

Article

Social Norms and Entrepreneurial Action: The Mediating Role of Opportunity Confidence

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Abstract: The aim of this paper is to investigate the mediating effect of opportunity confidence (OC) on the relationship between social norms (SNs) and decision to engage in entrepreneurial action (EA). The sample size includes prospective entrepreneurs engaged in the field of Information and Communications Technology (ICT) in science and technology parks in Iran. This research uses the longitudinal survey method. Research findings from the structural equation modeling (SEM) do not confirm the mediating role of OC. However, SNs have a significant positive effect on OC, which increases the likelihood of entrepreneurial action. The paper ends with a discussion of results and practical implications.

Keywords: entrepreneurial action; opportunity confidence; sociocognitive traits; sustainable entrepreneurship

1. Introduction

The entrepreneurial journey hinges on the dynamic and multiplicative process of action development under the conditions of uncertainty [1,2]. It aims to create something new and valuable in one or more markets. The process begins with an imagined opportunity or an idea accompanied by a range of actions, viz. defining whether the idea is appealing and workable enough to justify further attention, gathering information to diminish uncertainties related to the value and feasibility of the idea, and possibly adapting the original idea to meet newly discovered facts [3–8].

Until a few years ago, a general view about an entrepreneurial opportunity used to be that “it is a favorable situation for introducing new goods and services that had not been recognized previously by other market participants, where those new goods and services could be sold at a price higher than the cost of their production.” However, recently entrepreneurship scholars have started to pay considerable attention to entrepreneurial action which is not anchored in the opportunity but in what entrepreneurs do. This is due to the drawbacks around the ontology of the construct of the entrepreneurial opportunity [9], to the extent that some have called for abandoning the construct [10].

Entrepreneurs act in the face of uncertainty to discover, evaluate, and exploit profitable opportunities often in the form of new ventures [11]. For example, in the domain of the opportunity evaluation, it distinguishes between general opportunities and specific opportunities and this distinction can be only uncovered through action [12,13]. The evaluation part of the entrepreneurial journey relies on both indigenous and exogenous factors, where the former refers to an individual’s behavioral beliefs such as their assessments of the favorability and desirability of an action at hand, and the latter refers to norms and culture surrounding an individual’s institutional environment [14,15].

The way entrepreneurs interact with their close social network can induce a large impact on the need and motivation for understanding what they intend to offer in the market as the entrepreneur's societal environment plays a strong role in shaping behavior [16] and translating ideas into interpretations [3,17].

The core of this process in value creation is that an individual increases his/her attention toward a new value idea that he or she senses at the time of generation, and refines the opportunity insight [3]. This idea is perceived as an opportunity to meet current or emerging customer needs [3,18,19]. However, prior judgment of their eventual commercial success is unreliable [3], because "intuitive insights" cannot be judged right or wrong *ex ante*. Thus, in the next step, individuals are inclined to be more effortful and deliberately control cognitive processes, which are the characteristics of the reasoning process [20]. In this process, entrepreneurs need to know how much novelty it involves, how much purposefulness of action is required [21], whether she/he has the necessary confidence to perform it and, finally, how social norms prop up a new value idea [13].

Although, the action view has received much attention from entrepreneurship researchers, little is known about how this assessment process works, i.e., the interplay between endogenous and exogenous factors. To address this important gap, the relationship between social norms and entrepreneurial action is examined and it is assumed that opportunity confidence mediates with this relationship. The construct of opportunity confidence is applied [4,22], which in this paper focuses on the links between social norms and action. Opportunity confidence pertains to two behavioral beliefs about a new idea at hand, namely opportunity feasibility (that I have the knowledge, resources, and competency to perform the opportunity) and desirability (that the opportunity is attractive for me) [23,24]. The context of this research is Iran, with data from science and technology parks (STPs) located in the country applied. The main incentive of the authors to choose this region and the STPs as the data source is that the social context of this country is very mixed. Iran is characterized by conservative norms and its strong family ties and connections [25]. At the same time, the economy of the country is characterized by a high degree of uncertainty [26]. However, we do not know how social norms with the aforementioned characters impact entrepreneurship activities such as new venture creation, i.e., would social norms kill the subsequent entrepreneurial action or conversely boost the entrepreneurial action? Or maybe social norms would have an indirect effect on the entrepreneurial action by activating opportunity confidence. In addition, the history of business incubators in Iran is short and thus there is not as much knowledge accumulated in this entrepreneurship cluster. Furthermore, the literature on the STPs' activities often ignores the nature of informal institutions in individual countries [27,28]

Building upon theories about sociocognitive traits [29–31], entrepreneurial action [32,33], and entrepreneurial process [5,6,34], it is hypothesized that OC mediates the relationship between SNs and EA. However, due to the strict, conservative, and at the same time supportive atmosphere of Iranian families, social norms (SNs) can have a mixed effect on OC and EA. On the one hand, it has a negative effect on entrepreneurial action due to the conservativeness of the Iranian culture. On the other hand, it has a positive effect on OC, because it increases an individual's confidence to perform an entrepreneurial task. The analysis is done within a stylized setting in which nascent entrepreneurs set out to pursue their opportunities and the interplay between country-level institutional context (i.e., SNs) and sociocognitive resources (i.e., OC) can eventually lead to the emergence of a new venture.

The outcome of this research can have important implications for both theory and public policy matters in the country and similar contexts in other Middle Eastern countries, including neighboring Pakistan and Afghanistan.

2. Literature Review

2.1. Social Norms

Cognition is essentially interactive [35]. Thinking structures emerge in response to interaction between individuals and the environmental conditions [36]. The entrepreneurial journey comprises a series of sequential steps and institution of information through action and interaction with an ecosystem, which becomes embedded in the final product [37].

Trusted social capitals are important parts of the entrepreneurs' environment. In interpreting an idea, entrepreneurs interact with their immediate social network, that is, with family, friends, classmates, and so forth, to explain and defend the "fuzzy" images of their insights [3] (p. 563). Through these social communications, a shared recognition of the new value idea begins to appear, and thus the overall learning process enters the integrating phase, i.e., from the intuiting to the interpretation phase [3] (p. 563).

