



Shiraz
University

Research Article

Factors affecting entrepreneurial opportunity recognition and exploitation in the context of the Iranian agriculture sector

E. Masoomi, K. Rezaei-Moghaddam*

Department of Agricultural Extension and Education, School of Agriculture, Shiraz University, Shiraz, I. R. Iran

* Corresponding Author: rezaei@shirazu.ac.ir dr.rezaeimoghaddam@gmail.com
DOI: 10.22099/IAR.2021.37826.1401

ARTICLE INFO

Article history:

Received 14 July 2020

Accepted 21 April 2021

Available online 27 June 2021

Keywords:

Agricultural entrepreneurial process

Iranian agriculture sector

Opportunity recognition

Opportunity exploitation

ABSTRACT- The agricultural entrepreneurial process in developing countries is one of the most understudied issues in entrepreneurship research. Opportunity recognition and opportunity exploitation as two considerable components of the entrepreneurial process are among the most important abilities of successful entrepreneurs. Factors influencing opportunity recognition and opportunity exploitation in the Iranian agriculture sector was the aim of this study. The survey research method was used to collect data from a sample of 246 awarded agricultural entrepreneurs (N= 721), selected by Iran's Ministry of Cooperatives Labor and Social Welfare, through proportionate stratified random sampling. Data were collected using a questionnaire and were analyzed using R software. The face validity of the questionnaire was confirmed by a panel of experts from the School of Agriculture, Shiraz University and the reliability was examined using Cronbach's alpha through a pilot test. Independent variables were considered according to a sector-specific perspective, including social media networks, the success and failure of prior businesses, and environmental uncertainty. The findings showed that social media networks have positive effects on opportunity recognition and exploitation alike. The prior successful business also influenced opportunity recognition and recognition positively. The influence of prior failed business on opportunity recognition was positive, while its effect on opportunity exploitation was not significant. The effect of environmental uncertainty on two dependent variables was vice versa, a positive effect on opportunity recognition and a negative effect on opportunity exploitation. The results of this study indicated that the factors may not have a similar effect on opportunity recognition and exploitation.

INTRODUCTION

Agriculture has been considered a strategic sector for industrial growth and economic development (Byerlee et al., 2009). Rapid changes show the necessity of portfolio entrepreneurship in this sector (Lans et al., 2013). Agricultural entrepreneurs could play an important role in modernizing agriculture and energizing the rural economy (De Lauwere, 2005). They are able to respond to changes within the policy and market environments through the entrepreneurial process, effectively (Lans et al., 2014). The situation of the agriculture sector has become more critical under various changes such as uncertainty and complexity (Culas and Mahendrarajah, 2005), changes in the policy environment (Van der Straaten, 2002), climatic changes (de Moraes Sá et al., 2017), etc. On the other hand, entrepreneurship is closely interrelated with the environment (Zahra, 1993). Now, an important question

arises "is there any differentiation between entrepreneurship and agricultural entrepreneurship?"

One way to answer this question is the investigation of the entrepreneurial process. There is increasing consensus that entrepreneurship is a process (Shim and Davidson, 2018). The entrepreneurial process is one of the most promising topical areas in entrepreneurship research (Kuckertz et al., 2017) which is known as a complex phenomenon (Minniti, 2004). Many authors theorize entrepreneurship and define the entrepreneurial process from an opportunity-based perspective (Venkataraman, 1997; Eckhardt and Shane, 2003; Fuentes et al., 2010). In this regard, the entrepreneurial process consists of recognition, exploitation, and evaluation of the entrepreneurial opportunities (Ardichvili et al., 2003; Eckhardt and Shane 2003; Shamsudeen et al., 2017). Developing ideas or recognizing opportunities (Wilken, 1979; Zengyu

Huang et al., 2013), and establishing or running them (Hmieleski and Baron, 2008) are the main subjects that have been considered. Hence, recognition and exploitation of opportunities are largely considered as the important phases of the entrepreneurial process. In fact, before exploiting an opportunity, the opportunity must be recognized (Foss et al., 2013). Thus, these two components seem to be necessary for identifying the entrepreneurial process. Understanding of opportunity recognition (Singh et al., 1999; Ardichvili and Cardozo, 2000; Gaglio and Winter, 2009) and opportunity exploitation (Davidsson and Honig, 2003; Fuentes et al., 2010; Ren et al., 2016) is the core intellectual challenge within numerous entrepreneurship research. While these studies have contributed greatly to the literature of opportunity recognition and exploitation, they fall short of offering a holistic picture of the full entrepreneurial process (Ardichvili et al., 2003). The major reason is that every study concentrates on only one of the components of the entrepreneurial process, while a comprehensive perspective on the entrepreneurial process considers all parts of this process.

The question arises, what can the researchers do in order to provide a holistic view of the entrepreneurial process? There is enough knowledge regarding the most important antecedents of entrepreneurial opportunity recognition and exploitation. The same factors influence these two variables, such as social networks (Davidsson and Honig, 2003; Arenius and De Clercq, 2005), prior knowledge (Shepherd and DeTienne, 2005; Fuentes et al., 2010), personality traits (Ardichvili and Cardozo, 2000; De Carolis and Saporito, 2006) and perception of the environment (Lee and Wong, 2006; Wang et al., 2013). Therefore, the main issue is to understand whether the determinants of opportunity recognition have similar effects on opportunity exploitation or not? Trying to find an answer to this question, these two variables must be investigated in a single study. It is not correct to compare the results of a study about opportunity recognition among specific entrepreneurs with the results of another study regarding opportunity exploitation among other entrepreneurs. Thus, investigating various aspects of the entrepreneurial process (recognition and exploitation) should be done in the same sample. It is expected that simultaneously investigating components of the entrepreneurial process will add to the literature by comparing opportunity recognition and exploitation. If one component is neglected, the other one will become a mysterious part of the process. Few studies have considered these two concepts in the same platform (Ucbasaran et al., 2003; Block and Wagner, 2010; Lettl et al., 2008; Shamsudeen et al., 2017). However, the literature suffers from the lack of studies that simultaneously investigate factors influencing these two concepts and filling this gap would provide a comprehensive understanding of the entrepreneurial process.

Opportunity recognition and exploitation (as two important components of the entrepreneurial process) in the agriculture sector are among the understudied topics in entrepreneurship research. The review of entrepreneurial opportunity recognition by George et al. (2016) indicated that the publication frequency of

opportunity recognition by agricultural and biological sciences is very low. There is also no empirical research on opportunity exploitation in the agriculture context. Identification and pursuit of entrepreneurial opportunities are important processes for agribusinesses (McElwee, 2008). Ardichvili et al. (2003) expressed three distinct processes for recognition concept: (1) "sensing or perceiving market needs and/or underemployed resources" (Perception), (2) "recognizing or discovering a fit between particular market needs and specified resources" (discovery), and (3) "creating a new fit between heretofore separate needs and resources in the form of a business concept" (Creation). The focus of these three processes is on "market needs" and "resources". Vagaries of the market and changing consumer habit is a problem which agriculture sector is faced with it (Lans et al., 2013). A challenge for opportunity recognition processes is the need of a more flexible market. On the other hand, Nemes (2005) believed that agricultural resources are underutilized, unemployed, and even unknown, an advantage for opportunity recognition processes. These conditions along with many other concepts related to the agriculture sector (like new requirements for product quality, sustainability, food safety, and chain management) indicate that the entrepreneurial process (opportunity recognition and exploitation) may have a different mechanism in this sector. In this study, it is not claimed that entrepreneurship has a different process in the agriculture sector, but it must be considered that components of the entrepreneurial process (like opportunity recognition and exploitation) may have different behaviors in different contexts (like agriculture).

These issues also have special importance in developing countries. There are country-specific variations in entrepreneurship (Desai, 2011) that make it difficult to generalize the results of a study from a developed country to a developing one (Ozgen and Minsky, 2007). Sadeghi et al. (2019) introduced some context-based factors, which are specific to the particular conditions of the people/location of an entrepreneurial firm. In this regard, opportunity recognition and exploitation in the agriculture sector of developing countries may have a different story due to the special conditions such as international sanctions (Menezes, 2001), unpredictable market conditions (Sull and Escobari, 2004) and, as a result, uncertain and complex environment. Therefore, investigation of the entrepreneurial process should be location-specific.

Iran, as a developing country has some specific properties that create special circumstances for entrepreneurial activities which are important to consider for studying the entrepreneurial process. In this regard, there are three main characteristics that distinguish Iran from developed and most of the developing countries including a dominant public economy, international sanctions, and marginalization of the agriculture sector.

First, existing studies on entrepreneurship mainly focus on developed countries (Ozgen and Minsky, 2007) which clearly have a different economic system (Coccia, 2007). In Iran, the government has a strong

role in the economy. This is truer in relation to agriculture where government plays a major role in agricultural production by providing subsidies, services and regulations (Hayati and Karami, 2005). Given the dominance of the public economy in less developed and underdeveloped countries like Iran, more research on the entrepreneurial process in such countries is imperative.

Second, Iran has been sanctioned and the agriculture sector is affected by the sanctions considerably. As an instance, Iran is the world's biggest producer and exporter of saffron (Vahedi et al., 2018) but banking and trade restrictions mean Iranian companies face huge challenges in exporting it abroad, particularly to the US and Europe (Aghdaie et al., 2012). Instead, sanctions have created a large market for counterfeit, artificially colored products, and other countries act as intermediaries by importing the genuine spice from Iran and rebranding and exporting it to the wider world in their own name and at higher prices (Kamali Dehghan, 2016). Reports show that the Iranian economy greatly benefited from the lifting of the nuclear sanctions in 2016, when the Joint Comprehensive Plan of Action (JCPOA) nuclear deal was signed (Astrov et al., 2018). The investigation of the exact effects of sanctions is not the purpose of this paper. However, for a study on the entrepreneurial process, the question arises as to how opportunities are recognized and exploited when the country is under international pressures? Therefore, the results of studies in developed countries (which are not under such rigorous sanctions) could not be generalized to countries affected by international pressures.

Third, the marginalization of agriculture sector in Iran could be seen (Zakerhaghighi et al., 2015), despite the importance of this sector in this country (Rezaei-Moghaddam et al., 2005). Some characteristics of agricultural marginalization in Iran include decreasing the number of farmers, inability to compete, low productivity, migration from rural to urban areas, etc. However, agriculture is among the most important social and economic cornerstones of Iranian life and culture (McLachlan, 1988). To deal with the above-mentioned problems, entrepreneurship can be considered as a key to preventing the marginalization process of agriculture by putting this sector into an entrepreneurial process (McElwee, 2008).

