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Social Media Impact on Entrepreneurship Intention: Lessons Learned from Business Startups

Panagiotis Mallios

Technical University of Crete, pmallios1@tuc.gr

Leonidas Zampetakis

University of Crete, zampetakis.leonidas@uoc.gr

Vassilis Moustakis

Technical University of Crete, vmoustakis@gmail.com

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Cover Page Footnote

Authors would like to thank all entrepreneurs participated in the research reported herein, for their valuable time.

1. Introduction

Entrepreneurship is one of the most essential elements for economic development, prosperity and overall social change, so understanding the mechanisms that drive someone to initiate a new venture is crucial (Kirkley, 2016; Metallo et al., 2021). Specially, startup entrepreneurship which has got to do with new technologies, rapid scale up and growth, is guided usually by the younger generation who leads the fourth industrial evolution. These “producers of tomorrow” have grown in the social media era and the emerging web 2.0 technology environment, providing great potential in research field of entrepreneurship, since assessing the role and importance of social media could clarify possible ways these media can shape an entrepreneurial mind-set and how startup entrepreneurial intention may evolve.

A startup company -also known as start-up or startup- is described as “*a venture entrepreneur or a business in a starting phrase form, no matter it is a company, a partnership or a temporary organization, which aims at seeking a repeatable and scalable model of business*” (Blank, 2012).¹ Startup definitions tend to be subjective and relative by nature and there is still no general agreement as to what a startup is, as different experts define a startup differently, both among academics and business support institutions and among entrepreneurs themselves (Breschi et al. 2018). Skala (2019), introduces the notion of “spiral definition of a startup” based on the growth of the organization and argues that the criteria for identifying startups depend on the stage of development of the company and vary throughout this development. In general, research on startups is still fragmented, as there is no unified methodology or consistent definition of “startup”. Although there is an expanded blurry meaning, a startup funding cycle and eventually an investment phase or funding round defines a typical growth and development journey (Salamzadeh & Kawamorita, 2015).

Social Media (SM) are recognized as influential tools in our daily lives, affecting individual or group behavior and social attitudes. From an initial source of entertainment, they have gradually evolved into a significant communication and influence tool that accelerates the sharing of information,

¹ The complete article is available in <https://steveblank.com/2012/03/05/search-versus-execute/> [accessed on March 20, 2022)

knowledge and experiences. More and more people are getting involved with them from a young age, making them not just a trend, but undoubtedly a new way of life. As such, they are expected to impact business and the entire entrepreneurial phenomenon too, as the internet started to replace traditional media (Radu & Redien-Collot, 2008). Recent studies in entrepreneurship and SM show the importance of SM for firm performance (Bhimani et al., 2019), opportunity exploitation and knowledge seeking (Muninger et al., 2019), international entrepreneurial orientation (Freixanet et al., 2021) and business model innovation (Zhang & Zhu, 2022), all of which are important elements not only in mature firms, but also in the early stages of firm creation.

However, the relationship between SM and startup entrepreneurial intention has not been well explored. Entrepreneurial intention as an antecedent of actual behavior (Ajzen, 1985; Krueger et al., 2000), is essential and can be educated and guided, by creating public awareness of entrepreneurial outcomes and promoting entrepreneurship as a potential career choice (BarNir et al., 2011; Wongnaa & Seyram, 2014). In this regard, SM could be very useful, as users can create and share content simultaneously and both inspire and be inspired.

A great amount of investment has been put into startups worldwide in the previous years, as they are the leading tool for international economic growth and prosperity. Especially in Europe the number of investments in startups from the beginning of 2015 till the end of 2021 has increased from 1848 to 8397 (+354%).² Likewise, investment in Greek startups is on the rise and startup ecosystem is booming, keeping up the momentum and turning Greece into a major innovation hub in the Southeast Europe.³ More and more Greeks, especially young people, look for innovation, test their ideas and join competitions enhancing the ecosystem, which in turn, remains open and supportive to everyone, turning gradually brain drain into brain gain. Greek startup ecosystem was brought into the spotlight during the financial crisis, and

² According to Statista, available in <https://www.statista.com/statistics/763156/number-of-investments-in-start-ups-in-europe/> [accessed on May 20, 2022]

³ According to FOUND.ATION, available in <https://thefoundation.gr/wp-content/uploads/2021/12/Startups-in-Greece-2021-by-EIT-Digital-and-Foundation.pdf> [accessed on June 18, 2022]

it keeps growing ever since, gaining funding rounds rapidly.⁴ Within the last few years, the startup scene was strengthened with new successes and a lot of balancing out, making Greece home to many aspiring entrepreneurs who are working on promising new ideas and innovative business models. Thus, a new generation of entrepreneurs and startup companies has emerged, that not only directly helped the weak Greek economy during its dark years, but also created a new paradigm and set an example for the years to come.

Meanwhile, the number of SM users worldwide is constantly increasing. Within the last 5 years the global SM usage went up by 49%.⁵ Numerous studies have established that SM are highly integrated into peoples' lives and that many users socialize, exchange advice, use information available to make decisions and eventually play a fundamental role in everyday life (Nasir et al., 2017). Entrepreneurially speaking, many features and utilities of SM are deployed since more and more startup pages, communities and groups come into play organizing events, sessions, threads and other inputs. This has been increased in the previous years and sometimes SM are the only effective way of keeping up the momentum and overall interaction within the ecosystem. Likewise, SM have turned into significant channels for spreading and expanding the Greek startup ecosystem. They act as an information, networking and collaboration space, promoting startup entrepreneurship and providing support to the business ecosystem of Greece. SM started to have a more established role in business life, since more and more key players in the ecosystem are utilizing their intrinsic features.

While startup entrepreneurship is emerging around the world and social media users are increasing, only a few studies concerning SM effects on startup entrepreneurial intentions have been applied so far and research field has great potential.

The purpose of research reported herein is to gain an understanding of the specific factors of SM that current startup entrepreneurs perceive as most notable for shaping their attitudes toward entrepreneurship. This is an important aspect to help policy makers and educators in their strategies and to encourage

⁴ According to Marathon Venture Capital, available in <https://medium.com/marathon-vc/the-greek-startup-industry-investments-and-exits-2010-2018-78910354c5d6> [accessed on May 12, 2022]

⁵ According to Statista, available in <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/> [accessed on June 20, 2022]

future entrepreneurs who may currently be students, to raise their expectations and consider entrepreneurship as a possible career choice. Therefore, we propose a prototypical model combining fundamental theories and examine the impact of SM on startup entrepreneurial intention. Our goal is to identify linkages between SM and entrepreneurial intention and how they can become more effective and useful in promoting startup entrepreneurship. Our main research question is how and in what way SM influences startup entrepreneurship intention. In other words, can SM promote a positive mindset and attitude toward startup entrepreneurship and support entrepreneurial prospects?