While social norms (SNs) can be an important driver of individual behavior, entrepreneurial research lacks established knowledge or consensus on the impact of social norms on action [38,39].

Classifying individual norms, values, and attitudes into certain cultural patterns is a sociocultural approach from the "social milieu theory". This approach can be traced back to the origins of modern sociology, which were established and developed by French sociologists, such as Auguste Comte and Emile Durkheim, in the 19th century [40]. The milieu methodology process starts from an exploration of the type of personal values, behaviors, needs, and forms of interaction that exist, which will be then clustered into related portions or segments [40].

A social norm can be defined as an external rule shared by a group, conveyed both by formal sanctions and by guilt and shame, which urges its members to forgo selfish interests in the name of group interests [41]. In other words, social norms deal with the likely approval or disapproval of a target action by friends, family members, coworkers, teachers, family elders, and so forth [16,42]. Because entrepreneurship involves the sequential encounter and institution of information through action and interaction [34] (p. 1493), entrepreneurs interact closely with their immediate social network—family, friends, classmates, and so forth. Through these social communications, a shared recognition of the new value idea begins to appear [3,43].

SNs could be expected to vary across societies; in some countries, social norms, as well as family and in-group orientation, are supportive of novelty and creativity, while these are discouraged in other cultures [44,45]. These support systems can regulate resource allocation by shaping relative economic rewards and further affect entrepreneurial outcome [46,47].

2.2. Opportunity Confidence

Opportunity confidence as a sociocognitive trait provides an important basis for entrepreneurial activities [9]. Opportunity confidence is associated with the opportunity evaluation literature, which was introduced by Dimov in the context of nascent entrepreneurship and start-up efforts [4].

Opportunity confidence lies within two behavioral beliefs about an entrepreneurial task, namely the feasibility and desirability of performing an idea at hand. Desirability delivers attractiveness, i.e., profit potentials, and feasibility confirms the perceived practicability of opportunities. [22] Further developed the construct by attributing the feasibility to entrepreneurial self-efficacy (ESE) and the desirability to attitude toward value creation (AVC). Opportunity confidence is a second order latent construct that, like an umbrella word, encompasses both ESE and AVC. In this regard, AVC and ESE increase an individual's confidence in creating new value.

Attitude toward value creation. Several studies show that the desirability of an entrepreneurial action predicts entrepreneurial intention [48,49]. Attitude refers to the perceived desirability of specific actions to achieve an object or target [50,51]. In entrepreneurship, the relevant attitudes are about the attractiveness of starting a business [32], including both intra- and extrapersonal impacts [38] (p. 419). Some researchers substitute perceived desirability with personal attitude or attraction and find a

positive relationship with entrepreneurial intention [52,53]. Nevertheless, perceived desirability should be domain specific in order to be equivalent to attitude toward action [4,50]. The entrepreneur's attitude toward value creation (AVC) or opportunity desirability [22,24] is the conviction that offering the new product, service, or venture is the right course of action [54]. The theory of planned behavior [55] holds that because attitude toward action is important predictor of intention, it might also increase the motivation to obtain practical market knowledge prior to action.

Entrepreneurial Self-efficacy. Self-efficacy can be considered on a continuum, ranging from general, distal, trait-like beliefs in one's ability to perform successfully [23] to more moderate beliefs that utilize to a range of similar tasks such as job self-efficacy, creative self-efficacy [56], and entrepreneurial self-efficacy (ESE) [23,57].

Entrepreneurial self-efficacy pertains to an individual's belief in his/her capability to execute tasks and play roles meant at entrepreneurial outcomes such as value creation, venture creation, and entrepreneurial performance [23,58]. Potential entrepreneurs with high self-efficacy conviction are more likely to act on new business opportunities even in unfavorable ecosystems [59,60]. Krueger et al. argue that higher levels of self-efficacy increase perceptions of venture feasibility, thus fostering entrepreneurial behavior [38]. In this paper, ESE is defined as entrepreneurs' self-efficacy in accomplishing value creation [22,24].

The survival of a business idea does not depend solely on achieving planned tasks. During the start-up process entrepreneurs may feel efficacious in searching for potential opportunities (e.g., gathering required information), but may not feel confident in exploiting them [61].

2.3. Sustainable Opportunities and Entrepreneurship

Sustainable entrepreneurship as a field is in a nascent stage [62]. It has been defined by Schaltegger et al. as "An innovative, market-oriented and personality driven form of value creation by environmentally or socially beneficial innovations and products exceeding the start-up phase of a company" [63] (p. 32). Accordingly, Spence et al. argue that it consists of the ability of an entrepreneur to "demonstrate responsible creativity while achieving viable, livable, and equitable development through the integration and management of natural and human resources in business" [64] (p. 335). Sustainable entrepreneurship stress on the identification of new entrepreneurial opportunities which produce more sustainable products, processes, practices and services than current ones that are existed in the market [65]. In a multicasestudy, Belz et al. developed a model that proposed that the process of sustainability occurs in six stages: (1) recognizing a social or ecological problem; (2) recognizing a social or ecological opportunity, (3) developing a double bottom line solution, (4) developing a triple bottom line solution, (5) funding and forming of a sustainable enterprise, and (6) creating or entering a sustainable market [62]. According to them, the triple bottom line approach means to achieve economic, social, and ecological goals. In one of very few empirical studies of sustainable entrepreneurship and opportunity identification, a study of the PVC industry of Romania analyzed the factors that positively influence on sustainable opportunity recognition, and found that there are knowledge-related factors, including natural/communal environment, sustainable development, market-oriented, and entrepreneurship; and motivation-related factors, including perception of threats to the natural/communal environment, altruism toward others, and success. They also found that social embeddedness is a moderator [66].

