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Drivers for National Forest Lands Seizure by Rural Communities in Central Zagros Regions: A Factor Analysis

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ABSTRACT

One of the most important current issues and problems of natural resources management in Iran is the destruction and seizure of national forest lands and rangelands in various ways. This problem can have several reasons, which need to be scientifically surveyed for each region individually. This research was conducted to assess the economic, social, cultural and legal factors as the main underlying drivers of land seizure in rural communities of Zagros Regions in I.R. Iran. The study utilized a mixed research methodology based on an exploratory case study and a descriptive-explanatory survey. This methodology was conducted using the techniques of documents analysis, direct observation of land seizure in Zagros Region, semi-structured and structured interviews using a questionnaire. The statistical population consisted of 80 households with a history of seizing and occupation of national lands in the villages of study area, and all of whom were interviewed. The results of factor and regression analysis showed that economic components (with beta coefficient of 0.881) such as poverty, unemployment, low income and lack of permanent jobs had the most impacts on the destruction and seizure of the national lands followed by socio-cultural components (with beta coefficient of 0.797). In addition, the results of this survey revealed that legal issues such as the weakness of existing laws and the weakness of custodians to conserve and protect national resources had the least effect in comparison with other factors. Considering the increasing destruction and degradation of the national lands in Iran, in order to preserve the existing land and prevent the increase in the degradation and seizure of forests and rangelands, the conservation plans of the government and the authorities of natural resources protection should be aimed at improving the livelihoods of rural communities and creating sustainable jobs.

Keywords: National land degradation, Rangelands, Rural livelihoods, Socio-economic factors.

INTRODUCTION

Fast population growth and rapid economic development in developing countries in the last decades have put increasing pressure on forests and other natural resources by overexploitation and conversion into agricultural lands (FAO, 2003; Chan and Sasaki, 2014; Mahdavi *et al*., 2019). Forest decline and degradation refers to clearing of forests for pasture, harvesting, crop cultivation and development of residential areas (Gao and Liu, 2012). Remarkably, forest decline and fragmentation have various negative environmental and ecological outcomes including species extinction, soil erosion, non-native species invasion and desertification (Newman *et al.*, 2014). Based on FAO's report (2015), total annual rate of forest area decline was 3.3 million ha per year between 2010 and 2015, while the annual rate of deforestation in Iran was estimated 2.3% in the northern part of the country and 1.1% in other regions (e.g. Zagros Regions)

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(Esmaeili and Nasrnia, 2014). Presently, because of climate change and increasing demand for agricultural land, there is an increasingly attention in forest loss and an especial concern for large scale land grabbing (Larson and Dahal, 2012). Therefore, there is a high priority for local government to revise formulation of sustainable forest management and forest protection policy or land use planning (Reddy *et al*., 2013).

Numerous studies have been conducted in the field of human factors affecting the occupation of national lands and land use change, including the research of Shi *et al*. (2108) in Shanghai who found that socio-economic factors were effective in causing changes in the seizure and land uses of rangeland and forestlands. Long *et al*. (2007) examined the socio-economic driving forces of land use change in the Kunshan Region of China. The results of their research showed that the criteria of industrialization, urbanization and population growth and economic reform and transformation of China are the four main driving forces and the most important factors affecting land use change in this region. In the study of factors affecting destruction of forests and pastures with emphasis on the Zagros Region, Ebrahimpour (2001) found that the most important causes of natural resources degradation in the region were population growth, increasing economic needs, management and organizational systems, deforestation and conversion to agricultural uses, unpredictable and early grazing livestock, and civil and industrial measures. However, economic and social factors are the most important human factors affecting land use change. In natural resource areas, land use change for financial and economic use of land is one of the issues that has always been a controversial problem in rural areas. At the same time, social issues and relations are closely related to these changes and their intensification or mitigation. In this respect, investigation of drivers for forest and rangeland loss and occupation by local people is essential for land use planning and policy decision-making (Liu *et al*., 2016).

