



Original Article

## Analysis of the Role of Social Capital in the Spatial Evolution of Rural Settlements (Case Study: Esfandagheh District, Jiroft County)

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### Abstract

**Purpose-** The main purpose of this study is to investigate the effects of improving the dimensions of social capital in the spatial evolution of rural settlements in Esfandagheh.

**Design/methodology/approach-** This study is a quantitative survey conducted using questionnaires distributed among 400 households in 30 sample villages. Descriptive-analytical measures such as mean, variance, standard deviation, Kendall Tau-b correlation coefficient, and multiple regression were used to analyze social capital's status in the spatial evolution of rural settlements in the study area.

**Findings-** The findings revealed that the six dimensions of social capital, including social awareness, social organizations and groups, social networks and relations, social participation, social cohesion, and social trust have a positive and significant relationship with the dimensions of the spatial evolution of rural settlements. Moreover, there is a positive and significant relationship between social capital and spatial development dimensions in the studied villages' four environmental-ecological, social, economic, and physical-infrastructure dimensions. Also, social awareness, social participation, social cohesion, social trust, social networks and relations, and social organizations and groups with a variance of 0.433% were explained as predictors of spatial changes in the Esfandagheh rural district.

**Research limitations/implications-** The variable of social capital plays an essential role in the spatial transformation of rural settlements because improving the dimensions of spatial transformation regardless of the dimensions of social capital faces a crucial challenge. In other words, social capital is influential in various areas of life, from the local and micro-level to the national and macro-level; it can empower the villagers in dealing with the socio-economic problems of their village.

**Practical implications-** Paying attention to the dimensions of social capital in terms of approaches and planning and policy-making system of rural development and subsequently emphasizing the status of social capital as one of the most important intangible assets to improve the spatial evolution of rural settlements.

**Originality/Value-** This study investigated the effects of all dimensions of social capital on all four dimensions of geographical space. In such a way, the attention of policymakers and development planners to the outcome of this research provides a more effective planning ground for developing the rural space based on people's views and the conditions of each region.

**Keywords-** Social capital, Spatial developments, Rural settlement, Esfandagheh District, Jiroft County.

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### How to cite this article:

Shafieisabet, N. & Ebrahimipoor, F. (2022). Analysis of the role of social capital in the spatial evolution of rural settlements (Case study: Esfandagheh District, Jiroft County). *Journal of Research & Rural Planning*, 11(2), 23-40.

<http://dx.doi.org/10.22067/jrpp.v11i2.88511>

### Date:

Received: 05-12-2021

Revised: 09-02-2022

Accepted: 01-04-2022

Available Online: 01-04-2022

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## 1. Introduction

In any place and geographical space, improving the dimensions of social capital provides the ground for the evolution of its dimensions. In other words, improving the dimensions of social capital leads to significant progress in the environmental-ecological, socio-economic, and physical-infrastructural dimensions in the spatial evolution of rural settlements. Therefore, its connection with basic social dimensions such as awareness, cohesion, network and relationships, organization, trust, social participation, and social capital provides the basis for improving the lives of villagers and rural spatial developments (Bhuiyan & Evers, 2005). In other words, settlements with higher social capital are more likely to be in the process of transformation (Karami & Agahi, 2018) because improving the dimensions of social capital causes the development of economic, social, and cultural dimensions and the quality of decision-making and participation in the transformation of rural space (Topal, 2019), and provides the basis for the formation of non-governmental organizations (Borgonovi & Andrieu, 2020). The villager's dynamism increases by improving the dimensions of social capital in the villages, and the ground is provided for their growth and prosperity (Henaio-Zapata & Peiró, 2018). Improving the dimensions of social capital widely creates mechanisms and relationships like promoting coordination and responsibility in rural development (Chen, Ma, Wei, & Yang, 2021). On this basis, proportionate to the formation of social relations, interpersonal trust, and commitments of community members, social capital also expands the ability to improve cooperation between individuals in society and coordination in the transformation process (Brown & Sonwa, 2015). Today, focusing on social capital and emphasizing its role as one of the main factors of spatial changes is discussed in the programs of societies, especially in developing communities (Fang, 2020). Therefore, real change can be formed based on the creative behaviors of human actors, and people can be constantly involved in the planning, financing, implementation, and evaluation of projects (Krijthe et al., 2013). Thus, one of the fundamental foundations in transforming rural space is the enthusiastic participation of the people affected by improving their social capital dimensions (Le & Raven, 2015). With the spread of information and awareness, the use of indigenous knowledge of the villagers, and the formation of organizations, the

ground is provided for more communication between the villagers (Kyron et al., 2020). Thus, expanding social capital in rural areas increases trust between individuals and groups, develops individuals, and increases individual and group socio-economic participation. In this way, the ground is prepared to transform the dimensions of rural space (Lestarini, Harmain, Wulandhary, & Utari, 2018). In other words, social capital prepares popular resources, supports internal data, and engages people in socio-economic, political, and cultural plans and programs that affect their lives (Passmore et al., 2019).

In this regard, the effect of improving the dimensions of social capital in the spatial evolution of rural settlements is a challenge and a question that can be answered within each region and area. Therefore, the necessity and importance of the issue require us to gain scientific and more accurate knowledge of improving the dimensions of social capital in the spatial evolution of rural settlements because this type of knowledge can help reduce poverty, inequality, and injustice and improve the dimensions of the spatial evolution of rural settlements in the study area. Besides, numerous programs, including socio-economic activities, are underway. Therefore, research on the improvement of the dimensions of social capital of villagers in Esfandagheh provides an opportunity for local management, villagers, and those involved in rural development and transformation to understand better the strengths and weaknesses of villages in this area; and it helps them to take appropriate steps in this direction.

Thus, the main purpose of this study is to investigate the effects of improving the dimensions of social capital in the spatial evolution of rural settlements in Esfandagheh. In this regard, based on the challenges mentioned; the basic research questions are as follows: 1) What is the situation of rural settlements of Esfandagheh district in terms of social capital and spatial developments? 2) What is the relationship between social capital and spatial developments in the villages of Esfandagheh district? And which dimensions of social capital are more important for the spatial developments of the villages of this district? Undoubtedly, the attention of policymakers and development planners to the results of this research and numerous other types of research done in different regions provides the ground for more effective planning for rural space developments based on people's views and the conditions of each area.

## 2. Research Theoretical Literature

Over the past few decades, researchers such as Coleman (1981), Bourdieu (1997), and Putnam (2020) have played a vital role in the field of social capital. They equated the concept of social capital with capitals such as social awareness, social trust, social networks and relationships, social cohesion, social groups, and social participation, which helps people and planners solve socio-economic issues (Fan & Mahadevan, 2019). Therefore, according to these experts, social capital, with dimensions such as awareness, cohesion, trust, participation, organization, groups, and network and relationships, refers to the connections among the members of a network as a valuable resource (Giddens, 2013). It creates norms and mutual trust, which leads to the realization of the members' goals (Helgadóttir & Dashper, 2020). Accordingly, it provides a good environment for people to be highly productive in human, economic, and physical capital and achieve success (Richard, George-Marcelpoil, & Boudières, 2010). In other words, social capital contributes to collective behavior, which increases the costs of defying collective behavior, strengthens good mutual standards, and improves the flow of information that includes information about active self-knowledge. In this way, the past successes of collective activities are more appropriately reflected and function as a framework for further cooperation in the future (Popovych, 2018). On this basis, each of the dimensions of social capital and its relationship with the evolution of the dimensions of rural space is presented concisely to logically explain the questions and hypotheses of the present study.

