

The impact of social network support on opportunity intention among prospective male and female entrepreneurs during 2019-nCov pandemic

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Abstract

Purpose – The novel coronavirus (nCoV) pandemic, and the challenges of social distancing, proffer a unique opportunity to re-explore the role of social network support in entrepreneurship. Applying social support theory and gender schema theory, this study aims to examine the gender-based differences in prospective entrepreneurs' reliance on their social networks in their entrepreneurial journey amid social turmoil.

Design/methodology/approach – The authors collected two-stage primary survey data of prospective entrepreneurs within the pandemic's timeframe from Science and Technology Parks in Iran, one of the first countries to deal with the first, second and third waves of the 2019-nCoV virus.

Findings – The findings demonstrate that female entrepreneurs rely more strongly on their social network support for guidance and encouragement, which positively affects their opportunity intention. While this effect is also seen in men, the effect size is smaller. Also, prospective female entrepreneurs were generally more dissuaded from opportunity intention by the severe perceived environmental uncertainty of the crisis than were men.

Originality/value – Prior research on the interaction between social network support and opportunity intentions has been examined in the context of socio-economic normalcy. The authors test whether, how and why these interactions hold in times of crisis, with especial attention to the mechanisms of experienced stress, perceived environmental uncertainty and idea innovativeness.

Keywords COVID-19 pandemic, Opportunity intention, Gender, Nascent entrepreneur, Perceived environmental uncertainty, Social network support

Paper type Research paper

Introduction

The novel coronavirus (2019-nCoV or COVID-19) pandemic is the epitome of an exogenous shock that generates and enables new entrepreneurial opportunities (Eckhardt and Shane, 2003) and engenders new "opportunity intentions" (Dimov, 2007). This has, indeed, proven the case as the rates of new business founding in many countries spiked in its wake. While the



reasons for this spike in entrepreneurial activity are various, it is probably safe to say that much of it has been necessity entrepreneurship (Arrighetti *et al.*, 2016), a response to business failures and unemployment due to the lockdowns of “unnecessary” businesses such as gyms, cinemas, beauty salons, amusement parks, etc. that were closed or prohibited from normal operations in many countries due to Covid-19 health and safety measures.

While some countries displayed relatively strong economic resilience amid the pandemic, other countries proved less fortunate, their entrepreneurial institutions stagnating or collapsing under the pressure of the crisis. Iran, for example, suffered a third consecutive year of recession beneath the crippling effects of political sanctions, the global pandemic and its political responses and the oil market collapse in 2020 (World Bank, 2021). According to reports, the Covid-19 pandemic and policy responses reduced demand for goods and services, supply chain disruptions and limited physical operations, which resulted in lower revenues and profitability that were further exacerbated by economic sanctions on Iran. However, these effects varied based on, e.g. the size, sector and location of the firms (Salamzadeh and Dana, 2020; World Bank, 2021). Small businesses were reportedly hit hardest, lacking the resources to weather the economic turmoil. Small businesses in service industries (e.g. restaurants, gyms and cafes) and larger businesses in the tourism and hospitality sectors faced immense losses with the significant decline in customer traffic. However, some of the larger firms in sectors such as manufacturing were able to continue their operations by adopting physical distancing measures and incorporating remote work.

As the pandemic unfolded, Iran’s policymakers focused their efforts on keeping its struggling businesses alive. The percentage of established businesses in the Iranian economy fell from 12% in 2018 to 10.5% in 2019 (Global Entrepreneurship Monitor, 2020). However, according to the GEM report (2020), total entrepreneurial activity in Iran slightly increased in 2019. It might be inferred from this that the resolution of crises, such as the recent pandemic, falls largely to entrepreneurs (supported by political and economic institutions). Thus, this recent crisis affords a new opportunity to investigate the factors that facilitate or else impede such corrective entrepreneurship.

Notably, women were disproportionately affected by the social disruption caused by the virus. These effects are not necessarily for a lack of effort—in fact, the number of female entrepreneurs in 2020 was *up* from 2019 in many nations. However, many female entrepreneurs’ efforts have been stifled by the upheaval of the recent pandemic, which has fallen disproportionately into women’s laps (Alon *et al.*, 2020; Umamaheswar and Tan, 2020). Schools’ closing forced parents, especially working mothers, to stay home with their children, many at the expense of their jobs, with reports estimating a five-fold increase in stay-at-home parenting during the pandemic. Also, woman-dominated industries (e.g. day-cares, education, nursing, home health and other service industries) were some of the most disrupted. This has led to an unprecedented shock to work-life balance—for all, but especially for women on average—exacerbated by severe uncertainties regarding when businesses might return to normal operations and whether those jobs and the income that they imply will still be there. This disruption was particularly acute for Iranian women. Before the pandemic, women had the higher Total Entrepreneurial Activity (TEA) ratio in Iran compared to men, despite a lack of supportive institutional structure (Javadian and Y. Addae, 2013) and strong gender stereotypes (Javadian and Singh, 2012). However, this TEA ratio fell from 0.63 at the end of 2019 to 0.5 by the end of 2020, as Iran women’s businesses were hit the hardest by the pandemic (Nouri, 2022).

A survey by the Female Founders Alliance, released in mid-October 2020, found that *opportunity intentions* among women fell 36% among their sample as a result of the pandemic, respondents citing financial concerns (i.e. the need for a steady paycheck and benefits) as the primary reason and increased caretaking responsibilities as a secondary reason. Opportunity intentions are defined as “concrete [entrepreneurial] intention[s]

associated with a particular idea” (Dimov, 2007, p. 563), and are “the driving force of the opportunity development process” (p. 578). Scholars have pointed to various factors from when opportunity intentions arise, including the entrepreneur’s knowledge (Shane, 2003; Shepherd and DeTienne, 2005) and values (Grégoire *et al.*, 2010) as well as various “external enablers” (Davidsson, 2015). Herein we are particularly interested in the *social* factors that influence them. Scholars have long recognized that others strongly influence intentions, including entrepreneurial intentions (Krueger, 2017). Nevertheless, these social factors are thrown into question amid social crises. In particular, stress and uncertainty—which are especially characteristic of new venturing activities—are often assuaged by social support. But these tend to be exacerbated by crisis, the effects of which are not yet fully understood.

A sizeable literature has examined the influence of one’s social network on various aspects and types of entrepreneurship, such as family business (Edelman *et al.*, 2016; Koropp *et al.*, 2013) and other intergenerational entrepreneurship (Barnir and McLaughlin, 2011; Jaskiewicz *et al.*, 2015). It has also examined the role of network structure (Ebbers, 2014; Slotte-Kock and Coviello, 2010) on entrepreneurial intention and resource acquisition (McGrath *et al.*, 2018; Mitrega *et al.*, 2012; Semrau and Werner, 2014). Entrepreneurs strategically develop and engage with a wider range of relationships to grow their business (Hallen and Eisenhardt, 2012). Social network support theory is particularly useful for understanding the impact of social networks on community health and well-being, such as during the COVID-19 pandemic. It provides insights into the role of social networks in providing emotional and practical support during times of stress and uncertainty. More specifically, the theory emphasizes that entrepreneurs have a network capability—the ability to utilize relationships—to access resources and grow their business. However, so far what we have learned about the relationship between the social network support (SNS) provided to nascent entrepreneurs and the realization of their opportunity intentions has been studied in contexts of normal socio-economic activity in developed nations. Do these relationships hold in the context of a developing nation in a time of crisis? It stands to reason that the relationship would tend to be augmented by crisis, as one’s social network is a critical source of information and comfort in trying times. However, research has yet to examine this mechanism as such crises are rare and data are hard to collect in the midst of upheaval. The recent pandemic thus offers a key opportunity to advance our understanding of these theoretical mechanisms (cf. Alon *et al.*, 2020; Giones *et al.*, 2020; Kuckertz *et al.*, 2020; Shepherd, 2020).

Because it entails a complex journey involving behavioral, cognitive, technological, emotional, social and environmental factors (Davidsson and Gruenhagen, 2020; Shane, 2003) and their interactions (Dimov, 2017), “establishing new ventures is an emotion-laden process” (Arregle *et al.*, 2015, p. 318). SNS within this process is a critical factor in building and triggering opportunity intentions and, correspondingly, entrepreneurial action (Edelman *et al.*, 2016; Klyver *et al.*, 2018; Weiss *et al.*, 2019) and in building toward a successful launch (Grossman *et al.*, 2012; Newbert *et al.*, 2013). This study therefore aims to more fully unravel the role of the emotional and information support that prospective entrepreneurs receive from their social networks, in conjunction with potentially related factors such as experienced stress, perceived environmental uncertainty (PEU) and the perceived novelty or innovativeness of an idea. It draws upon social support perspectives (Edelman *et al.*, 2016; Powell and Eddleston, 2013) to assess the formation of opportunity intentions (Bird, 1988; Dimov and Pistrui, 2020)—a process already fraught with stress, uncertainty and unknowns (Lerman *et al.*, 2021; Packard *et al.*, 2017)—amid the recent pandemic. Because some have found social support to be especially critical for women entrepreneurs (Erogul and Quagraine, 2017; Hanson and Blake, 2009; Klyver and Terjesen, 2007; Watson, 2011), we are also interested in possible gender differences in the effects of these mechanisms.

This research makes several interesting contributions to, for example, Social Support Theory (Edelman *et al.*, 2016; Powell and Eddleston, 2013), Gender Schema Theory (Bem, 1981) and entrepreneurial opportunity intention theory (Dimov, 2007) by adding an additional contextual dimension: crisis. Specifically, it has not been clear to what extent the effects of SNS on entrepreneurial intentions, which has previously been studied only under *normal* conditions, might hold in times of *crisis*. Do these relationships change under the stress of crisis and, if so, how? This study adds further evidence of the vital role of SNS in building opportunity intentions, which it finds *strengthens* in times of crisis. It explored how and why this happens, examining specific mechanisms: experienced stress, PEU and idea innovativeness. It found that information support from one's social network may, in fact, *exacerbate* their feelings of uncertainty due to information redundancy, which also appears to have the effect of instigating *greater* opportunity intention within a radically changing economic landscape. It also found that information support from social networks increases perceived idea innovativeness, which increases opportunity intention among male (but not female) prospective entrepreneurs. Therefore, this study can help better understand how to navigate the challenges of crises and build stronger and more resilient communities.