About ten million population of the country are living in the Zagros Region, of whom 1.5 million are living within forests (Sagheb-Talebi *et al*., 2004). Undoubtedly, this big number of population living in Zagros Forests have a great impact on the degradation and land use changes of these forests. After a long period of diversified forest ownership and tenure (e.g., feudalism and forms of private ownership), forest ownership in Iran was transferred to the government following enactment of the Forest Nationalization Law (FNL) in 1963 (Yakhkeshi *et al*., 2008). Today, informal and traditional forestland tenure in Zagros Areas is somehow complicated and different in various places in the region. After FNL, when existing informal ownership deeds suddenly became invalid, initially this led to increased deforestation, land-use conversion, and disputes between the government and the communities that had lost their long-established ownership of forest resources and lands (Yachkeschi *et al*., 2008). Nonetheless, due to high dependence of local people on forest resources and weak enforcement, the traditional and customary rights to forest resources are still under de facto regime even though forest authorities do not formally accept it (Soltani *et al*., 2014).

Among the issues and challenges of the Zagros Areas, one of the most important challenges that the General Department of Natural Resources and Watershed Management Office (GDNRWMO) of the western provinces (Zagros Regions) of Iran are involved in is the challenge of destruction and seizure of national lands (forests and rangelands) by the local communities. This challenge is very important, such that there are many judicial cases to address these violations in the courts of Zagros' Provinces, but so far, there is no analytical study to investigate the drivers for such violations by the local communities in central Zagros Regions. According to the statistics of GDNRWMO of Ilam, about 6,000 hectares of agricultural lands in Malekshahi County (study area) was the result of destruction and

seizure of forest or rangelands over the past years.

This research attempted to identify and analyze the drivers of seizure of national lands including forest and rangelands by the local communities in Gachi Division of Malekshahi County as a representative of rural communities in central Zagros Regions. More particularly, the study aimed to find answers to the following research questions:

- What are the main drivers for natural resources land seizure and conversion into agricultural lands in central Zagros Regions?
- Which factor has the most important effect on national land seizure and forest land use changes?
- Are there realistic solutions to prevent the destruction and seizure of national lands and the return of land captured by rural communities?

Answers to these questions would be useful for introducing appropriate policies that could result in forest and other natural land protection and sustainable development in Zagros Regions.

MATERIALS AND METHODS

Study Area

This case study was carried out in Gachi division of Malekshahi County, with high rate of national land destruction (700 ha) compared to other areas in the county. The study area (3,203 ha) is located between 46°, 20' to 47°, 00' eastern longitude and 32°, 20' to 33°, 00' northern latitude (Figure 1).

