

Mediating Role of Rural Entrepreneurship Ecosystem in the Relationship between Pluriactive Rice Farmers' Motives and Pluriactivity Consequences

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ABSTRACT

The present research aimed to investigate the mediating role of the rural entrepreneurial ecosystem in linking the pluriactive rice farmers' motives to pluriactivity consequences in the Haraz Watershed in a descriptive-correlational study conducted through a survey technique. A sample of 182 pluriactive rice farmers in the Haraz Watershed participated in the study. The results of descriptive statistics showed that in both pull and push motive variables, the means were higher than the medium level. However, concerning the variables of rural entrepreneurship ecosystem and pluriactivity consequences, the means were lower than the medium level. In path analysis, the direct effects of the independent variables showed that the pull motive and rural entrepreneurial ecosystem had a significant and positive effect on the consequences of pluriactivity, while these consequences were not affected by the push variable significantly. The indirect effects of the independent variables revealed that the push motive had a significant and positive effect on the rural entrepreneurial ecosystem. However, the pull motive had no significant impact on the rural entrepreneurial ecosystem. The study has practical implications for institutions related to rural development, in general, and institutions related to rural business development, in particular. The latter institutions, especially educational and extensional centers in public and private sectors that are involved in rural regions, could encourage rice farmers to establish and develop their business based on their motives.

Keywords: Haraz Watershed, Pluriactivity, Pull Motive, Push Motive.

INTRODUCTION

The majority of the populations in the Haraz Watershed live in rural areas and most of them are rice farmers. Based on the Statistical Center of Iran (2016), these households have a lower employment rate than urban households, such that, on average, 1.41 people out of 3.65 people in each rural household were employed in the region in 2016. This figure was, on average, 1.42 people out of 3.43 people for urban households. Also, rural households have a lower income than urban households.

Indeed, the average annual income of rural households in the region was 176,866,000 IRR (1\$= 42,000 Rials) in 2016, whereas urban households had an annual income of 317,210,000 IRR in the same year. One of the most important strategies to increase rice farmers' income and create employment is pluriactivity (Kinsella *et al.*, 2000; Reardon *et al.*, 2001; McNamara and Weiss, 2005; DeSilva and Kodithuwakku, 2010; Martinez Jr *et al.*, 2016; Weltin *et al.*, 2017).

Pluriactivity is a growing phenomenon in the world (Salmi, 2005). According to Barrett *et al.* (2001), it is *the heart of*

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livelihood strategies in rural areas. Based on the concept of pluriactivity, most people earn their incomes from more than one source, hold their wealth in the form of more than one single asset, or use their assets in more than one activity (Barrett *et al.*, 2001). In general, motivation is considered the driving force of these activities (McElwee, 2008). There are two sets of motivation – *pull* and *push factors* (McElwee, 2008; Barrett *et al.*, 2001). These factors encourage households and individuals to diversify incomes, assets, and activities (DeSilva and Kodithuwakku, 2010; Kirkwood, 2009; McElwee, 2008; Barrett *et al.*, 2001). However, a question is raised as to whether there are any elements that can affect this relationship. Rural areas in Mazandaran Province, especially in the Haraz Watershed, have a great capacity for farmers' pluriactivity as a manifestation of entrepreneurship. Unfortunately, these capacities and potentials have not been well grasped in this region. The presence of an efficient and desirable entrepreneurship ecosystem can greatly help in benefiting from this capacity. The role of the entrepreneurship ecosystem in facilitating business creation and development has been emphasized in the literature (e.g. Kinsella *et al.*, 2000). Therefore, the present study proposes the Rural Entrepreneurship Ecosystem (REE) as a variable that can mediate the relationship between Pluriactive Rice Farmers' (PRFs) motives and pluriactivity consequences. Considering that, so far, no coherent study has been conducted on the pluriactivity consequences and the role of motivational factors and REE in it in the Haraz Watershed, this research can be a good guide for planners and policymakers for coherent planning.

MATERIALS AND METHODS

Theoretical Background

Traditional farming, especially smallholding farms, is mostly unstable.

Farms have mostly been consolidated and farmworkers have left rural areas for better jobs and opportunities in urban areas. A solution suggested for this social problem is that farmers should diversify their sources of income (McElwee and Bosworth, 2010). In this context, one of the most important strategies is pluriactivity, which is a phenomenon that has often a stable or, at least, a persistent nature (Oostindie, 2015). The phenomenon of pluriactivity is known as a lifestyle that combines farming with other occupations to increase income and quality of life (Rigg, 2005; Blad, 2015). Blad (2015) argues that pluriactivity means that farmers and their family members start to use a wider range of income opportunities, including those beyond farming and agricultural production. Taking up other gainful activities offers farming families a chance to stay in the countryside, keep their farm even if it is a small one, and generate an income that is high enough to enable them to fulfill their financial aspirations at least to some extent.

