Lu, S.M., Pan, Z.W. (2022), Imprint of first entrepreneurial failure and the imprinting decay. *Studies in Science of Science*, 40(5), 885.
- Zhu, D. (2022), An analysis of the coping strategies of college students after their failure in the entrepreneurial competition. *World Scientific Research Journal*, 8(11), 252-258.
- Zunino, D., Dushnitsky, G., Van Praag, M. (2022), How do investors evaluate past entrepreneurial failure? Unpacking failure due to lack of skill versus bad luck. *Academy of Management Journal*, 65(4), 1083-1109.