Theoretical background and hypotheses

Entrepreneurial action is driven by *perception* (McMullen and Shepherd, 2006), which is influenced by experiential learning and social discourse. Entrepreneurship is a goal-driven process in pursuit of new value (Bylund and Packard, 2022; Packard, 2017), a process of evolving intent (Dimov and Pistrui, 2020; Packard *et al.*, 2017). This process depends on various factors such as culture (Emami and Khajeheian, 2019), formal and informal mechanisms (Krueger and Brazeal, 1994), necessity versus opportunity motivators (Arrighetti *et al.*, 2016) and social networks (Jenssen and Koenig, 2002; Klyver *et al.*, 2018), among others. This study focuses on and elaborates on the role of social networks in shaping prospective entrepreneurs' perceptions and, thus, their opportunity intentions in the face of crisis. It applies, integrates and advances Social Support Theory (SST) and Gender Schema Theory (GST) to develop the argument. SST explains how an individual's social support influences opportunity intention; GST explains why this influence differs for male versus prospective female entrepreneurs.

Entrepreneurs' activities are legitimized by the adoption of social norms and meaning structures held by the members of social networks. Hence, they act not on personal beliefs but on the beliefs of their social group (Zaheer *et al.*, 2010). As such, the social norms defined in and by the network determine the behavioral models of individuals in different circumstances (Hayek, 1967), even to the extent they (e.g. entrepreneurs) give up their own personal desires for the benefit of the network (Festré, 2010). Within the group, social norms dictate what and how each member performs, inducing behavioral changes at the individual-social level of analysis (Schultz *et al.*, 2008).

A social network consists of a set of actors or nodes such as family, friends, colleagues and role models and a set of interpersonal or relational ties that link them (Borgatti and Halgin, 2011). A social network provides social support to its members, including being cared for, loved, accepted and esteemed by others in the social network (Edelman *et al.*, 2016). Studies have recognized that SNS highly influences entrepreneurial activities (Powell and Eddleston, 2017; Edelman *et al.*, 2016). One's willingness to take entrepreneurial actions toward starting a new business can induce different reactions from one's social network (Pruett *et al.*, 2009). For example, while strong social support would intuitively be expected to instil self-confidence and reinforce a willingness to bear uncertainty positively, empirical research has found mixed results. For example, a study by Edelman *et al.* (2016) found a positive association between social support on young entrepreneurs' venturing. However, the relationship

between SNS and opportunity intention is more ambiguous during periods of social upheaval. [Arrighetti et al. \(2016\)](#), for example, find no correlation between higher perceived family support and definite entrepreneurial intentions during a period of economic crisis. The COVID-19 crisis, where many value creation processes were put on hold and supply chains were disrupted ([Kuckertz et al., 2020](#)), thus offers a unique and powerful look into SNS.

Extending SST's explanation of how social networks affect opportunity intention, scholars have found evidence of social networking differences between men and women ([Neumeyer et al., 2019](#)) due to differences in their socialization experiences ([Eagly et al., 2000](#); [Gatewood, 2004](#); [Welter et al., 2006](#)). [Arshad et al. \(2016\)](#) advance the core gender difference using GST ([Bem, 1981](#)), which posits that individuals interpret incoming information through the lens of socially derived *schemas*—cognitive structures that classify and determine attitudes, preferences and behaviors. [Kohlberg \(1966\)](#) argues that gender schemas are rigid standards and social roles learned at an early age ([Eagly et al., 2000](#)). For example, gender schemas regulate appropriately gendered clothes, entertainment and career aspirations ([Bem, 1981](#)).

In a similar vein, social networking is schematically different for men and women. Women create their social networks through “feminine” schemas—women are more socially dependent than men, and so their networks mainly consist of family and friends ([Bertelsen et al., 2017](#)). They tend to build stronger social connections ([Miller, 2012](#)) and rely more heavily on those connections, including their business connections ([Khan, 2020](#)). [Ashourizadeh and Schott \(2013\)](#) find that female entrepreneurs generally seek and receive advice from their family, relatives and friends more regularly than men ([Bullough et al., 2017](#)), who tend to have and rely on more professional contacts ([Kalafatoglu and Mendoza, 2017](#)). A study by [Manolova et al. \(2007\)](#) finds the impact of social networks on male and female entrepreneurs' performance to be different and that male entrepreneurs' growth expectations are positively affected by advice from their network while females' are not. They posit that this is because of the different composition of their networks, with men's networks being comparatively more instrumental and women's being comparatively more social, which restricts them from accessing key industry and political networks ([Manolova, 2006](#); [Smallbone and Welter, 2001](#)) and, consequently, the essential resources those networks can offer ([Neumeyer et al., 2019](#)). For instance, female entrepreneurs often find it harder to get a business loan ([Fabowale et al., 1995](#)).

Social networks, gender and opportunity intention

Generally, entrepreneurship is already widely understood to be male-dominated ([Bird and Brush, 2002](#); [Cowling and Taylor, 2001](#); [Rocha and Van Praag, 2020](#)). The Global Entrepreneurship Monitor (GEM) report shows greater Total Entrepreneurial Activities among men than women in most economies ([GEM, 2020](#)). Building on GST, scholars have argued that the social gender norms that comprise contemporary gender schemas promote a gender disparity in attitudes toward entrepreneurship ([Santos et al., 2016](#); [Sarpong et al., 2021](#)). As a result, women generally have weaker entrepreneurial intentions and start fewer businesses on average than do men ([Shinnar et al., 2018](#)). These gender roles are especially augmented in patriarchal cultures such as Iran and have only been augmented by the recent pandemic ([Brysk, 2022](#); [Javed and Chattu, 2020](#)). For example, as previously reported, there was a severe dampening of women's entrepreneurial activities within the COVID-19 crisis, caused, in large part, by added pressures and responsibilities that fell to women, who traditionally assume the bulk of childcare responsibilities. In the face of this downward pressure on women's entrepreneurial actions, research may also see a countervailing upward pressure from social network effects if, of course, those social networks are positive toward and approving of women's entrepreneurial actions.

From the perspective of GST, women are associated with greater kindness, self-sacrifice, compassion and community (Ferriman *et al.*, 2009), leading them to more highly value and rely upon others' opinions than do men (Miller, 2012). Salo and Allwood (2011) find that female police investigators favor a dependent decision-making style (getting advice on important decisions) over a rational decision-making style (searching for complete information), highlighting the importance of others' opinions in determining their behaviors. In line with GST, then, the authors posit that women, socialized with specific behaviors and attributes (Eagly *et al.*, 2000), will tend to receive and interpret emotional support differently than men, generally and concerning entrepreneurship, specifically. Because entrepreneurship is broadly considered a masculine activity (Greene and Brush, 2018), female entrepreneurs generally reach for emotional support of their business activities as approval of their actions and legitimization of their behavior (Lavoie and Chamlee-Wright, 2001). In contrast, since it is already normalized for men to act entrepreneurially (as part of the "masculine" gender schema), such support merely reinforces the schema in men. Thus, emotional support is received differently by men and women according to respective gender schemas and may have different effects on behavior.

The importance of social networks for entrepreneurship is arguably even starker in times of crisis and turmoil, such as the COVID-19 pandemic. A study by Gable and Bedrov (2022) suggests that SNS helps individuals better overcome a disaster's adverse effects. Within the recent crisis, then, it can be expected that women lean even more heavily on the support of their social network. Since women attempt to accord their actions with others' opinions more than do men (Eagly, 1978), they are presumably more sensitive to their social networks. Thus, it is expected that women's opportunity intentions would be, compared to their male counterparts, more strongly influenced by SNS amid a crisis.

H1a. During the 2019-nCoV crisis, SNS has a positive influence on opportunity intention.

H1b. This effect will be greater for female prospective entrepreneurs than for their male counterparts.

Mediating effects

Experienced stress, PEU and idea innovativeness of the underlying business activities are proposed as key mediating variables in this study. Each of these has been shown to influence entrepreneurial intention (Emami and Dimov, 2017; Packard *et al.*, 2017; Rauch *et al.*, 2018). However, these are also each influenced by one's social network. Moreover, the experience or perception of all three are or may be altered by crisis. Thus, it can be expected that these variables will play an essential role in entrepreneurs' decisions and actions, particularly in times of crisis, and that their effects will also vary between men and women.

Experienced stress

Well-being in the entrepreneurial process is still a nascent research topic and is emphasized as a critical outcome in entrepreneurship research (Wiklund *et al.*, 2019). Experienced stress is a significant risk factor for entrepreneurial well-being (Lerman *et al.*, 2021; Shir *et al.*, 2018; Stephan *et al.*, 2020). Peters *et al.* (2017, p. 184) define stress as "the individual state of uncertainty about what needs to be done to safeguard physical, mental or social well-being". Extensive research suggests that stress is an essential variable in predicting behavioral outcomes (Ganster and Schaubroeck, 1991; Gilboa *et al.*, 2008). Experienced stress in small doses can be a motivating factor for entrepreneurial action (Pollack *et al.*, 2012; Lerman *et al.*, 2021). However, large amounts of experienced stress are typically inhibitory, reducing the optimism, resilience and self-esteem required for challenging tasks (Foo *et al.*, 2009; Kuratko *et al.*, 2021), such as entrepreneurship (Kariv, 2008).

Entrepreneurship, generally, is higher in stress than the typical career (Stephan *et al.*, 2020). Business management and income worries plague entrepreneurs (Egan and Tosanguan, 2009). Dealing with the uncertainties and complex tasks of new venturing can quickly accumulate into burnout, stress and isolation from the community (Pollack *et al.*, 2012). Pollack *et al.* (2012) note that, in situations beyond one's control (Markman *et al.*, 2005), negative feelings such as tension can arise, causing individuals to disengage from their economic activities.