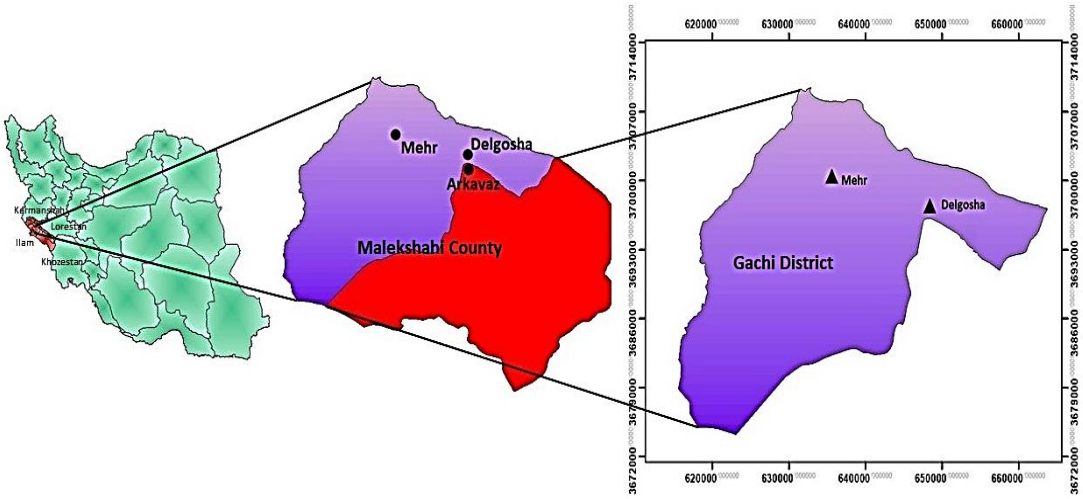

Figure 1. The map of study area in Ilam Province.

Malekshahi holds in total 105,000 ha of forest, complemented by agricultural land including pastoralist land uses, as shown in Figure 2. Within the entire study area, 56% represents forest cover (with variable tree-cover densities), 36% is rangelands, and 8% agricultural lands (Mahdavi *et al*., 2019).

According to data from the weather station in Malekshahi County, the mean annual precipitation in the study area is 500 mm and the average relative humidity of the region is 35%. In addition, the long term mean maximum temperature of the warmest month (July) is 48ºC and the long term mean minimum temperature of the coldest month (January) is minus 7ºC (Ilam Meteorological General Office, 2012). The county of Malekshahi has two divisions (Central and Gachi) and two towns with 22,587 populations (14,559 urban populations+7,883 rural populations) in 5,633 households in total. Table l shows the population of each of the eight villages selected for the study.

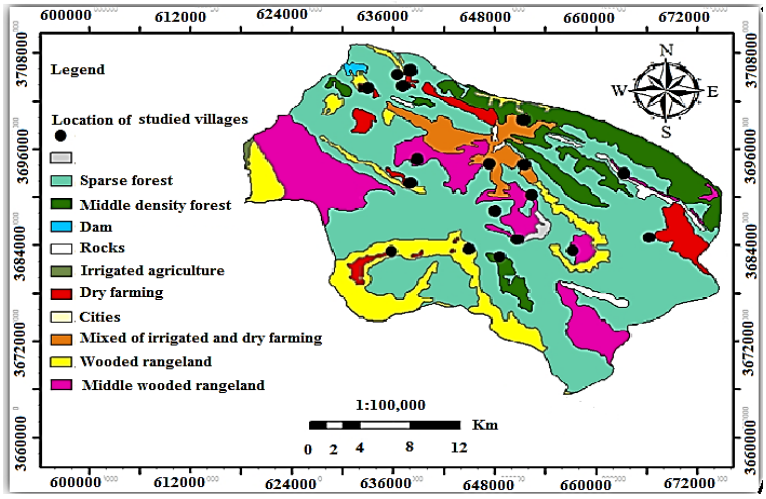

Figure 2. Land uses in Malekshahi County.

Table 1. Study villages and the number of household and population

Selected villages	No household	No population
Ziad Abad	30	162
Siraneh	15	83
Varbid	50	263
Shoreh	45	230
Bagh-e-Gholamali	29	156
Chashmeh Barik	18	93
Kalk Naghi	107	477
Total	294	1464

Data Collection and Survey Instrument

At first, by inquiring from the relevant offices (Jihad-e-Keshavarzi and Natural Resources Offices of Malekshahi County), information was obtained about the level, extent and location of the degraded and national lands seizure in the study area. Then, a researcher-made questionnaire was used to ask and collect data from the people who illegally seized or degraded national lands.

From 294 households that were living in seven villages in the study area, 80 households with a judicial record regarding land seizure were selected. To collect the field data, a member of the research team who was native to the study area was selected. Familiarity with the local areas and considered issues was the main reason for choosing local field assistant. The data were collected by visiting all 80 respondents (household heads) at their homes and conducting a formal interview based on the survey questionnaire from June to September in 2018.