As shown above in Belz et al. [62], sustainable opportunity is at the heart of sustainable entrepreneurship. Sustainable opportunities grow from an imperfect competition that happens in four types of situation: inefficient firms, existence of externalities, flawed pricing mechanisms, and imperfectly distributed information; and entrepreneurial innovation addresses market imperfection to exploit sustainable entrepreneurial opportunity [67]. A difference between a sustainable opportunity and an entrepreneurial opportunity is that the latter seeks short-term profits, while the former looks at more long-term benefits [68], which are not necessarily money, and prefers social goals over economic

goals [69]. All in all, successful entrepreneurship is highly depended on sustainable models for revenue generation [70].

3. Theory and Hypotheses

This section aims to develop a set of hypotheses on how individuals allocate their sociocognitive resources to entrepreneurship and what is the role of social norms in this regard? The effects of SNs in Iran are examined, as an emerging economy in the Middle East. According to Ács et al., Iran is ranked 11th in the Middle East and North Africa (MENA) and 72nd globally for promoting entrepreneurship. The region shows considerable strength in the areas of product innovation and risk capital. However, it has the region's lowest average scores in the areas of competition and risk acceptance, as large firms dominate many economies in the region and businesses bear higher risks in many MENA countries than in other areas [71] (p. 9).

The Iranian economy is characterized by a high degree of uncertainty, due to the unusually strong influence of political and institutional factors on the economy and a set of unclear and often changing rules [25]. Understanding the effects of SNs, should give a great deal of insight for entrepreneurs in the country or similar contexts.

Social norms are expected to play a particularly strong role in the country. Iran's culture is characterized by conservativeness and its strong family ties and connections. The most distinguishing feature of the country's culture is its family and in-group orientation, which demonstrate loyalty toward family and close friends [25]. On the importance of Iranian family solidarity, Limbert mentions "the individual [in a family] ... must pay visible respect to family elders; ... everyone must defer to family wishes in questions of marriage, career, business, residence, child raising, and education" [72] (p. 36). In return for deference, family elders are expected to settle disputes, to give final consent to marriages, and to provide for all family members who need support. One is never too busy to help a relative.

Children in Iranian families usually feel free to rely on not just their parents, but also on other relatives and friends to get things done and to resolve their difficulties and hurdles. "Individual identities are defined in the context of their groups. As a result, there is a cost attached to the support received from the in-group. The individual has to be careful not to dismay the other members. He/she also needs to be careful to satisfy the others' expectations. This leads to a strong sense of group control, which is mostly implicit and unwritten but very potent" [25] (p. 131).

As a consequence, individuals in this context—as a result of their tradition and upbringing—learn the unwritten law that their close friends, family elders, etc. have particular expectations and that individuals should not neglect their importance or hide important issues (or what they intend to do in their business) from family members. Hence, in-group loyalty and faithfulness pressure them to share their value proposition idea with their close social network and to be automatically imposed by the members of this network (change, modification, or withdraw).

It is widely acknowledged that country-level institutions play an important role in promoting new business creation [37,46,73]. Accordingly, it is assumed that in Iran, which comprises of collective societies, social norms influence EA and OC significantly.

On the one hand, it is expected that stricter family and in-group orientation would be associated with more conservative, traditional societies, with a high level of authoritarianism. In addition, because novelty and entrepreneurship are very risky, these strict social norms will have a negative effect on the decision to engage in entrepreneurial action. On the other hand, the supportive atmosphere of the Iranian culture can boost sociocognitive traits such as opportunity confidence. Thus, it is hypothesized that

Hypothesis 1. *Stricter social norms decrease the likelihood of entrepreneurial action.*

Hypothesis 2. *Supportive social norms increase opportunity confidence.*

Note that SNs are an endogenous variable (as opposed to OC as an indigenous variable that happens at the individual level) which logically have an important contribution in forming a context where entrepreneurs could act. However, it is also generally possible that OC influences SNs in some way. In other words, when family, friends, etc. witness the confidence of a potential entrepreneur in his/her business idea, they may modify their behavior toward him/her. However, given the strict social norms in the Iranian culture, this should be very unlikely. Further discussion of this issue is beyond the scope of the theoretical model in this research.

Before starting an action, entrepreneurs need to have a subjective assessment of several factors including the imagined opportunity, [3,34] the amount of novelty [9], the desirability, i.e., its profitability prospects, the feasibility, i.e., its perceived practicability, and the availability of necessary resources [12,46]. Therefore, it is expected that more opportunity confidence about an imagined opportunity would be synonymous with a higher likelihood of performing a pertinent action at hand (Figure 1). As such

Hypothesis 3. *Opportunity confidence increases the likelihood of entrepreneurial action.*