As was already mentioned, the emergence and development of pluriactivity is an important phenomenon in contemporary economies in general, and in rural economies, in particular. Understanding the elements of pluriactivity and their impact on the success of entrepreneurs is a prevailing question in developed and developing countries. The primary and basic elements that play an important role in the success of entrepreneurs are motivating factors of entrepreneurs (Stefanovic *et al.*, 2010). Several studies have pointed out the role of entrepreneurs' motivating features in pluriactivity in rural areas. In general, motivations to diversify activities, such as pluriactivity strategy, are divided into two sets, i.e. *pull* and *push factors* (Hansson *et al.*, 2013; DeRosa *et al.*, 2019). The term *pull* refers to a situation in which new activities are started because a farmer has perceived a business opportunity, wants to implement a good business idea, or reallocate existing resources and/or gain business growth. The term *push* refers to a

situation in which a farmer has to diversify his/her income sources to become self-employed, secure family income, or mitigate the risks arising from changes in the market situation (Hansson *et al.*, 2013). Thus, the most important motivating factors which could lead rice farmers towards pluriactivity include insufficient income (Morris *et al.*, 2017; Stephan *et al.*, 2015; Blad, 2015; Barbieri and Mahoney, 2009), a desire to achieve higher living standards (Blad, 2015; Barbieri and Mahoney, 2009), access to the workforce (Morris *et al.*, 2017; Meraner *et al.*, 2015; McNamara and Weiss, 2005; Sofer, 2001), independence (Stephan *et al.*, 2015), a desire to create social contacts with different people (Barbieri and Mahoney, 2009; Taylor and McClintock, 2004), and keeping a family tradition (Stephan *et al.*, 2015; Barbieri and Mahoney, 2009).

In the process of understanding the effects of the motivational characteristics of pluriactive rice farmers on Pluriactivity Consequences (PC) in rural areas, the next step is to understand the interaction of policy, economic, social, and other factors. These factors have been addressed in various entrepreneurial models including those proposed by Gartner (1985), Gnyawali and Fogel (1994), and Schaper and Volery (2007) in the form of the REE in business development. As pointed out by Kuratko and Hodgetts (2001), the emergence of some environmental factors or entrepreneurial ecosystem and their impact on the entrepreneurship process plays a decisive role in entrepreneurial outputs. In the field of business and entrepreneurship, the term *ecosystem* was originally used by Moore in the 1990s. Moore claims that businesses do not evolve in a "vacuum" and emphasizes the nature of the relationship that companies create with suppliers, customers, and financiers (Mason and Brown, 2014). As such, the fundamental idea of the Entrepreneurial Ecosystem (EE) was fostered, an idea that led to a change in the approach of entrepreneurial studies from personality characters and environmental factors (taking into account factors

separately) to a wider perspective, including the role of social, cultural, and economic functions in a coherent and integrated manner in the entrepreneurial process (Dodd and Anderson, 2007; Stam and Spigel, 2016). Indeed, social, political, and economic environments in an EE are effective in entrepreneurship development (Davari and Najmabadi, 2018; Rezaei *et al.*, 2017; Spigel, 2017; McKague *et al.*, 2017; Pishbin *et al.*, 2015; Lu and Tao, 2010). Accordingly, all business plans should be based on the ecosystem in which the activity is carried out. Thus, it is impossible to frame an entrepreneurial plan and implement it without considering the requirements of political, social, economic, and technological conditions. Kinsella *et al.* (2000) implied the role of environmental factors in pluriactivity. However, what has been addressed in this study is the mediating role of REE in the PCs (Figure 1). There are some EE models including: *Asset Mapping Roadmap*, *Global Entrepreneurship and Development Index*, *Innovation Rainforest Blueprint*, *Six+Six*, *Koltai and Company*, and *Doing Business* (ANDE, 2013). This study used the Isenberg entrepreneurship ecosystem model as a new, famous, and comprehensive model (Liguori *et al.*, 2018; Stam and Spigle, 2016; Mason and Brown, 2014; ANDE, 2013). Isenberg (2011) argues that an EE consists of hundreds of elements that can be grouped into six major realms. From Isenberg's perspective, the main realms of an EE include politics, financial resources, culture, support, human capital, and market.

Study Area

The study was conducted in the Watershed of Haraz (WH), Iran (Figure 2). The WH is enclosed by the Caspian Sea from the north, the Alborz Mountain Range and Tehran Province from the south, the counties of Pol-e-Sefid, Ghaemshahr, and Neka in Mazandaran Province from the east, and Nowshahr County in the same province

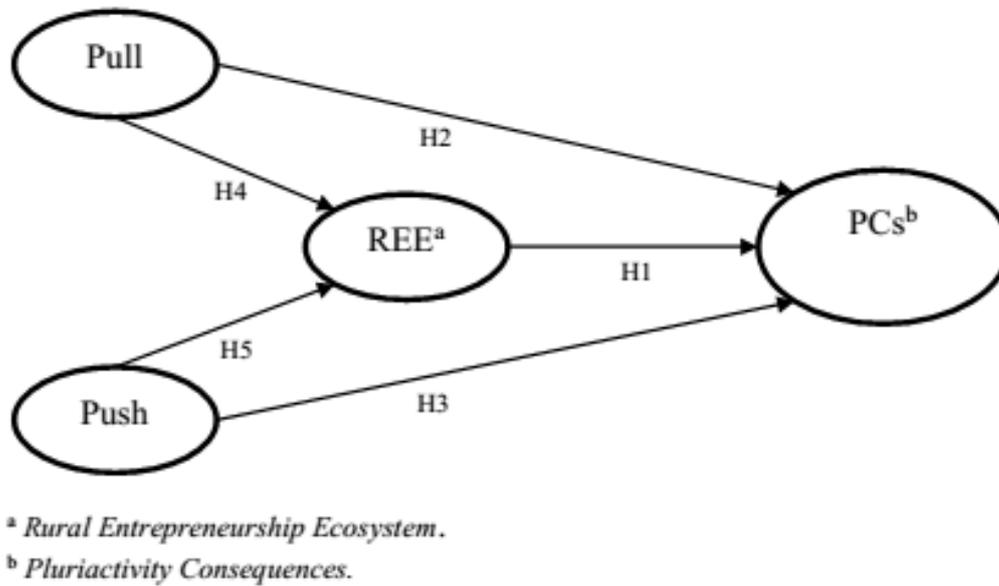


Figure 1. The theoretical framework of the research.