The questionnaire included 35 different questions (open and closed questions) and were implicitly divided into four major sections (Economy, Social, Cultural, and Legal). The questions were designed in such a way as not to be susceptible to the statistical community and to be easily convinced of being accountable. Since acceptance of the fact that the land under their tenure were part of the national land was difficult, we tried to deal indirectly with these types of questions. A pilot study was conducted to measure the reliability of the questionnaire. Thirty questionnaires were filled out by the households in the study villages. Cronbach's Alpha coefficient was estimated at 0.81, indicating that the questionnaire had a high internal consistency (Cronbach, 1951; Streiner, 2003).

Statistical Analysis

Factor analysis is used for many purposes. For instance, it is used to determine whether numerous variables can be explained on the basis of a smaller number of factors. The method has two main types. One, known simply as factor analysis, extracts factors

based on their shared variance. The other, known as principal component analysis, extracts factors based on the total variance of the variables. In this study, Principal Component Analysis (PCA) was used for factor extraction, which is the first phase of exploratory factor analysis. Principal component analysis is much more like a data reduction technique in which a researcher reduces a large number of variables to a smaller, more manageable number of factors (Krabbe, 2017).

The eigenvalue is a measure of how much of the variance of the observed variables a factor explains. In PCA, only factors with an eigenvalue ≥ 1 are considered as significant factors for further analysis (Azadi *et al*., 2013). Furthermore, a scree plot of the eigenvalues was used to show the breaks in determining numbers of factors including sufficient variance of responses to the entire questions.

The variables in this study were mainly measured on a five point Likert-type scale (Yousefpour and Hanewinkel, 2015) i.e., with five alternative responses for each query. We used the correlation matrix among the responses as independent and correlated variables and applied rotated component matrix to extract and interpret the factor loading of variables in each factor. To facilitate the interpretation of factor analysis results, the variables have been categorized in nine factors and named.

In addition to factor analysis, in this research, regression test was used to predict the behavior of dependent variable (land seizure and degradation). The goal of regression test was to predict the dependent variable behavior by using the regression line equation with knowledge of the values and characteristics of the independent variables. Considering that there were several variables, we used a multivariate linear regression to examine the dependent variable behavior in relation to independent variables.

RESULTS

Characteristics of Respondents

All the respondents were the head of household and 73 of the respondents (91%) were male and the rest (7 people) were female. About 53% of all respondents did not have any education (illiterate) and 20% of them did not complete primary education. 12.5% of the respondents completed middle school, 12.5% were high school graduates, and only one had University degree. Compared to other occupations, agricultural activity was remarkably more important to household's livelihoods. About 70% of respondents were farmers, 18.7% shepherds, 2.5% laborers, 7.5% had free jobs, and one of them worked as homemaker. The mean household's size was 5.8±1.6 and the maximum, minimum and average ages of respondents were 90, 25 and 53.08±13.9 years, respectively (Tables 2 and 3).

Table 2. Frequency distribution of respondents' age, education, household population and occupation.

Age of respondents	No frequency	Education	No frequency	Household population	No frequency	Occupation	No frequency
Under 30	7	Illiterate	43	2	3	Farmers	56
31-40	5	Primary School	16	3	16	Shepherds	15
41-50	19	Guidance School	10	4	15	Laborers	2
51-60	26	High School	10	5	22	Free jobs	6
61-70	15	University	1	6	11	Homemaker	1
> 70	8			> 7	13		
Total	80	Total	80	Total	80	Total	80

Table 3. Frequency distribution of marital status and gender of the studied household heads.

Marital status	Frequency	Gender	Frequency
Single	3	Woman	7
Married	77	Man	73
Total	80		80

Data Classification

In order to simplify analysis of the data, after editing, encoding and entering the data, the classification of the variables and the definition of the concepts were made. Table 4 shows the results of these classes of variables.

Table 4. Variable classification table.