The literature has not yet focused adequately on agricultural entrepreneurship in Iran affected by these conditions. In all, there are still many ambiguities regarding components of the entrepreneurial process in Iranian agriculture as little attention has been given to this process in developing countries. This study aimed to investigate the effect of sector-specific factors (focusing on the Iranian agriculture sector) on entrepreneurial opportunity recognition and exploitation as two important components of the entrepreneurial process. The objectives of this study are to address two research questions as follows:

What are the factors influencing entrepreneurial opportunity recognition and exploitation in the Iranian agriculture sector?

Do the determinants of opportunity recognition have similar effects on opportunity exploitation?

Theoretical Background and Hypotheses

The entrepreneurial process is an interesting subject in the entrepreneurship literature (Ardichvili and Cardozo, 2000; Fuentes et al., 2010) and determining influencing factors of opportunity recognition (Ardichvili et al., 2003) and exploitation (Choi and Shepherd, 2004) by researchers. In this regard, different groups of factors have been analyzed such as individual (Davidsson and Honig, 2003; Arenius and De Clercq, 2005) and environmental (Lee and Wong, 2006; Wang et al., 2013) factors or personality traits (Ardichvili and Cardozo, 2000; Lee and Wong, 2006). It seems that a part of these differences in considering factors is attributed to sectoral differences. For example, Wang et al. (2013) investigated the effect of perception about the industrial environment on opportunity recognition due to selecting an industrial sector (high technology firms) for collecting data. Another example would be personality traits that seem not to be dependent on the sector. Self-efficacy (Kickul et al., 2009; Wang et al., 2013) and creativity (Hansen et al., 2011; Gielnik et al., 2012) had the same effect (positive and significant) on opportunity recognition in the various studies among different entrepreneurs. The reason seems to be that variables such as personality traits (self-efficacy and creativity) are the vital component of entrepreneurship, not just a specific sector. Focusing on the agriculture sector, factors affecting the entrepreneurial process were considered from a sectoral perspective in this study. Sector-specific variables were found based on prior research on the entrepreneurial process (opportunity recognition and exploitation) and the agriculture sector. The variables related to the nature of agriculture including social media networks that agricultural entrepreneurs are joint, prior success and failed business in the agriculture sector, and uncertainty of agriculture environment were taken into account.

Social Media Networks

A review of available theoretical and empirical research confirms the importance of social networks in the entrepreneurial process (Ardichvili et al., 2003; Arenius and De Clercq, 2005; Fuentes et al., 2010). Fuentes et al. (2010) argued that network is an important factor in the entrepreneurial process due to providing valuable knowledge and experience through relevant contacts. These advantages could be observed in the other new forms of social networks like "social media networks". Social media networks include all platforms that allow people to articulate relational connections (Kane et al., 2014) and encompass almost all collaborative environments that improve collaborative work among users (Alexander, 2006). The development of internet facilitates the effective information (Ran, 2012) and knowledge sharing (Fang and Chiu, 2010). A virtual community could have an important role in the interaction of business partners (Tamjidyamcholo et al., 2014). Virtual community members have access to numerous and diverse sources of knowledge via advanced and cost-effective social interaction tools (Tamjidyamcholo et al., 2014). An advantage of social media networks is a continuous relationship with

consumers. Consumers in social media networks are not only consuming media—but they are also producing and circulating media content such as blog posts to other consumers (Mansson, 2011).

The components of social networks have been presented by Ardichvili et al. (2003): (1) “the set of people with whom an entrepreneur has long-term, stable relationships, and who are not partners in the venture” (entrepreneur’s inner circle), (2) “people recruited by the entrepreneur to provide necessary resources for the opportunity” (action set), (3) “start-up team members” (partnerships), and (4) “a network used to gather general information that could lead to identifying an opportunity or to answering a general question” (network of weak ties). Hemsley and Mason (2012) argued that social media tools allow people to develop and maintain social connections and collaborate with friends and strangers around the world (entrepreneurs’ inner circle); and self-publish as a way of sharing their knowledge with anyone who has a similar interest (action set). They have the opportunity to share past experiences and information that they have learned (action set) (Hackworth and Kunz, 2011). Bashar et al. (2012) indicated that social media provide plenty of opportunities to communicate with targets and offer them products/services to persuade them to transact and become loyal customers (network of weak ties). Ogunnaiké and Kehinde (2013) argued that entrepreneurs who start up and run businesses need to know their own strengths and weaknesses because entrepreneurship involves the ability to build a founding team with complementary skills and talents. They believed that this team would be facilitated using social media networks (partnership).

Entrepreneurs have different types of relations (face to face, group, online, etc.) with various people (family, friends, other entrepreneurs, customers, etc.) by different patterns and mechanisms (formal, informal, contractual, etc.). One of the main and new forms of entrepreneurs’ relations is social media networks (Duffy and Pruchniewska, 2017). Social media are utilized for rapid access to data. They are the most accessible tools used in today’s environment (Hackworth and Kunz, 2011). The influence of social media on entrepreneurship has been widely neglected (Hang and van Weezle, 2007). Social media networks have become the trend providing and exploring opportunities for all kinds of business (Alharbie, 2015). Gustafsson and Khan (2017) concluded that opportunity co-creation within the social media networks becomes the main driver of the entrepreneurial process. Adebayo (2015) believed that one reason why social media networks shape the entrepreneurial process is that they provide the conduits without boundaries through information flows which could be a vital tool for new ideas and innovation. Gustafsson and Khan (2017) stated that social media networks provide additional dimensions to opportunity recognition and exploitation, which are a focal concept of entrepreneurship research. Social media networks could be considered as a sectoral variable due to their contribution to obtaining information and sharing knowledge relevant to a specific sector like agriculture. Moreover, social media

are one of the most important aspects of Iranian networks (Rahimi, 2011). Therefore, the first hypothesis is:

H₁: Social media networks have a positive and significant effect on opportunity (a) recognition and (b) exploitation.

Success and Failure of Prior Businesses

Numerous empirical studies have investigated the contribution of prior knowledge into recognition (Ardichvili and Cardozo, 2000; Shepherd and DeTienne, 2005) and exploitation (Fuentes et al., 2010) of entrepreneurial opportunities. Knowledge often provides a solid base for the entrepreneurial process, in terms of presenting a larger number of opportunities, and the higher quality of recognized and exploited opportunities (Baron, 2006). Knowledge should be seen as possibly a necessary, but not sufficient, concept for the entrepreneurial process from a sectoral perspective. Prior knowledge enables entrepreneurs to recognize and exploit certain opportunities by creating a pathway for them (Venkataraman, 1997). Entrepreneurs are seeking opportunities related to their specific knowledge that have been shaped through a combination of different life experiences (Kirzner, 1997). Knowledge obtained through varied business and work experience could be a major “plus” for entrepreneurs in terms of recognizing and exploiting potentially profitable opportunities (Baron, 2006). Fuentes et al. (2010) suggested two components of knowledge related to success and failure of prior experience. One of the most important advantages of this division is measuring knowledge with sector-specific variables.

Ucbasaran et al. (2009) found that the failure experience of businesses was positively associated with opportunity identification. On one hand, the success and failure of a business in a specific sector lead to specific knowledge related to that sector. For example, agricultural entrepreneurs who have experienced successful or failed businesses are likely to have more extended networks with different stakeholders in this sector. Experience of collaborating with others with diverse expertise increases a person’s ability to understand and communicate complex ideas to diverse audiences (Phelps et al., 2012). It influences individuals’ ability to connect pre-existing ideas together as well as with new ideas, and therefore, enables them to recognize and exploit opportunities (Chandra et al., 2009). On the other hand, the success and failure of prior businesses are related to uncertainty and risk, as the most important concepts in agricultural entrepreneurship. Fuentes et al. (2010) believed that prior knowledge of entrepreneurs based on their successful businesses reduces uncertainty due to new initiatives they have learned. Some scholars believe that failure experiences have a similar role (Sitkin, 1992). Failures also reduce risks, uncertainties, and unpredictable conditions surrounding entrepreneurs to continue searching for new opportunities, as they have greater learning derived from experimentation (Singh et al., 2007). In another point of view, Iran as a developing country is faced with a high business failure rate (Arasti

et al., 2014), and investigation of entrepreneurial process under such conditions is essential.

Finally, it can be said that the above-mentioned type of prior knowledge (obtained from success and failure of prior business) provides a basis for recognition and exploitation of new opportunities, leading to the following hypotheses:

H₂: The number of prior successful businesses has a positive and significant effect on opportunity (a) recognition and (b) exploitation.

H₃: The number of prior failed businesses has a positive and significant effect on opportunity (a) recognition and (b) exploitation.

Environmental Uncertainty

There is an agreement between entrepreneurship scholars regarding the role of individual differences in the entrepreneurial process (Ardichvili and Cardozo, 2000; Davidsson and Honig 2003; Ardichvili et al. 2003; Arenius and De Clercq, 2005). A complementary notion in this regard is that the entrepreneurial process is also associated with entrepreneurs' interpretations of business environment (Tumasjan and Braun, 2012). The results of Wang et al. (2013) indicated that perception about the industrial environment is the most important predictor of opportunity recognition. Lee and Wong (2006) concluded that environmental factors are among the important determinants of entrepreneurial opportunity exploitation.

It was assumed that the environment of all sectors is the same due to the related literature. The lack of sectoral investigation of environmental factors could be realized. It is clear that various sectors have different spaces, conditions, and environments. It is suggested to study the environmental factors which are sector-specific. Agricultural entrepreneurship studies must consider the environmental factors related to the nature of agriculture. The agriculture sector is full of risk and uncertainty which leads to a different condition. The entrepreneurial process would be affected under such conditions. Therefore, it is essential to consider these features in the investigation of opportunity recognition and exploitation. Environmental uncertainty is a concept that seems to be appropriate for considering specific features of the agriculture sector.

The conceptualization of environmental uncertainty is related to the management, psychology, and economics literature in organizational studies and the fields of business (McMullen and Shepherd, 2006). Environmental uncertainty results from changes in conditions outside of control is hard to anticipate (Krishnan et al., 2006) and means that the future direction of the features along with the actions of different stakeholders and competitors are very difficult to understand and anticipate (Wang and Fang, 2012). These unpredictable features in the agriculture sector include market, customers' behavior, management chain, production to consumption process, and so on. Uncertainty and risk are quintessential features in the agriculture sector (Aimin, 2010), particularly in developing countries (Dwivedy, 2011). The risk and uncertainty of the agricultural environment are higher in

developing countries like Iran. These features included international sanctions (Menezes, 2001), unpredictable market conditions (Sull and Escobari, 2004), uncertain demands and supplies (Nomani and Ahmed, 2017), import and export problems and so on.