### 2.1 Social awareness and the evolution of rural space

One of the essential dimensions of social capital is using overt and covert capacities of social awareness. It is an inherent and inseparable part that provides the ground for the peasants' actions (Theodoraki, Messeghem & Rice, 2018). Improving the social awareness of villagers also provides the basis for improving the evolution of rural space (Joshi, Halseth, & Kanerva, 2016).

### 2.2 Social trust and the evolution of rural space

Trust is one of the concepts reflected in the quest for leadership, change, human relations, and active participation of individuals (Javadzadeh & Alavi, 2016). Trust is essential for building effective human relationships, establishing and improving public relations, forming groups and teamwork, building collaboration, and making successful change (Gardjito, Candra, & Cahyo, 2018). Thus, improving social trust among villagers as one of the

most fundamental dimensions of social capital provides the basis for the spatial transformation of rural settlements (Cobbinah, 2015).

### 2.3 Social cohesion and the evolution of rural space

Social cohesion observes the extent and pattern of interactions between actors, groups, and segregated subcultures (Rivera et al., 2019). Social cohesion is based on collective harmony between members of each community. The consequence is the acceptance and internalization of society's value system and the existence of collective belongingness to interaction among the members of that society (Fukuyama, 2002). Also, social cohesion is a sense of mutual responsibility between several individuals or groups with the will and awareness (Diekmann & Bauthier, 2011). Like different dimensions of social capital, this concept provides the basis for improving the environmental-ecological, social, economic, and physical-infrastructure dimensions.

### 2.4 Social participation and the transformation of rural space

Public participation means collective effort and participation in an organizational framework (Schmaal et al., 2020). Moreover, participation is a dynamic process in which participants are motivated to work collaboratively by their thoughts and efforts (Soithong, 2011). According to this, a proportionate and adaptive transformation in the dimensions of rural space is the result of improving the participation of villagers.

### 2.5 Social network and the evolution of rural space

There are networks and relationships in every settlement. These connections, exchanges, and networks exist within the settlements at both the horizontal and vertical levels (Nogueira de Moraes & March, 2019). Each settlement is known through its formal and informal communication networks. These networks are partially formed horizontally and bring together villagers with equal status and power. In most cases, networks involve vertical relationships (between villagers) and horizontal relationships (within households). The more crowded the social network in a settlement, the more likely it is that the residents of that settlement will be able to work together for mutual benefit (Popovych, 2018). Thus, the formation and expansion of the network and strong relations between the villagers effectively improve the evolution of rural space.

### 2.6 Social organization and transformation of rural space

Organization means gathering local and non-local, real, legal, and non-governmental individuals with a

common goal. This goal can be achieved through group activities and participation in the socio-economic activities of their local settlement (Worldwide, 2011).

### **2.7 Social capital and rural space evolution**

Michel Foucault, Anthony Giddens, and Doreen Messy consider the essence and nature of spatial transformations as all-around transformations in various natural, economic, social, cultural, and political fields (Richard et al., 2010). So, they define space as a socio-economic structure formed through social relations. Therefore, social capital and its dimensions are influential in the evolution of space dimensions. Thus, in this study, social capital was examined as a social transformational factor and the basis of the socio-economic activism of villagers in the spatial evolution of rural settlements (Hyden, 1997).

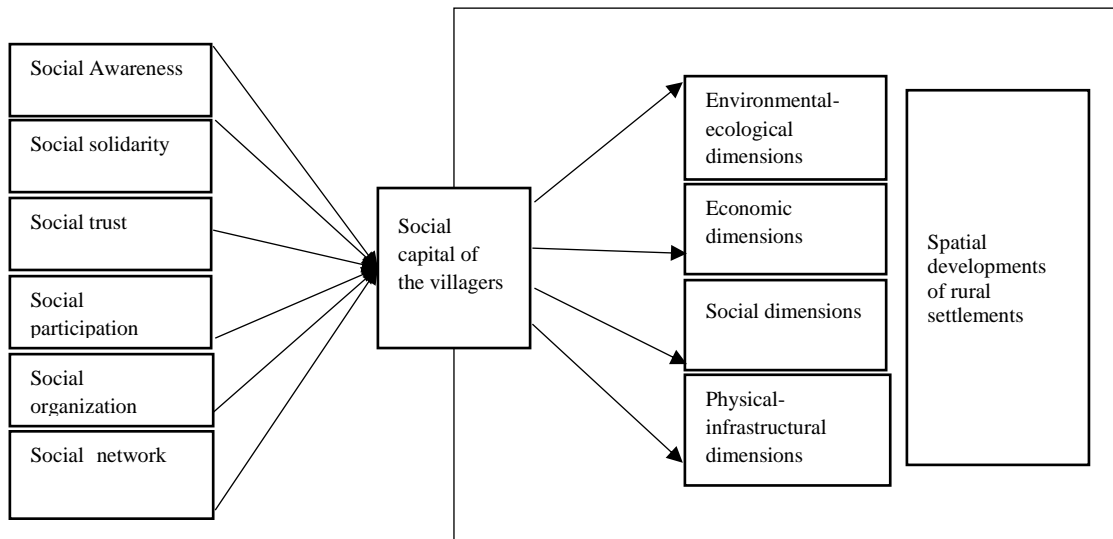
Regarding the role of social capital in the development and evolution of rural settlements in different countries, examined studies show that improving the dimensions of social capital provides the basis for development and transformation in the dimensions of rural space, such as environmental-ecological, social, economic, and physical-infrastructure dimensions (Cobbinah, 2015). Social capital's dimensions, especially social trust, have been the essential foundations for the spatial evolution of rural settlements (Putnam, 2020). Therefore, forming social capital in any settlement increases trust between individuals and groups (Chen et al., 2021). It should, however, be noted that, in general, most studies in the social capital field have examined its effects on the development of society.

It was revealed that improving dimensions of social capital provides the ground for improving the dimensions of development and sustainable development. However, in some studies in this field, for example, in Zimbabwe, the low level of their social capital has created problems in the process of improving the dimensions of rural development and transformation, so that, in order to solve their issues, villagers have considered this capital as an important asset to achieve common goals (Ryan, 2012).