This article is organized as follows. First, we present the theoretical background that supports the creation of our model along with the hypotheses to be tested. The next section describes the research methods used, followed by the results and data analysis. We conclude with a discussion of the results, followed by the research implications and limitations.

2. Theoretical background and hypotheses development

Entrepreneurial intention is a key link between entrepreneurs' ideas and attitudes, and consequent entrepreneurial behavior, as explained by Bird (1988):

“The founder's intentions determine the form and direction of an organization at its inception. Subsequent organizational success, development (including written plans), growth and change are based on these intentions, which are elaborated, modified, embodied or transformed. Thus, intentions affect a [...] firm's survival and growth” (p. 442).

We consider that the development of intention is an ongoing process, not a one-time activity. It has to do with the possibility that a startupper will keep on endeavoring and remaining active despite the obstacles and drawbacks. At the same time, he/she will maintain a state of mind, which directs his/her attention and action towards a target behavior, establishing a new business, or to a more encompassing meaning, self-employment.

Principal supporting theories in the context of entrepreneurial intention remain Ajzen's (1985) “theory of planned behavior” and “entrepreneurial event model”, by Shapero and Sokol (1982). These models take under consideration the feasibility and desirability beliefs as common factors in explaining intention.

Perceived feasibility indicates someone's perception regarding his/her ability to actual initiate a business and whether he/she thinks that can or cannot continue the process of setting up such business (Krueger et al., 2000). This is also related to the perception of "self-sufficiency" (Krueger & Brazeal, 1994). Entrepreneurial self-efficacy is defined by an individual's evaluation of his or her ability, as well as how to efficiently operate available resources and opportunities given in order to initiate a business (Godsey & Sebor, 2010). Perceived desirability shows an individual's perception about positive and negative outcomes of commencement of a business (Fayolle, 2005). Previous studies (Liñán et al., 2005, 2011; Zampetakis, 2008; Wang et al., 2011; Giagtz, 2013; Dutta et al., 2015) have identified a positive impact of perceived desirability on entrepreneurial intention.

Hence, the following hypotheses are posited:

H1: Perceived desirability is positively related to entrepreneurial intention.

H2: Perceived feasibility is positively related to entrepreneurial intention.

Nevertheless, not much is known about the effects of SM on an individual's intention to start a new business, as the influences of using SM have rarely been studied, especially in the entrepreneurial context (Ahmad et al., 2018). As Fishbein and Ajzen (1975) assert, perceptions of feasibility and desirability can be both learned and influenced by cultural and social factors. Therefore, SM as a powerful communication tool nowadays can trigger an invasion of culture, as individuals can challenge their own preferences or force others to do the same, by socializing and communicating, leading to direct effects in terms of intention or indirectly through desirability and feasibility (Tang and Chan, 2020). As studies show, entrepreneurial behavior and pro-entrepreneurial attitudes are significantly influenced, by promoting communication with local entrepreneurs (Toledano & Urbano 2008; Mueller, 2011; Eikhof et al., 2013). SM as a dual term that encompasses both social networks and broadcast channels, can have an impact on both perceived feasibility and perceived desirability. Specifically, social media use affects perceived feasibility and ultimately improves entrepreneurship feasibility by increasing the knowledge and provided resources of startup entrepreneurs, as well as promoting self-efficacy and building a type of confidence, based on its social network dimension. In the same vein, SM use

has an impact on perceived desirability and improves the overall perceived desirability for entrepreneurship by showing as a channel of communication (media dimension), that startup entrepreneurs are socially acceptable, highly regarded and ultimately may act as motivational role models. In this way, societies with a high level of general media coverage on successful entrepreneurs might be expected to undergo a higher level of entrepreneurial activity within all phases of the entrepreneurial process.

SM functions and features are emerging and as a result more and more users are joining them. Thus, SM worldwide adoption could be examined under the scope of theories and perceptions of Information Technology (IT) acceptance and adoption models. For the purposes of this research, we use factors from Technology Acceptance Model (TAM) (Davis et al., 1989) and Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003), in order to better understand the influence of SM usage on entrepreneurial intention. Specifically, we extracted *Perceived Ease of use* and *Perceived Usefulness* from TAM, which have both been evaluated in social media context (Heinrichs et al., 2011; George et al., 2014), as well as *Social Norms/Influence* and *Context Credibility/Trust* from TAM and UTAUT extensions, which have also been evaluated in social media context (Brown et al., 2007; Chai et al., 2011; Håkansson & Witmer, 2015). All these factors are analyzed further on.

2.1. Usefulness – Ease of Use

SM use through interaction and networking promotes the transfer of explicit knowledge and provide “know-how” and “know-who”, both of which influence perceptions of desirability and feasibility in entrepreneurship (Minniti, 2005). Moreover, studies show that the usefulness of SM can increase entrepreneurial intentions, by providing information about attainable opportunities, by providing guidance and help, by discovering market needs or by creating encouraging surroundings that foster entrepreneurial outcomes, generating more value (Thijssen & Vernooij, 2007; Park et al., 2017). The actual usefulness of SM regarding entrepreneurship is inferred from the assumptions, what if we didn't have this tool, how worldwide opportunities and ideas would be discovered and spread and how would a potential entrepreneur reach another entrepreneur from the same or different country to get mentoring or even to pursue collaboration? These assumptions are crucial for someone to overcome

the difficulties and obstacles and to consider entrepreneurial involvement an attractive and doable activity. Thus, social media use and benefits derived from them can trigger perception that entrepreneurship is a feasible and desirable career option.

Similarly, to assumptions mentioned for usefulness, there is a unique ability for someone to access key players and resources, which would be otherwise unavailable. Seroka-Stolka and Tomski (2014), argue that utilizing SM may provide access to powerful tools which enable nascent entrepreneurs to track information easily, as they are able to expand to not only national but international contacts as well. In their study, they found significant correlation between SM use and international entrepreneurial intention, showing that online social networking is of vital importance for knowledge access and international business activities. Communication can take place whenever participants have time and online access, making it easier and more convenient and as a result asynchronous communication helps bridge distance and lack of time (Nylander & Rudström, 2011).

Besides, in the initial phase of entrepreneurship with open and dynamic innovation, social networks and communications are supposed to be important components. Digital communities are supposed to be a new way of corroborating social capital, in addition to immediate or traditional social networks -friends, family, coworkers, classmates, teachers and so on- which in turn foster entrepreneurship (Audia & Rider, 2006; Yun et al., 2016). Since SM provide ways to access easily resources, information and knowledge regarding entrepreneurship as well as entrepreneurs themselves, we argue that they favor perceived desirability and feasibility about entrepreneurship.

Based on previous discussion, the following hypotheses are proposed:

H3a: Perceived usefulness of social media use is positively related to perceived desirability.

H3c: Perceived ease of use of social media is positively related to perceived desirability.

H4a: Perceived usefulness of social media use is positively related to perceived feasibility.

H4c: Perceived ease of use of social media is positively related to perceived feasibility.