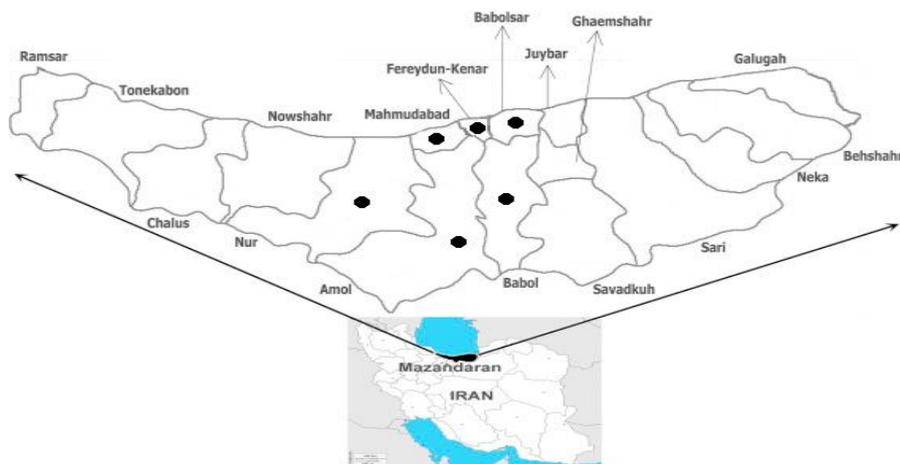


Figure 2. The study area (●) in WH.

from the west. The Haraz River originates from the mountains of the Central Alborz in Iran, flows from the northern slopes of this mountain range towards the well-known regions altogether named the WH, including Amol, Babol, Babolsar, Fereydun-Kenar, Mahmudabad, and Nur and, after passing through these regions, enters the Caspian Sea. Based on early observations, most businesses besides rice farming in the study area are vegetable production, flower husbandry, mushroom breeding, rice

packing, horticulture, agricultural services, poultry breeding, and seedling production.

Research Methodology

The present research is a quantitative study in which the survey technique was used for data collection. The research was done in 2019. The unit of analysis was all rice farmers in the WH, who had set up at least one rural business along with their rice

farming activity (rice farming as the main job) and they were the managers of their businesses. In many research settings including the present one, it is very difficult to calculate the population size as a basic requirement in probability sampling because there is no proper database of the statistical population's size. In these cases, researchers use a non-probability sampling technique (Ary *et al.*, 2010; Getz and Carlsen, 2000) in which the members of the community do not have an equal chance of being selected. Therefore, the selected samples may not be representative of the population under study (Balnaves and Caputi, 2001; Barbieri and Mahoney, 2009; Ary *et al.*, 2010). The snowball sampling technique is a non-probability sampling method that allows identifying the best samples for a study (Monette *et al.*, 1994; Barbieri and Mahoney, 2009). Using this technique, PRFs were identified with the help of rural experts. In the next step, these PRFs were asked to identify other PRFs. Finally, 182 PRFs returned the questionnaires and reported that they were in charge of at least one business along with their rice farming activity; therefore, their responses were included and analyzed in the study.

Research Instrument

The questionnaire was the main instrument for data collection. It consisted of four parts. The first part was related to individual characteristics, including age and gender, experiences, educational level, and business type. The second part was related to motivational features including push and pull factors. Push factors included seven items that were measured on a five-point Likert scale (from Very low= 1 to Very high= 5) including the unacceptable economic situation of rice farming, keeping rice farming, and preventing a change in the use of lands and unemployment of family members, etc. Pull factors included 13 items again measured on a five-point Likert scale (from Very low= 1 to Very high= 5)

including the market demand, the supply of new products and services for customers, testing a new business idea, etc. To capture PRFs' motives (push and pull factors) for developing both on-farm and non-farm businesses, a measurement scale was adapted from Blad (2015), Hansson *et al.* (2013), Vik and McElwee (2011), and Barbieri and Mahoney (2009). These variables were used as the main independent variables.

The third part included questions as to the status of the REE including 34 items measured on a five-point Likert scale (from Very inappropriate= 1 to Very appropriate= 5). To assess the REE, Isenberg's (2011) EE model was used. Thus, to capture the REE items, a measurement scale was adapted from Isenberg (2011) and Davari *et al.* (2017). This variable was used as the mediating variable.

The fourth part included the effects and consequences of creating businesses as pluriactivity. PCs included 13 items measured on a five-point Likert scale (from Very low= 1 to Very high= 5). This variable was used as the dependent variable whose items are presented in Table 1. The face validity of the questionnaire was approved by an expert panel and, based on their point of view, revisions were made in the data collection instrument. The reliability of the research instrument was investigated by Cronbach's alpha coefficient (α).

Statistical Methods

For data analysis, the SPSS24 software was used. The effects of the independent variables on the dependent variable were determined by the path analysis.