In Kenya, there are plans to improve social capital among young people. Putnam's definition of social capital, which emphasizes civil interaction, suggests

that social capital can provide a framework for how collective activities contribute to the development of rural communities (Setini, Yasa, Gede Supartha, Ketut Giantari, & Rajiani, 2020). Accordingly, social capital is the basis for the betterment of individuals in society and provides the basis for rural development and transformation (Popovych, 2018). Social capital through social identity has created a strong bond among the local community in India, enabling cooperation and self-organization (Teney & Hanquinet, 2012). Based on their policy system, E.U. countries have plans to improve social capital to develop their local settlements (Vasylychenko, Lotiuk, & Gut, 2018). On this basis, improving the dimensions of social capital makes spatial transformation possible. The dimensions of social capital are considered the basis for the transformation and evolution of the spatial dimensions (Ohe & Kurihara, 2013). In Iran, a study on Tehran revealed that improving the sustainable development dimensions of rural settlements is largely influenced by local management's improvement of social capital dimensions. Villagers' participation in plans and programs has increased with trust, social cohesion, and social network expansion (Shafiei & Khaksar, 2020). The results of various types of research revealed that the formation and improvement of social capital dimensions are an ideal tool for improving the dimensions of rural development. Hence, improving the dimensions of social capital is a necessary condition for the development and transformation of the dimensions of rural space. Although numerous studies have been conducted on the effects of social capital on development, few studies have analyzed the developments of rural areas affected by social capital. Therefore, what distinguishes this study from previous studies, is that this study focuses on the evolution and transformation of all spatial dimensions of rural settlements, such as environmental-ecological, socio-economic, and physical-infrastructure dimensions, which are affected by improving the dimensions of social capital. Moreover, unlike previous studies, this study investigated the effects of all dimensions of social capital on all four dimensions of geographical space. Figure 1 shows the conceptual framework of the research.





**Figure 1. Conceptual framework of research**

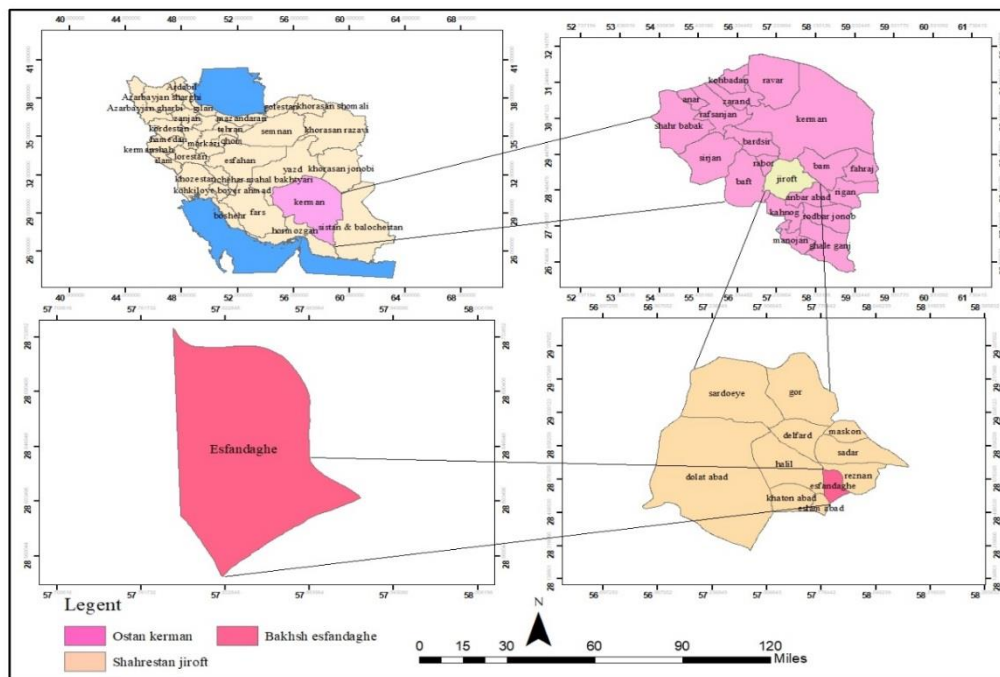
Source: Based on literature analysis and research background, 2020

### 3. Research Methodology

#### 3.1 Geographical Scope of the Research

Rural settlements in the Esfandagheh district were selected to investigate the status of social capital in rural development. This region has an area of 3472 square kilometers and covers about 50% of the central part of Jiroft County. The villages of this district are located 75 km west of Jiroft county. The

studied villages are located between 28 degrees and 38 minutes and 43 seconds north latitude and 57 degrees and 8 minutes and 47 seconds east longitude. From the north, northeast, and east, this area is adjacent to Sardouieh, Delfard, Halil, Khatunabad, and Ganjabad villages, respectively. From the southeast, south, and west, it neighbors Ismaili, Hoor, and Dashtab (in Baft town) villages.



**Figure 2. Scope of the study**

Source: Drawing based on the basic map of the National Cartographic Center (2013)

### 3.2. Methodology

This study investigates the status of social capital in the spatial evolution of rural settlements in Esfandagheh. Therefore, this is fundamental research regarding the purpose. It is survey research in terms of implementation method. It is also quantitative research in terms of the nature of the data. The study's statistical population included 42 inhabited villages of the Esfandagheh district (Results of Jiroft city census, 2016). To determine the random sample size for completing the questionnaire at the village level, 30 villages, including 3500 households, were randomly selected and categorized into two groups (mountainous and plain villages). Then, random sample households were selected from the villages based on the household size ratio (P.P.S)<sup>1</sup> method. The sample size of the villagers was calculated based on Cochran's formula of 344 households. Since the number of sample

questionnaires in several villages did not meet the quorum required to complete the questionnaire due to the household size ratio (P.P.S) method, the number of household questionnaires was increased to 370 households.

### 3.2. Research variables and indicators

To assess the concepts of social capital and spatial evolution of rural settlements based on documentary analysis literature and research background, social awareness, social cohesion, social network, social trust, social organization, and social participation were revealed as the dimensions of social capital. Also, spatial developments were identified with environmental-ecological, social, economic, and physical-infrastructure dimensions. Seventeen questions were used to measure social capital's latent and obvious variables at the village level (Table 1).

**Table 1. The latent and obvious variables of the dimensions of the social capital of the villagers**

Source: Based on literature analysis and subject background, 2020

| latent variables  | References  | lang&Briankcegh, 1990 | lang&Briankcegh, 1990 | Sato, 2006 | Yongunlu, 2011 | Soonhee Kim, 2012 | DURGA, 2013 | Rostami, 2013 | Karimi moghari, 2014 | Dictionary, 2017 | Ryser, 2018 | Sun Ying, 2018 | Bakker et al, 2019 |
|-------------------|---|-----------------------|-----------------------|------------|----------------|-------------------|-------------|---------------|----------------------|------------------|-------------|----------------|--------------------|
|                   | Obvious Variables   |                       |                       |            |                |                   |             |               |                      |                  |             |                |                    |
| Social Awareness  | Villagers' awareness of their rights  |                       |                       |            | ○              |                   |             |               | ○                    | ○                |             |                | ○                  |
|                   | Awareness of villagers about the duties of governmental and non-governmental organizations  |                       | ○                     |            |                | ○                 | ○           |               |                      |                  | ○           |                |                    |
|                   | Villagers' awareness of religious, social, and charitable activities  |                       | ○                     |            |                |                   |             |               |                      | ○                |             |                |                    |
| social solidarity | Reducing the number of differences, conflicts, and disputes among the villagers and increasing the solidarity and cooperation of the villagers with the neighboring villagers |                       | ○                     |            |                |                   |             |               |                      |                  |             |                |                    |
|                   | Increasing the spirit of forgiveness and sacrifice of the villagers and their respect for each other and solidarity between them  |                       | ○                     |            |                |                   |             |               |                      | ○                |             |                |                    |
|                   | Increasing the respect of the villagers towards the elders, council members, village heads, and district heads  |                       |                       |            | ○              |                   |             |               |                      |                  | ○           |                |                    |
| Social Network    | Villagers' participation in group parties   |                       |                       |            |                |                   |             |               |                      | ○                |             |                |                    |
|                   | Increasing the activity of villagers in a Basic cultural institution  |                       |                       |            |                |                   |             |               | ○                    |                  |             |                |                    |