Name of class	Variables
Economic	- Plowing of forest and rangeland lands for high permanent income - Leaving national lands when they have a well-paying job - Unemployment and plowing of national lands - High living costs and plowing national land - In order to have a better life, with more assets, it is attempting to seizure and plow the national lands - Because of having less assets than other tribesmen, they are attempting to seizure and plow the national land - Due to the shrinkage of the land after the independence of the family members - Due to lack of inherited agricultural land - To use loans and bank financial facilities for agriculture - Due to the lack of agricultural land around the village
Social	- Death of the head of the family - Having a large number of family members - Immigration -Impact of war (between Iran and Iraq) and migration from the village and deforestation - Tribal competition - Honoring those who have more lands - Thinking of originality and superiority with more lands - Transfer from nomadic system to settlement in the village - More inheritance for children
Cultural	- Compensation for the shortage of inheritance - Lack of knowledge about the importance and the value of forests - After the fire, the land was suitable for agriculture - The idea that after the forest fire, the land was suitable for agriculture - God's pleasure in reclamation of the land -The idea that national lands would be useful if they were farmed -The idea that agriculture has more benefit than the forest -The idea that rural development will be achieved with more agricultural land
Legal	Lack of effective law enforcement by related offices The weakness of existing laws The weakness of government and the judiciary to deal with the offenders -If the government prevents, we will abandon the seized national lands

Multivariate Regression Analysis

We assumed that the four classes identified were involved in the seizure and destruction of national lands. Therefore, it was necessary to determine the contribution of each of these categories in national land seizure. The total of these variables were classified as dependent variables and each of the clusters were separately entered into the regression model as an independent variable. Table 5 shows the results of the multivariate regression analysis. The economic component with a beta coefficient of 0.881 and a t-value of 16.41 had a significant effect on the prediction of the variation of the dependent variable, namely, national land seizure and degradation. As adjusted R^2 shows, the model predicts 77% of the variance of the dependent variable, and its beta value indicates that by increasing a standard deviation in the economic variables, the dependent variable will increase to 0.88 standard deviation.

Table 5. Results of multivariate regression analysis.

Variables	Unstandardized coefficients		Standardized coefficient	t	P
	B	Std error	Beta		
Constant	25.08	5.22		4.8	0.00
Economic variables	2.03	0.124	0.881	16.41	0.00
Model	ADJ R^2= 0.773	R^2= 0.775	R= 0.881		
Constant	41.33	5.96		6.93	0.00
Social variables	2.15	0.185	0.797	11.66	0.00
Model	ADJ R^2= 0.631	R^2= 0.635	R= 797		
Constant	46.98	5.65		8.30	0.00
Cultural variables	2.54	0.225	0.788	11.31	0.00
Model	ADJ R^2= 0.616	R^2= 0.621	R= 788		
Constant	94.57	5.38		17.57	0.00
Legal variables	1.26	0.428	0.317	2.94	0.00
Model	ADJ R^2= 0.089	R^2 = 0.1	R= 0.317		

Factor Analysis and Their variables

Figure 3 shows a scree plot of the eigenvalues and the nine main factors that play the most role in explaining the variance of the variables.

Table 6 shows the percentage of variance and eigenvalues for the nine main factors. Over 70% of the total variances are explained, which indicates that the factor analysis is efficient in identifying the key factors.

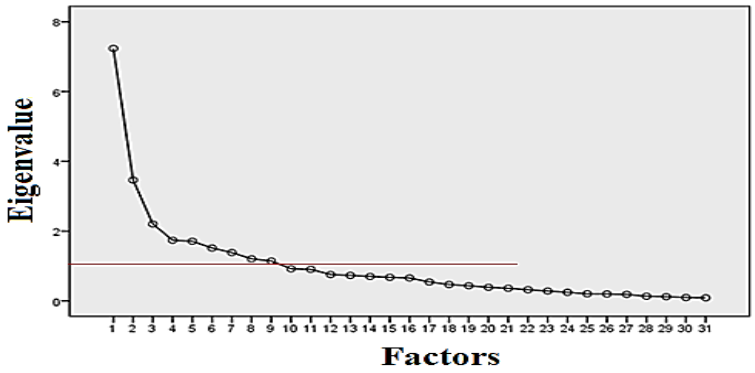

Figure 3. Scree plot used to determine the number of factors to retain in an exploratory factor analysis.