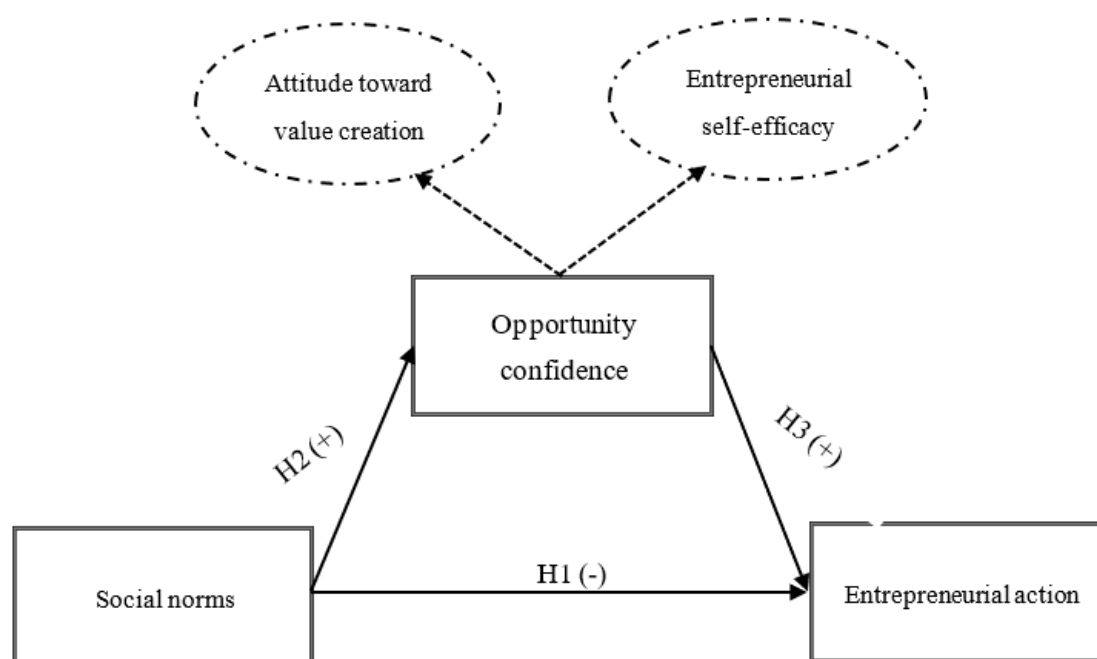


Figure 1. Theoretical model.

4. Material and Methods

4.1. Sample and Data

This research uses the longitudinal survey method. The data collection took place between 2015 and 2016. Data were collected in two phases; the same group being sampled in each phase. In the first survey an online questionnaire was used to gather information about SNs, ESE, and AVC in November, 2015. Since in the real world there is an inevitable time lag between the initial perception of an imagined opportunity and entrepreneurial action, the second survey, administered about a year later, asked about EA.

Research on the effect of behavioral beliefs on entrepreneurial plans often faces challenges of finding appropriate samples [74–77]. Business students are typically used as proxies for entrepreneurs, despite their lack of familiarity with real-world entrepreneurship [38,75,78–80]. However, the meaning of a new value creation is not the same, as “entrepreneurs, managers, students, etc., have often strikingly different maps of the entrepreneurial process” [81] (p. 58).

For this reason, this research focuses on prospective entrepreneurs who are or used to be tenants in Science and Technology Parks (STPs) in Iran. To minimize the industry variation effect we focus only on Information and Communications Technology (ICT) sectors (Figure 2). “Science and technology research parks are seen increasingly as a means to create dynamic clusters that accelerate economic growth and international competitiveness” [82] (p. 7). “[A] park is an innovation-related infrastructure through which knowledge is exchanged, and a university is often a catalyst for that symbiosis” [28].

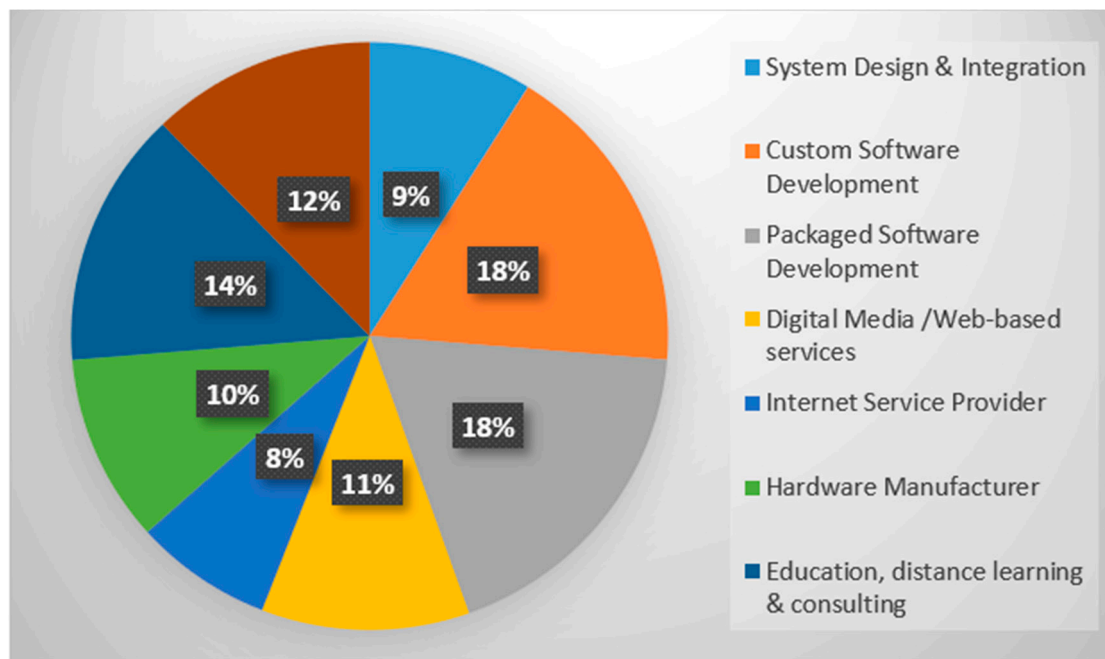


Figure 2. Information and Communications Technology (ICT) categories of subjects in this research.

The STPs are distributed throughout the country, each affiliated to a governmental university. In Iran, STPs are university incubators that have mainly been established for the purpose of promoting cooperation between industries, academic institutions, and research centers, in order to create jobs, connections between private and state sectors, and to commercialize know-how and innovations generated by research centers. STPs are commonly considered a reliable and credible source of primary data on entrepreneurship in the country [83,84].

The STPs’ activities depend on the approval of the Ministry of Science, Research, and Technology in the country. The STPs host teachers, researchers, students, academics, owners of projects and ideas, and knowledge-based businesses. Membership in STPs provides many benefits for start-ups such as tax discounts, affordable rentals access to equipment and office, and mentoring services availability and credibility which bring them competitive advantage [27]. Out of 23 STPs, only 16 had enough ICT projects or tenants at the time of data collection. These 16 STPs have hosted 2688 tenants until the first wave of data collection in November 2015.