<sup>1</sup> Probability Proportional to Size

| latent variables       | References   | lang&Briankeogh, 1990 | lang&Briankeogh, 1990 | Sato, 2006 | Yongguilu, 2011 | Soonhee Kim, 2012 | DURGA, 2013 | Rostami, 2013 | Karimi moghari, 2014 | Dictionary, 2017 | Ryser, 2018 | Sun Ying, 2018 | Bakker et al, 2019 |
|------------------------|--|-----------------------|-----------------------|------------|-----------------|-------------------|-------------|---------------|----------------------|------------------|-------------|----------------|--------------------|
|                        | Obvious Variables  |                       |                       |            |                 |                   |             |               |                      |                  |             |                |                    |
|                        | Increasing the activity of the villagers in the Gharz al-Hasna fund  |                       |                       | ○          |                 |                   | ○           |               |                      |                  |             |                |                    |
| social trust           | Increase trust among neighbors, relatives, friends, and having a good sense of the place   | ○                     |                       |            |                 |                   | ○           |               |                      |                  |             |                |                    |
|                        | Increasing villagers' trust in education system: schools and technical and vocational training centers   |                       |                       | ○          |                 |                   |             |               |                      |                  |             |                |                    |
|                        | Increase villagers' trust in rural municipality, council, district governor and rural dispute resolution council, and local Islamic association                |                       | ○                     |            |                 |                   |             | ○             |                      |                  |             |                |                    |
| Creating organizations | Creating or expanding the activities of political organizations such as Basij, Islamic Association, and religious organizations                                | ○                     |                       | ○          |                 |                   |             | ○             |                      |                  |             | ○              |                    |
|                        | Creating the necessary grounds for group dredging of aqueducts and streams and water atmosphere and maintenance of water wells and water source of the village |                       | ○                     |            | ○               |                   |             |               |                      |                  | ○           |                |                    |
| social participation   | Participation of villagers in teamwork, celebrations, and ceremonies of friends, neighbors, and relatives in the village                                       |                       | ○                     |            |                 |                   |             |               | ○                    |                  |             |                |                    |
|                        | Participation and investment of villagers in agricultural and non-agricultural activities in their village and neighboring villages                            |                       |                       | ○          |                 |                   | ○           |               |                      | ○                |             | ○              |                    |

According to Table 2, twenty-five questions were evaluated in the framework of ecological evolution to measure the dimensions of the spatial evolution

of rural settlements, social transformation, economic transformation, and physical transformation.

**Table 2. The latent and obvious variables of the dimensions of the spatial evolution of rural settlements**

Source: Based on literature analysis and subject background, 2020

| Latent variables                   | References  | Rothstein& stole, 2008 | Zahedi & Shiami, 2009 | Qiaoming Liu,2009 | Yongguilu, 2011 | jooho lee, 2012 | Rostami, 2013 | DURGA, 2013 | Lekaota, 2015 | Simatele, 2016 | setyono, 2018 | Lestariani, 2018 | MasthiasFinkv, 2018 |
|------------------------------------|---|------------------------|-----------------------|-------------------|-----------------|-----------------|---------------|-------------|---------------|----------------|---------------|------------------|---------------------|
|                                    | Obvious Variables   |                        |                       |                   |                 |                 |               |             |               |                |               |                  |                     |
| Environmental-ecological evolution | Dealing with the occurrence of drought, natural and unnatural events, and unforeseen events | ○                      |                       | ○                 |                 | ○               |               | ○           |               |                |               |                  | ○                   |

| Latent variables   | References  | Rothstein & stole, 2008 | Zahedi & Shami, 2009 | Qiaoming Liu, 2009 | Yongguiliu, 2011 | Jooho lee, 2012 | Rostami, 2013 | DURGA, 2013 | Lekaota, 2015 | Simatele, 2016 | sefyonu, 2018 | Lestari, 2018 | MasthiastFinky, 2018 |
|--|---|-------------------------|----------------------|--------------------|------------------|-----------------|---------------|-------------|---------------|----------------|---------------|---------------|----------------------|
|  | Obvious Variables   |                         |                      |                    |                  |                 |               |             |               |                |               |               |                      |
| Supervision and follow-up for documenting and determining land ownership and monitoring the proper implementation of rules related to environmental protection and improvement and exploitation of natural resources |   |                         |                      |                    |                  |                 |               | ○           |               |                |               | ○             |                      |
|  | Improving soil quality and fertility and slowing soil erosion, and improving biodiversity around the village                | ○                       | ○                    |                    | ○                |                 |               |             | ○             |                |               | ○             |                      |
|  | Improving the health of livestock and farming conditions  |                         |                      |                    |                  | ○               |               |             |               | ○              |               |               |                      |
|  | Improving the waste collection and disposal system and the sewerage system  |                         |                      |                    |                  |                 | ○             |             |               |                | ○             |               |                      |
| Social Evolution   | Improving population growth and retention of young men and women and reduction of migration                                 |                         |                      | ○                  |                  |                 |               | ○           |               |                |               |               |                      |
|  | Villagers' participation in improving Internet access   | ○                       |                      |                    |                  |                 |               |             |               |                | ○             |               |                      |
|  | Creating opportunities for education, training, increasing services   |                         |                      |                    | ○                |                 |               |             |               |                |               |               |                      |
|  | Improving rural social security (such as reduction of theft, addiction, corruption)   | ○                       |                      |                    |                  |                 |               | ○           |               |                |               |               |                      |
|  | Empowering villagers and creating skills  |                         |                      |                    |                  |                 |               |             | ○             |                |               | ○             |                      |
|  | Elimination of poverty, increasing empowerment  | ○                       |                      |                    |                  | ○               |               |             |               |                |               |               |                      |
|  | Improving development activities and social and economic decisions of the village   |                         |                      |                    |                  |                 |               |             | ○             |                | ○             |               |                      |
|  | Improving N.G.O.s and creating social cohesion and people's trust in each other   |                         |                      |                    |                  | ○               |               |             |               |                |               |               |                      |
|  | Improving people's health and upgrading the necessary capacity to perform local duties and responsibilities of the village  |                         |                      |                    | ○                |                 |               | ○           |               |                | ○             |               |                      |
| Economic Evolution   | Improving agricultural and non-agricultural activities and promoting villagers' efficiency                                  |                         |                      |                    |                  |                 |               |             | ○             |                |               |               |                      |
|  | Improving capital attraction and improving the situation of employment and income generation in the village                 |                         |                      |                    | ○                |                 |               | ○           |               |                |               |               |                      |
|  | Improving new, engineered residential buildings and improving the condition of commercial uses such as shops in the village | ○                       | ○                    |                    |                  |                 |               | ○           |               |                |               |               | ○                    |