Table 6. The percentage of variance and eigenvalues for nine main factors.

Total variance explained									
	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
Components	Eigenvalues	% of variance	Cumulative %	Eigenvalues	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	7.237	23.345	23.345	7.237	23.345	23.345	3.791	12.228	12.228
2	3.462	11.167	34.512	3.462	11.167	34.512	3.440	11.096	23.324
3	2.202	7.104	41.616	2.202	7.104	41.616	2.338	7.543	30.867
4	1.738	5.607	47.222	1.738	5.607	47.222	2.280	7.354	38.221
5	1.708	5.511	52.733	1.708	5.511	52.733	2.234	7.208	45.429
6	1.516	4.892	57.625	1.516	4.892	57.625	2.181	7.036	52.465
7	1.384	4.465	62.090	1.384	4.465	62.090	2.119	6.835	59.300
8	1.205	3.888	65.978	1.205	3.888	65.978	1.623	5.237	64.536
9	1.142	3.683	69.662	1.142	3.683	69.662	1.589	5.125	69.662

The factors were named after the variables with significant correlation placed in nine separate factors. Table 7 shows the name of factors, the variables

of each factor with highest contribution in explaining the percentage of variances, and their Spearman correlation coefficient.

Table 7. Main factors and their variables for national land seizure in study area.

No factor	Name of factor	Variables	Spearman correlation coefficient
1	Land acquisition	Transfer from nomadic system to settlement in the village	0.773
		Use of bank incentives and loans	
		Having more land for a better life	0.711
		Village development	0.666
		Lack of cultivable lands in the village	0.627
		Lack of land	0.602
		Shrinking lands after the independence of family members	0.568
			0.539
2	Poverty and unemployment	Unemployment	0.793
		Better income and abandon national land	0.760
		High cost of living	0.608
		Less assets than other members of the clan	0.570
		Getting high and permanent income by plowing and cultivating national lands	0.530
3	Legacy	More inheritance for children	0.784
		Compensation for the shortage of inheritance	0.738
4	Viewpoint	God's pleasure in building up the land	0.807
		After the fire, the land was suitable for agriculture	0.569
5	Migration	The role of non-native people entering into village and deforestation	0.833
		The role of war (between Iran and Iraq) and village immigration and deforestation	0.701
6	Weakness of law	Failure to play the protective role of related offices	0.827
		The weakness of existing laws	
		The weakness of government and the judiciary to deal with the offenders	0.710
			0.608
7	Tradition	Honoring more lands	0.795
		Customs and supremacy	0.722
8	False perceptions	Useless forest land	0.770
9	lack of knowledge	lack of knowledge about the importance and the value of forests	0.720

DISCUSSION

Understanding the drivers of forestland use changes and forest degradation is believed to be fundamental for developing policies and measures that can alter current trends of forest loss and national land degradation (Rudel *et al*., 2009). Etongobau (2016) suggested the drivers of land-uses change are multifaceted and cannot be reduced to a few variables; rather, they operate at different levels and scales in the human-environment linkage (Lambin *et al*., 2003). The drivers for national land seizing and degradation in Zagros Regions are also numerous and location-specific in nature.

As many scholars suggested, land use decision making at household level cuts across economic, social, cultural, institutional, land tenure security and property rights, etc. factors (Nkonya *et al*. 2013; Mirzabaev *et al*. 2015). In this research, we have considered complex interrelated drivers for national land seizure and degradation. The study has focused on the variables of the four main components: economic, social, cultural, and legal.