2.2. Social Influence/Norms – Context Credibility

SM are supposed to be a very important aspect nowadays and, in some cases, it is a supplement next to friends, family, school, university etc. Thus, these digital communities have the chance to create an entrepreneurial culture, which produces knowledge and broad acknowledgment (Dohse & Walter 2012; Andersson & Larsson 2014). This community atmosphere could facilitate entrepreneurial intentions, promote new entrepreneurial activities and help create an entrepreneurial network, which encourages potential entrepreneurs (Davidsson & Wiklund 1997; Mueller, 2006).

It seems that the example of “the important others who have made it” and their story has an inspiring effect and encourages others to initiate their own enterprises. Radu and Loué (2008) suggest that SM may produce role models with great impact on the young generation, fulfilling social and/or family requirements. Furthermore, if the speaker-entrepreneur is pragmatic, the spectator will be more engaged and consequently the effects are greater. As Hindle and Klyver (2007) argue, “stories on successful entrepreneurs are useful because they create role models stimulating people in the society to imitate” (p.14). Therefore, stories of successful entrepreneurs may have an impact on people’s vocational decision, and it might be expected that such stories would encourage more people to engage with entrepreneurial activities. Hence, the random or systematic exposure in SM role models regarding entrepreneurship, may affect someone’s perceived desirability and perceived feasibility of becoming an entrepreneur.

On the other hand, trust is very essential within any group or community and credibility is what everyone looks for. As Håkansson and Witmer (2015) show in their systematic literature review, SM and credibility issues are linked. Reaching reliable information might be a tricky thing in SM world. What a potential entrepreneur thinks about resources and information provided by the “important others” in SM, might be totally different than the actual real world. Chai et al., (2011) argue that a high interaction level in online networks can build and eventually establish credibility within the context. In other words, the more connected and familiar is someone with another person in SM, the more

likely is to get solid and valuable information, which in turn leads to feasible and desirable perceptions about entrepreneurship.

Based on the preceding discussion, the following hypotheses are formed:

H3b: Perceived social influence and norms in social media use are positively related to perceived desirability.

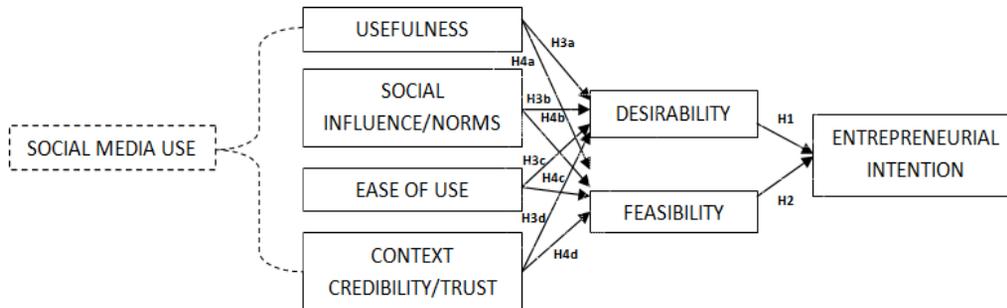
H3d: Perceived context credibility and trust in social media use is positively related to perceived desirability.

H4b: Perceived social influence and norms in social media use are positively related to perceived feasibility.

H4d: Perceived context credibility and trust in social media use is positively related to perceived feasibility.

Based on the discussion above, research framework is presented in Figure 1, along with hypotheses to be tested.

Fig. 1 Research Framework



Note. The framework encompasses the main four social media features, namely: usefulness, social influence, ease of use and trust and links the four features with desirability and feasibility. Desirability and feasibility link to entrepreneurial intention.

3. Methodology

3.1. Sample and data collection

This research was performed in Greece and has to do with the Greek startup ecosystem. At the time of the study, the new official platform-registry for Greek

startups as the ultimate point of reference,⁶ which had been active for just a few months, had recorded around 550-600 startups, with another 350-400 draft applications being under evaluation, making Greece the next major hub in innovation in Southeast Europe.

During the preparation of the research, we gathered information not only from the Greek official platform-registry, but also from every other formal or informal website concerning Greek startups (business incubators, Venture Capital funds, accelerators, training companies, technology parks, organizers of startup competitions), as well as annual electronic startup magazines and private rankings or databases of “startup activists”. In order to reach correct respondents and since many Greek startup companies may have their headquarters abroad, we considered them as Greek only if at least one co-founder was a citizen of Greece, or partially carry out their activities in Greece (e.g., produce software).

We connected through LinkedIn with as many Greek startup founders, co-founders and CEO’s and made a list within which we could track invitations that have been accepted, to whom the survey was sent and to whom the follow-up reminder was sent. At the same time, we joined active startup communities and group pages on Facebook and contacted with incubators and hubs through their social websites, to share the survey and gather information from collaborating startup teams at their early stage and young entrepreneurs working on a project. Thereby, this research should include the largest possible and ultimately, representative sample of respondents throughout the ecosystem.

Even though researchers have familiarity with the startup culture and community jargon, it was crucial to use language understandable for the startup’s founders and co-working teams, for collecting valuable data. Therefore, interviews with 15 startupper were firstly conducted in order to test potential jargon issues and get any final feedback. Then a pilot survey sample was followed, consisted of 28 individuals who participated electronically, being members of a Facebook startup community, to check reliability and validity issues and to identify any potential problems that may arise within the following research procedure. The main survey took place between November 10, 2021 and April 30, 2022. A questionnaire consisting of 30 items was used, covering critical aspects within our framework. Exploratory Factor Analysis (EFA) was

⁶ <https://elevategreece.gov.gr/>

used to test reliability and validity, Confirmatory Factor Analysis (CFA) was used for the measurement model assessment, and Structural Equation Modeling (SEM) was used for the structural model assessment as well as to test initial hypotheses. Regarding statistical analysis, SPSS 21.0 and AMOS 23.0 were used.

3.2. Measures

Participants completed measures of entrepreneurial intention by asking three items (a,b,c) adopted from Liñán and Chen (2009) and one item (d) adopted from Kolvereid and Isaksen (2006), in a 7-point Likert scale:

- a) “I am willing to do whatever it takes for my idea/project/startup”;
- b) “I will make every possible effort to run my idea/project/startup”;
- c) “I am determined to create my own startup”; and
- d) “In one year from now I have the intention to work full time for my idea/project/startup”.

Perceived feasibility (a,b,c) and perceived desirability (d,e,f) were measured by three items each, adopted from Kickul and Krueger (2004), in a 7-point Likert scale:

- a) “I think involvement with startup entrepreneurship is a realistic option for me”;
- b) “I think I have the skills required”;
- c) “I find what I do (entrepreneurship involvement) feasible”;
- d) “My involvement with startup entrepreneurship is something that I desire”;
- e) “I find attractive the concept of startup/startuppers”; and
- f) “I am interested in a startup career”.

SM items (usefulness, social influence/norms, ease of use, context credibility/trust) provided to respondents in a 7-point Likert scale, developed by

the authors. All 22 items used for the conceptual model are listed in the Appendix.

