Modeling Underdog Entrepreneurs Journey in Iran: A Mixed Method Approach

Mohamed Shabanpour*
Management and Accounting Department, Shahid Beheshti University, Tehran, Iran

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Abstract

The term underdog entrepreneur (UE) is increasingly used among scholars to discuss successful disabled, immigrant, and necessity entrepreneurs who encounter significant challenges in their early lives. However, their characteristics and business obstacles in emerging economies remain unclear. This research offers insights by answering two questions: (1) how do physical, socio-cultural, and economic challenges motivate underdog individuals to become entrepreneurs? And (2) what are UEs’ unique challenges following establishing their ventures in Iran? First, this research develops a theoretical model by providing insights from 76 secondary data and 18 in-depth interviews using topic modeling. Subsequently, a survey method is conducted to collect data from underdog entrepreneurs in Iran. Structural Equation Modeling is performed to analyze the data and test the hypotheses. The findings reveal that negative situations create experiences, which lead to innovativeness, risk-tolerance, skilled communications, and persistence, which mediate the entrepreneurship journey. Moreover, UEs confront governmental, managerial, and environmental challenges to maintain their businesses in Iran's emerging economy. In the end, practical suggestions were presented to governors, entrepreneurs, and scholars regarding how they can manage these challenges, paving the way for UEs' success to positively impact economic growth.

Keyword:
Text Mining
Topic Modeling
Structural Equation Modeling
Underdog Entrepreneur
Immigrant

1. Introduction

In modern societies, success is an objective that most people strive to achieve. Macroeconomists try to associate this desire with the economic growth of their society through entrepreneurship development. They believe that economic growth is one of the consequences of entrepreneurship development, which has been defined as enhancing the desire, intention, and act of entrepreneurship.

Entrepreneurship is a process that entails sufficient time and effort through which the risk of financial, social, and psychological resources must be considered. The outcome of this activity can be personal satisfaction due to independence as well as financial rewards [1]. Although the extent of the efficiency and operationalization of entrepreneurship differentiates mature economies from emerging ones, entrepreneurship has become the most strategic and indispensable economic tool for both developed and developing countries [2]. There is an overwhelming consensus among researchers and policymakers that entrepreneurial activity triggers innovation, increases job creation, and plays a vital role in sustainable economic growth [3].

Extensive studies have concentrated on entrepreneurial personality traits in favorable economic and socio-cultural environments, which are mainly classified as positive traits in human behavior categories [4]. However, in the past decade, research has revealed that promising conditions are not the only antecedents that contribute to the success of the entrepreneurship process. It has been discovered that a large group of remarkable entrepreneurs began their entrepreneurial activities in challenging situations. These individuals are classified into four groups of disabled,
immigrant, necessity, and attention deficit hyperactivity disorder (ADHD) entrepreneurs, all of whom are termed underdog entrepreneurs (UEs).

UEs confront unique hurdles in their entrepreneurship process, for it involves interactions between the entrepreneurs and the environments that surround them. Disabled entrepreneurs have to handle challenging work environments, cultural misfits, transportation, the need for personal assistance, and physical exhaustion. Immigrant entrepreneurs experience immigration stress, labor market discrimination, and racism. Social rejection, the lack of educational background due to child laboring, and severe financial hardships are the difficulties that necessity entrepreneurs face. In the end, cognitive impairment is the most problematic condition that ADHD entrepreneurs experience.

These challenging situations give rise to physical, economic, socio-cultural, and cognitive problems, but surprisingly, the same issues help UEs to build successful entrepreneurship. Due to these obstacles, they find themselves in a state of incapacity, undergo a lack of career alternatives, experience social differences, and feel loss and uncertainty. To overcome these problems, they attempt to adapt to the situation by working harder, receiving help from others, and doing things in a different fashion. Consequently, these challenges in everyday life may translate into work discipline, risk tolerance, high social skills, and creative thinking, which empower them to initiate successful entrepreneurship [5].

Given that the concept of underdog entrepreneurship has recently been introduced to the entrepreneurship literature, and very little research has been done in this field, proper research is necessary to examine the challenge-based underdog entrepreneurship model in different contexts to strengthen and modify it [5].

Furthermore, most of the extant studies have been conducted in mature economies. Therefore, the unique characteristics of emerging economies have not yet been considered. As Baumol states, entrepreneurial behavior changes from one economy to another in a manner that corresponds to the variations in the rules of the game [6]. Additionally, there is a need to fully understand the nature and the extent of the difference between emerging economy entrepreneurship and mature economy entrepreneurship [7]. Therefore, as an emerging economy where many people have struggled with these circumstances, Iran is an appropriate country for studying UEs due to its high population of disabled, immigrant, and necessity individuals.

