

Research Paper

Farmers' Resilience Against Drought with an Emphasis on Economic Factors and Social Capital in Rural Areas: A Case Study of Roniz in Estahban County

*Saeed Reza Akbarian ronizi¹, Mehdi Ramezanzadeh Lasboeyee²

1. Associate professor, Geography Department, Faculty of Economics, Management and Social Sciences, Shiraz University, Shiraz, Iran.
2. Associate professor, Tourism Department, Faculty of Humanity & Social Science, University of Mazandaran, Babolsar, Iran.



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ABSTRACT

Resilience is a positive approach to the issue of drought. In recent years, this term has been used mainly instead of vulnerability in natural disasters management studies. The present research aims at the status of farmers' resilience in *Roniz* rural district, Estahban County, and the factors affecting it during years of drought. The study is an applied type conducted through a descriptive-analytical method. The required data were collected using library and field (questionnaire) procedures. The study sample consisted of 230 farmers selected through the Cochran method. The data were analyzed using one-sample t-test as well as regression and correlation coefficient analytic techniques. As the results showed, of the two parameters in focus, namely social capital and a set of economic factors, the latter has a greater effect on farmers' resilience and, therefore, their survival against natural disasters particularly drought. The results also suggest that the more social capital, the more resilience can be expected against drought.

Key words:

Natural disasters, Hazards, Drought, Resilience, *Roniz* district

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Extended Abstract

1. Introduction

Natural disasters are the recurrent phenomena which are, in some cases, accompanied by severe material and spiritual damages. Scholars, experts and planners have always sought to decrease the damages resulting from those disasters with certain plans based on various approaches and in different manners. Resilience of the society in the face of economic,

cultural and social losses is of importance and results in easier recovery after the occurrence of natural disasters. The evaluation and understanding of resilience its relation with social, cultural and economic factors and the recognition of the impact of each of individual disasters can provide a background for the optimal management of those incidents and reduction of their consequences. Among the provinces in Iran which have good performance in agriculture, Fars has been exposed to drought frequently in recent years and has faced major challenges in agricultural activities. *Roniz* rural district is one of the agricultural zones in the county of Estahban in Fars

* Corresponding Author:

Saeed Reza Akbarian ronizi, PhD

Address: Shiraz, Shiraz University, Geography Department

Tel: +98 (912) 5854245

E-mail: akbarian@shirazu.ac.ir

province which plays a significant role in the production of farming crops and fruits. In recent years, however, drought incidents have posed a challenge to agricultural activities in this area, resulting in a considerable number of dried-up Qanats, springs and gardens. Thus, vast areas once under cultivation are now left unused. In this regard, attention should be paid to the unemployment of the drought-stricken rural communities in the region. In this study, the resilience level of farmers and the factors affecting it are discussed by the attitude that the identification and evaluation of such factors is a significant step in the process of managing drought crises, agricultural development, improvement of farmers' conditions, and reduction of the undesirable effects of drought. To do the research on this issue, attempts are made to answer the following two questions:

- a) What is the relationship of farmers' resilience in droughts with economic factors and social capital?
- B) Which factors have more influence on the resilience level in droughts?

2. Methodology

The method of the current research is descriptive-analytical, and it is an applied study in terms of purpose. The required data were collected by library and field studies (i.e. questionnaires). The statistical population of the research included 832 farmers residing in the villages of *Roniz* district. Of them, 230 were selected as the sample by using Cochran's formula. The independent variables of the research included the factors affecting the resilience of farmers in droughts. The tool for data collection was a researcher-made questionnaire. The data were analyzed using the SPSS software.

3. Results

Through a statistical analysis, the average value of resilience was found to be 13.5, comparatively higher than the level observed in other studies. The significance level of 0.001 revealed a meaningful agreement among the attitudes of the farmers toward drought. It also showed that the resilience level of the farmers in the studied area is above the average level. Analyzing the role of economic conditions in the farmers' resilience showed a meaningful agreement among the farmers' attitudes and suggested that the share of economic conditions is less than average level. Also, the role of social capital proved to be lower than the average level.

4. Discussion

Various factors have effects on drought. The analysis of the factors showed that of economic factors (including residence, employment and income) and social capital dimensions, economic factors play a more effective role in determining the resilience level of farmers. The results of the current research are consistent with those obtained by *Ramezanzadeh Lasboei et al. (2013)*. As for social capital, they were found to have effects on farmers' resilience just to some extent. This result is consistent with the findings of *Badri et al. (2013)* and *Eftekhari et al. (2014)*. In this regard, *Petzold et al (2015)* showed that social capital has a significant role in the adaptability to climate change. So, a society with a greater social capital has a higher degree of resilience to natural disasters and is less vulnerable. The other results of the present research pertain to the relationship between economic factors and the degree of farmers' resilience in droughts. In this case, no significant relationship was found among various economic factors, residence conditions and resilience degrees. However, employment conditions, income conditions and the amount of saving by farmers proved to be significantly correlated with resilience degree.

5. Conclusion

It is concluded from this study that the effect of economic conditions in farmers' resilience in the studied area is above the average level and acceptable, but the role of social capital in resilience is below the average level. Therefore, it is suggested that substantial steps be taken to prepare and implement local strategic plans to increase agricultural resilience.

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Conflict of Interest

The authors declared no conflicts of interest