4. Data Analysis and Results

4.1. Descriptive statistics and inter-correlations

The sample included 528 respondents (77,8% male and 22,2% female). Regarding age, 40,5% of respondents are between 31 and 40 years old, followed by the group age 41-50 (approximately 27%). They are well educated since almost 48% hold a master's degree and 13,3% have a PhD. As far as the founding round, 44,7% are currently on the *seed stage*, while 27,3% have achieved a *Series A funding round* and 22,7% are on the *pre-seed stage*. Moreover, most of them (62,7%) have a family business and haven't attempted in the past to initiate an idea or a project (73,7%) (see Figure 2). Means, Standard Deviations and Correlations are presented in Figure 3.

Fig. 2 Descriptive Statistics

		N=528		Gender			
				Male	Female	Total	
Age	18-24	46	8,7%	22	4,2%	68	12,9%
	25-30	46	8,7%	15	2,8%	61	11,6%
	31-40	169	32,0%	45	8,5%	214	40,5%
	41-50	120	22,7%	24	4,5%	144	27,3%
	51+	30	5,7%	11	2,1%	41	7,8%
Education	Undergraduate student/scholar	30	5,7%	17	3,2%	47	8,9%
	Postgraduate vocational education & training	4	,8%	2	,4%	6	1,1%
	Postgraduate (higher education/tech education/colleague)	118	22,3%	34	6,4%	152	28,8%
	Master	202	38,3%	51	9,7%	253	47,9%
	PhD	57	10,8%	13	2,5%	70	13,3%
Startup stage	Pre-Seed Funding	88	16,7%	32	6,1%	120	22,7%
	Seed Funding	187	35,4%	49	9,3%	236	44,7%
	Series A Funding	114	21,6%	30	5,7%	144	27,3%
	Series B Funding	18	3,4%	5	,9%	23	4,4%
	Series C Funding	4	,8%	1	,2%	5	,9%
Family business	No	163	30,9%	34	6,4%	197	37,3%
	Yes	248	47,0%	83	15,7%	331	62,7%
Other attempts	No	301	57,0%	88	16,7%	389	73,7%
	Yes	110	20,8%	29	5,5%	139	26,3%
Total		411	77,8%	117	22,2%	528	100,0%

Note. **Pre-seed** → Ideation of a minimum viable product (mvp) from the very beginning (bootstrapping, friends, family, founders), **Seed** → Development of the product so as to get to the user and find market fit, again with support from friends, family, founders and also incubators, crowdfunding, micro Venture Capitals and angel investors, **Series A and Series B** (early stage) → confirms business scaling (super angel investors, venture capitalists), **Series C** (later

stage, can continue into Series D, E, F investments, late stage Venture Capitals, private equity funding rounds, Initial Public Offering, etc.) → represents a growth equity firm.⁷

Fig. 3 Means, Standard Deviations, and Correlations

Variables	Mean	SD	1	2	3	4	5	6	7
1 Intention	5.813	0.890	1.00						
2 Desirability	5.569	1.103	.568**	1.00					
3 Feasibility	5.605	0.948	.523**	.438**	1.00				
4 Usefulness	5.476	1.203	.446**	.320**	.444**	1.00			
5 Social influence/norms	5.986	1.104	.361**	.429**	.498**	.420**	1.00		
6 Ease of use	4.408	0.819	.309**	.284**	.343**	.222**	.377**	1.00	
7 Context credibility/trust	5.085	1.305	.354**	.396**	.337**	.305**	.359**	.150**	1.00

***. Correlation is significant at the 0.01 level (2-tailed).*

4.2. Inspiration-trigger effect

In our context of entrepreneurship intention, inputs carried in SM about startup entrepreneurship could direct someone towards seriously considering becoming a startup entrepreneur. Entrepreneurially speaking, inspiring others through sharing positive thoughts, knowledge and ideas, especially if these come from successful businesspeople, might lead to increasing attractiveness of entrepreneurship (Wilson et al., 2004; Pihie, 2009). Therefore, inspiration/modeling could motivate someone and act as a trigger effect on entrepreneurial intention, providing us with the opportunity to test this parameter further on.

Specifically, SM inspiration was measured by a categorical construct (Q8) named “memorable trigger”. The term “trigger” was used to refer to the stimulus object (message, person, event or idea) that evokes inspiration. Respondents were presented with a list of potential SM-related triggers, and they had to mark the extent through which such events had an impact on them and made them to consider embarking on an entrepreneurial career (7-point Likert scale, 1 = not at all, 7 = to a large extent). The purpose of this list was to offer a menu of trigger-examples, which would help respondents to relate them

⁷ According to Investopedia, available in <https://www.investopedia.com/articles/personal-finance/102015/series-b-c-funding-what-it-all-means-and-how-it-works.asp> [accessed on April 26, 2022]

to the concept of memorable trigger, also followed by the “other” option to enrich our list. The trigger-extent list is shown in Figure 4.

Fig. 4 Memorable Trigger List

-
- A) Expert or mentor session-talk
 - B) Entrepreneur session-talk
 - C) Post for a contest or competition entry
 - D) Post for attending an incubator program
 - E) Post for attending an accelerator program
 - F) Post for a webinar about startup entrepreneurship
 - G) Post for an online workshop about startup entrepreneurship
 - H) Article in my newsfeed page
 - I) Article in a group or community
 - J) Conversation in a group or community page
-

A Spearman's correlation was run in order to identify any patterns between “memorable trigger” and the overall intention. Figure 5 shows high, moderate and no correlation that was established between triggers and intention.

Fig. 5 Spearman correlation coefficient for intention and memorable triggers

N 528		Trigger list	Correlation	Intention
Spearman's rho	Expert or mentor session-talk	Correlation Coefficient Sig. (2-tailed)	H	.684** .000
	Entrepreneur session-talk	Correlation Coefficient Sig. (2-tailed)	H	.708** .000
	Post for a contest or competition entry	Correlation Coefficient Sig. (2-tailed)	-	.057 .189
	Post for attending an incubator program	Correlation Coefficient Sig. (2-tailed)	M	.500** .000
	Post for attending an accelerator program	Correlation Coefficient Sig. (2-tailed)	-	.071 .103
	Post for a webinar about startup entrepreneurship	Correlation Coefficient Sig. (2-tailed)	M	.597** .000
	Post for an online workshop about startup entrepreneurship	Correlation Coefficient Sig. (2-tailed)	-	.063 .148
	Article in my newsfeed page	Correlation Coefficient Sig. (2-tailed)	-	.064 .140
	Article in a group or community	Correlation Coefficient Sig. (2-tailed)	H	.634** .000
	Conversation in a group or community page	Correlation Coefficient Sig. (2-tailed)	H	.650** .000

** . Correlation is significant at the 0.01 level (2-tailed).

Note. Six out of ten items from trigger list were significant correlated with intention at the 0.01 level (2-tailed). "**H**" is for high significant correlation ["Entrepreneur session-talk"/Intention ($r_s = .708$, $n = 528$, $p < .001$), "Expert or mentor session-talk"/Intention ($r_s = .684$, $n = 528$, $p < .001$), "Conversation in a group or community page"/Intention ($r_s = .650$, $n = 528$, $p < .001$), "Article in a group or community"/Intention ($r_s = .634$, $n = 528$, $p < .001$)]; "**M**" is for moderate significant correlation ["Post for a webinar"/Intention ($r_s = .597$, $n = 528$, $p < .001$), "Post for attending an incubator program"/Intention ($r_s = .500$, $n = 528$, $p < .001$)]; "-" is for no significant correlation ["Post for a contest or competition entry"/Intention, "Post for attending an accelerator program"/Intention, "Post for an online workshop"/Intention, "Article in my newsfeed page"/Intention].