By way of scrutinizing the reports of the National Statistics Center of Iran (2016), it can be comprehended that more than 15 million people in the country are in at least one of these four groups. In other words, about 19% of the population of Iran falls into these categories. It should be highlighted that the entrepreneurship of these people usually activates the idle part of the public, which is generally considered a burden. If their passion for entrepreneurial activities awakens, the disadvantageous economic and socio-cultural circumstances may change for the better. Moreover, recognizing the challenges of their entrepreneurship process empowers policymakers to devise a procedure to employ this enormous potential to solve adverse economic and social problems such as unemployment, drug and alcohol abuse, poverty, and racial discrimination.

This study aims to identify UEs' characteristics, the ex-ante and ex-post challenges in their entrepreneurship activity, and the factors that facilitate these challenges in Iran, based on the challenged-based entrepreneurship model.

2. Conceptual Development

2.1. Methodology

The author conducted 18 semi-structured interviews. The interviewees involved six disabled entrepreneurs, six immigrant entrepreneurs, and six necessity entrepreneurs who accomplish successful entrepreneurship, i.e., entrepreneurs who have run their businesses for at least five years and employed more than twenty employees in Iran [2]. The disabled entrepreneurs were chosen from those with physical and mobility disabilities, the immigrant entrepreneurs are from Iraq and Afghanistan, and the necessity entrepreneurs were selected from the suburban area of Tehran, the capital of Iran. It should be highlighted that ADHD entrepreneurs were not considered in this study, for there is no reliable source to identify ADHD individuals in Iran.

All interviews were conducted at participants' workplaces and lasted between 75 to 120 minutes. Each interview was recorded by an Android device in .wav format and converted to an MP3 format using AV Audio Converter Software. Using iotype software, the MP3 files were converted to MS Office Word files. Subsequently, the files were proofread by the author twice to make sure that the transcripts are well transcribed.

Afterwards, the data analysis process was conducted in two phases. First, when each interview had been carried out, the researcher perused the transcriptions over and over again so as to explore possible codes and themes and to improve the interview process. Then, the data were analyzed thematically to provide a deep understanding of UEs' characteristics and challenges [8]. For this purpose, topic modeling, a statistical method of Natural Language Processing, was utilized [9]. The author operated a latent Dirichlet allocation model using NLTK, Gensim, and Hazm (Persian corpus) libraries.
in python for analyzing the textual data and extracting the themes. Prior to conducting interviews, the author delved into online journal papers and magazines related to the topic to collect proper secondary data, which were analyzed using the mentioned text mining approach.

2.2. Results

The analysis of the data revealed that UEs undergo some traumatic experiences such as “being different” and “social exclusion” through economic, socio-cultural, and physical challenges. In order to cope with these experiences, they try to work harder, build up their resistance, eliminate barriers to social interaction, fulfill physiological and safety needs, hone their communication skills, do things in different ways, and be autodidactic. Consequently, these adaptive requirements create UEs’ characteristics which are categorized into the four themes of persistence, risk-tolerance, skilled communication, and innovativeness (Table 1).

As a result, the structure of the challenge-based entrepreneurship model [5] was confirmed in Iran's emerging economy. The following model (Figure 1) suggests how four adaptive requirements derive from experiences that are brought about by economic, socio-cultural, and physical challenges. It should be noted that experiences such as social exclusion and the need to prove oneself constantly are more observable in Iran society. Also, the study proposes how these adaptive requirements may produce positive characteristics that trigger entrepreneurial intent.

Furthermore, the author identifies five obstacles that UEs confront following their entrepreneurship in Iran. The early-stage financing gap and lack of business knowledge and network arise from economic, socio-cultural, and physical challenges. They may moderate the relationship between the UEs’ characteristics and successful entrepreneurship the same as the other three obstacles: discrimination against UEs, city infrastructure, and government regulations. Moreover, both conscious and unconscious discriminations toward underdog individuals intensely occur in Iran and mediate the relationship between the challenges and UEs’ experiences. This relationship may also be moderated by city infrastructure and government regulations.

Furthermore, two models were designed to analyze the findings empirically. In the first model, the author studies the relation between physical challenges and disabled entrepreneurs’ (DEs) characteristics and investigates the moderation effects of early-stage obstacles. Based on the conceptual framework, the hypotheses for the first model are shown in Table 2.