The effect of environmental uncertainty on opportunity recognition and exploitation is a challenge. There is a belief among some scholars that uncertainty prevents entrepreneurial actions (Stevenson and Jarillo, 1990; Shane and Venkataraman, 2000). Entrepreneurial opportunity recognition and opportunity exploitation are the components of a decision-based process. Krueger and Dickson (1994) point out that decision-making is difficult under high uncertainty. McMullen and Shepherd (2006) argued that entrepreneurs make a judgmental decision under uncertainty about a possible opportunity for profit. Entrepreneurship theorists have embraced the position that uncertainty is detrimental to entrepreneurial action because properties such as hesitancy, indecisiveness, and procrastination are thought to lead to missed opportunities (Casson, 1982). To test this postulate, the following hypothesis was set:

H₄: Environmental uncertainty has a negative and significant effect on opportunity (a) recognition and (b) exploitation.

MATERIALS AND METHODS

Sample

Data were collected from the list of awarded agricultural entrepreneurs in the Emtenan Festival Database. This festival annually holds through Iran's Ministry of Cooperatives Labor and Social Welfare at the national level. The Emtenan Festival considers different economic sectors such as industry, agriculture, and support services. This festival selects top entrepreneurs each year and entrepreneurs are selected through the specific criteria of the following definition: An entrepreneur is a person who recognizes an entrepreneurial opportunity and turns it into a new socioeconomic value (at firm, organization, market, society, or the world level) through innovation, creativity, risk-taking and competitive behavior (Ministry of Cooperatives, Labor and Welfare, 2017). The reasons for selecting this festival were multiple: having an appropriate definition of entrepreneurship based on the concept of opportunity; considering a separate category for agricultural entrepreneurs; taking opportunity recognition (due to recognizing an entrepreneurial opportunity) into account for selecting entrepreneurs; taking opportunity exploitation (due to turning opportunity into a socioeconomic value) into account for selecting entrepreneurs. Therefore in this study, an agricultural entrepreneur is a person who recognizes an agricultural entrepreneurial opportunity and turns it into a new socioeconomic value (McElwee and Bosworth, 2010).

The sample was selected among those people who were known as agricultural entrepreneurs for more than one year in order to warrant a more valid sample. Agricultural entrepreneurs were selected through

proportionate stratified random sampling. Each year was considered a stratum (covering 2015 to 2017) and from 721 agricultural entrepreneurs, a sample size of 256 entrepreneurs was selected proportionately based on Krejcie and Morgan (1970) sample table (Margin of Error= 5.0 %, Confidence= 95%) among stratum 1 (253), stratum 2 (196), and stratum 3 (272). The responses with partial data were removed and consequently, the final sample consisted of 246 agricultural entrepreneurs.

Data Sources, Measurement of Variables and Validation

The survey research methodology was conducted to study the proposed effects. The required data were collected through a questionnaire (via email, phone call and face to face survey) including (1) the respondents perspective regarding the environmental uncertainty, social media networks, and opportunity recognition, and (2) various demographic and economic characteristics including age, gender, prior experience in the agriculture sector, the number of prior successful businesses, the number of prior failed businesses, the number of recognized opportunities, and the number of exploited opportunities.

Dependent Variables

There are two dependent variables: the number of recognized opportunities, and the number of exploited opportunities. The measured items of this study were similar to that of Singh et al. (1999) for measuring dependent variables: (1) How many business opportunities have you recognized in the last year? (2) How many opportunities have been recognized (by yourself or with others) and exploited in the last year by yourself? The recognized opportunities had a range of 0-12, and exploited opportunities had a range of 0-10. This approach is consistent with many studies (Singh et al., 1999; Fuentes et al., 2010; Ucbasaran et al., 2009).

Independent Variables

Although the literature on enterprise social media networks is relatively limited, there has been a surge of research that examines social networks based on the use of social media tools (Smith et al., 2009). Social media networks are networks derived from social media data such as websites (including Facebook, LinkedIn, and YouTube) (Hemsley and Mason, 2012), and mobile instant messaging (including WhatsApp, Telegram, and Instagram) (Kasch et al., 2016). The measure for social media networks was taken from items used by Jagongo and Kinyua (2013) and Tamjidyamcholo et al. (2014). The scale consists of 5 items using a 5-point Likert-type scale ranging from strongly disagree to strongly agree (Cronbach's alpha = 0.87).

Environmental uncertainty was measured considering Milliken's (1987) three types of uncertainty simplified into the following questions: (1) "What's happening out there?" (2) "How will it impact me?" and (3) "What am I going to do about it?" 6 items measuring environmental uncertainty were also derived from

Swamidass and Newell (1987) and McMullen and Shepherd's (2006) rating on a Likert-type scale with five possible responses from never predictable to always predictable (Cronbach's alpha = 0.94).

The number of prior successful and failed businesses were derived based on Fuentes et al. (2010) to the following questions: (1) How many businesses have you started before this one that has succeeded? (2) How many businesses have you started before this one that has failed?

Some variables that determine the condition of opportunity recognition and exploitation were considered as statistical control variables. These variables are assumed to have impacts on the dependent variables. In this regard, they should be included in the analysis process for removing their effects on other variables. In prior studies, age (Ramos-Rodríguez et al., 2010), gender (Arenius and De Clercq, 2005; Ramos-Rodríguez et al., 2010), and prior experience in the sector (Fuentes et al., 2010) have been found to be significant factors in the probability of recognizing and exploiting opportunities. Age is a continuous variable ranging between 21 and 64 years. Prior experience in the agriculture sector is also a continuous variable ranging between 1 and 22. Gender as a binary variable has two categories: (0) "male", and (1) "female".

The face validity of the questionnaire was confirmed by a panel of experts from the School of Agriculture at Shiraz University and the reliability was examined using Cronbach's alpha through a pilot test of agricultural entrepreneurs in the Omid Entrepreneurship Fund database, respectively. The convergent validity of the number of recognized opportunities, and the number of exploited opportunities, were tested using correlation analysis with other measurements. Convergent validity refers to the relationship between different measures of the same construct. Entrepreneurial opportunity recognition with 5 interval scale questions and opportunity exploitation with 4 interval scale questions were used as the alternative measurement by a different method. It provides an extra data source for assessing the validity of our dependent variables. Entrepreneurial opportunity recognition (Cronbach's alpha = 0.91) and exploitation (Cronbach's alpha = 0.89) were measured using a 5-point Likert-type scale that ranged from strongly disagree to strongly agree. The items were adapted from Kuckertz et al. (2017). The Pearson correlation between opportunity recognition and the number of recognized opportunities ($r= 0.67$ and $P < 0.01$) and also between opportunity exploitation and the number of exploited opportunities ($r= 0.62$ and $p < 0.01$) were positive and significant, indicating convergent validity for dependent variables.

Data Analysis

Data were analyzed using R v. 3.5.2 (R Core Team, 2018). Three ways of analyzing the data were used. First, Poisson regression was performed using the specific functions of R software to examine the effects of the independent variables on the dependent count variables. Poisson regression, which is often implemented for modeling count data, was conducted.

In this study, the dependent variables were count variables. Second, plots for each variable were provided to visualize the set of independent variables and fitted values of dependent variables as Poisson Regression outcomes. The purpose of plotting was to compare the behavior of independent variables in influencing two dependent variables. Finally, another specific function of R software was used to bind analyzed data into a matrix that depicts the mechanism of independent variables' effect on dependent ones. The most important reason for using R software is related to computing fitted value. A fitted value is a statistical model's prediction of the mean response value when the values of the predictors and factor levels are inputted into the model (Liu and Mintram, 2005). This is an important capability of R software that helps attain a more realistic investigation of the dependent variable's behavior.

RESULTS

Some descriptive statistics are shown in Table 1. The average of number of recognized opportunities was confirmed to be 5.00, while the number of exploited opportunities had an average of 4.33. This is a high average compared to other studies like Fuentes et al. (2010) that reported an average of 3.14 for recognized opportunities and 1.60 for the exploited opportunities. It may refer to the respondents' level in Emtenan festival. In this study, awarded agricultural entrepreneurs were selected at national level and the high average number of recognized and exploited opportunities by them is not surprising. The average number of prior successful businesses was 3.02, vs. 2.71 for the failed businesses. This indicates a high average number of businesses that ended in failure and allows an appropriate analysis of the prior failed business's effect. The average number of years of prior experience in the agriculture sector was 14.75 and rational to the age average (39.25). Social media networks were scored on a scale from 1 to 5, having an average of 3.22. In other words, social media are widely used by agricultural entrepreneurs. The average of environmental uncertainty was 3.28 out of a

5-point Likert scale. It means that respondents displayed a high amount of uncertainty in the agricultural sector environment.

Statistical control variables were entered into the regression, at first. In model 1 of both Tables 2 and 3, the correlation of three statistical control variables (age, prior experience in the agriculture sector, and gender) were not significant to the dependent variables. Therefore, model 1 of both Tables 2 and 3 indicates that the statistical control variables were not significant predictors of dependent variables. In model 2 of Table 2, the Poisson regression model for recognized opportunities was significant with likelihood ratio chi-square equal to 207.17 ($df= 7, P < .001$) and for exploited opportunities was also significant with a likelihood ratio of chi-square equal to 313.88 ($df= 7, P < .001$).

Model 2 of both Tables 2 and 3 revealed the Wald chi-square test. The Wald test examines the true value of the variables based on the sample estimate and is a way to find which variables are significant (Lafontaine and White 1986). Based on the results, social media networks significantly predict the number of recognized (Wald $\chi^2 = 4.78, P = 0.02$) and exploited (Wald $\chi^2 = 15.52, P = 0.001$) opportunities. It was shown that the effect of the number of prior successful businesses on the number of recognized (Wald $\chi^2 = 51.69$) and exploited (Wald $\chi^2 = 143.13$) opportunities was statistically significant at 0.001. The number of prior failed businesses influences the number of recognized opportunities (Wald $\chi^2 = 4.09, P = 0.04$), but does not have any effect on the number of exploited opportunities (Wald $\chi^2 = 1.12, P = 0.29$). The findings indicated that the effect of environmental uncertainty on the number of recognized opportunities (Wald $\chi^2 = 4.87, P = 0.02$) and on the number of exploited opportunities (Wald $\chi^2 = 10.73, P = 0.001$) is statistically significant.