To select the sample, Emami and Dimov’s verification procedure [22] is applied (three questions (The first two questions eliminate those individuals in the process of starting up a new business or already engaged in a start-up; their intentions are already formed and expressed in action [22]. Moreover, the aim of the last question is to reduce the risk of unsystematic variance from disproportionate grouping in data [85] which is often the result of industry heterogeneity in cognitive research [3])) to confirm the credibility of the data in data collection. The sampling procedure started with all 2688 ICT projects in the Iranian STPs. These cases comprise both firms (current and former tenants) and individuals (market practitioners that had either worked on the incubators’ projects or participated in innovation warehouse in incubators) over the previous eight years, 1523 of these were identified. Then, the individuals and representatives of the owners were contacted by email or

phone, asked if (1) they had a new potential business idea and plans to start a business based on it, (2) they have applied to patent this idea or they intend to apply for patenting that in the (near) future, and (3) the new business idea is still in the domain of ICT.

This procedure resulted in 398 subjects for the first phase of the research (i.e., the excluded participants had no potential idea, had infant businesses based on that idea, were not related to ICT industry, were not solo nascent entrepreneurs, or their responses were not usable). For the second phase, 147 subjects due to lack of availability, or refusal to participate were abandoned. Concerning the third stage, a further 38 cases were removed from the study. Overall, the final sample of study comprised 213 questionnaires with usable responses on all questions (see Figure 3 for demographic information).

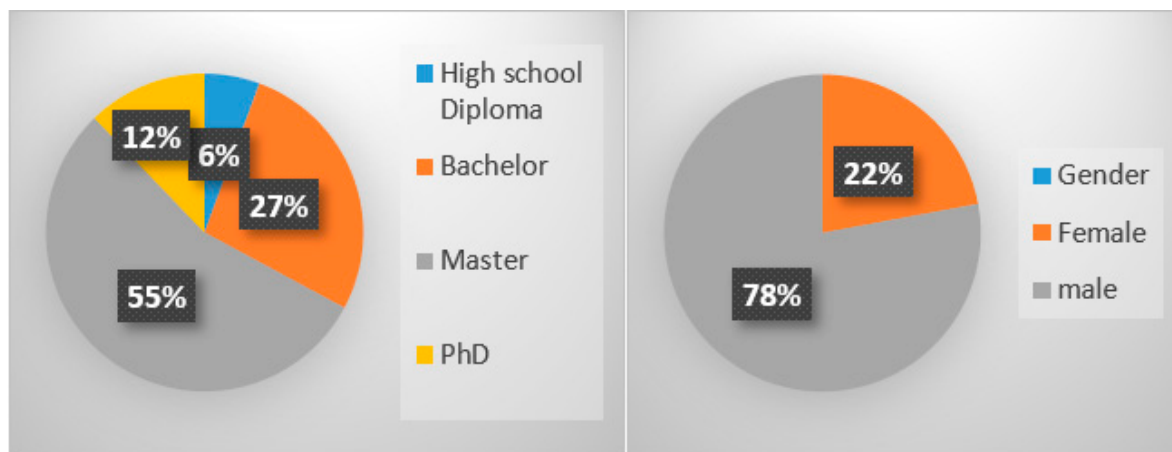


Figure 3. Education and gender variations (Mean Age = 33.9 SD = 8.07).

4.2. Measures

Attitude toward Value Creation. Three items were used to measure AVC: (1) Offering this product/service is very pleasant and exhilarating. (2) I do not want to offer this product or service (reverse). (3) Supplying this new value is very valuable (Adapted from [22,24]).

Entrepreneurial Self-efficacy. Six items were used to measure this construct: (1) Creating this new product in the near future is possible. (2) I know that economic and social situations do not influence my success in creating this new product. (3) I do not feel happy about being responsible for the consequence of delivering this new product (reverse). (4) I believe in the current condition of the market for this product, and due to its value for the target customer, it will become a distinctive product. (5) Owing to my competency and initiative, I have control over delivering this value. (6) I am not sure I can manage the unexpected issues in this project (reverse) (Adapted from [22,24]).

Social Norms. This factor was measured with three items: (1) The important people in my life think that offering this product is very necessary and important. (2) My close friends and/or family elders do not welcome my idea of offering this product (reverse). (3) Those whose ideas are very important to me will support (emotionally) me in the commercialization of the product. These items were designed according to Ajzen's guidelines on 'constructing a TPB questionnaire: conceptual and methodological considerations' [16] and then checked with identical constructs in related studies such as [42] and [39].

Entrepreneurial action. EA was measured with five items: (1) I have spent time outlining a business plan for the pursuit of the product. (2) I have discussed marketing the product with advisors or potential investors. (3) I have contacted the customer segment as the initial introduction. (4) I have sought potential partners for exploiting this opportunity. (5) I have 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). These items were adapted from Dimov's "action likelihood" construct [3] (see Table 1).

Table 1. Descriptive information of raw data for all of the items within each construct.