The second model examines the interaction between socio-cultural and economic challenges with immigrant and necessity entrepreneurs’ (INEs) characteristics. Based on the conceptual framework, the hypotheses of the second model are presented in the following table.

Table 1. Negative challenges lead to positive consequences in underdog entrepreneurship (Customized Challenged based model [5])

| Challenges          | Types of entrepreneurs | Persistence                                                                 | Risk-tolerance                             | Skilled communication               | Innovativeness                                      |
|---------------------|------------------------|------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------|-----------------------------------------------------|
| Physical            | Disabled               | 1. Barriers to social interaction                                           | 1. Experience great losses and failures    | 1. Social exclusion                   | 1. Being different                                   |
|                     |                        | 2. Physical limitation                                                      | 2. No fear of loss                         | 2. Need to seek help from others      | 2. Need to do normal tasks in different ways          |
|                     |                        | 3. Few job opportunities                                                    |                                            |                                      |                                                     |
|                     |                        | 4. Prove oneself                                                            |                                            |                                      |                                                     |
| Socio-Cultural      | Immigrant              | 1. Lack of cultural perception and linguistic skills                         | 1. Highly motivated to change their situation | 1. Social exclusion                   | 1. Being different                                   |
|                     |                        | 2. Few job opportunities                                                    |                                            | 2. High benefits of organizing ethnic group | 2. Dissimilar culture and mindset generate novel ideas |
|                     |                        | 3. Prove oneself                                                            |                                            | 3. Focus on niche markets             |                                                     |
| Economic            | Necessity              | 1. Physiological and safety needs for their family                          | 1. Live in an uncertain and intolerable situation | 1. Social exclusion                   | 1. Being different                                   |
|                     |                        | 2. Needs to work harder                                                     | 2. Have nothing to lose                     | 2. Networking with people to grasp any opportunity and resources | 2. Resource restriction stimulates process innovation |
|                     |                        | 3. Prove oneself                                                            |                                            |                                      |                                                     |
Table 2. First model Hypotheses

| Hypothesis |
|------------|
| H\(_1\): Physical challenges are positively associated with DEs’ success. |
| H\(_2\): Physical challenges are positively associated with DEs’ persistence. |
| H\(_3\): Physical challenges are positively associated with DEs’ risk tolerance. |
| H\(_4\): Physical challenges are positively associated with DEs’ communications skills. |
| H\(_5\): Physical challenges are positively associated with DEs’ innovativeness. |
| H\(_6\): Persistence behavior is positively associated with DEs’ success. |
| H\(_7\): Risk-tolerance is positively associated with DEs’ success. |
| H\(_8\): Innovativeness is positively associated with DEs’ success. |
| H\(_9\): Skilled communication is positively associated with DEs’ success. |
| H\(_{10}\): Early stage financing gap has a moderation effect on DEs’ characteristics and successful entrepreneurship. |
| H\(_{11}\): Lack of business knowledge has a moderation effect on DEs’ characteristics and successful entrepreneurship. |
| H\(_{12}\): Discrimination against UEs’ has a moderation effect on DEs’ characteristics and successful entrepreneurship. |
| H\(_{13}\): Government regulations has a moderation effect on DEs’ characteristics and successful entrepreneurship. |
| H\(_{14}\): City infrastructure has a moderation effect on DEs’ characteristics and successful entrepreneurship. |

Table 3. Second model Hypotheses

| Hypothesis |
|------------|
| H\(_{15}\): Socio-cultural and economic challenges are positively associated with INEs’ success. |
| H\(_{16}\): Socio-cultural and economic challenges are positively associated with INEs’ persistence. |
| H\(_{17}\): Socio-cultural and economic challenges are positively associated with INEs’ risk tolerance. |
| H\(_{18}\): Socio-cultural and economic challenges are positively associated with INEs’ communications skills. |
| H\(_{19}\): Socio-cultural and economic challenges are positively associated with INEs’ innovativeness. |
| H\(_{20}\): Persistence behavior is positively associated with INEs’ success. |
| H\(_{21}\): Risk-tolerance is positively associated with INEs’ success. |
| H\(_{22}\): Innovativeness is positively associated with INEs’ success. |
| H\(_{23}\): Skilled communication is positively associated with INEs’ success. |
| H\(_{24}\): Early stage financing gap has a moderation effect on INEs’ characteristics and successful entrepreneurship. |
| H\(_{25}\): Lack of business knowledge has a moderation effect on INEs’ characteristics and successful entrepreneurship. |
| H\(_{26}\): Discrimination against UEs’ has a moderation effect on INEs’ characteristics and successful entrepreneurship. |
| H\(_{27}\): Government regulations has a moderation effect on INEs’ characteristics and successful entrepreneurship. |