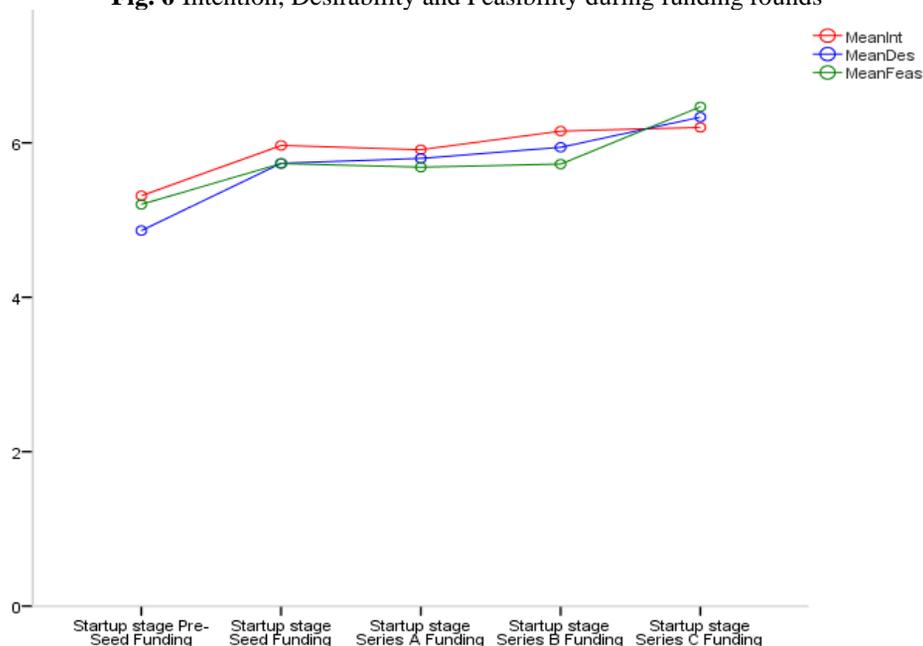
4.3. Funding rounds

Regarding funding rounds, they turned out to be very useful for our research, since they signal the threshold for someone to join a startup ecosystem on the one hand and may reveal insights concerning SM effects on intentions in different startup entrepreneurship stages, on the other. A single item was used to define funding rounds based on startup argot (pre-seed funding, seed funding, Series A funding, Series B funding, Series C funding).

As shown in Figure 6, the three lines are close to each other, indicating the close relationship among intention, desirability and feasibility, in accordance with the aforementioned theoretical background. Intention starts from a high

point and increases within startup stages, except Series A stage within which remains stable. Likewise, desirability and feasibility follow a similar way, which might indicate the obstacles that startupper face in the beginning of the “early stage” and somehow hold back their overall aspiration. We argue that intention’s initial point is already in a high level, due to social media engagement, through the overall “access” via networking and role model exposure. Also, towards funding rounds, intention seems to be stable, which might be the result of lack of motivation or the precursor of a different project, like serial entrepreneurs do, considering the high desirability point in the late stages. Moreover, feasibility seems to end up in the highest point, which means practically that everything looks feasible for an entrepreneur after a mature start up journey.

Fig. 6 Intention, Desirability and Feasibility during funding rounds



Note. X axis represents startup stage and Y axis represents 7-point Likert scale. Red line is for Intention, blue line is for Desirability, Green line is for Feasibility.

4.4. Reliability and Validity

Based on the large sample size (N=528) and according to the suggested (>300) minimum sample size (Comrey & Lee, 1992), a valid exploratory factor

analysis (EFA) would be applied to test all the items and investigate the compositions of the model. All 22 items were analyzed with principal components analysis and promax rotation. The Kaiser-Meyer-Olkin measure verified the sampling adequacy ($KMO=.895$) and the Bartlett's test of sphericity showed a statistical significance among the variables ($p<.000$), indicating that factor analysis was appropriate for EFA. Ultimately, 7 components were formed as initially developed and factor loadings for all 22 variables ranged between 0.821 and 0.976 with a total variance explained of 82,888% (see figures 7 and 8). Cronbach's Alpha was used to test the internal consistency of the study elements. The Cronbach's Alpha for Usefulness, Social Influence/Norms, Ease of Use, Context Credibility/Trust, Perceived Feasibility, Perceived Desirability and Entrepreneurial Intention were .877, .921, .917, .884, .860, .896 and .924, respectively, ascertaining sample reliability (all Cronbach's $\alpha>.700$).

Fig. 7 Cronbach's Alpha for all 7 components and factor loadings with EFA for the 22 items used

	Component						
	Cronbach's a						
Q1. Discover idea	.826						
Q2. Discover opportunity	.936						
Q3. Discover market gap	.889						
Q4. Startup entrepreneurship positive view		.976					
Q5. Tool for influence		.821					
Q6. Entrepreneurial mindset		.967					
Q7. Ease of use			.927				
Q8. Appropriate for business operations			.957				
Q9. Convenient in Covid 19			.881				
Q10. Trust context				.899			
Q11. Trust users				.910			
Q12. Expert info reliability				.901			
Q13. Realistic option					.896		
Q14. Skillful					.884		
Q15. Feasible					.865		
Q16. Desirable option						.839	
Q17. Startup attractive concept						.917	
Q18. Career option						.942	
Q19. Whatever it takes							.828
Q20. Make every possible effort							.889
Q21. Determined to create							.881
Q22. Intention to work full time one year after							.961

Note. Extraction method used is Principal Component Analysis. Rotation Method used is Promax with Kaiser Normalization. Rotation converged in 6 iterations.

Fig. 8 Total variance explained for all 7 components

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of		Total	% of		Total
		Variance	Cumulative %		Variance	Cumulative %	
1	8,621	39,187	39,187	8,621	39,187	39,187	5,974
2	2,259	10,270	49,457	2,259	10,270	49,457	3,888
3	1,941	8,824	58,281	1,941	8,824	58,281	5,141
4	1,789	8,132	66,413	1,789	8,132	66,413	4,179
5	1,406	6,391	72,804	1,406	6,391	72,804	4,457
6	1,218	5,535	78,339	1,218	5,535	78,339	5,248
7	1,001	4,549	82,888	1,001	4,549	82,888	5,447

Note. Extraction method used is Principal Component Analysis. *a*) When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

4.5. Measurement model assessment

The internal structure of our model was shaped using a confirmatory factor analysis (CFA), which analyzes relationships between latent and observed variables. As shown in Figure 9, high factor loadings appear within the variables and goodness-of-fit indices found to be very satisfactory.