RESULTS AND DISCUSSION

Profiling PRFs

The PRFs' average age was 43.69 years (SD= 9.44). A total of 129 of them (70.88%)

**Table 1.** Items of the dependent variable.

Dependent variable	Items	Sources
Pluriactivity consequences	Helping to create new infrastructure in the region	Sojasi Qeidari, 2012
	Using equipment with environmental standards	Kritikos, 2014; Wortman Jr, 1990
	Helping to preserve the natural landscape of the region	Ehsanifar <i>et al.</i> , 2017; Kinsella <i>et al.</i> , 2000
	Optimally using basic resources, e.g. water and soil	Morris <i>et al.</i> , 2017
	Creating new employment in the region	Rusu and Roman, 2017; Martinez Jr <i>et al.</i> , 2016; Kritikos, 2014; Heringa <i>et al.</i> , 2013; Sojasi Qeidari, 2012; Ronning and Kolvereid, 2006
	Providing new services in the region	Rusu and Roman, 2017; Kritikos, 2014; Heringa <i>et al.</i> , 2013; Sojasi Qeidari, 2012
	Providing job security for the workforce	Martinez Jr <i>et al.</i> , 2016; Ehsanifar <i>et al.</i> , 2017
	Using available local workforce	Morris <i>et al.</i> , 2017
	Creating new social relationships (connecting with new people)	Ehsanifar <i>et al.</i> , 2017; Taylor and McClintock, 2004
	Diversifying income sources	Rusu and Roman, 2017; Ehsanifar <i>et al.</i> , 2017; Shucksmith and Smith, 1991
	Helping to upgrade family income level	Ronning and Kolvereid, 2006; Taylor and McClintock, 2004
	Helping to upgrade workforces income level	Ronning and Kolvereid, 2006; Taylor and McClintock, 2004
Opening a new market	Sojasi Qeidari, 2012; Wortman Jr, 1990	

were at their middle age. A total of 173 respondents (95.5%) were male and 9 (4.95%) were female. In terms of the years of experience at the beginning of pluriactivity, 94 PRFs (51.6%) had less than 2 years of experience. Also, in terms of the educational level at the beginning of pluriactivity, 70 respondents (38.5%) had higher education and 112 individuals (61.5%) had general education, most of them (39.0%) being at the high school level. In terms of the domain in which businesses were launched, a total of 125 respondents (68.7%) started a business in the agricultural sector, 11 respondents (6.0%) in the industrial sector, and 46 respondents (25.3%) in the service sector (Table 2).

Describing Variables and Correlation between Variables

Table 3 represents the descriptive statistics of the variables presented in the theoretical framework shown in Figure 1. The results showed that in both pull and push motive variables, the means were higher than the medium level (3). Further, considering the REE and PCs variables, the means were lower than the medium level. Also, the SD values suggest approximate homogeneity among the respondents. The Pearson correlation test was used to determine the relationships of the variables (Table 3). Considering the theoretical framework of the study, the results of the correlation

Table 2. The demographics of the PRFs.

Characteristics	Frequency of respondents	Percent of respondents
Age		
18-35 years	35	19.23
36-55 years	129	70.88
56-70 years	18	9.89
Mean		43.69
Standard deviation		9.44
Gender		
Male	173	95.5
Female	9	4.95
Mode		Male
Experience at the beginning of pluriactivity (Year)		
Less than 2	94	51.6
2.1-4	36	19.8
4.1-6	30	16.5
6.1 or higher	22	12.1
Mean		3.52
Standard deviation		4.17
Educational level at the beginning of pluriactivity		
Elementary school	12	6.6
Secondary school	29	15.9
High school	71	39.0
Associate's degree	20	11.0
Bachelor's degree	47	25.8
Master's degree	3	1.7
Mode		High school
Field of the created business		
Agricultural sector	125	68.7
Industrial sector	11	6.0
Service sector	46	25.3
Mode		Agriculture

Table 3. Correlation matrix.

Variables	Mean	Pull	Push	REE ^a	PCs ^b
Pull	3.87	1			
Push	3.76	0.601**	1		
REE ^a	2.63	0.176*	0.265**	1	
PCs ^b	2.88	0.380**	0.310**	0.299**	1

**P < 0.01; *P < 0.05. ^a Rural Entrepreneurship Ecosystem, ^b Pluriactivity Consequences.

coefficient suggested that the pull motives ($r = 0.380$; $P < 0.000$), the push motives ($r = 0.310$; $P < 0.000$), and REE ($r = 0.299$; $P < 0.000$) had a positive and significant correlation with PCs. In other words, the higher the pull and push, the greater the PCs. Also, the more proper REE, the greater the PCs, and vice versa. This result is consistent with Stephan *et al.* (2015), Meraner *et al.*

(2015), Blad (2015), Sojasi Qeidari (2012), McNamara and Weiss (2005), Taylor and McClintock (2004), and Sofer (2001). Also, the pull motives ($r = 0.176$; $P < 0.018$) and the push motives ($r = 0.265$; $P < 0.000$) had a positive and significant correlation with REE.

**Table 4.** The measurement model evaluation.

Variables	α	R ²	F	Sig
Pull	0.772	-	-	-
Push	0.570	-	-	-
REE ^a	0.884	0.071	15.105	0.000
PCs ^b	0.898	0.203	6.808	0.001

^a Rural Entrepreneurship Ecosystem, ^b Pluriactivity Consequences.

Path Analysis

In this study, to investigate the relationships among the influential variables on the PCs, the causal analysis was used by applying path analysis according to the theoretical framework shown in Figure 1. To this end, first the effects of the direct effects of motive forces and REE on the PCs and then the indirect effects of the pull and push motives on the PCs were estimated. The measurement model evaluation shows that Cronbach's alpha value for the four variables is in the range of 0.570-0.898. According to Taber (2017), this range was acceptable. Also, the F-value extracted from the two models supports the appropriacy of the measured model (Table 4).