| Latent variables                          | References  | Rothstein & Stole, 2008 | Zahedi & Shiani, 2009 | Qiaoming Liu, 2009 | Yongguo, 2011 | Joohe Lee, 2012 | Rostami, 2013 | DURGA, 2013 | Lekaota, 2015 | Simatele, 2016 | sefyon, 2018 | Lestari, 2018 | Mastthias Finkv, 2018 |
|---|---|-------------------------|-----------------------|--------------------|---------------|-----------------|---------------|-------------|---------------|----------------|--------------|---------------|-----------------------|
|   | Obvious Variables   |                         |                       |                    |               |                 |               |             |               |                |              |               |                       |
|   | Improving the income level of the village and the employment situation of rural women   |                         |                       |                    | ○             |                 |               |             |               | ○              |              |               |                       |
|   | Forming a rural credit fund and providing facilities and loans to the villagers   |                         |                       |                    |               |                 |               |             |               | ○              |              |               |                       |
|   | Improving people's investment in agricultural and non-agricultural activities   | ○                       |                       |                    |               |                 | ○             |             |               |                |              |               |                       |
| Physical-<br>infrastructural<br>Evolution | Improving rural housing   |                         | ○                     |                    | ○             |                 |               |             | ○             |                |              | ○             |                       |
|   | Improving public access to public services and access to markets to sell products   |                         |                       | ○                  |               |                 |               | ○           |               |                |              |               |                       |
|   | Improving the status of educational uses such as rural schools  | ○                       |                       | ○                  |               |                 |               | ○           |               |                |              |               | ○                     |
|   | Improving the access of rural households to police stations, Basij, and emergencies in the village  |                         |                       |                    |               |                 |               |             | ○             |                |              |               |                       |
|   | Improving the access of rural households to the services of rural health centers and dentistry services, specialists, general practitioners, and specialists, nurses, midwives, health workers in the village |                         | ○                     |                    |               |                 |               |             |               |                | ○            |               |                       |

To ensure the compatibility of the questions taken from previous research with the research variables and to reveal the formal validity of these indicators and their adaptation to the villages of the study area. Several academic experts assessed the importance of effective and influential research components in rural planning at the universities of Tehran, Shahid Beheshti, and Kharazmi, experts of the governorate and agricultural jihad Esfandagheh. After receiving their comments, the

questionnaire was revised, and some unimportant questions were removed. Measurement of these indices on the Likert scale ranged from very low (1) to very high (5). Cronbach's alpha test was used to evaluate the reliability of the research questionnaire data. Finally, Cronbach's alpha value was obtained based on the table below for the present study. Therefore, the alpha value obtained in this study is reliable because it is close to 1 (Table 3).

**Table 3. Cronbach's alpha coefficient to determine the reliability of the research tool**

| Concept    | Social capital       | Alpha | Spatial developments | Social capital            | Alpha |
|------------|----------------------|-------|----------------------|---------------------------|-------|
| Dimensions | social participation | 0.73  | Dimensions           | Environmental-ecological  | 0.75  |
|            | social network       | 0.82  |                      | Physical – infrastructure | 0.75  |
|            | Social Awareness     | 0.84  |                      | Social                    | 0.73  |
|            | Social organization  | 0.76  |                      | Economic                  | 0.71  |
|            | social solidarity    | 0.71  |                      |                           |       |
|            | social trust         | 0.77  |                      |                           |       |

## 4. Research Findings

### 4.1. Data description

About 58.6% of 370 respondent households in rural areas were men, and 41/4% were women. Moreover, 35.9% of respondents had primary and intermediate

education, 43% had secondary education, diploma, and associate degree, and 21.1% had bachelor's degrees and above. About 60% of the respondents were farmers, 30% were business people, and 10% were artisans (Table 4).

**Table 4. Demographic characteristics of the respondents in the study area**

| Descriptive features |                              | Villagers  |             | Descriptive features |          | Villagers |     |
|----------------------|------------------------------|------------|-------------|----------------------|----------|-----------|-----|
|                      |                              | Percentage | Frequency   |                      |          |           |     |
| Education            | Bachelor and above           | 21.1       | 78          | Gender               | Male     | 58/6      | 220 |
|                      | Elementary and middle school | 60         | 190         |                      | Female   | 41.4      | 150 |
|                      | Diploma and Associate        | 30         | 110         |                      | Total    | 100       | 370 |
|                      | Total                        | 370        | 100         | Job                  | Business | 43        | 159 |
|                      |                              |            | Industry    |                      | 10       | 70        |     |
|                      |                              |            | Agriculture |                      | 35.9     | 133       |     |
|                      |                              |            | Total       |                      | 100      | 370       |     |

Kolmogorov-Smirnov test was used to analyze the findings appropriately. The results for social capital variables and spatial evolution and its dimensions showed that, since the significance level of all independent and dependent variables is less than 0.05, the data distribution is abnormal (Tables 6 and 7). Findings of the study on the status of social capital in the studied villages indicate that, from the respondents' perspective, the dimensions of social trust with a minimum average of 2.85 and social organization with a value of 3.40 have the

highest average, and they show a better situation than other dimensions. In this regard, among the dimensions of spatial evolution, the physical-infrastructure dimension has the lowest average, with a value of 2.70. The environmental-ecological dimension with 3.58 has the highest average value. The findings in table 6 indicate that the average general condition of the social capital dimensions in the villages of the Esfandagheh district is 3.20, and the average value of the dimensions of spatial evolution is 3.15

**Table 6. Kolmogorov-Smirnov test examining the normality of social capital variable data and its dimensions**

| Variable             | social participation | Social Network | Social organization | social trust | social solidarity | Social Awareness | Social capital |
|----------------------|----------------------|----------------|---------------------|--------------|-------------------|------------------|----------------|
| Average              | 3.11                 | 3/18           | 3.40                | 2.85         | 3.19              | 3.35             | 3.20           |
| Standard deviation   | 1.23                 | 1.30           | 1.90                | 1.28         | 1.31              | 1.34             | 1.32           |
| Z' Kolmogorov Smimov | 2.51                 | 2.53           | 2.80                | 1.98         | 2.59              | 2.80             | 2.50           |
| Sig                  | 0.000                | 0.000          | 0.000               | 0.000        | 0.000             | 0.000            | 0.000          |

**Table 7. Kolmogorov-Smirnov test evaluating the normality of variable data of spatial evolution and its dimensions**

| Variable            | Environmental-ecological | Physical-infrastructure | Economic | Social | Spatial developments |
|---------------------|--------------------------|-------------------------|----------|--------|----------------------|
| Average             | 3.58                     | 2.70                    | 3.15     | 3.10   | 3.15                 |
| Standard deviation  | 1.97                     | 1.20                    | 1.92     | 1.20   | 1.35                 |
| Z Kolmogorov Smimov | 2.88                     | 1.91                    | 2.54     | 2.49   | 2.74                 |
| Sig                 | 0.000                    | 0.000                   | 0.000    | 0.000  | 0.000                |

The relationship between the dimensions of social capital and spatial developments of the studied villages revealed a positive and significant relationship of 99% between the indicators of awareness, participation, trust, and social cohesion with the dimensions of

spatial developments in Esfandagheh. Therefore, improving the dimensions of social capital has led to progress in the dimensions of the spatial evolution of the studied rural settlements (Table 8).