Based on the results, the significant coefficient shown in model 2 of both Tables 2 and 3 supports H_{1a} and b, H_{2a} and b, H_{3a} , H_{4a} , and H_{3b} was not confirmed due to the lack of significant coefficient. H_{4b} was not confirmed due to the opposite direction.

Table 1. Mean, standard deviation and correlation of the variables

Variables	Range	Mean	SD	1	2	3	4	5	6	7	8	9
1. Gender	-	-	-	1								
2. Age	21-64	39.25	13.74	0.02	1							
3. Prior experience agriculture sector	1-22	14.75	8.90	- 0.06	0.02	1						
4. Social media networks	1-5	3.22	1.10	- 0.03	0.10	- 0.01	1					
5. Successful businesses	0-10	3.02	2.09	- 0.02	0.06	- 0.05	0.56**	1				
6. Failed businesses	0-6	2.71	2.06	- 0.14*	- 0.14*	- 0.03	0.12	0.20**	1			
7. Environmental uncertainty	1-5	3.28	1.09	- 0.05	0.04	- 0.08	0.74**	0.54**	0.26**	1		
8. Recognized opportunities	0-12	5.00	3.00	- 0.02	0.01	- 0.03	0.52**	0.65**	0.22**	0.52**	1	
9. Exploited opportunities	0-10	4.33	2.91	- 0.03	0.06	- 0.05	0.54**	0.82**	0.11	0.41**	0.54**	1

* $P < 0.05$; ** $P < 0.01$

Table 2. Results of the Poisson regression for the number of recognized opportunities

	Model 1		Model 2	
	β (SE)	EXP (95% CI)	β (SE)	EXP (95% CI)
Statistical control variables				
Gender	0.034 (0.057)	1.03 (0.92 – 1.15)	0.015 (0.058)	1.01 (0.90 - 1.13)
Age	0.001 (0.002)	1.00 (0.99 - 1.00)	- 0.003 (0.002)	0.99 (0.99 - 1.00)
Prior experience in agriculture sector	- 0.004 (0.004)	0.99 (0.98 – 1.00)	0.001 (0.005)	1.00 (0.99 - 1.01)
Independent variables				
Social media networks			0.096 (0.043)*	1.10 (1.01 - 1.20)
Successful businesses			0.115 (0.016)***	1.12 (1.08 - 1.15)
Failed businesses			0.027 (0.013)*	1.02 (1.00 - 1.05)
Environmental uncertainty			0.101 (0.045)*	1.10 (1.01 - 1.20)
Likelihood ratio χ^2 (df = 3)	1.02			
Likelihood ratio χ^2 (df = 7)			207.17***	

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Table 3. Results of the Poisson regression for the number of exploited opportunities

	Model 1		Model 2	
	β (SE)	EXP (95% CI)	β (SE)	EXP (95% CI)
Statistical control variables				
Gender	0.060 (0.061)	1.06 (0.94 - 1.19)	0.078 (0.062)	1.08 (0.95 - 1.22)
Age	0.003 (0.002)	1.00 (0.99 - 1.00)	- 0.002 (0.002)	0.99 (0.99 - 1.00)
Prior experience in agriculture sector	- 0.007 (0.005)	0.99 (0.98 - 1.00)	- 0.004 (0.005)	0.99 (0.98 - 1.00)
Independent variables				
Social media networks			0.192 (0.048)***	1.21 (1.10 - 1.33)
Successful businesses			0.220 (0.018)***	1.24 (1.20 - 1.29)
Failed businesses			0.015 (0.014)	1.01 (0.98 - 1.04)
Environmental uncertainty			- 0.154 (0.046)**	0.85 (0.78 - 0.94)
Likelihood ratio χ^2 (df = 3)	4.61			
Likelihood ratio χ^2 (df = 7)			313.88***	

* $P < 0.05$; ** $P < 0.01$; *** $P < 0.001$

Tables 2 and 3 provide the exponentiated values of the coefficients (the "Exp (95% CI)" column), it facilitates comparison of independent variables' effects on recognized and exploited opportunities. According to the results of Table 2, the exponentiated value of social media networks is 1.10 (95% CI, 1.01 to 1.20), which means that a unit increase in this variable is associated with a 1.10 greater recognized opportunities score. This value is 1.21 (95% CI, 1.10 to 1.33) for social media networks' effect on exploited opportunities, which means that the number of exploited opportunities will be 1.21 times greater for each extra unit of social media networks. The positive effect of social media networks on the number of recognized and exploited opportunities is clear in Figure 1. Values of both dependent variables are increasing from the left to the right of the plot. As indicated in this figure, the fitted values of exploited opportunities are larger than the fitted values of recognized opportunities under the influence of social media networks. Therefore, the

effect of social media networks on exploited opportunities ($\beta = 0.192$, $P < 0.001$) is greater than its effect on recognized opportunities ($\beta = 0.096$, $P < 0.05$). Based on the results, there will be a 1.12 (95% CI, 1.08 to 1.15) increase in the number of recognized opportunities for each extra unit in the number of prior successful businesses. A similar interpretation could be applied to the number of exploited opportunities that will be 1.24 (95% CI, 1.20 to 1.29) times greater for a unit increase in the number of prior successful businesses. Figure 2 indicated the fitted values of recognized and exploited opportunities that are found through putting values of the number of prior successful businesses into the regression equation. Both plots in Figure 2 show the linear pattern for recognized and exploited opportunities against successful businesses. Compared to recognized opportunities, fitted values of exploited opportunities are more influenced by the number of prior successful businesses. It can be viewed in this figure that those agricultural entrepreneurs who

have more prior successful businesses, will recognize and exploit more opportunities. Moreover, it is clear from the plot that they will be more successful in exploitation than recognition of opportunities. Therefore, the effect of number of prior successful businesses on exploited opportunities ($\beta = 0.0220, P < 0.001$) is greater than its effect on recognized opportunities ($\beta = 0.115, P < 0.001$).

According to the findings of Table 2, the exponentiated value of the number of prior successful businesses is 1.12 (95% CI, 1.08 to 1.15), which means that the number of recognized opportunities will be 1.21 times greater for each extra unit of the number of prior successful businesses. The effect of the number of prior failed businesses on the number of exploited

opportunities was not significant, as indicated by a random pattern on the right plot in Figure 3. This figure indicated that, unlike exploited opportunities, fitted values of recognized opportunities will increase for each extra unit of the number of prior fail businesses, but the change is slight. The plot shows increasing the mean number of recognized opportunities from 0 to about 7 across the range of failed businesses, but the change is somewhat small because there is a high mean number of recognized opportunities with a low number of prior failed businesses (from 0 to about 2). Therefore, the number of prior failed businesses ($\beta = 0.0027, P < 0.05$) positively influence on recognized opportunities.

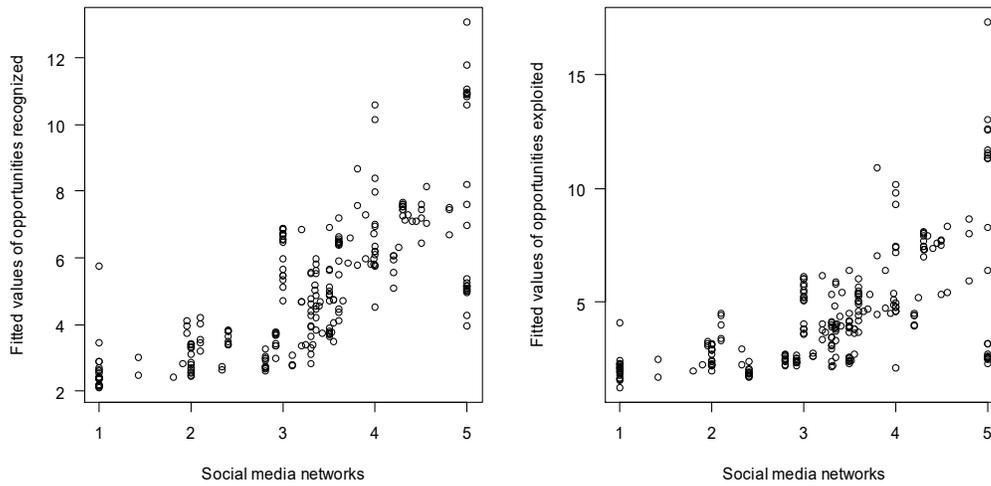


Fig. 1. Plots of fitted values of dependent variables against social media networks

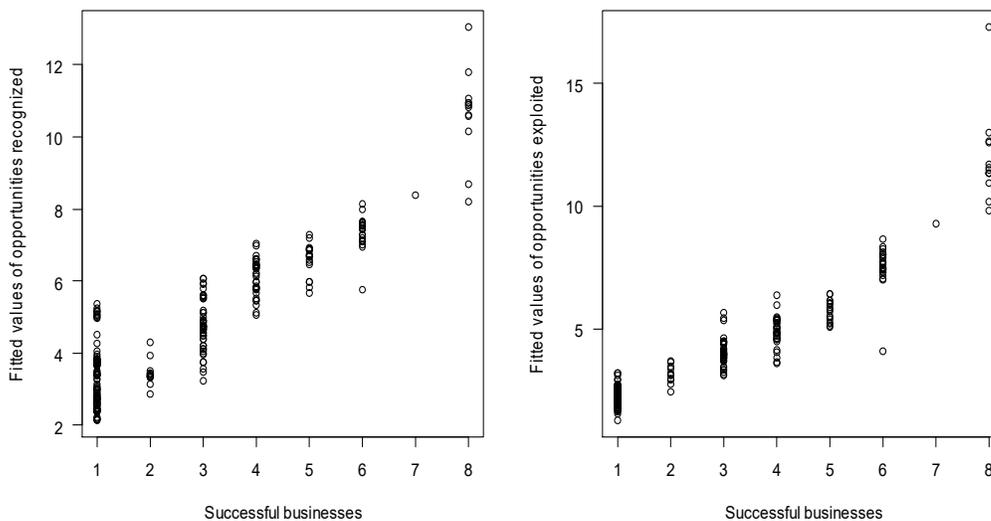


Fig. 2. Plots of fitted values of dependent variables against successful businesses