In the first step, the direct effects of the independent variables indicate that the pull

motive and REE have a significant and positive effect on the PCs (supporting hypotheses 2 and 1) such that the pull variable with a path coefficient of 0.297 has the greatest effect on the PCs, while the push variable has no significant effect on the PCs (refuting hypothesis 3). Therefore, it is expected that when rice farmers are excited by the pull motive and set up a business, that business has more favorable consequences. Also, the more favorable the REE is, the more likely it is to gain more appropriate consequences from pluriactivity. In the second step, according to the research model, the indirect effects of the independent variables show that the push motive has a significant and positive effect on the REE (supporting hypothesis 2). In other words, when the rice farmers are under pressure, they redouble their efforts to provide a proper business environment, which is summarized in the concept of the

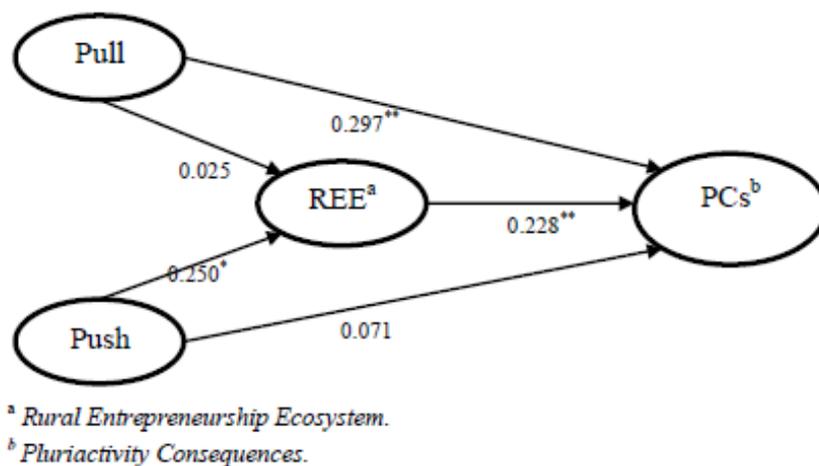
**Figure 3.** The path coefficients (β) for the research model.

Table 5. The results of the research model evaluation.

Hypothesis	Relationship ^a		β	<i>t</i> -Value	Decision	
Total effect						
Pull	→		0.303	-	-	
Push	→	PCs	0.128	-	-	
Direct effect						
Pull	→	PCs	0.297	3.545**	Supported	
Push	→	PCs	0.071	0.826	Discard	
REE	→	PCs	0.228	3.289**	Supported	
Pull	→	REE	0.025	0.281	Discard	
Push	→	REE	0.250	2.770**	Supported	
Indirect effect						
Pull	→	REE →	PCs	0.006	-	-
Push	→	REE →	PCs	0.057	-	-

^a PCs: Pluriactivity Consequences, REE: Rural Entrepreneurship Ecosystem. **P< 0.01.

REE, thereby having a positive effect on PCs. However, the pull motive has no significant effect on strengthening the REE (reputing hypothesis 4). It can be understood that when a person is in complete peace of mind, he or she pursues his or her exciting and attractive goals with a forward-looking (stress-free) approach, which will be achieved by starting a business as long as the entrepreneurial ecosystem (context and conditions) is appropriate. In other words, he or she does not attempt to strengthen and improve the entrepreneurial ecosystem. The results of this analysis are shown in Table 5 and Figure 3.

Therefore, it can be concluded that motivations that originate from positive conditions (pull motives) are important for positive PCs. This was referred to by Schjoedt and Shaver (2007). Therefore, in the first step, those who are driven by pull motives must be considered and guided. On the other hand, it must be planned to strengthen and develop the pull motives between the target communities. Some of the most important aspects of the pull motives that should be considered include having enough knowledge and experience in launching a business, creating financial sustainability for the future of children, creating jobs in the region, and ensuring independence and self-employment.

Therefore, to develop and reinforce these propositions, they should be taken seriously in the rural community in general and the rice farmers' community (the focus of this study) in particular. One of the most important suggestions is the knowledge and experience in starting and developing a business. Therefore, it is imperative to train the target community about how to create and develop a business, as it is one of the most important prerequisites. At the same time, it should be noted that the entrepreneurship spirit of the farmers is to be strengthened.

Also, the REE is considered an important factor in boosting PCs. This is confirmed by Davari and Najmabadi (2018) and Lu and Tao (2010). It is, hence, important to provide a proper ecosystem. REE includes a combination of elements that interact with each other. A part of this ecosystem is related to human factors and the other to institutional and policy factors. As the results of the study showed and the Office of the Global Entrepreneurship Monitor (GEM) in Iran (2015) confirms, the EE in the region is weak. To improve the EE in general and the REE in particular, special attention needs to be paid to policies and financing. In this regard, Ghambarali *et al.* (2016), who addressed the content analysis of policies appropriate to the REE, reported that



government plan indicators implied a poor status in Iran. Also, they reported that financial support, government policies, and government regulations were not satisfactory. Considering these propositions is a prerequisite for laying the ground for business development (as a component of the REE), which in fact provides the path towards the goals through appropriate rules and regulations.

CONCLUSIONS

By identifying the factors influencing PCs by rice farmers, the study attempted to present a causal analysis of these factors. In this regard, after identifying the factors based on the theoretical literature, a theoretical framework was outlined and tested using field data. Overall, based on the findings, the pull motive variable has the greatest causal effect on the PCs. The results of the correlation between variables also suggested a good relationship between this variable and the PCs as well as the other variable of the study i.e. push motive. Accordingly, paying attention to the pull motives of rice farmers and REE of rice farmers will enable them to develop some businesses (in the agricultural/industrial/service sectors) besides rice farming. The study suggested that the REE is one of the effective factors of the PCs. The REE reflects the role of policy, social, economic, and other forces in the process of entrepreneurship. Accordingly, it can be concluded that REE is a crucial factor of strengthening the creation and development of businesses, and the extension agents in the public and private sectors who are involved in the REE play an essential role in providing the part of the proper ecosystem of entrepreneurship.