Figure 1. Challenged-based model of UEs in Iran based on [10] – Topic modeling results
3. Empirical study

3.1. Methodology

Exploratory and confirmatory factor analyses are performed using SPSS and AMOS software to test the hypotheses and required data were collected using the survey method. Figures 2 and 3 represent the relation between the constructs and the hypotheses of the two models.

![Figure 2. First Model](image)

![Figure 3. Second Model](image)

Due to the scarcity of data, respondents were selected based on the convenience sampling technique. Prior to surveying, a draft survey was pretested by two professors in Management field and three entrepreneurs to address common method bias. Moreover, the participants cooperated voluntarily without compensation and were requested to evaluate the survey on its clarity, wording, and relevancy [11].

In the first model, respondents are among disabled entrepreneurs whose names and businesses were registered in the State Welfare Organization of Iran. Participants of the second model are immigrant and necessity entrepreneurs who were chosen from the State Welfare Organization of Iran (INEO, 2018) and the National Entrepreneurship Organization of Iran.

A self-administered questionnaire survey with a brief explanation of the study and demographic questions was distributed. Also, the constructs were ranked using the five-point Lickert scale with 1=strongly disagree and 5=strongly agree. For the first model, 253 questionnaires were distributed, and 136 final usable responses were obtained. Moreover, for the second model, of 289 questionnaires distributed, 163 final functional responses were received.
Using 23 items adapted from the quality of life questionnaire for disabled people the dimensions of physical challenges (PC) were measured. PC dimensions are mobility issues (MI), psychological (P), environmental (E), social relationship (SR), and level of independence (LI). MI was measured using three, P using five, E using eight, SR using three, and LI using four items [12, 13].

Persistence (PE) was quantified by three dimensions: current term purposes pursuing (CPP), long-term purposes pursuing (LPP), and recurrence of unattained pursuits (RUP) comprising of 16 items [14]. Financial (F), health (H), ethical (E), and social risk (S) are the four dimensions of risk tolerance (RT) [15]. An eight-item scale was adapted from (REF) in this study to measure innovativeness (IN) [16]. Skilled communication (SC) was ranked by 19 items with four dimensions: formal (F), informal (IF), inter-personal (IP), and non-verbal (NV) [17]. Entrepreneurship success (ES) was measured using three items [18].

In the second model, economic and socio-cultural challenges (ESC) was measured using 25 items in eight dimensions: household income (HI), education (ED), homeownership (HW), medical insurance (MI), temperate lifestyle (TL), occupation (OC), social activities (SA), and living environment (LE) [19]. All other constructs were measured the same as the first model except city infrastructure, which is not considered in the second model.

Furthermore, the moderators are examined with different items; Early-stage financing gap (EFG) was studied by three items, lack of business knowledge and network (LBN) by six, government rules (GR) by five, city infrastructure (CI) by six (only for DES), and discrimination against DESs (DDE) by 12 and against INEs (DIN) by 15 items both with four dimensions: educational (E), social (S), Health (HE) and occupational (O) [20, 21].
4. Results

Exploratory Factor Analysis (EFA) was performed using the principal component analysis method and varimax rotation. As Pattanayak suggests, a minimum factor loading of 0.5 was taken as the criteria to retain items, so all the items are appropriately loaded and maintained for future analysis [22]. Also, variance extracted values were above 50 percent for all the factors and ranged from 64.18 to 82.91 percent, which shows the measurements’ reliability. Moreover, all constructs and variables are reliable, for all their Cronbach’s $\alpha$ values are above the acceptable threshold of 0.7 [23]. Precisely, the Cronbach’s $\alpha$ value ranges between 0.814 and 0.928 for PC constructs, 0.786 and 0.852 for PE, 0.861 and 0.901 for RT, 0.859 and 0.930 for SC, 0.879 and 0.943 for ESC, 0.866 and 0.921 for DDE, 0.874 and 0.938 for DIN, 0.913 for IN, 0.886 for ES, 0.783 for EFG, 0.839 for LBN, 0.796 for GR, and 0.836 for CI. The results are summarized in Table 5.