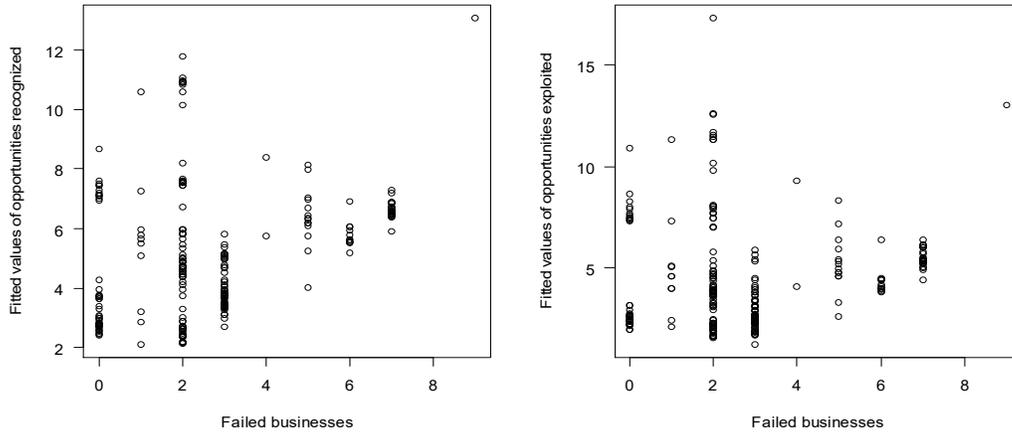


Fig. 3. Plots of fitted values of dependent variables against failed businesses

For every extra unit of environmental uncertainty, 1.10 (95% CI, 1.01 to 1.20) times more opportunities were recognized, while 0.85 (95% CI, 1.01 to 1.20) times fewer opportunities were exploited. As indicated in Figure 4, the effect of environmental uncertainty on these two variables is vice versa. According to the plot, as the environmental uncertainty increases, the mean number of recognized opportunities increases, while the mean number of exploited opportunities decreases. The plot shows some interesting features. The mean number of exploited opportunities is about 5 under the condition of low environmental uncertainty (from about 1 to about 3) and is about 2 under the condition of high environmental uncertainty (from about 4 to about 5). Under the condition of low environmental uncertainty, the shades seem to be getting darker for larger values of exploited opportunities. This figure also shows that when there is high environmental uncertainty, there is a more acute decrease in the mean number of exploited opportunities. While, the mean number of recognized opportunities regularly increases from about 2 to about 10, as there is a change from low environmental uncertainty to high (from 1 to 5). Thus, the effect of environmental uncertainty on recognized opportunities ($\beta = 0.101, P < 0.05$) is positive and its effect on exploited opportunities ($\beta = - 0.154, P < 0.01$) is negative.

The predicted counts ("fitted") and the values of the independent predictor equaled the log of the expected counts (Table 4). The Table shows fitted values of the mean number of dependent variables based on the given

amounts of independent variables. Sample cases are selected and named from A to H. The reason for the selection of them was related to their similarity in aspects of different variables. According to cases A and B, there is a 1.05 increase in the mean number of recognized opportunities and a 0.85 increase in the mean number of exploited opportunities for 3 extra scales of social media networks. A similar finding was observed from the effect of prior successful businesses in cases C and D. Increasing in the number of prior successful businesses (from 3 to 5) leads to an increase in recognized opportunities (from 4.85 to 5.96) and a more sensible increase in exploited opportunities (from 3.96 to 5.79), while holding the other variables constant in the model. The findings showed the great importance of social media networks and successful businesses n dependent variables, especially exploited opportunities. Based on cases E and F, three units increase in the number of prior failed businesses, is associated with a greater mean number of recognized opportunities, while it does not have any effect on exploited opportunities. However, the slight change in exploited opportunities is related to the social media network changes. As indicated in cases G and H, the mean number of recognized opportunities decreases from 5.13 to 3.11 for three units decrease in environmental uncertainty. Also, increasing the mean number of exploited opportunities from 2.58 to 3.02 indicates the inverse relationship between this dependent variable and environmental uncertainty.

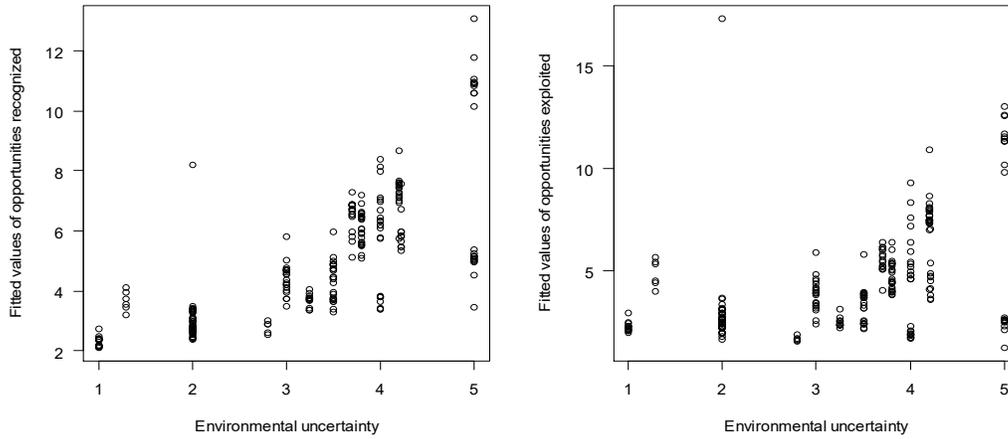


Fig. 4. Plot of fitted values of dependent variables against environmental uncertainty

Table 4. Fitted values of dependent variables based on given amounts of independent variables

Case	Social media networks	Successful businesses	Failed businesses	Environmental uncertainty	Fitted value of recognized opportunities	Fitted value of exploited opportunities
A	1	1	3	5	3.45	1.25
B	4	1	3	5	4.5	2.1
C	3.50	3	2	3.50	4.85	3.69
D	3.35	5	2	3.50	5.96	5.79
E	2	1	0	2	2.55	2.19
F	2.80	1	3	2	3.26	2.54
G	5	1	3	5	5.13	2.58
H	3.30	1	3	2	3.11	3.02

DISCUSSION

Effect of Social Media Networks

Social media networks had a positive and significant effect on the two components of the entrepreneurial process. Social media networks have several benefits to agricultural entrepreneurs for recognizing and exploiting new business opportunities. Agriculture has a large variety of customers with different needs. Social media could be appropriate for meeting and identifying the varied needs and demands of different stakeholders in the agriculture sector. Introducing unique entrepreneurial opportunities for agricultural entrepreneurs could be done using such tools. For example, there are many channels in social media tools (like Telegram and WhatsApp) representing many opportunities to their members directly. There are also many groups in these tools which allow members to share their ideas, improve them, and turn them into business opportunities. The use of social media to shape or look for new ideas could even increase the likelihood of recognizing new entrepreneurial opportunities.

On the other hand, the knowledge accessed through individuals' networks has been found to be critical for recognizing new business opportunities (Ardichvili et al., 2003). Social networks are considered to be one of

the main sources of information about new opportunities and entrepreneurial action (Birley, 1986; Shepherd and De Tienne, 2005). Arenius and De Clercq (2005) argue that an important reason why some people are more likely to get new information and therefore to identify entrepreneurial opportunities results from the different structure of their social networks. Social media is known as the new structure of networks. Different tools of these networks are among the main sources of specialized information related to various sectors like agriculture and this is due to the association between social media networks and knowledge sharing (Fang and Chiu, 2010). Meusburger (2013) believes that social media is a social learning system for jointly solving problems, sharing ideas, setting standards, developing tools, and maintaining relations.

Based on the results of this study, the role of social media networks in opportunity exploitation is more important than opportunity recognition. Social media itself could be seen as a potential tool for the exploitation of opportunities. On the other hand, these tools provide agricultural entrepreneurs with access to support, knowledge and distribution channels for

delivering their goods and services. In fact, social media networks help businesses to increase their worthiness, cultivate strategic partnerships and increase their contact with customers and suppliers. Social media networks are used in business in different ways such as a marketing tool (Syed-Ahmad and Murphy, 2010) and attracting customers (Kahar et al., 2012). Therefore, social media is among the most important tools for agricultural entrepreneurs to find sector-specific information, identify needs, demands, and market features, attract customers, and finally recognize entrepreneurial opportunities and exploit them. On the other hand, due to the broad range of stakeholders in the agriculture sector (including farmers, ranchers, wholesalers and retailers, dealers, and various consumers), entrepreneurs in this sector are required to use social media for expanding and strengthening their networks.

“Social networks” as an important issue in entrepreneurship studies required to be investigated in detail. The study on this concept in relation to social media tools is more important due to the important role of these tools in recent years. It was not the aim of this research to study the relationship between the variables such as level of education and knowledge of social media tools with the use of these tools. These issues and many other gaps in this regard are suggested to be investigated in future studies.

Effect of success and failure of prior businesses

Jo and Lee (1996) discussed how starting a new business with only limited previous experience may negatively affect future business prospects. The business experiences could be divided into successful and failed businesses. Based on the results, the number of prior successful businesses had a positive and significant effect on the number of recognized opportunities.

The agriculture sector is facing many problems and changes. These changes create opportunities and challenges for agricultural entrepreneurs. The owners of successful businesses are able to maintain their focus and determination in the face of challenges (Owens et al., 2013). They are obtaining valuable knowledge during their successful businesses, which provides a solid base for opportunity recognition (Baron, 2006). The results suggest that the number of prior successful businesses is more effective in opportunity exploitation than opportunity recognition. It refers to some special aspects of successful experience which facilitate the exploitation of opportunities including knowledge about customers' need, market mechanism, production to consumption process, etc. Agricultural entrepreneurs with a higher number of prior successful businesses have more experience about the prerequisites of running a business. They also have more knowledge and skills in terms of how to launch a business due to their prior experiences.

In this study, the number of prior successful businesses had a positive and significant effect on opportunity exploitation, but the effect of the number of prior failed businesses was not significant. These findings are congruent with Fuentes et al. (2010). The lack of significant effect of the number of prior failed

businesses on opportunity exploitation may be related to the lack of learning potential in failed businesses for exploiting opportunities. In fact, agricultural entrepreneurs' prior failure experience refers to their inability to correctly exploit an opportunity and now, although they may have learned something from their mistakes, it does not meet the required applicable knowledge for exploiting the next opportunity. Consistent with Ucbasaran et al. (2009), the number of prior failed businesses influences the number of recognized opportunities positively. The failed business helps individuals reshape the existing and new informational cues in a more useful way. People give attention to those particular pieces of information on specific opportunities in which they failed. As a result, at any given time those people who have failure experience will recognize entrepreneurial opportunities which are related to their previous weaknesses. These weaknesses are good resources for identifying some new opportunities but are not enough for exploiting them. Therefore, it could be suggested that agricultural entrepreneurs dig into their prior successful and failed businesses to recognize the new opportunities and find a way of exploiting these opportunities based on their prior successful businesses.