Fig. 9 Factor loadings with CFA for all 7 components (Usefulness, Social Influence/Norms, Ease of Use, Context Credibility/Trust, Feasibility, Desirability, Intention) of the 22 items used

USEF1	<---		0.823
USEF2	<---	Usefulness	0.867
USEF3	<---		0.832
SN1	<---		0.897
SN2	<---	Social Influence/Norms	0.851
SN3	<---		0.934
EASE1	<---		0.918
EASE2	<---	Ease of Use	0.930
EASE3	<---		0.816
CRED1	<---		0.822
CRED2	<---	Context Credibility/Trust	0.901
CRED3	<---		0.823
FEAS1	<---		0.814
FEAS2	<---	Feasibility	0.792
FEAS3	<---		0.855
DES1	<---		0.851
DES2	<---	Desirability	0.909
DES3	<---		0.829
INT1	<---		0.852
INT2	<---		0.903
INT3	<---	Intention	0.864
INT4	<---		0.857

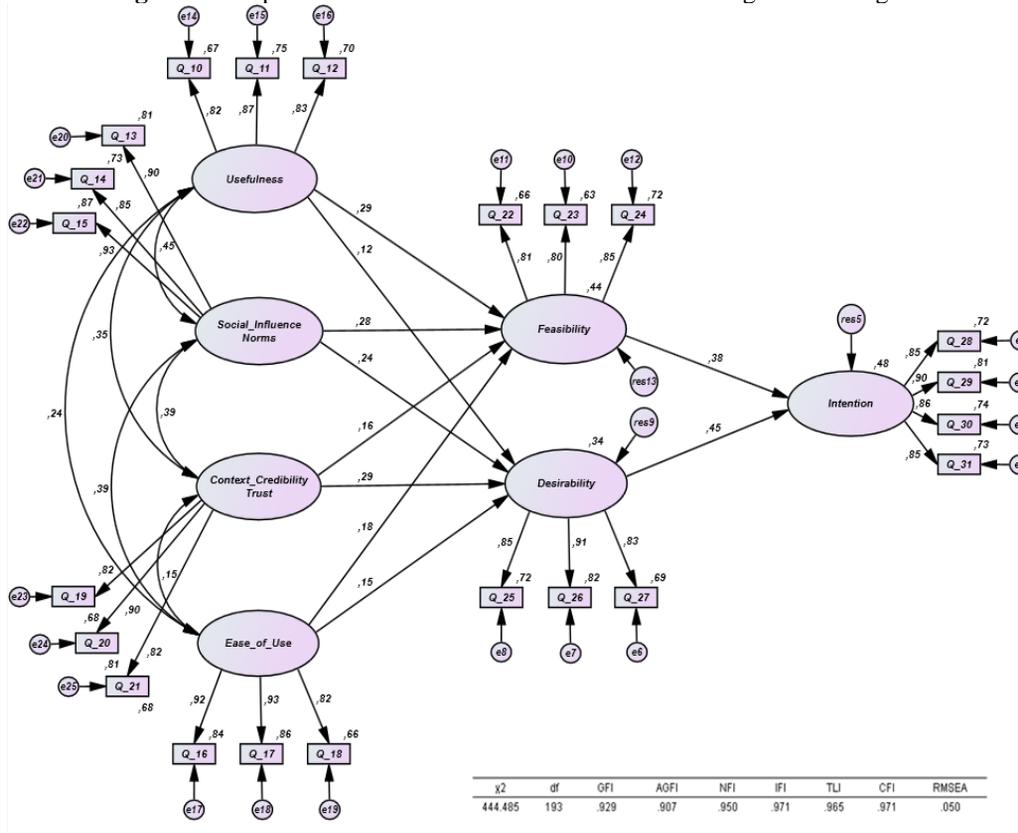
Note. $\chi^2=395.590$, $df=188$, $GFI=.937$, $AGFI=.915$, $NFI=.955$, $IFI=.976$, $TLI=.970$, $CFI=.976$, $RMSEA=.046$

4.6. Structural model assessment

In order to test our hypotheses, we used structural equation modeling (SEM). Based on research framework, social media have been measured through four aspects, i.e., perceived usefulness (USEF), social influence/norms (NORMS), perceived ease of use (EASE) and context credibility/trust (CRED). The actual effect of SM on entrepreneurial intention (INT) in this research, is being mediated by two variables namely perceived desirability (DES) and perceived feasibility (FEAS). Figure 10, illustrates the conceptual model with standardized estimations and overall fit. All indexes are within the acceptable range (Hair et

al., 1998; Shook et al., 2004; Meyers et al., 2005). As shown in Figure 11, unstandardized regression weights generated in SEM, support all initial hypotheses, since significant positive correlations were found.

Fig. 10 Conceptual model with estimates of standardized regression weights



Note. Path coefficients have fixed values set to 1.00 (e.g., when Desirability goes up by 1 standard deviation, Intention goes up by 0,45 standard deviations). Rectangles indicate observed variables/survey items, ellipses indicate latent variables/factors, single-headed arrows represent causal effects/direct influence among variables or factor loadings among factors and variables, double-headed arrows represent correlation, “e” indicates measurement error, “res” indicates residual error.

Fig. 11 Conceptual Model Regression Weights

Hypotheses	Relationship	Estimate	S.E.	C.R.	P	Result
H1	Intention <--- Desirability	0.396	0.038	10.369	***	Supported
H2	Intention <--- Feasibility	0.363	0.042	8.704	***	Supported
H3a	Desirability <--- Usefulness	0.107	0.044	2.456	0.014	Supported
H3b	Desirability <--- Social_Influence_Norms	0.219	0.046	4.735	***	Supported
H3c	Desirability <--- Ease_of_Use	0.188	0.055	3.404	***	Supported
H3d	Desirability <--- Context_Credibility_Trust	0.240	0.039	6.141	***	Supported
H4a	Feasibility <--- Usefulness	0.243	0.04	6.017	***	Supported
H4b	Feasibility <--- Social_Influence_Norms	0.233	0.042	5.579	***	Supported
H4c	Feasibility <--- Ease_of_Use	0.211	0.05	4.232	***	Supported
H4d	Feasibility <--- Context_Credibility_Trust	0.118	0.034	3.431	***	Supported

Note. Hypothesized model with unstandardized regression weights. All hypotheses are supported since significant positive effects at $p < 0.001$ and $p < 0.05$ level were estimated (**H1**: $\beta = .396$, $z = 10.369$, $p < .001$; **H2**: $\beta = .363$, $z = 8.704$, $p < .001$; **H3b**: $\beta = .219$, $z = 4.735$, $p < .001$; **H3c**: $\beta = .188$, $z = 3.404$, $p < .001$; **H3d**: $\beta = .240$, $z = 6.141$, $p < .001$; **H4a**: $\beta = .243$, $z = 6.017$, $p < .001$; **H4b**: $\beta = .233$, $z = 5.579$, $p < .001$; **H4c**: $\beta = .211$, $z = 4.232$, $p < .001$; **H4d**: $\beta = .118$, $z = 3.431$, $p < .001$). **H3a** was significant at $p < 0.05$ level ($\beta = .107$, $z = 2.456$, $p < .05$).