In different conditions, other factors and variables involved in pluriactivity might be considered. Finally, it should be noted that one of the main limitations of the study was the unknown size of the statistical society such that the purposive method was used for

sampling and data collection, so, caution should be exercised when generalizing the results.

REFERENCES

1. ANDE. 2013. Entrepreneurial Ecosystem Diagnostic Toolkit. Available at: https://assets.aspeninstitute.org/content/uploads/files/content/docs/pubs/FINAL%20Ecosystem%20Toolkit%20Draft_print%20version.pdf
2. Ary, D., Jacobs, L. C. and Sorensen, C. K. 2010. *Introduction to Research in Education*. Eighth Edition, Wadsworth, USA.
3. Balnaves, M. and Caputi, P. 2001. *Introduction to Quantitative Research Method*. SAGE Publication, London.
4. Barbieri, C. and Mahoney, E. 2009. Why Is Diversification an Attractive Farm Adjustment Strategy? Insights from Texas Farmers and Ranchers. *J. Rural Stud.*, **25**: 58-66.
5. Barrett, C. B., Reardon, T. and Webb, P. 2001. Nonfarm Income Diversification and Household Livelihood Strategies in Rural Africa: Concepts, Dynamics, and Policy Implications. *Food Policy*, **26(4)**: 315-331.
6. Blad, M. 2015. *Pluriactivity on Family Farmers: Old Phenomenon in New Times*. Food and Agriculture Organization of the United Nations, PP. 45-60. Available at: <http://www.fao.org/family-farming/detail/en/c/409627/>
7. Davari, A. and Najmabadi, A. D. 2018. Entrepreneurial Ecosystem and Performance in Iran. In: "*Entrepreneurship Ecosystem in the Middle East and North Africa (MENA)*" (Eds.): Faghieh, N. and Zali, M. Springer, Cham, PP. 265-283.
8. Davari, A., Sefidbari, L. and Baghersad, V. 2017. The Factors of Entrepreneurial Ecosystem in Iran Based on Isenberg's Model. *J. Enterpren. Dev.*, **10(1)**: 101-120. (in Persian)
9. DeRosa, M., McElwee, G., and Smith, R. 2019. Farm Diversification Strategies in Response to Rural Policy: A Case from Rural Italy. *Land Use Policy*, **18**: 291-301.
10. DeSilva, R. and Kodithuwakku, S. S. 2010. *Pluriactivity, Entrepreneurship and Socio-Economic Success of Rural Households*. Manchester Business School Working Paper

- 596, 2-22, Available at: <https://www.econstor.eu/obitstream/10419/50729/1/656919760.pdf>
11. Dodd, S. D. and Anderson, A. R. 2007. Mumpsimus and the Mything of the Individualistic Entrepreneur. *Int. Small Bus. J.*, **25**: 341-360.
 12. Ehsanifar, T., Rostami, F., Naderi, N. and Khoshkhouy, S. 2017. Investigation of Sustainability Indicators in Agricultural Entrepreneurial Activities. *J. Entrepren. Agri.*, **4**(1): 19-36. (in Persian)
 13. Gartner, W. B. 1985. A Conceptual Framework for Describing the Phenomenon of New Venture Creation. *Acad. Manage. Rev.*, **10**(4): 696-706.
 14. Getz, D. and Carlsen, J. 2000. Characteristics and Goals of Family and Owner-operated Businesses in the Rural Tourism and Hospitality Sectors. *Tour. Manag.*, **21**(6): 547-560.
 15. Ghambarali, R., Agah, H. i., Alibaygi, A. H. and Zarafshani, K. 2016. Content Analysis of Policies Being Appropriate to the Entrepreneurial Ecosystem. *J. Entrepren. Dev.*, **9**(1): 39-58. (in Persian)
 16. Gnyawali, D. R. and Fogel, D. S. 1994. Environments for Entrepreneurship Development: Key Dimensions and Research Implications. *Entrep. Theory Pract.*, **18**(4): 43-62.
 17. Hansson, H., Ferguson, R., Olofsson, C. and Rantamaki-Lahtinen, L. 2013. Farmers' Motives for Diversifying Their Farm Business-The Influence of Family. *J. Rur. Stud.*, **32**: 240-250.
 18. Heringa, P. W., van der Heide, C. M. and Heijman, W. J. M. 2013. The Economic Impact of Multifunctional Agriculture in Dutch Regions: An Input-Output Model. *NJAS-Wagen. J. Life Sci.*, **64-65**: 59- 66.
 19. Isenberg, D. J. 2011. *The Entrepreneurship Ecosystem Strategy as a New Paradigm for Economic Policy: Principles for Cultivating Entrepreneurship*. Institute of International European Affairs, Dublin, Ireland. Available at: https://www.slideshare.net/DanIsenberg/the-entrepreneurship-ecosystem-strategy-for-economic-growth-policy-ieee-dublin-2011-1?from_action=save
 20. Kinsella, J., Wilson, S., DeJong, F. and Renting, H. 2000. Pluriactivity as a Livelihood Strategy in Irish Farm Households and its Role in Rural Development. *Soc. Rur.*, **40**(4): 481-496.
 21. Kirkwood, J. 2009. Motivational Factors in a Push-Pull Theory of Entrepreneurship. *Gend. Manag.*, **24**(5): 346-364.
 22. Kritikos, A. S. 2014. Entrepreneurs and Their Impact on Jobs and Economic Growth. *IZA World of Labour*, **8**: 1-10. Available at: <https://wol.iza.org/articles/entrepreneurs-and-their-impact-on-jobs-and-economic-growth/long>
 23. Kuratko, D. F. and Hodgetts, R. M. 2001. *Entrepreneurship: A Contemporary Approach*. Harcourt College Publishers, Philadelphia.
 24. Liguori, E., Bendickson, J., Solomon, S. and McDowell, W. C. 2018. Development of a Multi-dimensional Measure for Assessing Entrepreneurial Ecosystems. *Enterpren. Reg. Dev.*, **31**(1-2): 7-21.
 25. Lu, J. and Tao, Z. 2010. Determinants of Entrepreneurial Activities in China. *J. Bus. Ven.*, **25**(3): 261-273.
 26. Martinez Jr, A., DeDios, C. and Leyso, N. L. 2016. *Pluriactivity in the Philippines*. Life Course Center: Institute for Social Science Research, the University of Queensland. Available at: <http://www.lifecoursecentre.org.au/research/journal-articles/working-paper-series/pluriactivity-in-the-philippines/>
 27. Mason, C. and Brown, R. 2014. *Entrepreneurial Ecosystems and Growth Oriented Entrepreneurship*. OECD Publishing. Available at: <http://www.oecd.org/cfe/leed/entrepreneurial-ecosystems.pdf>
 28. McElwee, G. 2008. A Taxonomy of Entrepreneurial Farmers. *Int. J. Entrepren. Small Bus.*, **6**(3): 465-478.
 29. McElwee, G. and Bosworth, G. 2010. Exploring the Strategic Skills of Farmers across a Typology of Farm Diversification Approaches. *J. Farm Manage.*, **13**(12): 819-838.
 30. McKague, K., Wong, J. and Siddiquee, N. 2017. Social Franchising as Rural Entrepreneurial Ecosystem Development: The Case of Krishi Utsho in Bangladesh. *Inter. J. Entrepren. Innov.*, **18**(1): 47-56.
 31. McNamara, K. T. and Weiss, C. 2005. Farm Household Income and On and Off-Farm Diversification. *J. Agric. Appl. Econ.*, **37**(1): 37-48.