Effect of Environmental Uncertainty

Environmental factors are among the most important concepts in agricultural entrepreneurship because agricultural entrepreneurs' interpretations of market environments differ from those of other economic agents in this sector. This study investigated the agricultural environment considering the concept of uncertainty as a sector-specific factor. The results indicated a positive effect of environmental uncertainty on opportunity recognition and conversely a negative effect on opportunity exploitation.

McMullen and Shepherd (2006) argued that uncertainty in the context of action has three consequences: (1) “produces hesitancy by interrupting routine action”, (2) “promotes indecision by perpetuating continued competition among alternatives”, and (3) “encourages procrastination by making prospective options less appealing”. Three important concepts of these consequences could be used to explain the environmental effect on the important parts of the entrepreneurial process in the Iranian agriculture sector: routine action; competition among alternatives; and less appealing prospective options.

Routine activities in the agriculture sector include the guaranteed purchase price system for agriculture products by the government, import and export of agricultural goods, banks credit facilities, etc. These situations are similar to Iranian agriculture that has been repeated many times but are under the influence of uncertain conditions. For instance, most of the agricultural crops are not based on a guaranteed purchase price system; international relations and sanctions influence the import and export of agricultural products continuously; and the banks do not have any certain mechanism for providing credit facilities.

Competition is an important concept in entrepreneurship research (Plummer et al., 2014). However, the degree of competition as an important factor should be considered as well. For example, there is no specific organization responsible in the field of import and export of agricultural goods in Iran. In such a situation, import and export of goods is done without supervision and no attention is given to some related concepts such as supply and demand. Some individuals export the high-quality goods which are valuable inside the country (like Saffron and fruits) and reversely, import some other goods (at a lower price than domestic products) which are sufficiently produced by the country (like rice and tea). Such actions would compel agricultural entrepreneurs to enter into inappropriate competitions with foreign producers.

On the other hand, the agriculture sector is confronted with the changing consumer habits, vagaries of the market, new requirements for product quality, chain management, enhanced environmental regulations, food safety and so on (Lans et al. 2013). These features cause an uncertain environment, forcing individuals to leave the agriculture sector and turn it to a less appealing sector. Thus, agricultural entrepreneurs are faced with a challenging situation. They have also found many gaps in the different parts of the agriculture sector, which ultimately lead to entrepreneurial opportunities. They would have a different perspective from other people under environmental uncertainty, which may give them an advantage then in terms of their ability to perceive opportunities. However, these conditions will force them to face many problems and prevent them from exploiting opportunities. As indicated in Figure 4, the plot shows that most of the agricultural entrepreneurs have exploited the opportunities under the condition of low environmental uncertainty (from about 1 to about 3). However, very few of them have exploited the perceived opportunities under the condition of high environmental uncertainty (from about 4 to about 5). Thus, an imbalanced situation facilitates the recognition of entrepreneurial opportunities (Hadjikhani et al., 2005) but a balanced situation is essential for developing these opportunities (Hmieleski and Baron, 2008). It means that environmental uncertainty will facilitate recognition and prevent exploitation of entrepreneurial opportunities. Therefore, the special facilities for those agricultural entrepreneurs who recognize opportunities in regard to filling gaps that are related to environmental uncertainty should be considered by the Iranian government. This offers two advantages: (1) it promotes the exploitation of such opportunities by agricultural entrepreneurs, and (2) environmental uncertainty will be reduced through the exploitation of environmental opportunities related to the uncertain environment of the agriculture sector.

Contribution to the Literature

This study aimed to look for a useful addition to the literature by simultaneously investigating two vital important components of the entrepreneurial process (entrepreneurial opportunity recognition and exploitation) in the same sample. Most of the prior

research has investigated factors influencing opportunity exploitation based on determinants of opportunity recognition. The results of this study indicated that the factors may not have a similar effect on these two variables (the reverse effect of environmental uncertainty on dependent variables). The predictors of opportunity recognition and exploitation were considered according to a sector-specific perspective in this study. The study also tackled the agriculture sector of Iran (as a developing country) as two neglected aspects of the literature of entrepreneurial opportunity recognition and exploitation. Social media was considered for the measuring networks of Iranian agricultural entrepreneurs due to the important role of such media in Iranian people in different levels of their life and businesses (Rahimi, 2011). It means that the meaning of social networks among these people is not only the strength and size of the individuals who are around them (like family, friends, their coworkers, or even customers), but also is the strength and size of their online networks. Thus, the virtual communities could be considered around agricultural entrepreneurs for investigation of their networks.

Entrepreneurial process studies have not given enough attention to the various aspects of variables. The variables have different concepts and also measurements under different conditions like country and sector. For example, this could be seen for measuring the environment. Although there is evidence that the environment is associated with opportunity recognition and exploitation, there is a lack of research examining its role in businesses with a different context. Considering variables like environment originates from differentiation in the context of various businesses. This variation affects different concepts of entrepreneurship like the entrepreneurial process. The study described the context of the agriculture sector and reached the concept of environmental uncertainty. The application of such a view is an interesting contribution to the literature due to clarifying a way of selecting valid variables. Some new factors such as social media networks and environmental uncertainty were achieved according to the context of the Iranian agriculture sector, representing a significant contribution to the literature.

Limitations and Future Research

Two concepts of the entrepreneurial process (opportunity recognition and exploitation) were considered. However, this process could be more complete. There are other components like opportunity evaluation or entrepreneurial exit (DeTienne, 2010) that could be considered and give a more holistic image of the entrepreneurial process. In particular, simultaneously investigation of all the components of the entrepreneurial process remains understudied. The focus of this study was on the agriculture sector. A cross-sectoral investigation of the entrepreneurial process could be the subject of future studies. Lack of a more detailed investigation of social media networks was the limitation of this study. Much more research on the use of social media networks and the entrepreneurial process is needed in order to determine a more detailed

and certain role of social media networks in the recognition and exploitation of entrepreneurial opportunities. Future studies in this area should consider different kinds of information and different types of relationships in social media networks. The tools to undertake user behavior analysis in social media networks are still in their infancy (Singh et al., 2009). Future studies should overcome such limitations to increase the validation of measurements of social media networks in entrepreneurship studies.

CONCLUSIONS

The entrepreneurial process in the agriculture sector of developing countries is one of the neglected topics in entrepreneurship research. While there are a considerable number of publications concerning the determinants of entrepreneurial opportunity recognition and exploitation, there is still much to learn about the entrepreneurial process, particularly in the agriculture

sector. Furthermore, most entrepreneurship studies have not given enough attention to the simultaneous investigation of different components of the entrepreneurial process. Considering both components of the entrepreneurial process (opportunity recognition and exploitation) as well as some new and sector-specific variables related to the agriculture sector, including social media networks, the number of prior failed and successful businesses and environmental uncertainty were the main purpose of the study. This study provided a better understanding of the effect of different factors on two different concepts of the entrepreneurial process (opportunity recognition and exploitation) in the context of Iranian agriculture.

REFERENCES

- Adebayo, P. O. (2015). Impact of social media on students entrepreneurial orientation: A study of selected institutions in Nigeria. *Journal of the International Association of Advanced Technology and Science*, 1(12), 1-13.
- Aghdaie, S. F. A., Seidi, M., & Riasi, A. (2012). Identifying the barriers to Iran's saffron export by using porter's diamond model. *International Journal of Marketing Studies*, 4(5), 129-138.
- Aimin, H. (2010). Uncertainty, risk aversion and risk management in agriculture. *Agriculture and Agricultural Science Procardia*, 1, 152-156.
- Alexander, B. (2006). A new wave of innovation for teaching and learning?. *Educause Review*, 41(2), 32-44.
- Alharbie, A. (2015). Business growth thru social media marketing. *International Journal of Innovation and Applied Studies*, 13(4), 873-880.
- Arasti, Z., Zandi, F., & Bahmani, N. (2014). Business failure factors in Iranian SMEs: Do successful and unsuccessful entrepreneurs have different viewpoints?. *Journal of Global Entrepreneurship Research*, 4(1), 1-14.
- Ardichvili, A., & Cardozo, R. N. (2000). A model of the entrepreneurial opportunity recognition process. *Journal of Enterprising Culture*, 8(2), 103-119.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105-123.
- Arenius, P., & De Clercq, D. D. (2005). A network-based approach on opportunity recognition. *Small Business Economics*, 24(3), 249-265.
- Astrov, V., Ghodsi, M., Grieveson, R., & Stehrer, R. (2018). The Iranian economy: Challenges and opportunities. Wiiw research reports. Retrieved from <https://ideas.repec.org/p/wii/tpaper/tr429.html>.
- Baron, R. A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs "connect the dots" to identify new business opportunities. *The Academy of Management Perspectives*, 20(1), 104-119.
- Bashar, A., Ahmad, I., & Wasiq, M. (2012). Effectiveness of social media as a marketing tool: An empirical study. *International Journal of Marketing, Financial Services & Management Research*, 1(11), 88-99.
- Birley, S. (1986). The role of networks in the entrepreneurial process. *Journal of Business Venturing*, 1(1), 107-117.
- Block, J. H., & Wagner, M. (2010). Necessity and opportunity entrepreneurs in Germany: Characteristics and earning s differentials. *Schmalenbach Business Review*, 62(2), 154-174.
- Byerlee, D., De Janvry, A., & Sadoulet, E. (2009). Agriculture for development: Toward a new paradigm. *Annual Review of Resource Economics*, 1(1), 15-31.
- Casson, M. (1982). *The entrepreneur: An economic theory*. Totowa, NJ: Barnes & Noble Books.
- Chandra, Y., Styles, C., & Ian W. (2009). The recognition of first time international entrepreneurial opportunities: Evidence from firms in knowledge-based industries. *International Marketing Review*, 26(1), 30-61.
- Choi, Y. R., & Shepherd, D. A. (2004). Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30(3), 377-395.
- Coccia, M. (2007). A new taxonomy of country performance and risk based on economic and technological indicators. *Journal of Applied Economics*, 10(1), 29-42.
- Culas, R., & Mahendrarajah, M. (2005). Causes of diversification in agriculture over time: Evidence from Norwegian farming sector. Paper presented at the 11th International Congress of the European Association of Agricultural Economists (No. 724-2016-49296), Budapest, 2005, Copenhagen, EAAE.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301-331.
- De Carolis, D. M., & Saporito, P. (2006). Social capital, cognition, and entrepreneurial opportunities: A theoretical framework. *Entrepreneurship Theory and Practice*, 30(1), 41-56.
- De Lauwere, C. C. (2005). The role of agricultural entrepreneurship in Dutch agriculture of today. *Agricultural Economics*, 33(2), 229-238.
- de Moraes Sá, J. C., Lal, R., Cerri, C. C., Lorenz, K., Hungria, M., & de Faccio Carvalho, P. C. (2017). Low-carbon