In adverse events, experienced stress increases due to more frequent disruptions of normal "life" and routine. Jabri *et al.* (2020) find that the COVID-19 pandemic drastically increased stress cardiomyopathy. Amid such crises, SNS can be essential to relieving and managing stress. Social networks can supply new information (Crick *et al.*, 2021), companionship (Cohen and Wills, 1985; Arregle *et al.*, 2015) and emotional support (Wills, 1985) to relieve stress. Individuals turn to their social network for information, affection and for help and guidance in coping with an unfamiliar situation. The social interconnectedness of family and friends amid trying times is expected to play an essential role in eliminating loneliness, reducing stress and maintaining psychological well-being. Yet, in the recent COVID-19 pandemic, social distancing and shelter-in-place regulations severely disrupted the intercourse between individuals and their social networks. Feelings of loneliness and solitude spiked, and, as a result, psychological well-being plummeted (Alradhawi *et al.*, 2020; Pierce *et al.*, 2020). Because in-person interactions had fallen drastically, social connections were maintained through other means, such as video conferencing and social media.

On average, women tend to experience more stress than men (Verma *et al.*, 2011; Kariv, 2008), which difference may exacerbate within times of crisis. This is attributable, in part, to their comparatively greater attentiveness to the community (Miller, 2012) and their social roles therein (Skitka and Maslach, 1996). So, in crisis, the SNS they receive may have a more significant role in relieving experienced stress, consequently increasing the likelihood of opportunity intention.

H2a. During the 2019-nCoV crisis, the positive relationship between SNS and opportunity intention is mediated by experienced stress.

H2b. The mediation effect is stronger for prospective women entrepreneurs than it is for men.

Perceived environmental uncertainty

Uncertainty is an integral part of entrepreneurial activities and innovations. Lack of information constrains entrepreneurs' ability to predict the outcome of a decision. Perceived environmental uncertainty (PEU) is defined as "an individual's perceived inability to predict something accurately" (Milliken, 1987, p. 136). Scholars have specified various environmental factors that cause actors to be uncertain (e.g. technological advancement, competitive response, customer preference changing, supply shocks, political instability) (Duncan, 1972; Meijer *et al.*, 2007; Milliken, 1987). While the task of entrepreneurship is to "bear" uncertainty (Foss and Klein, 2012), greater PEU increases the burden (i.e. risk) to bear and, thus, inhibits entrepreneurial intentions and actions (Townsend *et al.*, 2018). Entrepreneurs attempt to reduce and navigate PEU by collecting information and clarifying their tasks in their entrepreneurial venturing (Dimov, 2017; McMullen and Shepherd, 2006; Packard and Clark, 2020).

The effect of SNS on opportunity intention is mediated by entrepreneurs' PEU. Interestingly, research suggests that exposure to the ideas and opinions of one's social network may *increase*, rather than decrease, PEU because such exposure illuminates uncertainties the entrepreneur did not previously see (Atanasov, 2019). Arregle *et al.* (2015) find that information support from one's social network has an inverted U-shaped effect on

new venture growth. This means that an increasing amount of advice and information has a counter effect rather than a strictly positive effect on business activity. Relating this research to the context of crisis, such as the pandemic, a wider array of actors within one's social network would tend to have a wider diversity of opinions, which may increase PEU during times of crisis.

PEU also varies across genders. On average, prospective female entrepreneurs perceive more uncertainties than their male counterparts (Emami, 2017). Women, on average, consider information and risks broadly and generally and consider a wider array of uncertainties. In contrast, men engage in more selective information processing, with more perceived opportunities and fewer uncertainties (Emami, 2017). Thus, men tend to be more willing than women to act with high PEU.

While theory on the general effects of PEU on entrepreneurial action is quite robust, PEU is traditionally understood to have adverse effects on opportunity intention. These effects may be severely altered in times of crisis, as the level of PEU increases to an extreme level. The COVID-19 pandemic, for example, caused extreme uncertainty in nearly every aspect of the environment due to a lack of sufficient information and understanding of the event and its effects. Government-imposed closings, social distancing rules and other rapidly changing regulations drastically affected business models, and entrepreneurs struggled to cope with the regulatory uncertainties.

It is also expected that the entrepreneurial judgment complications of crisis-borne PEU will be stronger for women on average due to women's comparative conservativeness and risk aversion (Bird and Brush, 2002; Yordanova and Boshnakova, 2011; Wang *et al.*, 2022), as well as their comparatively greater substantial reliance on their social network for information and emotional support. For instance, a social network may draw more attention to the challenges and issues of a decision, adding to doubt and uncertainty (Rafaeli and Gleason, 2009). Thus, the authors propose that PEU mediates the relationship between social networks and opportunity intention, which mediation is expectedly stronger for men than for women.

H3a. During the 2019-nCoV crisis, the positive relationship between SNS and opportunity intention is mediated by perceived environmental uncertainty.

H3b. The mediation effect is stronger for prospective men entrepreneurs than it is for women.

Idea innovativeness

Getting involved in an innovative start-up is risky. The more innovative the new venture idea is, the more risk the focal entrepreneur must bear (Emami and Dimov, 2017). This risk is compounded by social upheaval. In a social crisis, new and radical innovations are especially vulnerable and unlikely because conservatism increases, both on the supply- and the demand-sides (Walsh and Cunningham, 2016). Demand dries up for new solutions as consumers bulk up on and hunker down with safe and reliable necessities, while producers must scrape every budget to keep the lights on, with R&D being one of the first to go. Kuckertz *et al.* (2020) found that innovations have been comparatively unsuccessful amid the COVID-19 pandemic.

Context and framing of a new venture idea can influence this disparity, although the empirical evidence here is again mixed. For example, Braun *et al.* (1997) find that women feel more reassured than men when a difficult decision is presented positively. Harris *et al.* (2006) find that women become risk-seeking within positive domains, where prospects for high income and profit are strong and the likelihood of losses is low. Women become risk avoiders where the perceived context suggests a higher possibility of adverse outcomes. In contrast,

Fagley and Miller (1997) observe that women make riskier decisions when the negative task domain encompasses outcomes than when the positive domain is predominant. Huang and Wang (2010) find a relationship between risky action and gender stereotypes—when a trend is perceived to be menacing, women are more likely than men to make risky choices and take action in the domain of feminine tasks, and less likely to take action when that action is perceived as masculine.

Social networks are one of the crucial influencers of new venture idea framing and entrepreneurial action. They can activate entrepreneurs' needs and motivation to understand what value they should offer in the market (Emami and Khajeheian, 2019). Social networks turn prospective entrepreneurs' attention toward their favored idea(s), offer feedback to hone and develop the idea or relate negative feedback against it (Dimov, 2007). SNS and influence over new venture ideation are more prominent in the early stages of the entrepreneurial journey (Dimov, 2007), while in the later stages, entrepreneurs generally invoke more effortful cognitive processes such as reasoning (Kahneman, 2003) and pursue broader market research to ascertain market interest (Emami and Klein, 2020; Webb *et al.*, 2011).

In line with the reviewed literature, the authors posit that information and emotional support from a prospective entrepreneur's social network are positively related to the perceived innovativeness of the new venture idea (Fritsch and Kauffeld-Monz, 2010; Ioanid *et al.*, 2018), but that this relationship will differ between men and women. More innovative ideas are expected to be seen by prospective male entrepreneurs, in line with their gender schema, as a challenge and opportunity, more or less independently of feedback from their social network. Many entrepreneurs, almost all male, from Apple's Steve Jobs to Palm's Jeff Hawkins to Airbnb's Brian Chesky and Joe Gebbia, report ignoring negative feedback from their social networks, confident that the market would take to their idea. In contrast, the role of the social network on female prospective entrepreneurs' assessment of more innovative ideas is expected to be much stronger, as women are again more attentive and responsive to their social networks, and the magnitude of feedback is expected to be stronger with more innovative ideas. Thus, women are expected to be more influenced by their social network when their idea is more innovative than men.

H4a. During the 2019-nCoV crisis, the positive relationship between SNS and opportunity intention is mediated by perceived idea innovativeness.

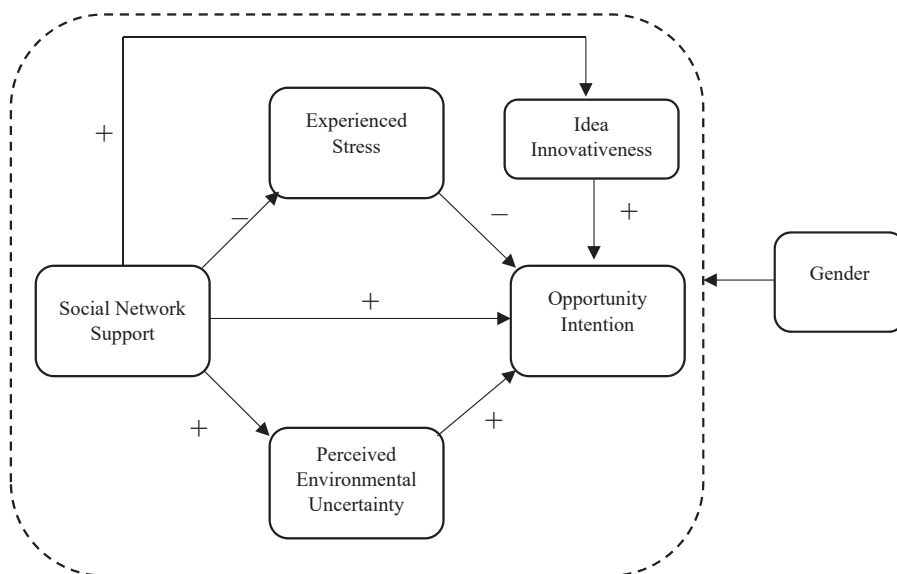
H4b. The mediation is stronger for prospective women entrepreneurs than it is for men.