| Variables | Number of items | Number of factors | Range of factor loadings | Percentage of variance extracted | Number of items | Number of factors | Range of factor loadings | Percentage of variance extracted |
|-----------|-----------------|-------------------|--------------------------|---------------------------------|----------------|-------------------|--------------------------|---------------------------------|
| PC        | 23              | 5                 | 0.510 - 0.785            | 64.99                           | -              | -                 | -                        | -                               |
| ESC       | -               | -                 | -                        | -                               | 25             | 8                 | 0.637 - 0.849           | 78.02                           |
| PE        | 16              | 3                 | 0.665 - 0.768            | 74.78                           | 16             | 3                 | 0.666 - 0.719           | 88.17                           |
| RT        | 12              | 4                 | 0.694 - 0.803            | 76.19                           | 12             | 4                 | 0.644 - 0.826           | 83.53                           |
| IN        | 8               | 1                 | 0.823 - 0.896            | 84.53                           | 8              | 1                 | 0.715 - 0.831           | 85.76                           |
| SC        | 19              | 4                 | 0.525 - 0.752            | 66.37                           | 19             | 4                 | 0.599 - 0.884           | 61.53                           |
| ES        | 3               | 1                 | 0.873 - 0.904            | 89.70                           | 3              | 1                 | 0.848 - 0.874           | 89.56                           |
| EFG       | 3               | 1                 | 0.724 - 0.793            | 65.52                           | 3              | 1                 | 0.602 - 0.672           | 70.84                           |
| LBN       | 6               | 1                 | 0.589 - 0.715            | 60.26                           | 6              | 1                 | 0.576 - 0.763           | 67.43                           |
| DDE       | 5               | 1                 | 0.796 - 0.818            | 77.96                           | -              | -                 | -                        | -                               |
| DIN       | -               | -                 | -                        | -                               | 6              | 1                 | 0.611 - 0.787           | 81.05                           |
| GR        | 8               | 4                 | 0.666 - 0.719            | 72.43                           | 8              | 4                 | 0.575 - 0.782           | 69.77                           |
| CI        | 15              | 4                 | 0.544 - 0.826            | 67.59                           | -              | -                 | -                        | -                               |

The unidimensionality of each construct and the instrument’s convergent and discriminant validity were verified utilizing confirmatory factor analysis (CFA). For an acceptable model, the $\chi^2/df$ should be less than three [24]. Also, Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) value of 0.90 or more is considered a good model fit. Moreover, the recommended value for root mean square error of approximation (RMSEA) value is 0.08 or less, and for Normed Fit Index (NFI) is 0.9 [23]. Structural Equation Modeling and maximum likelihood estimation procedure were adopted to assess the structural models. The fit of the models was acceptable based on the structural model fit measures [23-24]. The first model showed: $\chi^2/df=1.439$, CFI=0.908, TLI=0.912, NFI=0.8, RMSEA=0.054, and the second model showed: $\chi^2/df=1.215$, CFI=0.959, TLI=0.973, NFI=0.9, RMSEA=0.076, which show that the models are well-fitted.

Furthermore, CFA standardized factor loadings ($\lambda$), average variance extracted (AVE), and construct reliability (CR) values were above 0.5, 0.5, and 0.7, respectively, which show convergent validity [24, 25]. The results are shown in Table 6.