**Table 8. The relationship between the dimensions of social capital and spatial developments of rural settlements in the study area**

At the significance level of 99% \*

| Independent variable | The dependent variable                   | Average | Standard deviation | Kendal's tau-b              |                         | Relationship |
|----------------------|--|---------|--------------------|-----------------------------|-------------------------|--------------|
|                      |  |         |                    | The correlation coefficient | (sig)significance Level |              |
| Social Awareness     | Spatial developments<br>Rural settlement | 3.35    | 1.34               | 0.401                       | 0.000                   | Positive     |
| social trust         |  | 3.19    | 1.31               | 0.353                       | 0.000                   | Positive     |
| social solidarity    |  | 2.85    | 1.28               | 0.269                       | 0.000                   | Positive     |
| Social organization  |  | 3.40    | 1.90               | 0.462                       | 0.000                   | Positive     |
| Social Network       |  | 3.18    | 1.30               | 0.348                       | 0.000                   | Positive     |
| social participation |  | 3.11    | 1.23               | 0.341                       | 0.000                   | Positive     |

In this regard, the study of the relationship between social capital and the four dimensions of the spatial evolution of the studied villages indicates a positive and significant relationship at the significance level of 33% between social capital and economic, social, environmental-ecological,

and physical-infrastructure dimensions of spatial evolution. Thus, by improving the dimensions of social capital, the economic, social, environmental-ecological, and physical-infrastructure dimensions have been improved (Table 9).

**Table 9. The relationship between social capital and economic, social, environmental-ecological, and physical-infrastructure dimensions in the study area**

\*Significant at the level of 99%

| Independent variable | The dependent variable   | Average | Standard deviation | Kendal's tau-b          |                             | Relationship |
|----------------------|--------------------------|---------|--------------------|-------------------------|-----------------------------|--------------|
|                      |                          |         |                    | (sig)significance level | The correlation coefficient |              |
| Social capital       | Social capital           | 3.10    | 1.20               | 0.000                   | 0.345                       | Positive     |
|                      | Economic                 | 3.15    | 1.92               | 0.000                   | 0.349                       | Positive     |
|                      | Physical-infrastructure  | 2.70    | 1.20               | 0.001                   | 0.231                       | Positive     |
|                      | Environmental-ecological | 3.58    | 1.97               | 0.000                   | 0.485                       | Positive     |

In the same context, the study of the relationship between social capital and spatial developments of

rural settlements showed a positive and significant relationship at 99% (Table 10).

**Table 10. The relationship between social capital and spatial developments in the study area**

\*Significant at the level of 99%)

| Independent variable | The dependent variable | Average | Standard deviation | Kendal's tau-b          |                             | Relationship |
|----------------------|------------------------|---------|--------------------|-------------------------|-----------------------------|--------------|
|                      |                        |         |                    | (sig)significance Level | The correlation coefficient |              |
| Social capital       | Spatial evolution      | 3.67    | 1.99               | 0.000                   | 0.457                       | Positive     |

A multiple regression test was used to analyze and predict the effects of social capital on the spatial evolution of rural settlements in the study area and reveal the main effective dimensions. The results in Tables 11, 12, and 13 show the effect of social capital dimensions as an independent variable on the spatial evolution of rural settlements in Esfandagheh. It indicates that social capital

explains the changes in the dimensions of the spatial evolution of villages. In this regard, Table 11 shows a correlation of 0.648 between independent and dependent variables. Also, based on the determination coefficient of 0.423% of the percentage variance, the spatial evolution of the studied rural settlements has been explained by social capital.

**Table 11. Regression results of effective components of social capital on spatial developments in villages of Esfandagheh**

| Model | Multiple correlation coefficient (R) | The determination coefficient (R <sup>2</sup> ) | The adjusted coefficient of determination | standard error |
|-------|--------------------------------------|---|---|----------------|
|       | 0.648                                | 0.423   | 0.422                                     | 7.25           |

Also, according to the research findings, based on the F value calculated at the 33% confidence level, it can be said that from the respondents' perspective, the

combination of independent variables can significantly explain and predict changes in the dependent variable of spatial evolution (Table 12).

**Table 12. Significance of regression of effective components of social capital on spatial developments in rural areas of Esfandagheh**

\*Significant at the level of 99%

| Model             | Total  | Degrees of freedom (df) | average of squares | F       | (sig) significance level |
|-------------------|--------|-------------------------|--------------------|---------|--------------------------|
| Regression effect | 14.134 | 1                       | 14.13              | 281.484 | 0.000                    |
| Remainder         | 19.483 | 368                     | 52.7               |         |                          |
| Total             | 34.618 | 369                     |                    |         |                          |

Finally, based on the standard coefficients listed in Table 13, the relative importance of independent variables in explaining and predicting the dependent variable is revealed. On this basis, social participation, social organizations and groups, social networks and relationships, social awareness, social cohesion, and social trust play a prominent role in explaining and predicting the spatial developments of the villages in the study area, respectively. Among these, the social

participation variable is the most important since a unit of change in this index's standard deviation causes the dependent variable's standard deviation (spatial evolution) to change by 0.740. At the same time, a unit of change in the standard deviation of other dimensions will cause changes of 0.737, 0.529, 0.450, 0.439, and 0.350 in the standard deviation of the dimensions of the dependent variable, respectively.

**Table 13. The intensity factor influences the coefficient of the dimensions of the independent variable on the dependent variable**

| Dimensions           | Non-standard coefficient |            | Standard coefficient | T      | (sig)significance level |
|----------------------|--------------------------|------------|----------------------|--------|-------------------------|
|                      | B                        | Std. Error | β                    |        |                         |
| Width of origin      | 33.177                   | 3.058      |                      | 10.851 | 0.000                   |
| social participation | 0.740                    | 0.112      | 0.356                | 6.602  | 0.000                   |
| Social organization  | 0.737                    | 0.175      | 0.223                | 4.206  | 0.000                   |
| Social network       | 0.529                    | 0.111      | 0.211                | 4.785  | 0.000                   |
| Social Awareness     | 0.450                    | 0.153      | 0.147                | 2.946  | 0.030                   |
| social solidarity    | 0.439                    | 0.159      | 0.111                | 3.797  | 0.010                   |
| social trust         | 0.350                    | 0.119      | 0.137                | 1.840  | 0.020                   |

Based on these findings, spatial developments in rural settlements of Esfandagheh about the dimensions of social capital are:

$$(the\ trust)0.350 + (Cohesion)0.439 + (Awareness)0.450 + (Network)0.529 + (organizations)0.737 + (participation)0.740 + (Relationships)33.177 = \text{Spatial developments of rural settlements}$$



**Figure 3. The intensity factor influences the coefficient of independent variables on dependent variables from the respondents' perspectives**

The research hypotheses are as follows:

- The rural settlements of the Esfandagheh district are at a desirable level in terms of social capital and spatial development;
- The dimensions of social capital have positive and significant relationships with the spatial developments of the studied villages;
- The dimensions of social capital, especially social trust, are of greater importance as the main basis of the spatial evolution of rural settlements.