As agriculture and livestock, systems are the dominant land use types in Zagros Regions, this study also revealed that the conversion of forests and rangelands to croplands and pastures have been identified as the main direct driver of national lands degradation and deforestation in study area. Mahdavi *et al*. (2019) also showed that the households of the villages in Malekshahi County had cleared 1.04±0.78 ha of forestland over their lifetime, converting it into other land uses (crops, gardens, pasture, and residential

areas). For more general net forest clearing in the region, the deforestation rate in the entire county of Malekshahi has historically (1976–2014) been 0.43% of total forest area (105000 ha) per year (Mirzaeizadeh *et al*., 2016).

Economic Factor

The results identified the economic factor with beta coefficient of 0.881 as the most important factor in seizing and destroying national lands and turning them into agricultural lands. Meanwhile, the results of factor analysis confirmed the same issue, such that the components of land acquisition, poverty and unemployment from the group of economic concepts were the highest with 23.44 and 11.6% of the total variance, respectively (Tables 4, 5, and 6). This finding is in line with the results of many studies that confirmed off-farm employment opportunities could reduce forest degradation because it is competing with agricultural activities and utilizing forest resources. The availability of better-paid off-farm employment because of urbanization and economic development causes the loss of farm laborers. This loss raises the wages of the remaining workers, thereby turning more agricultural enterprises unprofitable. Such circumstances thus cause farmers to abandon their more remote and less productive fields, which eventually return to forests (Rudel *et al*., 2005). As Soltani (2014) suggested, perhaps, one possible solution for limiting the access of rural households to forest resources could be the paying to households in the form of subsidies in exchange for non-use of forests, or alternative employment opportunities for these households should be provided.

However, the lack of non-agricultural employment reflects the fact that the structural transformation of the economy is not complete. In any case, policies that increase employment opportunities outside the farm and lead to poverty reduction can also help to reduce forest degradation (Angelsen and Kaimowitz, 1999). Some studies in Iran also indicated that the economic poverty and low income are the main causes of forestland seizure and degradation for the development of agricultural land (Amozad *et al*., 2007; Soltani *et al*., 2014).

Social Factor

According to the results, the variables of social component such as death of the head of household, large family population, change of lifestyle from nomad pastoralism to rural pastoralism, competition of clan members for more land, tradition, and inheritance ranked the second in seizure and destruction of national lands. In regression test, social component with beta coefficient of 0.797 showed significant ability to predict dependent variable (seizure and destruction of national lands) (Table 4). Social reasons for the seizure and destruction of forestlands by foreign researchers have also been investigated. Giliba *et al*. (2011) considered the effect of social factors on deforestation in the Bereku forest reserve in Tanzania insignificant, while Vu *et al*. (2014) demonstrated its significant effects on the destruction of natural resources in Vietnam. Rqibat *et al.* (2014) identified social factors such as population density and rural living conditions along with economic factors as the main cause of forest degradation in Madagascar. Iranian researchers have also introduced social problems such as low level of education, low level of facilities and lack of development (Imanirastabi *et al*., 2014), increase of human population, management, and organizational systems (Ibrahimpour, 2000) along with economic problems as the significant reasons for the destruction and degradation of forestlands.

Cultural Factor

The results showed that cultural components include variables such as

negative attitude to natural resources, lack of awareness of the benefits of preserving forests and pastures, believing in more agricultural benefits than forests, etc. are in lower rank than socio-economic components. Cultural component with beta coefficient of 0.788 significantly ranked third in the regression model (Table 4). Several studies examined the role of cultural factors in the degradation of forests. Some of them considered lack of knowledge about natural resource conservation (Ojoyi *et al*., 2015), or low level of environmental culture (Imanirastabi *et al*., 2014) along with socio-economic problems, as the main reasons for deforestation and forest degradation.