- agriculture in South America to mitigate global climate change and advance food security. *Environment International*, 98, 102-112.
- Desai, S. (2011). Measuring entrepreneurship in developing countries. Working paper in Naudé, W.A. (Ed). Desai, S. (2011). Measuring entrepreneurship in developing countries. In *Entrepreneurship and economic development* (pp. 94-107). Palgrave Macmillan, London. Retrieved from <https://www.econstor.eu/bitstream/10419/45048/1/601807472.pdf>.
- DeTienne, D. R. (2010). Entrepreneurial exit as a critical component of the entrepreneurial process: Theoretical development. *Journal of Business Venturing*, 25(2), 203-215.
- Duffy, B. E., & Pruchniewska, U. (2017). Gender and self-entrprise in the social media age: A digital double bind. *Information, Communication & Society*, 20(6), 843-859.
- Dwivedy, N. (2011). Challenges faced by the agriculture sector in developing countries with special reference to India. *International Journal of Rural Studies (IJRS)*, 18(2), 1-6.
- Eckhardt, J. T., & Shane, S. A. (2003). Opportunities and entrepreneurship. *Journal of Management*, 29(3), 333-349.
- Fang, Y. H., & Chiu, C. M. (2010). In justice we trust: Exploring knowledge-sharing continuance intentions in virtual communities of practice. *Computers in Human Behavior*, 26(2), 235-246.
- Foss, N. J., Lyngsie, J., & Zahra, S. A. (2013). The role of external knowledge sources and organizational design in the process of opportunity exploitation. *Strategic Management Journal*, 34(12), 1453-1471.
- Fuentes, M. D. M., Ruiz Arroyo, M., Bojica, A. M., & Fernández Pérez, V. (2010). Prior knowledge and social networks in the exploitation of entrepreneurial opportunities. *International Entrepreneurship and Management Journal*, 6(4), 481-501.
- Gaglio, C. M., & Winter, S. (2009). Entrepreneurial alertness and opportunity identification: Where are we now?. In *Understanding the entrepreneurial mind* (pp. 305-325). New York, NY: Springer.
- George, N. M., Parida, V., Lahti, T., & Wincent, J. (2016). A systematic literature review of entrepreneurial opportunity recognition: insights on influencing factors. *International Entrepreneurship and Management Journal*, 12(2), 309-350.
- Gielnik, M. M., Frese, M., Graf, J. M., & Kampschulte, A. (2012). Creativity in the opportunity identification process and the moderating effect of diversity of information. *Journal of Business Venturing*, 27(5), 559-576.
- Gustafsson, V., & Khan, M. S. (2017). Monetising blogs: Enterprising behaviour, co-creation of opportunities and social media entrepreneurship. *Journal of Business Venturing Insights*, 7, 26-31.
- Hackworth, B. A., & Kunz, M. B. (2011). Health care and social media: Building relationships via social networks. *Academy of Health Care Management Journal*, 7(2), 1-15.
- Hadjikhani, A., Ghauri, P., & Johanson, J. (2005). Introduction: Opportunity development in business networks, In *Managing opportunity development in business networks* (pp. 1-24). London: Palgrave Macmillan.
- Hang, M., & Van Weezel, A. (2007). Media and entrepreneurship: A survey of the literature relating both concepts. *Journal of Media Business Studies*, 4(1), 51-70.
- Hansen, D. J., Lumpkin, G. T., & Hills, G. E. (2011). A multidimensional examination of a creativity-based opportunity recognition model. *International Journal of Entrepreneurial Behavior & Research*, 17(5), 515-533.
- Hayati, D., & Karami, E. (2005). Typology of causes of poverty: The perception of Iranian farmers. *Journal of Economic Psychology*, 26(6), 884-901.
- Hemsley, J., & Mason, R. M. (2012). The nature of knowledge in the social media age: Implications for knowledge management models, Presented at 45th Hawaii International Conference on System Sciences (pp. 3928-3937), Maui, 2012, New York, IEEE.
- Hmieleski, K. M., & Baron, R. A. (2008). Regulatory focus and new venture performance: A study of entrepreneurial opportunity exploitation under conditions of risk versus uncertainty. *Strategic Entrepreneurship Journal*, 2(4), 285-299.
- Jagongo, A., & Kinyua, C. (2013). The social media and entrepreneurship growth. *International Journal of Humanities and Social Science*, 3(10), 213-227.
- Jo, H., & Lee, J. (1996). The relationship between an entrepreneur's background and performance in a new venture. *Technovation*, 16(4), 161-211.
- Kahar, R., Yamimi, F., Bunari, G., & Habil, H. (2012). Trusting the social media in small business. *Procedia-Social and Behavioral Sciences*, 66, 564-570.
- Kamali Dehghan, S. (2016). Iran anticipates saffron sales will soar after lifting of sanctions. The guardian. Retrieved from <https://www.theguardian.com/world/2016/feb/04/iran-saffron-sales-lifting-sanctions>.
- Kane, G. C., Alavi, M., Labianca, G., (Joe) & Borgatti, S. P. (2014). What's different about social media networks: A framework and research agenda. *Management Information Systems Quarterly*, 38(1), 275-304.
- Kasch, C., Haimmerl, P., Arlt, S., & Heuwieser, W. (2016). The use of mobile devices and online services by German veterinary students. *Veterinary Evidence*, 1(3), 1-12.
- Kickul, J., Gundry, L. K., Barbosa, S. D., & Whitcanack, L. (2009). Intuition versus analysis? Testing differential models of cognitive style on entrepreneurial self- efficacy and the new venture creation process. *Entrepreneurship Theory and Practice*, 33(2), 439-453.
- Kirzner, I. M. (1997). Entrepreneurial discovery and the competitive market process: An Austrian approach. *Journal of Economic Literature*, 35(1), 60-85.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- Krishnan, R., Martin, X., & Noorderhaven, N. G. (2006). When does trust matter to alliance performance?. *Academy of Management Journal*, 49(5), 894-917.
- Krueger, N., & Dickson, P. R. (1994). How believing in ourselves increases risk taking: Perceived self- efficacy and opportunity recognition. *Decision Sciences*, 25(3), 385-400.
- Kuckertz, A., Kollmann, T., Krell, P., & Stöckmann, C. (2017). Understanding, differentiating, and measuring opportunity recognition and opportunity exploitation. *International Journal of Entrepreneurial Behavior & Research*, 23(1), 78-97.
- Lafontaine, F., & White, K. J. (1986). Obtaining any wald statistic you want. *Economics Letters*, 21(1), 35-40.
- Lans, T., Seunke, P., & Klerkx, L. (2013). Agricultural entrepreneurship, In *Encyclopedia of creativity, invention, innovation and entrepreneurship* (pp. 44-49). New York: Springer.
- Lans, T., Van Galen, M. A., Versteegen, J. A. A. M., Biemans, H. J. A., & Mulder, M. (2014). Searching for entrepreneurs among small business ownermanagers in agriculture. *NJAS-Wageningen Journal of Life Sciences*, 68, 41-51.