The theoretical model presented herein is represented in Figure 1. This model conceptualizes how the pandemic has affected the founder's social, psychological and demographic characteristics as well as the perceived innovativeness of their venture idea and how these affect the opportunity intention.

Method

Research context

The research context is the Iranian entrepreneurship community during the COVID-19 pandemic. The Iranian business community offers an ideal research context in that it (1) has a strong cultural gender schema, (2) exhibits a comparatively high reliance on social support and (3) was severely affected by the pandemic (among other crises). First, the dominant Islamic religion engenders comparatively strong gender schemas throughout society, with explicit social norms based upon gender differences. Part of these gender schemas is the traditional delineation between male breadwinner and female homemaker. In Iran, the *masculine* schema includes the entrepreneur, whereas the *feminine* schema does not.



Source(s): Authors' own creation

Figure 1.
Conceptual model

Second, as a religious community, SNS in Iran is comparatively strong. Institutional support for businesses in Iran, particularly new businesses, is traditionally weak and has only gotten worse amid the pandemic (Salamzadeh and Dana, 2020). Thus, social support is heavily relied on as a meager substitute. It is especially crucial for female entrepreneurs who pursue their interests against the cultural grain of traditional gender schemas.

Finally, Iran has also faced various crises in recent decades: foreign-imposed sanctions (which have severely weakened its national currency), an eight-year war with Iraq, the rise of ISIS and military warring in neighboring countries, isolation from global connections, as well as natural disasters such as earthquakes and floods. Amid such turmoil, Iran was one of the first countries to deal with the COVID-19 pandemic's first, second and third waves, which considerably worsened the already dire situation. The pandemic, along with the crisis management response tactics, severely impacted Iran's economy, which relies heavily on services (Taherinia and Hasanvand, 2020). Reports estimate that 1.5 million Iranians left the labor market due to the pandemic, 60% of them women. A lack of institutional support has caused the impact of the Covid crisis to fall more severely on women and female entrepreneurs. Therefore, social networks' provision of emotional, informational and financial support plays a crucial part in enabling female entrepreneurs to survive during crises in an isolating environment.

Methodology

To test our hypotheses, we employ quantitative methods typical of the psychological sciences. The dependent and independent variables that we have developed in our hypotheses are perception and intention variables best captured in self-report measures. We are particularly interested in the effects of SNS changes across time. Therefore, our methodology is a 2-stage survey sampling methodology, explained as follows.

Sample and procedure

The authors collected two-stage sample data at the height of the COVID-19 pandemic to test the hypotheses. According to Shepherd (2020), the COVID-19 pandemic offers a chance to reconsider entrepreneurship's dominant assumptions. The first sampling took place from mid-March to early April 2020. By then, the COVID-19 outbreak was already well underway, with Iran's Ministry of Health and Medical Education reporting 18,407 total confirmed cases and 1,284 deaths by March 19. Just prior to the first sample, the Iranian government enacted lockdown policies, closing businesses, schools, streets, parks and shrines. After the first sample was collected, the "Nowruz peak" ended, and case numbers started to decline. Restrictions began to be lifted, as Iran simply could not keep its economy closed for so long. Two months later, when the second follow-up sample was collected, the 2019-nCov virus was already resurging. Thus, both samples were collected amid surging case numbers and severe concerns over health and economic conditions.

The sample consists of prospective and early-stage entrepreneurs in Iran who were either beginning actions toward new venture creation amid the pandemic or else were pivoting their initial venture idea due to the COVID-19 situation. The authors focused a sample on early-stage entrepreneurs since opportunity intention and development activities are especially vulnerable to crises. The screening questions used to identify the sample of prospective entrepreneurs were: 1) "Are you currently pursuing a business idea in the time of pandemic?" and 2) "Do you plan on modifying your business idea due to the pandemic situation?" Those who responded "no" to both screening questions were excluded from the sample. Those who responded "yes" to one of the screening questions received an e-link to the first-stage questionnaire. This initial screening resulted in 1,265 entrepreneurs that were sent the first-stage questionnaire.

Two-stage sampling was used to capture changes in the entrepreneurs' perceptions and opportunity intention, as well as in the regulatory conditions (due to COVID-19), technological factors and competitive conditions. To collect data on real opportunity intention (and not mere entrepreneurial aspirations), the prospective entrepreneurs do not merely desire to start a business but are actively performing the initial activities of new venturing. The research group partnered with Science and Technology Parks (STPs) to collect the sample. STPs work with firms in various industries and markets, spanning various degrees of innovativeness (whereas growth and technology centers, and incubators, primarily work with highly innovative ideas) and PEU. One of the STP's conditions for admission is that the candidates be a team—no solo entrepreneurs are admitted. The authors obtained the contact information of 13,072 companies developed within one of the 43 STPs' business training programs. So, the authors contacted the team leader/founder via email and followed up by phone if no response was received.

The two survey questionnaires were composed of items established in prior work and they have been explained in the measures section. The first-stage questionnaire included items concerning experienced stress and social networks. The response rate to this initial questionnaire was 9.6%. The research group also asked participants to share the questionnaire link with any potential entrepreneurs in their network who met the screening criteria (chain-referral sampling technique). In all, 644 responses were returned with no missing data. To reduce response bias, several strategies were followed. First, it was promised to disseminate the study results to participating entrepreneurs to improve the sample. Furthermore, respondents were promised a business consultancy session in exchange for a completed questionnaire receipt.

The second-stage questionnaire was sent to collect additional data on variables related to innovativeness, PEU and opportunity intention. The authors obtained complete responses from 414 of the initial 644, a response rate of 60.9%.

Harman's single factor test shows that the percentage of variance is 19.373, which is less than 50%, indicating no common method bias. A random sub-sample of 40 prospective entrepreneurs out of the stage two respondents was created to check for response errors. All these participants were contacted by phone to ascertain the accuracy of their answers, specifically regarding perceived innovativeness (Emami and Dimov, 2017). Results revealed that only minor and negligible mistakes were made in the responses.

The generalizability of these data is limited to a population of prospective entrepreneurs within societies that have a traditional culture and where the Covid crisis was severe. However, we think the mechanisms we study are likely to hold, to at least some extent, in other cultures and crises.

Measures

Two university experts verified the validity of the questionnaire and whether the questions effectively captured the topic under investigation. Table A1 in the Appendix 1 presents the measurement constructs of variables.

Dependent variable

Opportunity Intention. This measure is consistent with Dimov's (2007) *opportunity intention* construct, and is measured as the participants' degree of willingness to take subsequent entrepreneurial actions for their business idea or their pivoted business idea. It measures respondents' likelihood of taking entrepreneurial action. Responses were given via a seven-point Likert scale. Cronbach's alpha (0.85) shows high consistency among items. The opportunity intention was indexed by taking the mean of the five items.

Independent variables

Social Network Support (SNS). The instrument for this variable was constructed based on Edelman *et al.*'s (2016) and Welsh *et al.*'s (2018) SNS items. Because reliability was good (Cronbach's alpha = 0.80), the mean of the two items was indexed.

Mediators

Experienced stress (ES). Cohen *et al.*'s (1983) items were applied to measure the stress of prospective entrepreneurs. Again, the items were customized to fit the current conditions of COVID-19. High internal consistency of items (Cronbach's alpha = 0.86) was found and therefore, they were indexed.

Perceived Environmental Uncertainty (PEU). The PEU variable was made according to Daft *et al.* (1988) and Sawyerr and her colleagues' (2003) formulation:

$$PEU_i = SI_i(V_i + X_i)$$

i = Related environment

PEU_i = Perceived Environmental Uncertainty of the related environment

SI_i = Strategic importance of the related environment

V_i = Variability of the related environment

X_i = Degree of the complexity of the related environment

Previous studies have identified various sources of environmental uncertainty (Daft *et al.*, 1988; Dill, 1958; Sawyerr *et al.*, 2003): technology changes, competition, customer/market dynamics, access to resources and economic/regulatory change. Thus, the authors generated

a score for each aspect of the business environment: technology, competition, customer/market, resource and regulatory environment. [Sawyer et al. \(2003\)](#) believe that macro (e.g. regulatory) environments have no direct effect on firms, their effects are mediated by micro-environments. However, at least during the COVID-19 pandemic, government regulations have directly affected business activities. For instance, due to COVID-19, shops in Iran were prohibited from reopening unless they received a health code from the Ministry of Health and Medical Education and put it at the entrance of their shops. Therefore, the regulatory environment was included in this study. The items were indexed into a single variable due to the high reliability of the items (Cronbach's alpha = 0.80).

Innovativeness (INNO). This study employs [Emami and Dimov's \(2017\)](#) scale to measure perceived innovativeness. The respondents were required to specify the extent of their ideas' innovativeness through one of the seven categories. Following [Emami and Dimov \(2017\)](#), these responses were recoded into three levels: low, medium and high innovativeness.

Convergent and discriminate validity of constructs

The correlation among instruments measuring the same construct is > 0.50, suggesting sufficient convergent validity ([Abma et al., 2016](#); [Carlson and Herdman, 2012](#)). Discriminant validity is also satisfactory, as the correlations across instruments measuring different constructs are <0.7 ([Cheung and Wang, 2017](#)).

Method of analyses

This study used hierarchical linear regression as the primary method to test the hypotheses. The PROCESS macro (Model 4) from [Hayes \(2017\)](#) has been used to check the robustness of mediation.

Results

The sample consists of 59.2% men, with an average of 9.5 years of business experience, and 40.8% women, with an average of 5.1 years of business experience. The *Pearson* correlation coefficients for these variables are provided in [Table 1](#). There are strong, significant correlations between opportunity intention and independent variables of the study. The mean and low standard deviation suggests reliability and normal distribution of the data. All variables are within a normal range, and there were no outliers among them.