32. Meraner, M., Heijman, W., Kuhlman, T. and Finger, R. 2015. Determinants of Farm Diversification in the Netherlands. *Land Use Policy*, **42**: 767-780.
33. Monette, D. R., Sullivan, T. J. and DeJong, C. R. 1994. *Applied Social Research – Tool for the Human Services*. Third Edition, TX Harcourt Brace, Fort Worth.
34. Moore, J. F. 1993. Predators and Prey: a New Ecology of Competition. *Harvard Business Review*, **71(3)**: 75-86. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/10126156>
35. Morris, W., Henley, A. and Dowell, D. 2017. Farm Diversification, Entrepreneurship and Technology adoption: Analysis of Upland Farmers in Wales. *J. Rur. Stud.*, **53**: 132-143.
36. Office of the GEM in Iran. 2015. *Evaluation of Entrepreneurship Indicators in Iran based on Global Entrepreneurship Monitoring Model*. Institute of Labor and Social Security. Retrieved from: [http://ent.ut.ac.ir/Images/UserFiles/18/file/2015%20report\(1\).pdf](http://ent.ut.ac.ir/Images/UserFiles/18/file/2015%20report(1).pdf)
37. Oostindie, H. A. 2015. Family Farming Futures; Agrarian Pathways to Multi-functionality: Flows of Resistance, Redesign and Resilience. Ph.D. Dissertation, Wageningen University. Available at: <http://edepot.wur.nl/334489>
38. Pishbin, S. A. R., Alambeigi, A. and Iravani, H. 2015. Investigation of the Role of Structural, Leadership, and Strategy Factors in Cooperatives Entrepreneurship. *J. Agr. Sci. Tech.*, **17(5)**: 1115-1125.
39. Reardon, T., Berdegue, J. and Escobar, G. 2001. Rural Nonfarm Employment and Incomes in Latin America: Overview and Policy Implications. *World Dev.*, **29(3)**: 395-409.
40. Rezaei, R., Karimi, A., Mangeli, N. and Safa, L. 2017. Effect of Entrepreneurial Orientation and Marketing Capabilities on Greenhouse Businesses Performance in Jiroft County, Iran. *J. Agr. Sci. Tech.*, **19(4)**: 771-783.
41. Rigg, J. 2005. Poverty and Livelihoods after Full-Time Farming: A South-East Asian View. *Asia Pac. Viewp.*, **46(2)**: 173-184.
42. Ronning, L. and Kolvereid, L. 2006. Income Diversification in Norwegian Farm Households; Reassessing Pluriactivity. *Int. Small Bus. J.*, **24(4)**: 405-420.
43. Rusu, V. D., and Roman, A. 2017. Entrepreneurial Activity in the EU: An Empirical Evaluation of Its Determinants. *Sustainability*, **9(10)**: 1-16.
44. Salmi, P. 2005. Rural Pluriactivity as a Coping Strategy in Small-Scale Fisheries. *Soc. Rur.*, **45(1/2)**: 22-36.
45. Schaper, M. and Volery, T. 2007. *Entrepreneurship and Small Business: A Pacific Rim Perspective*. John Wiley & Sons Australia, Ltd., Queensland.
46. Schjoedt, L. and Shaver, K. G. 2007. Deciding on an Entrepreneurial Career: A Test of the Pull and Push Hypotheses Using the Panel Study of Entrepreneurial Dynamics Data. *Entrep. Theory Pract.*, **31(5)**: 733-752.
47. Shucksmith, D. M. and Smith, R. 1991. Farm Household Strategies and Pluriactivity in Upland Scotland. *J. Agric. Econ.*, **42(3)**: 340-353.
48. Sofer, M. 2001. Pluriactivity in the Moshav: Family Farming in Israel. *J. Rur. Stud.*, **17(3)**: 363-375.
49. Sojasi Qeidari, H. 2012. Modelling for Ecotourism Entrepreneurship Development in Rural Region (Case Study: Rural Valley Ecotourism in Tehran Province). Ph.D. Dissertation, Tarbiat Modares University, Tehran, Iran.
50. Spigel, B. 2017. The Relational Organization of Entrepreneurial Ecosystems. *Enterpren. Theor. Pract.*, **41(1)**: 49-72.
51. Stam, E. and Spigel, B. 2016. *Entrepreneurial Ecosystems*. Tjalling C. Koopmans Research Institute, Discussion Paper Series 16-13, PP. 1-15. Available at: <https://www.uu.nl/en/file/55729/download?token=dzRMYt-t>
52. Statistical Center in Iran. 2016. *Data and Statistical Information*. Available at: <https://www.amar.org.ir>
53. Stefanovic, I., Prokic, S. and Rankovic, L. 2010. Motivational and Success Factors of Entrepreneur: The Evidence from a Developing Country. *J. Econ. Bus.*, **28(2)**: 251-269.
54. Stephan, U., Hart, M., Mickiewicz, T. and Drews, C. 2015. *Understanding Motivations for Entrepreneurship*. Department for Business, Innovation and Skills. Aston Business School, Birmingham and IFF Research, London, UK. Available at: http://publications.aston.ac.uk/25296/1/Understanding_motivations_for_entrepreneurship.pdf
55. Taber, K. S. 2017. The Use of Cronbach's Alpha When Developing and Reporting