- Lee, L., & Wong, P. K. (2006). How does an entrepreneur's ability influence the propensity to exploit novel opportunities? The moderating role of personality and environment, MPRA Paper No. 597. Retrieved from <http://mpra.ub.uni-muenchen.de/597/>. Posted 26. October 2006/22:38.
- Lettl, C., Hienerth, C., & Gemuenden, H. G. (2008). Exploring how lead users develop radical innovation: Opportunity recognition and exploitation in the field of medical equipment technology. *IEEE Transactions on Engineering Management*, 55(2), 219-233.
- Liu, Q., & Mintram, R. C. (2005). Preliminary data analysis methods in software estimation. *Software Quality Journal*, 13(1), 91-115.
- Mansson, M. (2011). Mediatized tourism. *Annals of Tourism Research*, 38(4), 1634-1652.
- McElwee, G. (2008). A taxonomy of entrepreneurial farmers. *International Journal of Entrepreneurship and Small Business*, 6(3), 465-478.
- McElwee, G., & Bosworth, G. (2010). Exploring the strategic skills of farmers across a typology of farm diversification approaches. *Journal of Farm Management*, 13(12), 819-838.
- McLachlan, K. (1988). *The neglected garden: The politics and ecology of agriculture in Iran*, London: IB Tauris and Co.
- McMullen, J. S., & Shepherd, D. A. (2006). Entrepreneurial action and the role of uncertainty in the theory of the entrepreneur. *Academy of Management Review*, 31(1), 132-152.
- Menezes, F. (2001). Food sovereignty: A vital requirement for food security in the context of globalization. *Development*, (4), 29-33.
- Meusburger, P. (2013). Relations between knowledge and economic development: Some methodological considerations, In *Knowledge and the economy* (pp. 15-42). Netherlands: Springer.
- Milliken, F. J. (1987). Three types of perceived uncertainty about the environment: State, effect, and response uncertainty. *Academy of Management Review*, 12(1), 133-143.
- Ministry of Cooperatives, Labor and Welfare (2017). Guide for entrepreneurs. Retrieved from http://karafarinanebartar.ir/Pdf/karafarinan_guide.pdf.
- Minniti, M. (2004). Entrepreneurial alertness and asymmetric information in a spin-glass model. *Journal of Business Venturing*, 19(5), 637-658.
- Nemes, G. (2005). Integrated rural development-the concept and its operation. IEHAS discussion papers (No. MT-DP-2005/6). Retrieved from https://www.econstor.eu/bitstream/10419/108086/1/MTDP_0506.pdf.
- Nomani, M. A., Ali, I., & Ahmed, A. (2017). A new approach for solving multi-objective transportation problems. *International Journal of Management Science and Engineering Management*, 12(3), 165-173.
- Ogunnaike, O. O., & Kehinde, O. J. (2013). Social networking and business performance: The case of selected entrepreneurs in Ota, Nigeria. *Journal of Business Administration and Management Sciences Research*, 2(5), 116-122.
- Owens, K. S., Kirwan, J. R., Lounsbury, J. W., Levy, J. J., & Gibson, L. W. (2013). Personality correlates of self-employed small business owners' success. *Work*, 45(1), 73-85.
- Ozgen, E., & Minsky, B. D. (2007). Opportunity recognition in rural entrepreneurship in developing countries. *International Journal of Entrepreneurship*, 11, 49-73.
- Phelps, C., Heidl, R., & Wadhwa, A. (2012). Knowledge, networks, and knowledge networks a review and research agenda. *Journal of Management*, 38(4), 1115-1166.
- Plummer, L. A., & Acs, Z. J. (2014). Localized competition in the knowledge spillover theory of entrepreneurship. *Journal of Business Venturing*, 29(1), 121-136.
- R Core Team (2018). *R: A language and environment for statistical computing*. Austria: R foundation for statistical computing, Vienna. Retrieved from <https://www.R-project.org/>.
- Rahimi, B. (2011). The agonistic social media: Cyberspace in the formation of dissent and consolidation of state power in postelection Iran. *The Communication Review*, 14(3), 158-178.
- Ramos-Rodríguez, A. R., Medina-Garrido, J. A., Lorenzo-Gómez, J. D., & Ruiz-Navarro, J. (2010). What you know or who you know? The role of intellectual and social capital in opportunity recognition. *International Small Business Journal*, 28(6), 566-582.
- Ran, Z. (2012). A model of collaborative intrusion detection system based on multi-agents. Presented at *International Conference on Computer Science and Service System* (pp. 789-792), Nanjing, 2012, New York, IEEE.
- Ren, S., Shu, R., Bao, Y., & Chen, X. (2016). Linking network ties to entrepreneurial opportunity discovery and exploitation: The role of affective and cognitive trust. *International Entrepreneurship and Management Journal*, 12(2), 465-485.
- Rezaei-Moghaddam, K., Karami, E., & Gibson, J. (2005). Conceptualizing sustainable agriculture Iran as an illustrative case. *Journal of Sustainable Agriculture*. 27(3), 25-56.
- Sadeghi, V. J., Nkongolo-Bakenda, J. M., Anderson, R. B., & Dana, L. P. (2019). An institution-based view of international entrepreneurship: A comparison of context-based and universal determinants in developing and economically advanced countries. *International Business Review*, 28(6), 1-16.
- Shamsudeen, K., Keat, O. Y., & Hassan, H. (2017). Entrepreneurial success within the process of opportunity recognition and exploitation: An expansion of entrepreneurial opportunity recognition model. *International Review of Management and Marketing*, 7(1), 107-111.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.
- Shepherd, D. A., & DeTienne, D. R. (2005). Prior knowledge, potential financial reward, and opportunity identification. *Entrepreneurship Theory and Practice*, 29(1), 91-112.
- Shim, J., & Davidsson, P. (2018). Shorter than we thought: The duration of venture creation processes. *Journal of Business Venturing Insights*, 9, 10-16.
- Singh, R., Hills, G. E., Hybels, R. C., & Lumpkin, G. T. (1999). Opportunity recognition through social network characteristics of entrepreneurs. *Frontiers of Entrepreneurship Research*, 19(10) 228-241.
- Singh, S., Corner, P., & Pavlovich, K. (2007). Coping with entrepreneurial failure. *Journal of Management & Organization*, 13(4), 331-344.
- Singh, V. K., Jain, R., & Kankanhalli, M. S. (2009). Motivating contributors in social media networks. Presented at proceedings of the first SIGMM workshop on social media (pp. 11-18), New York, 2009, ACM.
- Sitkin, S. B. (1992). Learning through failure: The strategy of small losses. *Research in Organizational Behavior*, 14, 231-266.
- Smith, M., Hansen, D. L., & Gleave, E. (2009). Analyzing enterprise social media networks. Presented at the Proceedings of the 2009 International Conference on

- Computational Science and Engineering, Vancouver, 2009, New York, IEEE.
- Stevenson, H. H., & Jarillo, J. C. (1990). A paradigm of entrepreneurship: Entrepreneurial management. *Entrepreneurship: Concepts, Theory and Perspective*, 11, 17-27.
- Sull, D. N., & Escobari, M. (2004). Creating value in an unpredictable world. *Business Strategy Review*, 15(3), 14-20.
- Swamidass, P. M., & Newell, W. T. (1987). Manufacturing strategy, environmental uncertainty and performance: A path analytic model. *Management Science*, 33(4), 509-524.
- Syed-Ahmad, S. F., & Murphy, J. (2010). Social networking as a marketing tool: The case of a small Australian company. *Journal of Hospitality Marketing & Management*, 19(7), 700-716.
- Tamjidyamcholo, A., Baba, M. S. B., Shuib, N. L. M., & Rohani, V. A. (2014). Evaluation model for knowledge sharing in information security professional virtual community. *Computers & Security*, 43, 19-34.
- Tumasjan, A., & Braun, R. (2012). In the eye of the beholder: How regulatory focus and self-efficacy interact in influencing opportunity recognition. *Journal of Business Venturing*, 27(6), 622-636.
- Ucbasaran, D., Westhead, P., & Wright, M. (2009). The extent and nature of opportunity identification by experienced entrepreneurs. *Journal of Business Venturing*, 24(2), 99-115.
- Ucbasaran, D., Wright, M., Westhead, P., & Busenitz, L. (2003). The impact of entrepreneurial experience on opportunity identification and exploitation: Habitual and novice entrepreneurs. In J. Katz & D. Shepherd (Eds.), *Advances in entrepreneurship, firm emergence and growth*, vol. 6: Cognition and decision-making in the entrepreneurial context: 231-264. Oxford, UK: JAI, Elsevier
- Vahedi, M., Kabiri, M., Salami, S. A., Rezadoost, H., Mirzaie, M., & Kanani, M. R. (2018). Quantitative HPLC-based metabolomics of some Iranian saffron (*Crocus sativus* L.) accessions. *Industrial Crops and Products*, 118, 26-29.
- Van der Straaten, J. (2002). Can sustainable tourism positively influence rural regions? In Richards G, Hall D (Eds). *Tourism and Sustainable Community Development*. (pp. 221-232) London: Routledge.
- Venkataraman, S. (1997). The distinctive domain of entrepreneurship research: An editor's perspective. In J. Katz & R. Brockhaus (Eds.), *Advances in entrepreneurship, Firm Emergence, and Growth*, 3 (pp.119-138). Greenwich: JAI Press.
- Wang, M. C., & Fang, S. C. (2012). The moderating effect of environmental uncertainty on the relationship between network structures and the innovative performance of a new venture. *Journal of Business & Industrial Marketing*, 27(4), 311-323.
- Wang, Y. L., Ellinger, A. D., & Wu, Y. C. J. (2013). Entrepreneurial opportunity recognition: An empirical study of R & D personnel. *Management Decision*. 51(2), 248-266.
- Wilken, P. H. (1979). *Entrepreneurship: A comparative and historical study*, Norwood, NJ: Ablex Publishing Corporation.
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319-340.
- Zakerhaghighi, K., Khanian, M., & Gheitarani, N. (2015). Subjective quality of life; assessment of residents of informal settlements in Iran (A case study of Hesar Imam Khomeini, Hamedan). *Applied Research in Quality of Life*, 10(3), 419-434.
- Zengyu Huang, V., Nandialath, A., Kassim Alsayaghi, A., & Esra Karadeniz, E. (2013). Socio-demographic factors and network configuration among MENA entrepreneurs. *International Journal of Emerging Markets*, 8(3), 258-281.



عوامل مؤثر بر تشخیص فرصت کارآفرینانه و بهره‌برداری از آن در بخش کشاورزی ایران

احسان معصومی، کورش رضایی مقدم*

گروه ترویج و آموزش کشاورزی، دانشکده کشاورزی، دانشگاه شیراز، شیراز، ج.ا. ایران

*نویسنده مسئول

اطلاعات مقاله

تاریخچه مقاله:

تاریخ دریافت: ۱۳۹۹/۴/۲۳

تاریخ پذیرش: ۱۴۰۰/۲/۱

تاریخ دسترسی: ۱۴۰۰/۴/۶

واژه‌های کلیدی:

فرآیند کارآفرینانه کشاورزی

بخش کشاورزی ایران

تشخیص فرصت

بهره‌برداری از فرصت

چکیده- فرآیند کارآفرینانه کشاورزی در کشورهای درحال توسعه یکی از موضوعاتی است که در پژوهش‌های کارآفرینی نادیده گرفته شده است. تشخیص فرصت و بهره‌برداری از آن به‌عنوان دو جزء مهم از فرآیند کارآفرینانه، از مهم‌ترین توانایی‌های کارآفرینان موفق محسوب می‌شود. هدف این پژوهش، تعیین عوامل مؤثر بر تشخیص فرصت‌های کارآفرینانه و بهره‌برداری از این فرصت‌ها در بخش کشاورزی ایران بود. در این راستا، نمونه‌ای ۲۴۶ نفری (N= ۷۲۱) از طریق نمونه‌گیری تصادفی طبقه‌ای متناسب انتخاب شد. داده‌ها با پرسشنامه جمع‌آوری شد و با استفاده نرم‌افزار R مورد تحلیل قرار گرفت. روایی صوری پرسشنامه به‌وسیله اساتید صاحب‌نظر در دانشکده کشاورزی دانشگاه شیراز و پایایی آن از طریق ضریب آلفای کرونباخ در مطالعه‌ای پیشگام مورد تأیید قرار گرفت. نتایج نشان داد که متغیرهای مستقل اثر متفاوتی بر روی متغیرهای وابسته دارند. متغیرهای مستقل عبارت از شبکه‌های رسانه‌ای اجتماعی، موفقیت و شکست کسب‌وکارهای قبلی و عدم قطعیت محیطی بر اساس ویژگی‌های بخش کشاورزی مورد ملاحظه قرار گرفتند. یافته‌ها نشان داد که شبکه‌های رسانه‌ای اجتماعی اثری مثبت بر تشخیص فرصت و بهره‌برداری از آن دارند. اثر شکست کسب‌وکارهای قبلی بر تشخیص فرصت مثبت بود، درحالی‌که اثر آن بر بهره‌برداری از فرصت معنی‌دار نبود. عدم قطعیت محیطی بر دو متغیر وابسته، اثرهای معکوس داشت؛ اثر آن بر تشخیص فرصت، مثبت و بر بهره‌برداری از فرصت منفی بود. نتایج این مطالعه نشان داد که متغیرهای مستقل ممکن است اثرهای مشابهی بر تشخیص فرصت و بهره‌برداری از آن نداشته باشند.