	Mean	Std. Deviation	(1)	(2)	(3)	(4)	(5)
(1) OI ¹	4.47	1.546	1				
(2) SNS ²	4.94	1.541	0.544**	1			
(3) ES ³	3.69	1.071	-0.103*	-0.117*	1		
(4) PEU ⁴	47.15	18.023	0.419**	0.352**	0.032	1	
(5) INNO ⁵	2.00	0.887	0.220**	0.121*	-0.063	0.170**	1

Note(s): **Correlation is significant at the 0.01 level (2-tailed)

*Correlation is significant at the 0.05 level (2-tailed)

Number of cases = 414

1. OI: Opportunity Intention

2. SNS: Social Network Support

3. ES: Experienced Stress

4. PEU: Perceived Environmental Uncertainty

5. INNO: Idea Innovativeness

Source(s): Authors' own creation

Table 1.
Mean, Standard
Deviation and
correlations of the
variables

Also, no potential multicollinearity among independent variables was observed, as diagnosed through the *Variance Inflation Factor* (VIF) test (Stine, 1995; Daoud, 2017). Finally, the distribution of each variable falls within the acceptable range of Skewness and Kurtosis.

Findings

The Goodness-of-Fit Model has been tested (Table A2 in the Appendix 1), which shows that SNS can explain 29.6% of the variance in opportunity intention. Adding the mediators strengthens the model, explaining 37.3% of the variance.

The first hypothesis (H1a) assumes SNS's direct and positive impact on opportunity intention. Results in Table 2 show that the influence of SNS on the opportunity intention is positive and significant ($\beta = 0.54$, p -value < 0.001). Thus, H1a is supported.

The mediation effects (H2a, H3a and H4a) from the hierarchical linear regression are also presented in Table 2. Only experienced stress does not mediate the relationship between social networks and opportunity intention among all mediators. Therefore, H3a and H4a are supported by the data, while H2a was not.

To further validate the mediation effects, the hypotheses H2a, H3a and H4a were tested with Hayes's PROCESS method (Model 4), with a 95% bootstrap confidence interval. 5,000 bootstrap samples were used in each test, with the sample's 245:169 ratio of men to women.

The 4-step analysis was run for each mediation separately (Table 3). In Step 1, a naïve regression model without the mediator is calculated. Step 2 shows the regression effect of IV, social networks, on the mediator, i.e. experienced stress, perceived environmental university and innovativeness. Step 3 of the mediation process shows the mediator (experienced stress, perceived environmental university and innovativeness), controlling for the IV (social networks). Step 4 of the analysis reveals whether social networks are a significant predictor of opportunity intention, controlling for the mediator (experienced stress, PEU and innovativeness). The last two rows present the direct and indirect effects.

Results in Table 3 display, in line with previous results, that innovativeness and PEU mediated the relationship between social networks and opportunity intention, but experienced stress did not. Thus, the hypotheses H3a and H4a are, again, supported, but not H2a.

Model	Model 1 Direct effect of SNS on OI	Model 2 Effect of SNS on mediator	Model 3 Unique effect of mediator on OI	Model 4 Indirect effect on OI
SNS	0.54** (0.042)	-0.081* (0.039)		0.54* (0.042)
ES			-0.14* (0.073)	-0.05 (0.058)
Constant	1.775	4.095	5.020	2.010
SNS	#	4.12** (0.565)		0.454** (0.044)
PEU			0.036** (0.004)	0.022** (0.004)
Constant	#	4.121	2.776	1.178
SNS	#	0.07* (0.029)		0.52** (0.043)
INNO			0.38** (0.082)	0.27** (0.073)
Constant	#	1.653	3.705	1.325

Note(s): * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

same value for all mediation analyses

Source(s): Authors' own creation

Table 2.
Coefficient with
bootstrap on 1,000
samples

Predictors	On ES				On OI			
	β	SE	p	CI 95%	β	SE	p	CI 95%
SNS	-0.08	0.03	0.01	-0.14,-0.01	0.54	0.04	0.0000	0.45, 0.62
ES					-0.05	0.06	0.34	-0.17, 0.06
R^2	0.01				0.29			
F	5.73				86.9			
Direct effect of SNS on OI					0.54	0.04	0.0000	0.45, 0.62
Indirect effect SNS on OI					0.004			-0.004, 0.01

Predictors	On PEU				On OI			
	β	SE	p	CI 95%	β	SE	p	CI 95%
SNS	4.12	0.53	0.0000	3.06,5.18	0.45	0.04	0.0000	0.37, 0.53
PEU					0.02	0.003	0.0000	0.01, 0.02
R^2	0.12				0.35			
F	58.39				112.99			
Direct effect of SNS on OI					0.45	0.04	0.0000	0.37, 0.53
Indirect effect SNS on OI					0.09			0.05, 0.13

Predictors	On INNO				On OI			
	β	SE	p	CI 95%	β	SE	p	CI 95%
SNS	0.06	0.02	0.0136	0.01,0.12	0.52	0.04	0.0000	0.44, 0.6
INNO					0.27	0.07	0.0002	0.13, 0.41
R^2	0.01				0.31			
F	6.14				96.6			
Direct effect of SNS on OI					0.52	0.04	0.0000	0.44, 0.6
Indirect effect SNS on OI					0.01			0.003, 0.03

Note(s): $N = 414$
Source(s): Authors' own creation

Table 3.
Testing the mediating effect of ES, PEU and INNO on OI using PROCESS model

The moderating effect of gender

The independent samples *T*-test (with 95% bootstrapped confidence intervals) was run to understand whether there is a significant difference between men and women in the variables (H2b, H3b, H4b). The results presented in Table 4 revealed that women experienced greater

Variable	Group	Mean	<i>t</i> -test for equality of means <i>t</i>
OI	W	4.12	-3.9***
	M	4.71	
SNS	W	4.84	-1.123
	M	5.01	
ES	W	3.92	3.72***
	M	3.53	
PEU	W	46.36	-0.74
	M	47.69	
INNO	W	1.92	-1.535
	M	2.05	

Note(s): *Equal variances assumed
*** $p < 0.005$
Source(s): Authors' own creation

Table 4.
Independent samples test*

stress than their male counterparts (women = 3.92 vs. men = 3.53, p -value <0.005). This difference resulted in a significant difference in opportunity intention (men = 4.71 vs. women = 4.12, p -value <0.005), supporting H2b. The remaining mediators—Innovativeness and PEU—did not exhibit significant mediation differences between women and men (Table 4).

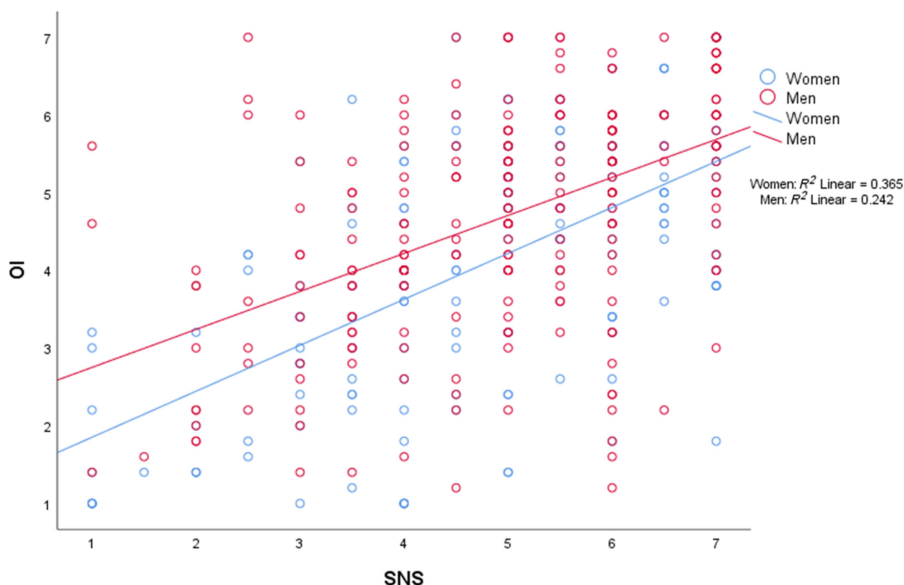
The authors use hierarchical linear regression to test the gender difference in the mediation effects. Table 5 shows the Goodness-of-Fit Model; 36.5% of the variance in opportunity intention among women and 24.2% among men can be explained by their social networks. R square shows a significant change by adding the mediators, specifically among men (12.4% compared to only a 3% change for women). The significance of the model in the ANOVA test is strong (p -value <0.0005).

H1b supposes that social networks' direct and positive impact on opportunity intention varies between men and women. Results in Table 9 show that the influence of social networks upon opportunity intention is more potent for women ($\beta = 0.59$, p -value <0.001) than men ($\beta = 0.46$, p -value <0.001). Thus, H1b is supported. Figure 2 displays this effect among prospective male and female entrepreneurs, which is higher for women than men.

Model	R	R square	Men R square change	Std. Error of the estimate	R	R square	Women R square change	Std. Error of the estimate
1	0.492 ^a	0.242	0.242	1.270	0.604 ^a	0.365	0.365	1.287
2	0.605 ^b	0.367	0.124	1.168	0.629 ^b	0.396	0.030	1.267

Note(s): a. Predictors: (Constant), SNS
 b. Predictors: (Constant), SNS, INNO, ES, PEU
 Source(s): Authors' own creation

Table 5. Model summary of hierarchical linear regression with OI as the dependent variable



Source(s): Authors' own creation

Figure 2. The impact of SNS on OI among prospective male and female entrepreneurs

Table 6 also shows the mediation effect differences between genders, proposed in H2b, H3b and H4b, in the hierarchical linear regression tests. Results show that among all mediators, *only* PEU (H3b) mediates the relationship between social networks and opportunity intention for prospective male and female entrepreneurs, and it is stronger for men than women. Therefore, only H3b is supported by the data.

The mediation effects through gender were also tested by using the PROCESS method. Results for this test (Tables 7–9) suggest that only PEU mediated the relationship between social networks and opportunity intention and that this mediation effect is stronger for men than for women (Table 9). Thus, only H3b was supported in this test.