Discriminant validity occurs when the square root of the construct’s AVE is greater than the correlations between the construct and the other constructs in the model [25], which is satisfied in both models. Also, to address multicollinearity, the r-value between each pair of independent variables was calculated, which is shown in Tables 7 and 8. As can be seen in the table, all r-values are less than 0.55, so both models are free from multicollinearity.
| Variables | Indicator | First Model | Second Model |
|-----------|-----------|-------------|--------------|
|           | Standardize Loading | Average Variance Extracted | Construct Reliability | Indicator | Standardize Loading | Average Variance Extracted | Construct Reliability |
| MI        | 0.758     | 0.619       | 0.929        | -         | -                  | -                         | -               |
| P         | 0.590     |             |              |            |                    |                           |                 |
| E         | 0.809     |             |              |            |                    |                           |                 |
| SR        | 0.759     |             |              |            |                    |                           |                 |
| LI        | 0.826     |             |              |            |                    |                           |                 |
| MI        |           |             |              |            |                    |                           |                 |
| P         |           |             |              |            |                    |                           |                 |
| SC        |           |             |              |            |                    |                           |                 |
| PC        |           |             |              |            |                    |                           |                 |
| E         |           |             |              |            |                    |                           |                 |
| SR        |           |             |              |            |                    |                           |                 |
| LI        |           |             |              |            |                    |                           |                 |
| ESC       |           |             |              |            |                    |                           |                 |
| CPP       | 0.589     | 0.566       | 0.968        | -         |                    |                           |                 |
| LPP       | 0.516     |             |              |            |                    |                           |                 |
| RUP       | 0.600     |             |              |            |                    |                           |                 |
| F         | 0.590     |             |              |            |                    |                           |                 |
| RT        |           |             |              |            |                    |                           |                 |
| H         | 0.673     | 0.738       | 0.972        | -         |                    |                           |                 |
| E         | 0.625     |             |              |            |                    |                           |                 |
| S         | 0.550     |             |              |            |                    |                           |                 |
| IN        |           |             |              |            |                    |                           |                 |
| IN4       | 0.640     | 0.629       | 0.991        | -         |                    |                           |                 |
| IN5       | 0.864     |             |              |            |                    |                           |                 |
| IN6       | 0.865     |             |              |            |                    |                           |                 |
| IN7       | 0.892     |             |              |            |                    |                           |                 |
| IN8       | 0.800     |             |              |            |                    |                           |                 |
| SC        |           |             |              |            |                    |                           |                 |
| IF        | 0.627     | 0.564       | 0.953        | -         |                    |                           |                 |
| IP        | 0.896     |             |              |            |                    |                           |                 |
| NV        | 0.598     |             |              |            |                    |                           |                 |
| ES        |           |             |              |            |                    |                           |                 |
| ESJ       | 0.797     | 0.792       | 0.949        | -         |                    |                           |                 |
| EFG       | 0.598     |             |              |            |                    |                           |                 |
| LBN       |           |             |              |            |                    |                           |                 |
| LBN4      | 0.810     | 0.577       | 0.989        | -         |                    |                           |                 |
| LBN5      | 0.843     |             |              |            |                    |                           |                 |
| LBN6      | 0.806     |             |              |            |                    |                           |                 |
| DDE       |           |             |              |            |                    |                           |                 |
| SDD       | 0.824     | 0.867       | 0.950        | -         |                    |                           |                 |
| HDD       | 0.749     |             |              |            |                    |                           |                 |
| ODD       | 0.694     |             |              |            |                    |                           |                 |
| DIN       |           |             |              |            |                    |                           |                 |
| GR        |           |             |              |            |                    |                           |                 |
| CI        |           |             |              |            |                    |                           |                 |
Table 7. Correlation matrix of model 1

|       | PC   | PE   | RT   | IN   | SC   | EFG  | LBN  | DDE  | GR   | CI   |
|-------|------|------|------|------|------|------|------|------|------|------|
| PC    | 1    |      |      |      |      |      |      |      |      |      |
| PE    | 0.417*** | 1    |      |      |      |      |      |      |      |      |
| RT    | 0.328*** | 0.318* | 1    |      |      |      |      |      |      |      |
| IN    | 0.427*** | 0.235* | 0.451 | 1    |      |      |      |      |      |      |
| SC    | 0.440*** | 0.290 | 0.327 | 0.238 | 1    |      |      |      |      |      |
| EFG   | 0.200*  | 0.059 | 0.454** | 0.514 | -0.395 | 1    |      |      |      |      |
| LBN   | 0.373   | 0.290 | 0.215 | 0.466 | -0.182 | 0.296 | 1    |      |      |      |
| DDE   | 0.534*** | 0.243** | 0.284 | 0.139 | -0.307 | 0.441** | 0.394* | 1    |      |      |
| GR    | -0.120  | -0.285 | -0.185 | 0.347 | 0.234 | 0.392*** | 0.289 | 0.131 | 1    |      |
| CI    | -0.370** | -0.476 | -0.251 | 0.273 | 0.351 | 0.241 | 0.412 | 0.231 | 0.414 | 1    |