| Items | n | Mean | Std. Error | Std. Deviation | Variance | Skewness | Std. Error | Kurtosis | Std. Error |
|-------|-----|------|------------|----------------|----------|----------|------------|----------|------------|
| SN 1 | 213 | 5.86 | 0.106 | 1.542 | 2.376 | −1.376 | 0.167 | 1.006 | 0.332 |
| SN 2 | 213 | 5.82 | 0.094 | 1.376 | 1.893 | −1.430 | 0.167 | 1.527 | 0.332 |
| SN 3 | 213 | 5.83 | 0.091 | 1.333 | 1.776 | −1.222 | 0.167 | 0.852 | 0.332 |
| ESE 1 | 213 | 5.24 | 0.106 | 1.541 | 2.374 | −0.760 | 0.167 | −0.218 | 0.332 |
| ESE 2 | 213 | 3.02 | 0.103 | 1.497 | 2.240 | 0.505 | 0.167 | −0.552 | 0.332 |
| ESE 3 | 213 | 5.62 | 0.095 | 1.387 | 1.924 | −0.865 | 0.167 | −0.108 | 0.332 |
| ESE 4 | 213 | 5.34 | 0.087 | 1.263 | 1.594 | −0.797 | 0.167 | 0.569 | 0.332 |
| ESE 5 | 213 | 5.47 | 0.101 | 1.475 | 2.175 | −0.849 | 0.167 | −0.199 | 0.332 |
| ESE 6 | 213 | 5.51 | 0.099 | 1.443 | 2.081 | −1.099 | 0.167 | 0.407 | 0.332 |
| AVC 1 | 213 | 5.06 | 0.103 | 1.499 | 2.246 | −0.657 | 0.167 | −0.189 | 0.332 |
| AVC 2 | 213 | 5.33 | 0.105 | 1.537 | 2.363 | −0.880 | 0.167 | 0.106 | 0.332 |
| AVC 3 | 213 | 5.29 | 0.097 | 1.417 | 2.007 | −0.729 | 0.167 | 0.020 | 0.332 |
| EA 1 | 213 | 4.76 | 0.104 | 1.525 | 2.324 | −0.145 | 0.167 | −0.885 | 0.332 |
| EA 2 | 213 | 4.70 | 0.100 | 1.454 | 2.115 | −0.346 | 0.167 | −0.503 | 0.332 |
| EA 3 | 213 | 4.97 | 0.112 | 1.635 | 2.673 | −0.306 | 0.167 | −1.129 | 0.332 |
| EA 4 | 213 | 4.41 | 0.091 | 1.328 | 1.762 | −0.012 | 0.167 | −0.520 | 0.332 |
| EA 5 | 213 | 4.45 | 0.094 | 1.368 | 1.871 | 0.103 | 0.167 | −0.561 | 0.332 |

4.3. Validity, Reliability and Model Fitness

The validity and reliability for the measurement models and fitness were calculated for the structural model and the overall model [42,86] by Smart PLS version 2. Chandler and Lyon's guidelines were followed for the measurement model [87]. All thresholds were fully satisfied for in the final measurement model. Thus, evidence suggesting that further examination of the hypothesized model was warranted (see Tables 2–4).

Table 2. Reliabilities, convergent and discriminant validities, and correlations among the latent constructs of the measurement model.

| Latent Variables | Average Variance Extracted (AVE > 0.5) | Composite Reliability Coefficient (CR > 0.7) | Cronbach's Alpha Coefficient (Alpha > 0.7) |
|------------------|--|--|--|
| 1. AVC | 0.82 | 0.93 | 0.88 |
| 2. EA | 0.57 | 0.87 | 0.81 |
| 3. OC | 0.56 | 0.91 | 0.89 |
| 4. ESE | 0.67 | 0.90 | 0.87 |
| 5. SN | 0.73 | 0.89 | 0.82 |

Table 3. Latent variable correlations and Fornell–Larcker matrix for discriminant validity of the latent constructs.

| Latent Variables | 1 | 2 | 3 | 4 | 5 |
|------------------|-------------|-------------|-------------|-------------|-------------|
| 1. AVC | 0.90 | | | | |
| 2. EA | 0.49 | 0.75 | | | |
| 3. OC | 0.82 | 0.62 | 0.75 | | |
| 4. ESE | 0.54 | 0.58 | 0.92 | 0.82 | |
| 5. SN | 0.39 | 0.31 | 0.47 | 0.44 | 0.86 |

A comparison of the root AVE with the correlations between the constructs in Table 3 indicates that the root AVE does exceed any other correlations, supporting the discriminant validity of all the constructs. In addition, the goodness of fit (GoF) for the full model was estimated to be 0.58 which is very desirable [88].

Table 4. Cross-loading matrix.

| Items | AVC | EA | OC | ESE | SNs |
|-------|------|------|------|------|------|
| SN1 | 0.33 | 0.31 | 0.41 | 0.39 | 0.88 |
| SN2 | 0.28 | 0.20 | 0.37 | 0.36 | 0.87 |
| SN3 | 0.40 | 0.28 | 0.44 | 0.38 | 0.83 |
| ESE1 | 0.46 | 0.42 | 0.71 | 0.74 | 0.36 |
| ESE2 | 0.41 | 0.51 | 0.74 | 0.83 | 0.35 |
| ESE3 | 0.39 | 0.50 | 0.75 | 0.85 | 0.32 |
| ESE4 | 0.49 | 0.48 | 0.79 | 0.84 | 0.40 |
| ESE5 | 0.48 | 0.50 | 0.78 | 0.83 | 0.37 |
| AVC1 | 0.83 | 0.49 | 0.79 | 0.54 | 0.36 |
| AVC2 | 0.88 | 0.43 | 0.72 | 0.47 | 0.35 |
| AVC3 | 0.89 | 0.42 | 0.73 | 0.47 | 0.37 |
| EA1 | 0.43 | 0.79 | 0.53 | 0.49 | 0.31 |
| EA2 | 0.34 | 0.77 | 0.46 | 0.45 | 0.16 |
| EA3 | 0.38 | 0.82 | 0.52 | 0.51 | 0.34 |
| EA4 | 0.37 | 0.68 | 0.39 | 0.33 | 0.13 |
| EA5 | 0.35 | 0.72 | 0.45 | 0.43 | 0.21 |

Note: the high loadings on OC (dotted rectangle) is because it is a second order latent construct which is normal.

To test the unobserved heterogeneity in the structural model FIMIX (final mixture) segmentation was used [89,90]. This method captures heterogeneity by calculating the probabilities of segment memberships for each questionnaire. The result shows acceptable grouping of observations. Moreover, the largest outcome belonged to two segmentations (0.9) which means there is only 10% unobserved heterogeneity in the whole sample.

5. Results

Structural equation modeling rather than linear regression or path analysis was applied because the research model contains multiple dependent variables and a second-order latent variable (opportunity confidence) in which their relationships need to be tested in a single run. The SEM model is analyzed using the Partial Least Squares (PLS) method. According to the results, the full model explains 38% variance in EA (Figure 4).