Discussion

A number of studies have taken advantage of the COVID-19 pandemic to study entrepreneurship processes and mechanisms (e.g. Alon *et al.*, 2020; Giones *et al.*, 2020; Kuckertz *et al.*, 2020; Shepherd, 2020). This study also has taken the initiative to observe the effects this crisis has had on social factors and how these effects differ across genders. It has examined how the key role of SNS in the opportunity intention process varies between men and women in times of crisis, such as the COVID-19 pandemic. Furthermore, it explored how experienced stress, innovativeness and PEU might mediate this relationship.

We studied these with two-stage primary survey data of prospective entrepreneurs within the pandemic's timeframe from Science and Technology Parks in Iran. Iran was chosen because it (1) has a strong cultural gender schema, (2) exhibits a comparatively high reliance on social support, (3) was severely affected by the pandemic (among other crises) and (4) business activities have been negatively influenced by its isolation from global markets.

The results reveal that, within the COVID-19 pandemic, the importance of SNS for entrepreneurs' opportunity intentions was stronger than ever, implying that crises augment the role of SNS in building and bolstering opportunity intentions. Moreover, the differences in the importance of social support between men and women were also wider. While this study's findings are consistent with previous studies (e.g. Emami and Khajeheian, 2019; Meek *et al.*, 2010), it strongly suggests that the critical importance of SNS for opportunity intention is exacerbated in times of crisis. Entrepreneurship has long been recognized as predominantly male-dominated (Bird and Brush, 2002; Cowling and Taylor, 2001; Rocha and Van Praag, 2020). Moreover, in traditional cultures such as Iran's, men are presupposed the "breadwinners" and women the "homemakers." These norms take a toll on women's entrepreneurial intentions, particularly in times of crisis. However, this study demonstrates that (prospective) women entrepreneurs can overcome the challenges posed by crisis and cultural expectations with the help of their networks. Prior research also highlights the importance of family and friends as sources of support for women entrepreneurs (Bertelsen *et al.*, 2017; Ashourizadeh and Schött, 2013). (Prospective) Women entrepreneurs are more likely than men to seek and receive advice from their networks (Bullough *et al.*, 2017), which support can enhance their opportunity intentions, even in times of crisis (such as the pandemic).

This study also found that women and men entrepreneurs differed in how they experienced stress and uncertainty during the pandemic. Women entrepreneurs' stress was alleviated to a greater extent with support from their networks than it was for men. However, their social network increased women's perceived environmental uncertainty, compared to men. This suggests that different types of network support can have disparate effects on different aspects of opportunity intentions. For example, psychological support can be helpful in reducing stress, while informational support may not be valid or specific enough to reduce environmental uncertainty due to the limited business knowledge of family and friends.

Model	Men					Women				
	Model 5 Direct effect of SNS on OI	Model 6 Effect of SNS on mediator	Model 7 Unique effect of mediator on OI	Model 8 Indirect effect on OI	Model 9 Direct effect of SNS on OI	Model 10 Effect of SNS on mediator	Model 11 Unique effect of mediator on OI	Model 12 Indirect effect on OI		
SNS	0.48** (0.058)	-0.03 (0.049)	-0.02 (0.089)	0.49** (0.058)	0.59** (0.054)	-0.12* (0.059)	-0.2 (0.125)	0.58** (0.052)		
ES				0.01 (0.079)			4.931	-0.04 (0.084)		
Constant	2.260	3.684	4.781	2.220	1.259	4.535	4.931	1.451		
SNS	#	3.59** (0.764)		0.4** (0.061)	#	4.71** (0.801)		0.51** (0.063)		
PEU				0.025** (0.005)	#			0.017** (0.006)		
Constant	#	29.707	3.060	1.516	#	23.579	2.428	0.862		
SNS	#	0.061 (0.041)		0.46** (0.061)	#	0.07 (0.041)		0.58** (0.057)		
INNO				0.38** (0.086)	#			0.05 (0.119)		
Constant	#	1.748	3.770	1.592	#	1.553	3.713	1.170		

Note(s): * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$
#same value for all mediation analyses
Source(s): Authors' own creation

Table 6.
Coefficient with
bootstrap on 1,000
samples

	Predictors	β	On ES			β	On OI		
			SE	<i>p</i>	CI 95%		SE	<i>p</i>	CI 95%
MEN <i>N</i> = 245	SNS	-0.03	0.04	0.49	0.11,0.05	0.48	0.05	0.0000	0.37,0.59
	ES					0.01	0.08	0.89	-0.14,0.16
	<i>R</i> ²	0.0019				0.24			
	F	0.45				38.68			
	Direct effect of SNS on OI					0.48	0.05	0.0000	0.37,0.59
	Indirect effect SNS on OI					-0.0003			-0.01,0.008

	Predictors	β	On ES			β	On OI		
			SE	<i>p</i>	CI 95%		SE	<i>p</i>	CI 95%
WOMEN <i>N</i> = 169	SNS	-0.12	0.05	0.01	-0.22,-0.02	0.58	0.06	0.0000	0.46,0.7
	ES					-0.04	0.09	0.64	-0.22,0.13
	<i>R</i> ²	0.03				0.36			
	F	6.09				47.93			
	Direct effect of SNS on OI					0.58	0.06	0.0000	0.46,0.70
	Indirect effect SNS on OI					0.005			-0.01,0.03

Table 7. Testing the mediating effect of ES on OI using PROCESS
Source(s): Authors' own creation

	Predictors	β	On PEU			β	On OI		
			SE	<i>p</i>	CI 95%		SE	<i>p</i>	CI 95%
MEN <i>N</i> = 245	SNS	3.58	0.75	0.0000	2.11,5.06	0.39	0.05	0.0000	0.29,0.5
	PEU					0.02	0.004	0.0000	0.01,0.03
	<i>R</i> ²	0.08				0.32			
	F	22.88				59.35			
	Direct effect of SNS on OI					0.39	0.05	0.0000	0.29,0.5
	Indirect effect SNS on OI					0.08			0.04,0.13

	Predictors	β	On PEU			β	On OI		
			SE	<i>p</i>	CI 95%		SE	<i>p</i>	CI 95%
WOMEN <i>N</i> = 169	SNS	4.7	0.77	0.0000	3.17,6.24	0.51	0.06	0.0000	0.38,0.64
	PEU					0.01	0.005	0.004	0.005,0.02
	<i>R</i> ²	0.18				0.39			
	F	36.92				54.16			
	Direct effect of SNS on OI					0.51	0.06	0.0000	0.38,0.64
	Indirect effect SNS on OI					0.07	0.03		0.02,0.14

Table 8. Testing the mediating effect of PEU on OI using PROCESS
Source(s): Authors' own creation

Moreover, social networks' role in facilitating opportunity intentions, especially amid crisis, is mediated by PEU and the innovativeness of the venture idea. PEU and the venture idea's innovativeness are essentially akin to aforesaid consequences that mediate perception and

Table 9. Testing the mediating effect of INNO on OI using PROCESS

Predictors	On INNO				On OI				
	β	SE	p	CI 95%	β	SE	p	CI 95%	
MEN $N = 245$	SNS	0.06	0.03	0.11	-0.01,0.13	0.46	0.05	0.0000	0.35,0.57
	INNO					0.38	0.08	0.0000	0.2,0.55
	R^2	0.01				0.29			
	F	2.45				51.01			
	Direct effect of SNS on OI					0.46	0.05	0.0000	0.35,0.57
	Indirect effect SNS on OI					0.02			-0.005,0.06
Predictors	On INNO				On OI				
	β	SE	p	CI 95%	β	SE	p	CI 95%	
WOMEN $N = 169$	SNS	0.07	0.04	0.06	-0.005,0.15	0.58	0.06	0.0000	0.46,0.7
	INNO					0.05	0.11	0.61	-0.16,0.28
	R^2	0.02				0.36			
	F	3.4				47.96			
	Direct effect of SNS on OI					0.58	0.06	0.0000	0.46,0.7
	Indirect effect SNS on OI					0.004			-0.01,0.02

Source(s): Authors' own creation

intention. This idea contributes to the recursivity of the entrepreneurial intention-action path in crises over time (Dimov and Pistrui, 2020), wherein the feedback loop between exogenous shocks and the entrepreneurial agent (including the perception of environmental uncertainty and innovativeness of the idea) facilitates opportunity intention process.

The results also suggest that social networks play a more critical role for women, and that prospective female entrepreneurs benefit more than their counterparts from such support in forming their opportunity intention. Gender schema theory suggests that entrepreneurship is, in most cultures, a male-dominated arena (Ahl, 2006; Bird and Brush, 2002; Cowling and Taylor, 2001; Rocha and Van Praag, 2020). The institutional pressure of such gender schemas may hinder women, who are more dependent on social networks in developing new behavior (Venkatesh and Morris, 2000), from forming opportunity intentions and taking the risks necessary for entrepreneurial action. If a behavior (like new venturing) is not supported by their social network (Emami and Khajeheian, 2019), women are particularly discouraged from performing such behavior. However, with the existence of social support particularly from family and friends, for a behavior like new venturing, women tend to feel empowered to take such action (Arshad *et al.*, 2016).

The data did not support experienced stress as a possible mediator. However, PEU and innovativeness significantly mediated the relationship between SNS and opportunity intention. Uncertainty is an integral part of entrepreneurial activities and can be transcended or lowered by the network around an entrepreneur (Wang *et al.*, 2014). In line with the study by Atanasov (2019), this study found that exposure to the ideas and opinions of the social network *increases*, rather than decreases, the perception of uncertainty. This may be because exposure to others' opinions illuminates uncertainties the entrepreneur did not previously see. Seeing new aspects of the opportunity, though there are uncertain, may result in more actions toward that opportunity. The interpretation is that prospective entrepreneurs feel uncertainty (that they have received from their network) like a fog around an opportunity,

which was particularly thick during the pandemic. Hence, they start doing some actions (like outlining a business plan or getting advice from experts) in line with their intention.