Table 8. Correlation matrix of model 2

|       | ESC  | PE   | RT   | IN   | SC   | EFG  | LBN  | DIN  | GR   |
|-------|------|------|------|------|------|------|------|------|------|
| ESC   | 1    |      |      |      |      |      |      |      |      |
| PE    | 0.521*** | 1    |      |      |      |      |      |      |      |
| RT    | 0.489*** | 0.379** | 1    |      |      |      |      |      |      |
| IN    | 0.471**  | 0.211 | 0.319 | 1    |      |      |      |      |      |
| SC    | 0.392*** | 0.305** | 0.434 | 0.272 | 1    |      |      |      |      |
| EFG   | 0.508*** | 0.172 | 0.533*** | 0.498 | -0.298* | 1    |      |      |      |
| LBN   | 0.470*** | 0.255* | 0.175 | 0.332 | -0.216 | 0.311 | 1    |      |      |
| DIN   | 0.545**  | 0.202 | 0.333*  | 0.285 | -0.445 | 0.475** | 0.374** | 1    |      |
| GR    | -0.420*** | -0.397** | -0.255 | 0.247 | 0.343 | 0.289*** | 0.270 | 0.190 | 1    |

Table 9. The results of model 1 hypotheses

| Hypothesis | Linkage | Effect | Standardized Path Coefficient | Result       |
|------------|---------|--------|-------------------------------|--------------|
| H₁         | PC → ES | +      | 0.697***                     | H₁ is supported |
| H₂         | PC → PE | +      | 0.839***                     | H₂ is supported |
| H₃         | PC → RT | +      | 0.427                        | H₃ is rejected |
| H₄         | PC → SC | +      | 0.591                        | H₄ is rejected |
| H₅         | PC → IN | +      | 0.781***                     | H₅ is supported |
| H₆         | PE → ES | +      | 0.872***                     | H₆ is supported |
| H₇         | RT → ES | +      | 0.623***                     | H₇ is supported |
| H₈         | IN → ES | +      | 0.948***                     | H₈ is supported |
| H₉         | SC → ES | +      | 0.612***                     | H₉ is supported |
| H₁₀        | PC * EFG → ES | - | -0.489***                     | H₁₀ is supported |
| H₁₁        | PC * LBN → ES | - | -0.217**                     | H₁₁ is supported |
| H₁₂        | PC * DDE → ES | - | -0.926***                     | H₁₂ is supported |
| H₁₃        | PC * GR → ES | - | -0.194                       | H₁₃ is rejected |
| H₁₄        | PC * CI → ES | - | -0.809***                     | H₁₄ is supported |
Furthermore, the common method variance (CMV) was addressed in two ways. First, Harman’s single factor test was utilized, in which all latent variables are loaded into one factor without rotation. The total variance for the single factor was 38% for the first model and 41% for the second (less than 50%), which suggests no discrimination in the results. Secondly, as Podsakoff states, Harman’s single factor test is not sufficiently sensitive; therefore, latent common method factor was applied [26]. In this technique, a new latent variable (CLV) was introduced to each model and linked to all observed variables. Then, the models were operated with and without CLV. The differences in standardized loadings factors of the models were less than 0.2. Also, the CLV squared coefficient in both models was less than 0.5: 0.397 for the first and 0.424 for the second model. Therefore, the models are free from CMV [27, 28].

The findings of the first model established a significant contribution between PC and ES (H1), which positively mediate by PE and IN (H2 and H5). Moreover, the findings reveal that PC does not strengthen RT and SC in disabled individuals (H3 and H4). Additionally, the results claim that all four studied characteristics are positively associated with ES, where IN has the most substantial effect (H6, H7, H8, and H9). The moderation effect of GR is not supported (H13); on the other hand, the impacts of the other identified moderators are found to be negatively significant (H10, H11, H12, and H14). Of the moderators, DDE and CI have the strongest impact on the examined relationship, respectively.

In the second model, the authors examine the relationship between ESC and ES (H15), which is found to be positively significant. Moreover, the mediating effects of immigrant and necessity individuals’ characteristics are supported, where PE and SC have the most potent effect, respectively (H16 to H23). Also, the findings support the negative moderation effects of BFG, LBN, DIN, and GR on the relationships between ESC and ES (H24, H25, H26, H27). Similar to the first model, discrimination (DIN) has the most decisive impact on the investigated relationship. The hypotheses results are presented in the Tables 9 and 10.

5. Discussion

Consistent with previous findings, the result shows that the challenges mentioned earlier may have positive consequences. UEs confront hurdles in everyday life and experience many failures, which develop their persistence and, consequently, assist them in their initial business setbacks [29]. Moreover, immigrant and necessity individuals successfully get through stressful and sometimes dangerous challenges, intensifying their risk tolerance by becoming more optimistic and self-confident [30].