The bootstrapping approach is used to check the indirect effect of SNs on EA through OC. The results show that the path from SNs to EA is reduced in absolute size (from 0.33 to 0.02) and statistically becomes insignificant when the mediator is introduced. In addition, the *t*-value in the direct effect between IV and DV is not significant (<1.96), which is inconsistent with mediation. Instead, this is a case of spurious relationship (A ‘spurious relationship’ is a statistical term in which two or more constructs or variables are not causally associated with each other. However, it may be incorrectly concluded that they are, due to either coincidence or the presence of a particular third, unseen factor (referred to as a “confounding factor”). As such, an exploratory test for OC→SNs→EA was performed. However, the spurious relationship was not observed.) between SNs and EA. In this case, although SNs→EA is positive and significant, Hypothesis 1 cannot be approved.

As Iran’s culture is characterized by strong family ties, in-group orientation, and so forth, a negative correlation between SNs and EA and a positive correlation with OC was expected. However, SNs only predict OC, and not EA. While not surprising, these findings suggest that social norms may be important predictors of behavioral beliefs (e.g., entrepreneurial self-efficacy and attitude toward value creation), but they do not have a particular effect on entrepreneurship per se. This will be discussed further in the discussion section.

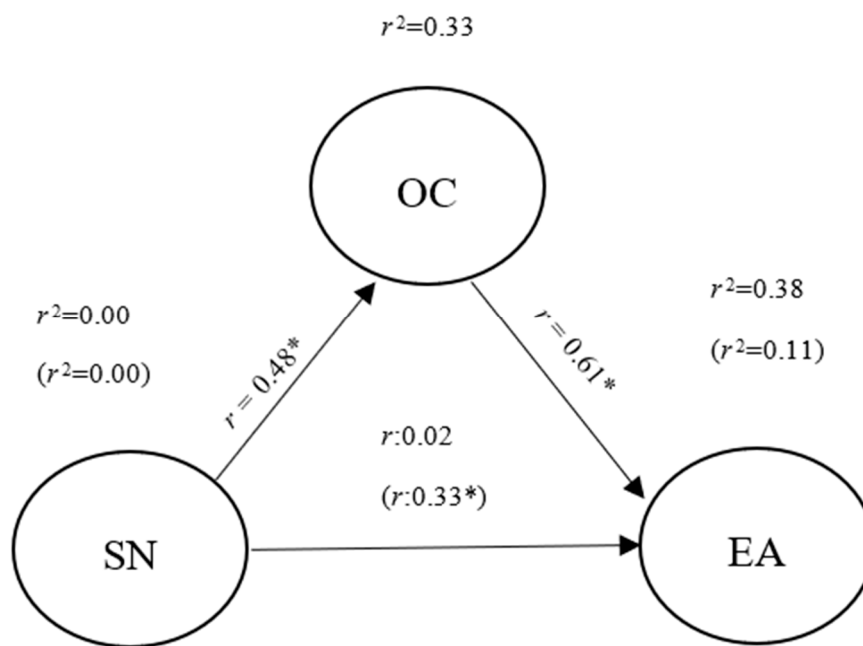


Figure 4. Bootstrapping test for the significance of mediation (the digits in parentage pertain to the model without mediator).

With regard to Hypothesis 2 and Hypothesis 3, as expected, the proposed relationship between SNs and OC is significant and positive ($r: 0.48$; $p < 0.001$), and OC is positively associated with EA ($r: 0.64$; $p < 0.001$). Therefore, both hypotheses are approved. Also, the higher the entrepreneur's confidence in the perceived opportunity, the greater the likelihood of entrepreneurial action.

6. Discussion

The research finding concerns the role of social norms. SNs involve social interactions that are noncontractual. Such noncontractual interactions are ubiquitous. In these noncontractual interactions, people are frequently willing to reduce their own material well-being, not only to improve that of others, but also to sanction those who violate social norms [41]. A significant negative effect of SNs on EA was not observed, which is surprising given the central role of the conservative culture in Iran. Here are some potential explanations:

First, a spurious relationship for SNs \rightarrow OC \rightarrow EA was observed, which suggests that there is room for interference of a particular third confounding factor in which this very factor is commingled with other factors. Opportunity confidence may overshadow the need for support from the members of an entrepreneur's immediate network (e.g. friends, teachers, role models, etc.) to perform an entrepreneurial act. Moreover, autonomy and the need for achievement [91] are primary motivators for entrepreneurs [8] and are also notable characters of entrepreneurs [92]. Given their strong need for achievement and autonomy, entrepreneurs try to solve problems themselves, set targets, and strive for these targets through their own actions [93] (p. 296). Nevertheless, the relationship between the need for achievement, autonomy, and OC will remain conjecture unless the correlation between them is measured for the participants. This makes sense because of the presence of the spurious relationship between SNs and EA, which was discussed earlier. This can be an intriguing research question for future studies.

Second, Elster defines social norms as “not outcome-oriented” injunctions to act [94]. On the other hand, SNs are important driving forces or supportive mechanism of economic behaviors [41], which might explain why SNs are not related to EA but to OC. [41] (p. 514) believes that SNs may take different normative forms. For example, from “specific forms of consumption norms (e.g., etiquette, manners of dress, or tipping norms), reciprocity norms (e.g., gift giving), retribution

norms (e.g., revenge), work norms (e.g., effort in relation to competences and codes of honor norms), cooperation norms (e.g., to vote or to pay taxes), or distribution norms (e.g., fairness and equality norms).” As such, in the context of value creation, a SN seems to take a specific form of supporting entrepreneurs’ opportunity confidence.

On the contrary, OC seems to have a strong impact on the outcome-oriented elements of the model (EA). Because, it predicts entrepreneurial action. Opportunity confidence transforms entrepreneurs’ beliefs into efforts (as they believe in their own abilities to accomplish a task at hand and the desirability of that task in entrepreneurial areas). This helps entrepreneurs to set challenging growth expectations for their firms and persist in their efforts to accomplish their goals [31].