However, this study shows that the mediation effect of PEU varies among prospective male and female entrepreneurs. Comparatively, women rely more on their social network due to greater conservativeness and risk aversion (Bird and Brush, 2002; Yordanova and Boshnakova, 2011; Wang *et al.*, 2022). On average, they consider information and risks broadly and generally and consider a wider array of uncertainties, whereas men engage in more selective information processing, with more perceived opportunities and fewer uncertainties (Emami, 2017). Therefore, the likelihood of acting on an entrepreneurial intention may be notably reduced in times of crisis, with the social network's warning of obstacles and challenges.

In line with previous studies (Emami and Khajeheian, 2019), this study found a positive effect of SNS on the innovativeness of venture ideas. The prospective entrepreneur receives the network's support in the form of new and latest information or feedback, which helps them to formulate a more innovative venture idea (Dimov, 2007). Having an innovative idea transcends the opportunity intention. The entrepreneur attempts more effortful cognitive processes such as reasoning (Kahneman, 2003), and pursues broader market research to ascertain market interest (Emami and Klein, 2020; Webb *et al.*, 2011). Hence, this study finds that idea innovativeness mediates the relationship between SNS and opportunity intention.

The mediation of idea innovativeness between SNS and opportunity intention was statistically similar across the genders. An innovative idea may need to be revised many times throughout the new venturing process because customers' needs and wants in comparatively uncertain times (like a pandemic) are often dynamic and difficult to ascertain. According to GEM (2020–21), the pandemic (and responses to it) have caused many businesses in Iran to suffer losses due to the forced reduction in workforce activity and lower sales. The situation has reduced business owners' entrepreneurial orientation in terms of risk-willingness and proactiveness (Pittino *et al.*, 2017; Miller and Friesen, 1983) and impelled them toward "safer" products with low innovativeness and lower production costs. This also comports with the study results: the expected positive relationship between the innovativeness of venture ideas and opportunity intention was not found among either men or women groups. In contrast, opportunities for goods delivery businesses, internet businesses and health and safety products flourished in that same timeframe and received considerable government support. Thus, the perceived opportunities, their viability and desirability and the impetus to exploit are all affected by one's social network and situational conditions. This is in line with research that suggests that entrepreneurial orientation is an important strategy for entrepreneurial firms, but it must be balanced with other considerations such as strategic focus, environmental factors and industry dynamics (Zahra and Covin, 1995; Lumpkin and Dess, 2001).

Finally, it was found that, in contrast to Kuckertz *et al.*'s (2020) finding of diminished entrepreneurial activity amid the current pandemic, social networks have apparently encouraged greater entrepreneurial activities. Men, as expected, have been comparatively proactive amid the crisis. Women, on the other hand, have had fewer opportunities, many having been pushed to caretaking tasks due to the lockdown regulations. One possible explanation for this is that, during crises, social gender norms are more heavily relied on or, at least, more rarely deviated from due to the rise in uncertainty.

Theoretical and practical contributions

The study offers several contributions: first, it contributes to Social Support Theory (Edelman *et al.*, 2016; Grossman *et al.*, 2012; Newbert *et al.*, 2013) and Gender Schema Theory (Bem, 1981) by adding an additional contextual dimension: crisis. While these theories have

been applied in entrepreneurship, they have not been applied contextually. Implementing these theories in a developing context and during a crisis strengthens the theories' validity and application. It suggests that social networks can have both positive and negative effects on prospective entrepreneurs' intentions, depending on the gender and nature of the information received. Specifically, it highlights the potential downside of information redundancy, which can create confusion and doubt in the minds of potential entrepreneurs. At the same time, it underscores the importance of innovative ideas and the role that social networks can play in fostering idea generation and opportunity recognition.

Additionally, social interactions challenge the entrepreneur's beliefs and intentions about current or future states of affairs (e.g. beliefs regarding the opportunity at hand) and their reconsideration or modification is inevitable. Their social environment shapes entrepreneurs' perceptions of uncertainty, stress and innovation. Of course, in the context of this study, the recent pandemic would expectedly differ in important ways from normal conditions, particularly in terms of these. In fact, the pandemic's heightening of these variables in particular was the impetus for this study as an opportunity to unravel the effects of such changes in the social and circumstantial environment on opportunity intentions. Indeed, the pandemic provides ample evidence of just how vital environmental and social factors are to entrepreneurial perceptions.

Moreover, the study advances opportunity intention and evaluation theories (Davidsson, 2015; Pidduck *et al.*, 2023; Vilanova and Vilanova, 2020) by providing evidence on how crises might affect entrepreneurial intentions differently for men and women, with perceived environmental uncertainty having a more significant impact on dissuading women from pursuing entrepreneurial opportunities. The path from the beginning of ideation to pertinent behaviors within the entrepreneurial journey encompasses complex interactions between various activities and decision points, which transpire non-linearly and procedurally. This process "highlights issues of timing and temporality, recursion, sequence, causal order, critical events, pivoting and path-dependence as well as demarcations of start- and endpoints and the stages, milestones and transitions in-between them" (Davidsson, 2021, p. 366). It is needed to be understood the nature of this path better if it is going to be explained why and how the results of this study in the pandemic era are important and applicable more broadly.

Practically, these results offer help to prospective entrepreneurs and policy makers. The results have implications concerning whom to listen to and rely upon when dealing with a situational crisis for prospective entrepreneurs. Although your social network brings valuable support when dealing with the stresses of crises, it is likely to have varying interpretations of the situation and its causes, increasing your uncertainty. It may be useful to focus your attention on fewer and targeted members of your network for business guidance—customers should probably top that list. If you can help your customers through a challenging situation by adapting to their changing needs, they may stay with you through the crisis and beyond.

The study also provides, in a way, a cautionary tale against political solutions to crises. Political responses are always convenient and can be much quicker and stronger in actively responding to a crisis. However, such blunt solutions also tend to be unwieldy and have unintended consequences. The effects of lockdowns, for example, had severe discrepancies across gender lines, harming women more than men. This was the case not only for employment but also for opportunity intention. Facilitating entrepreneurship in a crisis, instead, may require lightening the regulatory burden on entrepreneurs, which can be a tough ask for politicians while their constituents clamor for them to do "something". But entrepreneurship is very often the way out of a crisis. When radical upheaval arises, new socio-economic solutions are needed, the provision of which is the function of entrepreneurs. Crises provide opportunities but impede the exploitation of those opportunities due to PEU, stress and other limiting factors. Perhaps finding ways to lighten this exploitation burden for

entrepreneurs is what policy makers might find the most productive “something” to do in the face of a crisis.

Policy implications

Despite these advancements, drawing prescriptive policy recommendations from such results is difficult. Although it is tempting to conclude that correctives should be pursued to equalize opportunities and opportunity intentions, such equalization is not necessarily socially productive under the current institutional settings (although it certainly may be). It could be argued that the tendency toward gender norm conformity amid crisis is socially productive (e.g. providing social stability and predictability amid turmoil), and countermeasures would thus be counterproductive. Alternatively, conformity to antiquated norms might stall or regress social productivity by limiting the entrepreneurial activities necessary to move on from the crisis. More work to unpack these key mechanisms is needed to draw policy inferences.

Nevertheless, the severity of the recent crisis demands special attention from policymakers. More specifically, the presence of the pandemic is a massive crisis for female entrepreneurs that, aside from their business activities, have to grapple with home responsibilities. Entrepreneurship for women comes with gendered roles but is enhanced by social relationships and externally. [Ayatakshi-Endow and Steele \(2021\)](#) argue that in the pre-pandemic time, there was an overlap between home and business activities for women, but not as much as in the lockdown period where the business operated within the confines of the family physical space. In the pre-pandemic era, the established and developed external relationship with the social network could support business activity; however, due to a stronger interweaving of the business-family interface, there is less opportunity to develop such a relationship and, therefore, very difficult to gain SNS.

Developing countries have a long history of government intervention in businesses. Although this is a threat in normal conditions, it can be a good thing during the Covid-19 outbreak. Governments should help female/mom entrepreneurs benefit from social relationships more within their SNS. For example, female entrepreneurs should be helped to delegate some of their home activities (such as nutrition and children’s education) to others in their social network or get intellectual help. For this to work effectively, the government should enhance internet broadband, provide subsidies for the internet and encourage particular social media platforms (e.g. all-female members) that foster social relationships for female entrepreneurs exclusively for the lockdown era. In addition, these social platforms can be used by female entrepreneurs to get early market feedback and pivot, receive innovative ideas from their social network ([Ayatakshi-Endow and Steele, 2021](#)) and reduce information asymmetry ([Xheneti et al., 2019](#)), where women can build their confidence. However, such policy implication requires an emphasis on entrepreneurs’ personal and social skills ([Afshan et al., 2021](#)). The e-training broadcasted by the national media (such as state television) can provide female entrepreneurs the skills at the local and national levels.

According to the findings, this policy program is necessary because social networks have a more decisive role in opportunity intention for women than men, lessening the greater stress women experience and their perceived uncertainty during the pandemic outbreak.

Limitations and future research

While the authors tried to conduct this research as comprehensively as possible, it is not free from limitations. One such was in the process of data collection. In this time of upheaval, many prospective entrepreneurs were reluctant to answer a survey as their priorities were understandably elsewhere. As described above, motivating mechanisms were used to increase the response rate to an acceptable level to overcome this obstacle. But the authors

believe that there is a need to investigate the possible confounding effects of such incentives and their surrounding context. Randomizing the use of motivating mechanisms in future surveys to see if there are any differences in response rates or data quality between groups that receive incentives and those that do not can be a solution these confounding effects. Additionally, using a mixed-methods approach that combines survey data with qualitative interviews can give a more comprehensive understanding of respondents' motivating mechanisms.

Another serious difficulty was the coincidence of the initial data collection phase with the early shock of the pandemic crisis, which caused the participation rate to be drastically low. Consequently, the number of variables had to be limited as much as possible. Also, while this research studied social networks from the focal actor's point of view, others' awareness of their role in the entrepreneur's venturing process could not be observed. It would be helpful to examine how entrepreneurs' networks might perceive their own roles in influencing the entrepreneurs' behavior and thoughts. Furthermore, while this study sheds light on the emotional aspects of social network support during the pandemic, future studies are urged to explore the more tangible aspects of such support, such as financial and other resource contributions.