Moreover, the people with whom immigrant and necessity individuals frequently interact encounter similar difficulties, which enable them to build a supportive network [31, 32]. These practices result in high communication skills, which is crucial in the early stage of their entrepreneurship [33]. Also, constraints have been found to be an influential source of entrepreneurial intuition [34, 35]. For instance, significant financial barriers and paucity of material resources encourage creative thinking in UEs to build their venture [36, 37].
Furthermore, as mentioned before, after running their businesses, UEs uniquely encounter some obstacles that put their ventures at high risks. Although all entrepreneurs experience difficulties providing sufficient initial funding, barriers such as discriminations against UEs and inappropriate government regulations exacerbate fundraising for UEs. To fill the early-stage financing gap, the author suggests that UEs should utilize different types of crowdfunding (CF).

CF owns the capacity to obtain funding in the early stage of a company’s life cycle and thus an opportunity to fill the early-stage gap [38]. Also, CF supports the democratization of the capital [39] and offers post-investment implications for UEs [40]. Entrepreneurs should employ CF to collect funds, attract the public’s attention, and receive feedback for their products and services [41]. Therefore, government and policymakers should consider innovative financing methods such as crowdfunding to facilitate the initial funding process.

Furthermore, inadequate city infrastructures impede disabled entrepreneurs from managing their businesses. They confront many hindrances in procuring raw materials, communicating with colleagues and customers, setting up exhibitions, and attending workplaces. SansBobi explains that disabled people can fully participate in society and maintain an independent lifestyle by exploiting technology [42]; therefore, policymakers should develop Iran’s electronic government system to assist disabled entrepreneurs.

Additionally, Government regulations put up significant barriers for UEs. For instance, an Afghan entrepreneur who lived more than twenty years in Iran could not own a patent for his invention and faced many obstacles attracting investors to implement this competitive advantage. Also, parallel to the findings of [43], this study reveals that necessity entrepreneurs are bewildered and hampered by government regulations. Hence, to avoid these regulations, they start their businesses in the informal sector.

These results are consistent with the work of Bailey and Thomas, who argue that regulations harm young firms [44]. Therefore, policymakers should enhance the process of obtaining patent protection, reduce entry regulations, upgrade technology availability, and extend financial and tax policies beyond their standard in order to financially support UEs and levy appropriate taxes, especially in the early stage of their entrepreneurship.

Moreover, the lack of business knowledge and network intensifies the liability of newness prospects for UEs. While their businesses grow, they suffer from the inability to design an organizational structure, determine the proper distribution channels, overcome numerous hurdles in human resource management, and possess strategic thinking. These results consistent with prior findings [45]. To improve UEs’ business knowledge and network, policymakers and accelerators should implement monitoring programs to distinguish worthwhile ventures and mentor UEs. In addition, UEs should establish an association to share their ideas, experiences and build up business networks.

Furthermore, discriminations against UEs harshly affect their businesses. Many individuals have no propensity to work for a disabled or immigrant employee due to ableism or racial prejudice. Similarly, many investors do not trust UEs due to discrimination by perception. As Paluck suggests, policymakers should encourage empathy for outgroups by promoting the social norms through media programming [46]. Also, they can introduce the successful UEs and express their impacts on society and economic growth in order to integrate them into society. Moreover, scholars should research and redesign the contents of social sciences school books in Iran to eradicate the next generation’s prejudice toward underdog individuals.

6. Conclusions

This research investigates how physical, socio-cultural, and economic challenges may positively impact disabled, immigrant, and necessity individuals’ entrepreneurship journey. Using a qualitative approach, the challenge-based model in Iran was presented based on which the research hypotheses were proposed. Next, an empirical examination was conducted to study the relationships between variables and constructs.

Disabled, Immigrant, and necessity individuals comprise a sizeable amount of Iran's population. They are highly motivated and possess unique characteristics that induce entrepreneurship, which can significantly affect Iran’s emerging economy. In order to facilitate UEs’ efforts to accomplish successful entrepreneurship, the government's role is to enhance the city infrastructure, simplify regulations for initiating new businesses, utilizing modern financing methods, and provide financial privileges for UEs. Additionally, the private sector can establish management consulting companies that hold a focus on UEs. They can share their business knowledge and network with UEs and advise them to expand their businesses and minimize the liabilities of newness. Also, scholars should spread awareness regarding the prejudice towards UEs and attempt to discover a way to prevent the high cost of discrimination in the economy. Future research should examine more detailed models, hopefully with access to an extensive dataset. Also, scholars can focus on ADHD entrepreneurs in Iran whose characteristics and challenges remain indistinct.
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