### 5. Discussion and Conclusion

Based on the analysis of literature, "Messi" and many other scholars in the field of geography have considered the nature of spatial evolution a comprehensive transformation in various natural and socio-economic fields. In such a way, space's socio-economic structure and function are formed and transformed through social relations (Richard, 2010). Therefore, social capital and its dimensions as a social category effectively evolve and transform the dimensions of space. Social science scholars like Putnam and Coleman also emphasized the fundamental role of social capital and its dimensions in the development and evolution of societies, which can help people and planners solve socio-economic issues (Vasylchenko, 2018). Therefore, the present study has investigated the status of social capital in the spatial evolution of rural settlements in the study area. The literature and research background were reviewed to achieve this goal, and finally, a

conceptual framework was provided to explain the research questions and hypotheses.

Six dimensions of social capital, such as social awareness, social organization, social networks and groups, social cohesion, social trust, and social participation, have a positive and significant relationship with spatial developments in rural areas. The spatial evolution of the studied villages has also increased based on improving these dimensions. These results align with Shafiei and Khaksar's (2020) findings that sustainable rural development is largely due to local management's improved dimensions of social capital. The results are also consistent with their research results, indicating that villagers' participation in plans and programs has increased with increasing trust and social cohesion and expanding social networks and relations. Also, the findings of this research correspond with the findings of Blackburn and Lestari (2018). They concluded that improving social capital in rural areas had increased trust between individuals and groups, the development of individuals, and increased individual and group socio-economic participation. In this way, the ground for transforming the dimensions of rural space is provided. In terms of the intensity factor influence of each dimension of social capital, it became clear that the improvement of these dimensions has contributed to the evolution of environmental-ecological, social, economic, and physical-infrastructure dimensions of rural settlements. However, special attention should be paid to improving social trust and cohesion in the



study area. A significant relationship between social capital and spatial developments in each of the studied villages' four dimensions has re-emphasized the need to pay attention to this important issue.

Moreover, researchers such as Passmore et al. (2019) concluded that improving social capital in rural areas had increased trust between individuals and groups, the development of individuals, and increased individual and group socio-economic partnerships. In this way, the ground for transforming the dimensions of rural space is provided. The above conclusion is consistent with Cayho et al., (2019) research, and Shortall (2008) noted that improving the dimensions of social capital makes social transformation possible. The dimensions of social capital are the basis for transforming the dimension of space. It is also in line with the findings of Vasylchenko (2018), who concluded that improving the social capital dimensions provides the grounds for developing and evolving rural space dimensions such as environmental-ecological, social, economic, and physical-infrastructure dimensions. It is also consistent with the findings of Putnam (2020), who defines social capital dimensions especially social trust as a fundamental basis for the spatial development of rural settlements. Based on the research background, in different countries of the world, the improvement of social capital indicators is significant for achieving the transformation of environmental-ecological, social, economic, and physical-infrastructure dimensions, as the above conclusion is in line with the research by (Hena-Zapata & Peiró, 2018).

By improving the dimensions of social capital, spatial transformation is possible, and the dimensions of social capital are the basis for the transformation and evolution of the dimensions of space. Besides, it is consistent with the findings of Borgonovi and Andrieu (2020). They concluded

that improving the dimensions of social capital provides the basis for development and transformation in the dimensions of rural space, such as environmental-ecological, social, economic, and physical-infrastructure. It is also in line with Putnam (2020), which defines the dimensions of social capital, especially social trust, as a fundamental basis for the spatial evolution of rural settlements, social networks, social relations, and social participation. On this basis, all the hypotheses of this research are confirmed. It is worth noting that the effect of social capital on spatial developments in the study area has been positive. As social capital has increased, the environmental-ecological, social, economic, and physical-infrastructure dimensions have increased. In other words, as the amount of social capital has increased, so have the infrastructure's ecological, social, economic, and physical dimensions. In other words, a lack of attention to improving the dimensions of social capital has reduced the amount of social capital; the result will be a reduction in the improvement of the dimensions of rural development. Thus, rural and local management must provide the necessary ground for developing and transforming the dimensions of rural space with appropriate planning and policy to increase the amount of social capital in rural individuals and groups. Therefore, according to what was stated in the literature on the status of social capital, in general, improving social capital's dimensions, the evolution of environmental-ecological, social, economic, and physical-infrastructure dimensions of rural space will be possible.

**Acknowledgment-** The present study is taken from the master thesis of the second author Faezeh Ebrahimipour, Department of Geography and Rural Planning, Shahid Beheshti University of Tehran, Iran.

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## واکاوای جایگاه سرمایه اجتماعی در تحولات فضایی سکونتگاه‌های روستایی (مطالعه موردی: بخش اسفندقه، شهرستان جیرفت)

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### چکیده مبسوط

#### ۱. مقدمه

بر این اساس دورین مسی، میشل فوکو، انتونی گیدنز؛ جوهره و سرشت تحولات فضایی را تحول همه جانبه در زمینه های مختلف طبیعی، اقتصادی، اجتماعی، فرهنگی، سیاسی می دانند، به گونه ای که فضا را یک ساخت اجتماعی تعریف می کنند که از طریق روابط اجتماعی شکل می گیرد و سرمایه اجتماعی و ابعاد آن که شامل (آگاهی اجتماعی، شبکه و روابط اجتماعی، تشکل اجتماعی، انسجام اجتماعی، اعتماد اجتماعی و مشارکت اجتماعی) است در تحول ابعاد فضا اثر گذار هستند؛ براین اساس در این پژوهش سرمایه اجتماعی به مثابه یک عامل دگرگون ساز اجتماعی در راستای تحولات فضایی سکونتگاه های روستایی واری شده است.

#### ۳. روش تحقیق

پژوهش حاضر به واکاوی جایگاه سرمایه اجتماعی در تحولات فضایی سکونتگاه های روستایی بخش اسفندقه پرداخته است. بنابراین، از نظر هدف بنیادی و ازنگرش شیوه اجرای پژوهش، در زمره پژوهش های پیمایشی و بر حسب ماهیت داده ها، از نوع پژوهش های کمی است. از سوی دیگر، از آن جاکه نحوه و میزان تاثیرات متغیرها و همبستگی آن ها را با یکدیگر مورد مطالعه قرار می دهد، پژوهش همبستگی نیز به شمار می آید. جامعه آماری پژوهش شامل تعداد ۴۲ روستای دارای سکنه بخش اسفندقه بوده است. در این پژوهش برای تعیین حجم نمونه تصادفی برای تکمیل پرسشنامه در سطح روستا، تعداد ۳۰ روستا که شامل ۳۵۰۰ خانوار است؛ در دو گروه (روستاهای کوهستانی و دشتی) به صورت تصادفی انتخاب شد. سپس در درون روستاهای انتخابی، خانوارهای نمونه تصادفی بر اساس روش نسبت به اندازه خانوار روستاها (P.P.S) انتخاب شدند. در این ارتباط، حجم نمونه محاسبه شده برای روستاییان بر اساس فرمول «کوکرن» (سرای، ۱۳۹۳)، با سطح اطمینان ۹۵ درصد و پیش برآورد واریانس ۰/۲۵ (۰/۵\*۰/۵) و دقت احتمالی مطلوب ۵ درصد، تعداد ۳۴۴ خانوار محاسبه شد.

