

Research Paper

Analysis of the Key Factors Affecting the Formation of Spatial Planning Patterns in Rural Areas Based on the Foresight Approach: A Case Study of Lorestan

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ABSTRACT

Rural development programs based on different patterns in *Lorestan* province did not have the expected effect on the economic prosperity and improvement of villagers' life. Socially, they had no success to establish the participation of villagers and their empowerment either. In order to eliminate these shortcomings from the rural areas of the province, it is necessary to identify and analyze the key factors in presenting a rural spatial planning pattern through a foresight approach. In this research, Delphi and panel techniques together with the analysis of interactions were implemented with the MicMac software to identify and analyze the key factors involved in designing a pattern for rural spatial planning. The results showed that, out of 40 main problems in rural programs, 13 factors are the most important ones to affect the design of a pattern for the rural areas of *Lorestan*. These factors include rural perspective, futurism, environment, rural economic structure, rural governance, alternative scenarios, features of the regions, land use planning, rural participation, spatial development principles, rural, local capacity and social capital, rural management, and convergence-divergence of the sectors.

Key words:

Spatial pattern, Rural areas, Foresight, MicMac, *Lorestan* province

Extended Abstract

1. Introduction

Rural development programs based on different patterns have failed to achieve the expected success in development of economic prosperity and improvement of rural life in *Lorestan* province, neither have they been socially able to institutionalize the

participation of rural population or empower them in this field. To eliminate these defects from the rural areas of the province, it is necessary to identify and analyze the key factors affecting the rural spatial planning patterns based on the Foresight approach. It is, indeed, the main objective of this research. Therefore, at first, appropriate responses should be provided to the following questions:

What are the problems and insufficiencies of the existing rural spatial planning patterns in *Lorestan* province?

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What are the key factors in shaping rural spatial planning patterns based on the Foresight approach in *Lorestan* province?

The scope of this study is the rural areas in *Lorestan* province that, based on previous studies, is ranked at the lowest level of rural development among the other provinces of Iran.

2. Methodology

The study is a qualitative piece of research based on the quasi-numerical or judgment approach within the scope of foresight techniques. Regarding the methodology, it is a combination of documentary and survey methods. The instruments used for data collection and evaluation included books, reports, cyberspace as well as questionnaires developed in three phases. The first phase included semi-open-ended questions, while the second and the third phases were based on closed-ended questions. In this study, the Delphi method was practiced along with panel interviews and cross-impact analyses by the MicMac software (to facilitate structural analysis) conducted to identify and analyze the key factors affecting the pattern of rural spatial planning. It is worth mentioning that 19 qualified experts were identified and asked to conduct the Delphi survey. By making inferences from the current problems in rural spatial planning, it was possible to identify and analyze the factors involved. Among the affecting factors, some were effective and some were affected. In addition, the dominant group of factors in this study included two-dimensional variables that were both effective and affected. This identification task was practically the first step in the foresight technique, called pre-foresight. So, it was possible to present a new, efficient and systematic pattern for rural spatial planning based on the foresight approach.

3. Results

The Delphi method was conducted in three stages in order to do a pathological study on the current patterns of rural spatial planning. The experts reached a consensus of 40% on the main problems associated with the current pattern of rural spatial planning in *Lorestan* province. However for the primary identification of the factors affecting rural spatial planning, several panel-based interviews were held in the presence of five experts who had participated in the Delphi study. Finally, 40 cases of basic damage to the existing programs were scrutinized, and 34 factors were selected as those that affected rural spatial planning patterns. The MicMac software was used to extract and analyze the key factors that formed a prerequisite

for providing a rural spatial planning pattern. The results obtained from the comparison of the analyzed direct and indirect impacts showed that only a few indices would have significant indirect effects on the system and the classification of key factors. In addition, since the given system was unstable, the factors were mainly distributed around the diagonal axis of the affected and effective factors in a crossover chart. The factors had dual effects, but the affected factors were of significant influence.

4. Discussion

Two methods were used to draw the final conclusion about the determination of the key factors affecting rural spatial planning patterns. The first method was based on the ranking of variables in each state, and the second method dealt with the total impact of variables in all the states. This was done by calculating the algebraic summation of the affected and affective variables in both direct and indirect states. Thirteen out of the 14 key affecting factors with both direct and indirect effects proved to be common factors. In other words, the investigation of the indirect relationships of various factors showed that all the first 14 factors with direct effects had been exactly repeated in the classification of the indirect effects, with minor changes in their rankings. Moreover, since the given system was unstable, the factors were mainly distributed around the diagonal axis of the affected and effective factors in the crossover chart. The factors emerged to have dual effects, but the affected factors were of significant impacting power. Therefore, in this study, the list of 14 affected factors was exactly repeated in the class of direct and indirect effects, with the exception of one case. The most important factors in the sequence of effectiveness proved to be rural prospect, foresight, environment, rural economic structure, rural governance, alternative scenarios, characteristics of areas, spatial planning, rural participation, principles of rural spatial development, local capacity, social capital, cultural-ethnic conditions, rural management, and convergence-divergence of sectors.

5. Conclusion

The key factors involved in providing a rural spatial planning pattern include a series of economic, social, natural and spatial aspects of a rural system as well as its management and foresight aspects. Then, consideration of these factors in designing a spatial planning pattern can solve the most important problems in the current rural planning system of *Lorestan* province.

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Conflict of Interest

The authors declared no conflicts of interest