Social networks are a critical aspect of entrepreneurial activities. It provides strength and information during good times and bad, specifically during the COVID-19 pandemic. For instance, the Covid-19 pandemic caused perceived stress and uncertainty (particularly for those with novel products), prompting people to seek support from their social networks. The support they found helped keep their floundering entrepreneurial intentions alive. Thus, although this research hypothesized a mediation from social networks to entrepreneurial intention formation through perceived stress and PEU, it finds the hypothesis of social networks as a potential mediator between stress or PEU to be similarly compelling and the topic of possible future research.

In addition, this research was conducted in the context of a developing nation; however, a comparative study between developed and developing national contexts would help us better understand the possible institutional, cultural and other contextual factors that could play a role in this process. Understanding how the entrepreneurial process differs in different contexts can help policymakers and entrepreneurs develop more effective strategies and make use of best practices from different contexts for promoting entrepreneurship in times of crisis.

Finally, in this study, a gender-as-variable approach has been adopted. Though some view this approach as outdated, others are hesitant to dismiss extensive gender difference research over what is seen as mere ideological unpopularity. We recognize that gender differences have an effect on human perception and action. Future research might adopt an intersectional approach, which recognizes the interconnectedness of multiple social identities, such as gender, religion, race, ethnicity, class and sexuality and how they intersect to shape individuals' experiences and opportunities (Jennings and Brush, 2013).

Conclusion

This study is consonant with other recent studies that have featured the impact of the COVID-19 crisis from a gender perspective, it shows the significant role of SNS in helping or hindering an entrepreneur's likelihood of action. Social supports are specifically gendered, which gendering appears to be exacerbated by the crisis. Thus, more than their counterparts, prospective female entrepreneurs may benefit from SNS—in crisis more than any other time—regarding their opportunity intentions.

The current pandemic has drastically affected all aspects of lives, including the shared mental models. Because social norms conscribed behaviors into categorical scripts, crises

such as this can have varying effects on different social categories, such as genders. COVID-19 has impacted women very differently than men, as much of the added burdens of lockdowns have fallen upon women. This has resulted in declining opportunity intention among women. However, within traditional cultures in times of crisis, family and friends play an essential role for all individuals as they attempt to navigate the uncertainties and complexities of the upheaval. Communications with members of one's social network may be preventive or supportive of one's goals, such as entrepreneurial intentions and activities; in times of crisis, these communications have an especially strong influence. Thus, while the crisis has inhibited opportunity intentions among many women (and some men), social support has influenced this effect for others and has strengthened their courage to take on such risky endeavors. This research has important implications for theory and practice, as it matters whom you surround yourself with. Not everyone should be an entrepreneur, and the authors do not mean to imply that the facilitation of opportunity intentions is, in any and all cases, a good thing. But unpacking these key causal factors helps scholars better understand the process and better support those whose entrepreneurial journey is just beginning.

Note

1. The traditional gender roles in Iran have been strongly influenced by Islamic doctrine emphasizing the importance of modesty, family and community, and male authority. Women are expected to adhere to strict gender norms and are restricted in many areas of life, including employment, education, and social interactions. Islamic law in Iran enforces gender segregation in public spaces and specifies dress codes for women. These gender schemas are deeply embedded in Iranian culture, and while there have been some efforts in recent years to challenge them, change has been slow.

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Further reading

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Appendix 1

Concept	Indicator	Indicator type	Question/statement in this research's survey	Likert scale choices	Cronbach's alpha
Opportunity Intention (OI)	Likelihood of action	Continuous	(1) I will/ have spent time outlining a business plan for the pursuit of the product. (2) I will/ have discuss/discussed marketing the product with advisers or potential investors. (3) I will/ have contact/contacted the customer segment as the initial introduction. (4) I will/ have seek/sought potential partners for exploiting this opportunity. (5) I will/ have invest/ invested my own money in researching the viability of the opportunity [e.g. delivering minimum viable product (MVP) to receive some feedback on the product]	Completely disagree = 1 ... Completely agree = 7	0.88
Social Network Support (SNS)	Social support	Continuous	(1) The important people in my life agree that offering this product is very necessary and important. (2) My close friends and/or family elders welcome my idea of offering this product	Completely disagree = 1 ... Completely agree = 7	0.77
Experienced Stress	Stress	Continuous	(1) In the last 3 months, how often have you been upset because of COVID-19? (2) In the last 3 months, how often have you felt that you were unable to control the important things in your life because of COVID-19? (3) In the last 3 months, how often have you felt nervous and "stressed" because of COVID-19? (4) In the last 3 months, how often have you felt confident about your ability to handle your personal problems even with the existence of COVID-19? (5) In the last 3 months, how often have you felt that things were going your way even with the existence of COVID-19? (6) In the last 3 months, how often have you found that you could not cope with all the things that you had to do because of COVID-19? (7) In the last 3 months, how often have you been able to control irritations in your life even with the existence of COVID-19? (8) In the last 3 months, how often have you felt that you were on top of things even with the existence of COVID-19? (9) In the last 3 months, during COVID-19, how often have you been angered because of things that were outside of your control? (10) In the last 3 months, how often have you felt difficulties were piling up so high that you could not overcome them because of COVID-19?	Completely disagree = 1 ... Completely agree = 7	0.87

(continued)

Table A1. Measurement constructs of each variable

Table A1.

Concept	Indicator	Indicator type	Question/statement in this research's survey	Likert scale choices	Cronbach's alpha
Innovativeness	Product/service innovation	Continuous	<p>The below table shows seven categories of products/services (from A-G) innovation. Please select "only" one category that might be the best match with your potential product/service idea</p> <p>A. Your product will be almost the same as current products offered in the market, however, you think that offering this product in a new market is a good opportunity for generating revenue</p> <p>B. Your product will only have a little change to the current product in the market but will provide new value to your customers through a significant compatibility -in use- with the current products in market (eg. as complementary product or revised version) which would benefit your potential consumers largely</p> <p>C. The same information in B. In addition, it will have significant cost reduction for your potential customers (price) in comparison with current products or services in the market</p> <p>D. Your product will only have a significant improvement to the existing products in the market in term of functionality, however, it does similar task as the similar products do in the market. The main difference between your product with those of rivals is the modification in the overall system of relationship and linkage between the components in your product or service</p> <p>E. Your product will still retains the linkages between core concepts and components of the similar product in the market, however, some new unique components/s as well as its design will be modified (add or/and replacement)</p> <p>F. Your product will be radically enhanced version of the current product in the market from every aspects. It means that not only the overall system of relationship and linkage between the components in your product or service will be altered, but also some new unique components/s as well as its design would be new</p> <p>G. Your product idea is radically novel and has not been offered. It means, either currently there is a demand in the market for that but no existing product offered for that or even there is still no explicit demand for that on the market but you foresee a great market for that in the new future</p>	<p>N/A</p> <p>Low innovation = 1</p> <p>Low innovation = 1</p> <p>Low innovation = 1</p> <p>Medium innovation = 2</p> <p>Medium innovation = 2</p> <p>High Innovation = 3</p> <p>High Innovation = 3</p>	N/A

(continued)

Concept	Indicator	Indicator type	Question/statement in this research's survey	Likert scale choices	Cronbach's alpha
Perceived Environmental Uncertainty (PEU)	Technology Uncertainty	Continuous	Concerning the technology of your product/service, how much variability exists?	1 = Extremely Low ... 7 = Extremely High 1 = Extremely Low	0.77
			Concerning the technology of your product/service, how complex it is?	... 7 = Extremely High 1 = Extremely Low	
			Concerning the technology of your product/service, how important its role is?	... 7 = Extremely High 1 = Extremely Low	
	Competition Uncertainty	Continuous	Concerning the competition aspect of your market or industry, how much variability exists?	... 7 = Extremely High 1 = Extremely Low	0.77
			Concerning the competition aspect of your market or industry, how complex it is?	... 7 = Extremely High 1 = Extremely Low	
			Concerning the competition aspect of your market or industry, how important its role is?	... 7 = Extremely High 1 = Extremely Low	
			Concerning the competition aspect of your market or industry, how important its role is?	... 7 = Extremely High 1 = Extremely Low	
	Customer/Market Uncertainty	Continuous	Concerning your customer/market needs or demands, how much variability often exists?	... 7 = Extremely High 1 = Extremely Low	0.73
			Concerning your customer/market needs or demands, how complex it is?	... 7 = Extremely High 1 = Extremely Low	
			Concerning your customer/market needs or demands, how important its role is?	... 7 = Extremely High 1 = Extremely Low	
Supplier uncertainty	Continuous	Concerning the suppliers of your product/service, how much variability often exists?	... 7 = Extremely High 1 = Extremely Low	0.78	
		Concerning your suppliers' behavior, how complex it is?	... 7 = Extremely High 1 = Extremely Low		
		Concerning your suppliers' role, how important it is?	... 7 = Extremely High 1 = Extremely Low		
		Concerning your suppliers' role, how important it is?	... 7 = Extremely High 1 = Extremely Low		

(continued)

Table A1.

Table A1.

Concept	Indicator	Indicator type	Question/statement in this research's survey	Likert scale choices	Cronbach's alpha
Rules and regulation uncertainty		Continuous	Concerning rules and regulations that impact your business, how much variability often exists?	1 = Extremely Low ... 7 = Extremely High	0.84
			Concerning rules and regulations that impact your business, how complex they are?	1 = Extremely Low ... 7 = Extremely High	
			Concerning rules and regulations that impact your business, how important they are?	1 = Extremely Low ... 7 = Extremely High	

Source(s): Authors' own creation

Model	<i>R</i>	<i>R</i> square	<i>R</i> square change
1	0.544 ^a	0.296	0.296
2	0.610 ^b	0.373	0.077

Note(s): a. Predictors: (Constant), SNS

b. Predictors: (Constant), SNS, INNO, PS, PEU

Source(s): Authors' own creation

Table A2.
Model summary

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