اثرات بهبود ابعاد سرمایه اجتماعی در تحولات فضایی سکونتگاه های روستایی، چالش و پرسشی است که می توان پاسخ آن را در درون هر منطقه و ناحیه واکاوی کرد. بنابراین، ضرورت و اهمیت موضوع ایجاب می کند تا شناخت علمی و دقیق تری به مسئله بهبود ابعاد سرمایه اجتماعی در فراگرد تحولات فضایی سکونتگاه های روستایی بدست آوریم. زیرا، این نوع شناخت می تواند به کاهش فقر، نابرابری، بی عدالتی و بهبود ابعاد تحولات فضایی سکونتگاه های روستایی در ناحیه مورد مطالعه کمک نماید. افزون براین، در این ناحیه طرح ها و برنامه های پرشماری در زمینه فعالیت های عمرانی، اجتماعی - اقتصادی در حال انجام است. بنابراین، پژوهش در زمینه میزان بهبود ابعاد سرمایه اجتماعی روستاییان در بخش اسفندقه، فرصتی برای مدیریت محلی، روستاییان و دست اندرکاران توسعه و تحول روستایی فراهم می سازد تا نقاط قوت و ضعف روستاها را در این زمینه بهتر بشناسند؛ و کمک می نماید تا در این راستا به گونه ای متناسب گام بردارند.

#### ۲. ادبیات نظری تحقیق

سرمایه اجتماعی با ابعادی همچون: آگاهی، انسجام، اعتماد، مشارکت، تشکل و گروه ها، و شبکه و روابط به پیوندها و ارتباطات میان اعضای یک شبکه به عنوان منبع با ارزشی اشاره دارد؛ که با خلق هنجارها و اعتماد متقابل موجب تحقق اهداف اعضا می شود. براین بنیاد، زمینه مناسب برای بهره وری سرمایه انسانی و فیزیکی و نیل به موفقیت برای افراد فراهم می شود. به گونه ای دقیق تر، سرمایه اجتماعی، کمک دهنده رفتار جمعی است؛ که هزینه های سرپیچی از رفتار جمعی را افزایش می دهد؛ و معیارهای خوب دو طرفه را تقویت کرده، و جریان گردش اطلاعات را که شامل اطلاعات مربوط به خودشناسی فعالانه است، بهبود می بخشد.

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شش بعد سرمایه اجتماعی همچون: آگاهی اجتماعی، شکل اجتماعی، شبکه و گروه های اجتماعی، انسجام اجتماعی، اعتماد اجتماعی و مشارکت اجتماعی، رابطه مثبت و معنی دار با تحولات فضایی سکونتگاه های روستایی دارند، بر این اساس با بهبود این ابعاد، سطح تحول فضایی روستاهای مورد مطالعه هم افزایش یافته است.

به سخن دیگر، بهبود سکونتگاه های روستایی بدون بهبود ابعاد سرمایه اجتماعی امکان پذیر نیست. در همین راستا، با توجه به نتایج حاصل از تحلیل رگرسیون، در زمینه شدت اثرگذاری هر یک از ابعاد سرمایه اجتماعی آشکار شد که بهبود این ابعاد به تحول ابعاد محیطی-اکولوژیک، اجتماعی، اقتصادی و کالبدی-زیربنایی سکونتگاه های روستایی کمک کرده است. البته، در این میان به ویژه باید به ارتقا اعتماد اجتماعی و انسجام اجتماعی در ناحیه مورد مطالعه توجه شود. وجود رابطه معنی دار بین سرمایه اجتماعی با تحولات فضایی در هر یک از چهار بعد اقتصادی، اجتماعی، محیطی-اکولوژیک و کالبدی-زیربنایی روستاهای مورد مطالعه تاکید مجددی بر ضرورت توجه به این مهم شده است.

**کلیدواژه ها:** سرمایه اجتماعی، تحولات فضایی، سکونتگاه روستایی، بخش اسفندقه، شهرستان جیرفت.

#### تشکر و قدرانی

پژوهش حاضر برگرفته از پایان نامه کارشناسی ارشد نویسنده دوم (فائزه ابراهیمی پور)، گروه جغرافیای انسانی و آمایش، دانشکده علوم زمین، دانشگاه شهید بهشتی، تهران است.

از آن جاکه تعداد نمونه پرسشنامه در تعدادی از روستاها، با توجه به روش نسبت به اندازه خانوار روستاها (P.P.S) حد نصاب لازم را برای تکمیل پرسشنامه را پیدا نکرد، تعداد پرسشنامه های خانوار به ۳۷۰ خانوار افزایش داده شد.

#### ۴. یافته های تحقیق

بر اساس ضرایب استاندارد، اهمیت نسبی متغیرهای مستقل در تبیین و پیش بینی متغیر وابسته آشکار شده است. بر این شالوده، به ترتیب مشارکت اجتماعی، شکل و گروه های اجتماعی، شبکه و روابط اجتماعی، آگاهی اجتماعی، انسجام اجتماعی و اعتماد اجتماعی نقش برجسته ای در تبیین و پیش بینی تحولات فضایی روستاهای ناحیه مورد مطالعه دارد. در این میان، متغیر مشارکت اجتماعی از بیشترین اهمیت برخوردار است، زیرا یک واحد تغییر در انحراف معیار این شاخص موجب می شود تا انحراف معیار متغیر وابسته (تحولات فضایی) به میزان ۰/۷۴۰ تغییر پیدا نماید. در حالی که یک واحد تغییر در انحراف معیار سایر ابعاد به ترتیب تغییراتی به میزان ۰/۷۳۷، ۰/۵۲۹، ۰/۴۵۰، ۰/۴۳۹، ۰/۳۵۰ در انحراف معیار ابعاد متغیر وابسته را در پی خواهد داشت.

#### ۵. بحث و نتیجه گیری

پژوهش حاضر به واکاوی جایگاه سرمایه اجتماعی در تحولات فضایی سکونتگاه های روستایی در بخش اسفندقه پرداخته است. به منظور نیل به این هدف، ادبیات موضوع و پیشینه پژوهش مورد واریسی قرار گرفت و سرانجام چهار چوب نظری پژوهش ارائه شد. در این راستا، فرضیه براساس روابط فرض شده در مدل مفهومی مورد آزمون قرار گرفت. در این چارچوب نتایج مطالعه حاضر دلالت بر آن دارد که



#### How to cite this article:

Shafieisabet, N. & Ebrahimipoor, F. (2022). Analysis of the role of social capital in the spatial evolution of rural settlements (Case study: Esfandagheh District, Jiroft County). *Journal of Research & Rural Planning*, 11(2), 23-40.

<http://dx.doi.org/10.22067/jrrp.v11i2.88511>

#### Date:

Received: 05-12-2021

Revised: 09-02-2022

Accepted: 01-04-2022

Available Online: 01-04-2022