As such, for the sample of entrepreneurs in this study, OC in value creation appears to be an outcome-oriented construct that transforms only certain beliefs to accomplish higher performances and desired outcomes for a person. For example, several studies have found a positive relationship between ESE and firm performance (e.g., financial achievement, such as sales revenues after entrepreneurs establish their firms) [57,95]. In addition, there is a general belief that positive attitude has a positive impact on outcome [61].

7. Conclusions

This study contributes notable insights into the domain of institutional entrepreneurship and how individuals allocate their sociocognitive resources to entrepreneurship. Many studies have investigated the effect of sociocognitive traits on entrepreneurial intention (maybe more than any other behavioral studies in the entrepreneurship literature) but rarely have they studied sociocognitive traits in the domain of entrepreneurial action. This research focused on the prerequisites of entrepreneurial action by investigating the mediating effect of opportunity confidence on the relationship between social norms and entrepreneurial action. Although we expected a significant negative correlation between social norms and entrepreneurial action, due to the presence of a spurious relationship, statistical results could not confirm this relationship (when entering the opportunity confidence as the mediator, the correlation between subjective norms and action dropped dramatically). This study provided some justifications for that. For example, it might be the case that opportunity confidence may overshadow the need for support from members of the entrepreneur’s immediate network (e.g., family, teachers, role models, etc.). Besides, considering the highly conservative Iranian culture, social norms can drastically deter individuals from carrying out high-risk and uncertain activities that are innovative and entrepreneurial, though, social norms can build up confidence (by encouraging perceptions about desirability and feasibility of an entrepreneurial idea) to perform an entrepreneurship task at hand. Therefore, as expected, the results confirmed that stricter social norms are positively related to higher levels of opportunity confidence. Moreover, opportunity confidence increases the likelihood of entrepreneurial action. This has important implications for both theory and entrepreneurship practice in Iran and other similar institutional contexts.

7.1. Implications

Our conceptual framework and empirical findings have important implications for entrepreneurship theory and public policy. First, this study responds to numerous calls in the comparative entrepreneurship literature for new researches that explore the bilateral relationship between micro- and macrolevel variables [96–98]. Specifically, the research findings suggest a plausible mechanism through which social norms can direct individual effort to productive entrepreneurial exercises by enabling individuals to use their entrepreneurial self-efficacy, attitude to perceived business opportunities, and confidence of success more effectively in the course of entrepreneurial action.

However, while Iranian culture is influenced by strong family ties, in-group control, and so forth, a significant effect of social norms on EA is not confirmed. In other words, while SNs affect OC it would not affect EA. Although this finding sheds light on the place of SNs in entrepreneurial opportunity development, SNs might play other, unexplored roles, such as helping actors interpret their judgments, intuitions, or discoveries. On the other hand, SNs are different from AVC and ESE. For example, among a sample of entrepreneurs, it makes sense that attitudes toward value creation and self-efficacy should have a major impact on action, while the impact of SNs may not vary systematically, or much at all [99]. Because of this ontological dilemma, this study calls for future studies in the domain of entrepreneurial intention to apply qualitative methods in addition to quantitative ones to support and help generalize the findings.

Second, this paper analyzed its model in the domain of opportunity-driven entrepreneurship (as opposed to necessity-driven opportunity). Therefore, the findings should be interpreted with caution as they need to be replicated in different theoretical and empirical frameworks such as necessity-driven entrepreneurship.

One important implication for public policy is that in Iran (and maybe in similar social contexts) the influence of social norms should not be neglected for the creation of entrepreneurial endeavors because of a lack of a direct relationship with entrepreneurial action. Policy-makers should consider its influence on more in-depth and intangible aspect of entrepreneurship which is the sociocognitive level and try to channel them to entrepreneurship practices.

Because of many economic hurdles and barriers that are sourced both from the inside and outside of the country (e.g., unusually strong influence of political and institutional factors on the economy, a set of unclear and often changing rules, and sanctions imposed by the United States), and the ensuing economic recession, SNs can smooth the entrepreneurial journey. Policy-makers should pay more attention to social norms and invest in that, for example, by culture-building practices around the importance of SNs for entrepreneurship, or by organizing business events for prospective entrepreneurs' families especially those that are interacting with entrepreneurship centers such as STPs, accelerators, incubators, etc., or producing TV shows for the dominant television channels aimed at stimulating both entrepreneurs and their families for new value creation. Programs such as Silicon Valley, Shark Tank, and Superior Donuts could be excellent practices in this regard (of course after being localized according to the country's social context).

7.2. Limitation and Future Research

This study has two major limitations.

First, internal validity of entrepreneurship studies is highly dependent on the sample characteristics [100]. One major limitation of the present work was the difficulty of finding an appropriate large random sample of entrepreneurs in the ICT sector. First, Tehran's STPs were targeted, but this resulted in a small number of subjects (23), which did not fulfil Barclay's (1995) sampling principle in the PLS approach. For this reason, data from all STPs in the country were collected. Moreover, the effect of the in-group control tends to be stronger in the country's provinces than in a metropolitan city like Tehran (because they conform more to customs and traditions), as another potential source of unobserved heterogeneity). However, all the study's observations come from a single industry, minimizing the possible response bias.

Second, the scope of entrepreneurial action in this study entails the early stage of the entrepreneurial event. For this reason, it does not adequately cover the recursive process of the entrepreneurial action. Prospective researches should consider more extended time periods and multiple phases (e.g., obtaining the first sales and buying bricks and mortar).

Third, this study considers data from only one country (hence, lacking the variation that can be achieved with a multicountry sample), so the obtained results could be only tailored to the context of Iran and may not be generalizable. Intention research in Scandinavia has demonstrated a great impact of social forces [38,54,101]. On the other hand, Javidan et al. found that the Iranian cultural

cluster is similar to that of South Asian countries such as India, Indonesia, the Philippines, Malaysia, and Thailand, but different from the Arab/Middle Eastern cluster [25]. (They asserted that it is due to the close historical ties that have existed between Iran and other South Asian countries, and particularly India, since the early 1500's (p. 128).) Future studies can replicate this research model between clusters of South Asian and Scandinavian countries.

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