- Research Instruments in Science Education. *Res. Sci. Educ.*, **48(6)**: 1273–1296.
56. Taylor, N. and McClintock, W. 2004. Some Characteristics of Multiple Job Holding by New Zealand Farm Men and Women. *NZARES Conference Blenheim Country Hotel, Blenheim, New Zealand. June 25-26.* Available at: <https://ageconsearch.umn.edu/bitstream/97775/2/2004-3-characteristics%20of%20multiple%20job%20holding%20by%20nz%20farm%20men%20and%20women.pdf>
57. Vik, J. and McElwee, G. 2011. Diversification and the Entrepreneurial Motivations of Farmers in Norway. *J. Small Bus. Manage.*, **49(3)**: 390–410.
58. Weltin, M., Zasada, I., Franke, C., Piorr, A., Raggi, M. and Viaggi, D. 2017. Analysing Behavioural Differences of Farm Households: An Example of Income Diversification Strategies based on European Farm Survey Data. *Land Use Policy*, **62**: 172–184.
59. Wortman Jr, M. S. 1990. Rural Entrepreneurship Research: An Integration into the Entrepreneurship Field. *Agribusiness*, **6(4)**: 329–344.

نقش میانجی اکوسیستم کارآفرینی روستایی در ارتباط بین انگیزه شالیکاران چندکاره و پیامدهای فعالیت چندکاره

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چکیده

مطالعه حاضر با هدف بررسی نقش میانجی اکوسیستم کارآفرینی روستایی در ارتباط با انگیزه شالیکاران چندکاره و پیامدهای فعالیت چندگانه در حوزه آبریز هراز انجام شده است. این تحقیق توصیفی-رابطه‌ای است و از طریق تکنیک پیمایشی اجرا گردیده است. در این مطالعه، ۱۸۲ نفر از شالیکاران چندکاره در حوضه آبریز هراز شرکت داشتند. نتایج آمار توصیفی نشان داد که میانگین متغیرهای انگیزشی کشش و فشار بالاتر از سطح متوسط بود. همچنین متغیرهای اکوسیستم کارآفرینی روستایی و پیامدهای فعالیت چندگانه پایین‌تر از سطح متوسط بودند. در تحلیل مسیر، اثرات مستقیم متغیرهای مستقل نشان داد که انگیزه کشش و اکوسیستم کارآفرینی روستایی دارای اثر مثبت و مستقیم بر روی پیامدهای فعالیت چندگانه دارد، درحالی که متغیر انگیزه فشار بر روی پیامدهای فعالیت چندگانه تاثیر معنی‌داری ندارد. اثرات غیرمستقیم متغیرهای مستقل نشان می‌دهد که انگیزه فشار دارای اثر مثبت و معنی‌دار بر روی اکوسیستم کارآفرینی روستایی است. اما، انگیزه کشش بر روی اکوسیستم کارآفرینی روستایی تاثیر معنی‌داری ندارد. این مطالعه دارای کاربردهای عملی برای موسسات مرتبط با توسعه روستایی به طور عام، و موسسات مرتبط با توسعه کسب و کار به طور خاص دارد. موسسات مرتبط با توسعه کسب و کار، بالاخص مراکز آموزشی و ترویجی بخش‌های دولتی و خصوصی که در منطقه فعال هستند، می‌توانند شالیکاران را برای راه‌اندازی و توسعه کسب و کارشان بر اساس انگیزه‌هایشان تشویق نمایند.