4.7. Mediation analysis

In order to test the indirect effects of social media use on entrepreneurial intention, a mediation analysis was applied. Results revealed a significant positive indirect effect of all social media elements on entrepreneurial intention, through desirability and feasibility (see figure 12). “Social influence/norms” has the highest impact on intention through desirability and feasibility ($\beta = .171$, $p < .001$), and “usefulness” has the lowest ($\beta = .131$, $p < .05$). Regarding standardized total effects, “social influence/norms” ($\beta = .217$, $p < .05$), “context credibility/trust” ($\beta = .191$, $p < .001$), “usefulness” ($\beta = .166$, $p < .05$) and “ease of use” ($\beta = .138$, $p < .001$), they all indicate a significant positive effect.

Fig. 12 Unstandardized Indirect Effects

	Usefulness	Ease of use	Social influence/norms	Context credibility/trust
Desirability	0.000	0.000	0.000	0.000
Feasibility	0.000	0.000	0.000	0.000
Intention	.131 **(.001)	.151 *(.000)	.171 *(.000)	.138 *(.000)

Note. Indirect effect of each column variable on each row variable (e.g., the indirect/mediated effect of Usefulness on Intention is .131. That is, due to the indirect/mediated effect of

Usefulness on Intention, when Usefulness goes up by 1, Intention goes up by 0,131). This is in addition to any direct (unmediated) effect that Usefulness may have on Intention.

***.* *The indirect (mediated) effect of Usefulness on Intention is significantly different from zero at the 0,001 level ($p=,001$ two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias corrected confidence intervals.*

**.* *The indirect (mediated) effect of Ease of Use or Social influence/norms or Context credibility/trust on Intention is significantly different from zero at the 0,001 level ($p=,000$ two-tailed). This is a bootstrap approximation obtained by constructing two-sided bias corrected confidence intervals.*

Furthermore, we assessed separately the mediating role of desirability and feasibility regarding social media elements and intention. As shown in Figure 13, “usefulness” affects positively intention through feasibility ($\beta=0.088$, $p=0.000$) slightly more than through desirability ($\beta=0.043$, $p=0.034$). Likewise, “context credibility/trust” affects positively intention through desirability ($\beta=0.095$, $p=0.000$) slightly more than through feasibility ($\beta=0.043$ $p=0.003$). Within all the other correlations, feasibility and desirability have almost the same mediating effect. As indirect effects are significant and also direct effects (see figure 11) are also significant, we conclude that desirability and feasibility partially mediate the relationship among social media elements and intention.

Fig. 13 Mediation Analysis Summary

Relationship	Indirect Effect	Confidence Interval		T-Statistic	P-Value	Mediation
		Lower Bound	Upper Bound			
Usefulness--> Desirability-->Intention	0.043	0.002	0.114	1.535	0.034**	Partial
Usefulness--> Feasibility-->Intention	0.088	0.040	0.167	2.750	0,000*	Partial
Social_Influence_Norms-->Desirability-->Intention	0.087	0.042	0.150	3.222	0,000*	Partial
Social_Influence_Norms-->Feasibility-->Intention	0.085	0.043	0.134	3.695	0,000*	Partial
Context_Credibility_Trust-->Desirability-->Intention	0.095	0.050	0.163	3.392	0,000*	Partial
Context_Credibility_Trust-->Feasibility-->Intention	0.043	0.013	0.089	2.263	0.003**	Partial
Ease_of_Use-->Desirability-->Intention	0.075	0.030	0.138	2.678	0.001*	Partial
Ease_of_Use-->Feasibility-->Intention	0.077	0.033	0.139	2.851	0.001*	Partial

**. Effects are significant at $p<0.001$ level.*

***.* *Effects are significant at $p<0,05$ level.*

5. Discussion

5.1. Theoretical contribution and implications

Research reported herein, investigates the role of SM in entrepreneurial intention. Based on previous theories and research findings, a conceptual research model was presented and empirically tested through several hypotheses, contributing to the existing entrepreneurship literature, providing further knowledge of how SM usage as a new dynamic element next to family, friends, university etc. can nurture startup entrepreneurial intentions increasing activities towards entrepreneurship.

Findings indicate that Hypotheses H1 and H2 are supported, since significant positive correlation was established between perceived desirability and entrepreneurial intention, and perceived feasibility and entrepreneurial intention, confirming the validity and applicability of Entrepreneurial Intention (EI) models across different contexts. Results are consistent with other studies (Shook et al., 2003; Kibler, 2013; Schlaegel & Koenig, 2014), which examine the determinants of entrepreneurial intention, providing a better understanding towards the formation of EI. Moreover, we provide further insights regarding the relationship among intention, desirability and feasibility, by showing that within a startup funding journey, they all grow as stages move on and act together, since differences among them are marginal. Results are consistent with other studies (Krueger and Brazeal, 1994; McMullen and Shepherd, 2006), which show that perceived desirability and perceived feasibility should be both in a high level in order to form entrepreneurial intention. On the other hand, findings are not consistent with Fitzsimmons and Douglas (2011), who found evidence that entrepreneurial intention can be high regardless the level of its determinants, which may call for further investigation.

Regarding SM, results show that H3 and H4 family of hypotheses were also fully supported, since all SM elements have significant positive correlation with perceived desirability and perceived feasibility. Particularly, findings revealed that perceived usefulness of SM, as well as perceived ease of use, social norms and context credibility, can positively influence someone's intention towards startup entrepreneurship, through the mediating role of intention's antecedents, namely, perceived feasibility and perceived desirability. In other words, when individuals in the entrepreneurial world consider specific factors of SM as

important, they see startup entrepreneurship as something feasible and desirable and are inclined to do so. Furthermore, we provide evidence that specific SM trigger events can evoke inspiration and thus change attitude and intention towards entrepreneurship. Results are consistent with other studies (Fischer & Reuber, 2011; Laguía & Moriano 2019; Barrera-Verdugo & Villarroel-Villarroel, 2022), which show that SM networking and representation of entrepreneurship play an essential role in entrepreneurial thinking, attitude and behavior. Hence, SM can become beneficial tools, since they can promote entrepreneurial practices and encourage startup entrepreneurship in the society.

5.2. Practical implications and future research directions

The findings of this research provide several practical implications, since public policy makers, educators and governments can set strategies towards promotion of entrepreneurship and entrepreneurial engagement. SM may dramatize a crucial role in attitude change to a more positive mindset in regard to entrepreneurship and entrepreneurs and thus endorse entrepreneurial perspectives. Especially, young people are more open to SM influence. SM do not operate in isolation from broader political and cultural shifts, but on the contrary, it is the space within which users themselves create the content, reacts and cultural trends. Thus, their role in entrepreneurship education could be critical. Since startup communities organize sessions, online events and other kind of formats, these platforms could provide pedagogical materials, which can be included in entrepreneurship education and boost entrepreneurship. Block et al. (2017) indicate that new forms of entrepreneurial education actions are appropriate to raise entrepreneurial intentions. Therefore, the attendance of successful entrepreneurs who will act as role models to university courses, is necessary.

The role of universities as a link to the startup scene, implementing SM tools, is also important. Educating change makers, applying general adjustment on entrepreneurship programs, universities and centers can shift the trend and better prepare young adults to join a startup, connecting them with relevant opportunities at startups, or helping them launch businesses of their own. Thus, they would provide students further assistance towards the development and testing of new ideas so as to commercialize, or may host lectures and networking sessions, as well as provide shared access to workspaces. This is

something that could lift students' expectations, making them realize that both commitment and resources required to seek a career in startup entrepreneurship are attainable. In other words, they encourage them to consider that being an entrepreneur is something desirable and feasible. In the same vein, more initiatives regarding startup competitions, startups visiting and establishing entrepreneur-in-residence programs, could be planned. Specific techniques and methods, or even philosophies of startup management which are particularly widespread within the ecosystem, could be shared via university seminars. For instance, entertainment education for entrepreneurship could serve as an alternative way of training which can motivate students, making them see entrepreneurship in a more interesting way and, as a result, launch more business start-ups. Discourse analysis of SM implicit or explicit messages, images and values through startup sessions and events, could further explore impact on intention and address how SM can become more effective towards entrepreneurship.

An anticipated query is whether other mass media could raise entrepreneurial intentions. It should be of great interest to make a comparative analysis of the so-called traditional media like press (journals, newspapers, magazines), print materials other than press, radio, TV, cinema, etc., so as to test the potential effects that may have on entrepreneurial intentions, attitudes and aspirations. Research has been conducted on images of entrepreneurs presented in television (Boyle, 2008) and printed media (Radu & Redien-Collot, 2008). As Zampetakis et al. (2015) claim, films could be useful in the design of educational programs for the promotion of entrepreneurship as a career choice. Likewise, bringing up attractiveness of entrepreneurship as a career should be a key issue within national policies, since they could use SM to increase exposure to startup entrepreneurship and entrepreneurs. Nonetheless, further research is needed to fully understand the potential impact of SM on startup entrepreneurial intention. Future researchers may productively address questions such as whether there are other potential benefits from SM usage and activity apart from networking, learning, resources and inspiration. For instance, potential entrepreneurs would be enhanced by learning about themselves and what they actually like (self-realization) and early stage or mature startup entrepreneurs would track ideas and opportunities so as to further develop their projects. Thus, the ways within

which entrepreneurial phase could be reinforced by SM, would be further examined.

Finally, it would be of great significance to focus on networking aspects of social media sites and categorize them regarding social features offered as well as mechanisms used to attract members and keep them coming back. To this extent, a more extended analysis would provide further insights regarding SM effects on startup entrepreneurial intentions. Thus, it would be examined the kind of networking functionality that is offered, mechanisms used to attract members, how well that works, how members use the sites, and overall users' contributions.

5.3. Research limitations

Like any other research and due to its novelty, certain limitations can be referred. First, SM factors used may not be the only or the best type of indicators through which SM might influence entrepreneurship intention. Second, further investigation should be done within different countries with varied cultural norms. Considering that promoting entrepreneurship should stipulate the formation of national culture, SM factors might have a different dynamic or no dynamic at all. Third, since potential SM influence might be by nature a more long-term issue, any time gap between SM usage and their effect on startup intentions could not be taken into account using the data set employed. Despite its limitations, that can serve as prominent indicators of the way forward to better future research regarding influence of SM upon entrepreneurship, this research does initiate the use of empirical data to examine the relationships between SM and startup entrepreneurship intention. We highlight the importance of research into the area and hopefully may encourage others to better address issues in this field.

6. Conclusion

Within our globalized society, social media sites are supposed to be a powerful tool not just for people and their personal beliefs, but also for world markets, for shaping social cultures, for applying best practices and innovative thinking as well. Hence, the emerge of web 2.0 technologies and digital services as part of our daily lives, has created infinite space for innovation in an open market with no boundaries and a new generation of entrepreneurial minded individuals has

come into sight. Throughout the world, and in a vast array of activities, SM communications are recognized and studied as a major influential factor in a wide range of attitudes and behaviors of people, especially the young ones and similarly to other areas, SM favor a discourse on entrepreneurship.

Thus, the aim of research reported herein, is to better understand the relationship between SM usage and startup entrepreneurial intention, highlighting their inspiring role as well as indicating their influence on intention's antecedents, within the Greek startup scene. This study, then, supposes a first step to further explore the influence of SM on startup entrepreneurship. In today's wide social changes, people with innovative ideas leading the fourth industrial evolution and thus, entrepreneurial thinking and behavior can assist next generation to be the actual producers of tomorrow. Therefore, we expand the existing body of knowledge regarding entrepreneurship intention, towards a better understanding on possible ways through which SM communications and their emerging mechanisms have the dynamic to exercise some degree of influence upon national levels of entrepreneurship participation and engagement.

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Appendix

Fig. 14 Conceptual framework items used

	1 In social media I can discover business ideas
Usefulness	2 In social media I can discover business opportunities
	3 In social media I can find market gaps
Social	4 Social media made me see startup entrepreneurship in a more positive way
Influence/norms	5 I think social media are means-tools for influence
	6 I think social media can form entrepreneurial mindset
	7 I think social media are easy to use
Ease of Use	8 I think social media are appropriate for my business operations around my idea/project/startup
	9 I think social media are convenient within Covid 19 emergency
Context	10 I trust social media context around startup entrepreneurship
credibility/trust	11 I think users in social media that I keep contact for business purposes are reliable
	12 I find expert's information in social media trustworthy
	13 I think involvement with startup entrepreneurship is a realistic option for me
Feasibility	14 I think I have the skills required
	15 I find what I do (entrepreneurship involvement) feasible
	16 My involvement with startup entrepreneurship is something that I desire
Desirability	17 I find attractive the concept of startup/startuppers
	18 I am interested in a startup career
	19 I am willing to do whatever it takes for my idea/project/startup
Entr. Intention	20 I will make every possible effort to run my idea/project/startup
	21 I am determined to create my own startup
	22 In one year from now I have the intention to work full time for my idea/project/startup