Many religions and indigenous spiritual beliefs in the world have emphasized the conservation of nature and sacred trees for generations (Chunhabunyatip *et al*., 2018). Muslims do believe in nature conservation (Prakash Kala, 2017) and Islamic religion also emphasizes nature conservation and even encourages its followers to plant trees. However, unfortunately, there are some religious and cultural misconceptions among Muslims about the reclamation of lands. Based on the religious beliefs of many people in the study area, conversion of forests into agricultural lands is pleasing to God. Therefore, some of the problems about cultural issues are related to the religious beliefs, environmental knowledge, and awareness of the people in the study area.

Legal Factor

We considered the weakness of the law, such as the lack of supervision of state agencies, or the weakness of the laws on conservation of natural resources, as the fourth assumption of the reasons for the seizure and destruction of national lands in this study. This assumption was also taken into account in other studies. As some scholars pointed out, the lack of timely implementation of the law and the lack of judicial backing (Kushanfar, 2009), the lack of clarity of existing laws, failure to deal decisively with the offenders and the low level of fines and deficiency of laws as the factors affecting the destruction of natural resources (Ansari *et al*., 2007). In this study, although the role of legal variables in the destruction of national lands was significant, a beta coefficient of 0.317 indicates a much weaker role than the other studied components. The result of the factor analysis also shows that the legal factor only explains 4.8 percent of the total variance (Tables 4, and 5).

CONCLUSIONS

The results showed that economic and social factors, along with cultural and legal factors, are effective drivers in national land seizure and destruction in the study area. However, this effect can vary by different factors. Indeed, land use patterns are highly correlated with the local governance institutions, job opportunities, and natural resource endowment of a country. This research emphasizes that, if the government's goal is to reduce the amount of national land seizing and degradation, it should have a more effective role in economic development issues in Zagros Regions (increasing income, eliminating unemployment and reducing living costs, and so on) and more efforts to improve the livelihoods of the rural community and forest dwellers.

This can be achieved by creating home-based businesses for rural women, creating conversion industries related to the dominant rural products, handicraft economic, native animal breeding, cultivation and exploitation of medicinal plants, development and exploitation of non-wood products such as gums, manna, tannin, and development of dryland gardens.

DISCUSSION

According to the results of this research, various options can be proposed to reduce the

amount of land seizing and degradation, or even enhance land reclamation.

At the end of the questionnaire, those who took possession of the national lands (forests or rangeland) were asked if they were willing to abandon the seized land. If they agree, what are their request to give up captured national lands?

Three quarters of the respondents were prepared to give up the land to the government in exchange for certain things, such as proper employment, increased income, improved livelihoods, receiving adequate agricultural land, and receiving financial facilities.

Perhaps the first strategy that can to be taken into account is the use of force, the power of law, and the referral of cases to judicial authorities and reclaiming seized land. Of course, this is a path that the law has designed and cannot be blamed on the executives and managers for reliance on it. Nevertheless, given the high level of seizure and, consequently, the high number of affected families, this method is time consuming and difficult. It may even cause many social conflicts. Experiences have shown that this method cannot be an effective and durable solution, since many of the captured land are re-seized after being abandoned, and their conservation is costly. Meanwhile, the results of this study show that the legal factor did not have much effect on the seizure of land, and even they did not believe that the occupied land can be taken back from them by force of law.

It is possible to restore the forest cover by planting drought resistant fruit trees that are close to the forest species of the Zagros Region such as almonds, figs, buckthorn tree, etc. There is also a new running policy in Forest, Rangelands, Watershed Organization (FRWO) of Iran that has focused on planting fruit tree species (such as walnut, sumac, almond, figs, grapes, etc.) in sloppy lands and rangelands of Zagros Regions (FRWO, 2018). However, this may lead to stabilization of ownership and a factor in persuading others to seizure national lands because they will escape the law after planting fruit trees.

Considering that unemployment is one of the main economic factors in reducing the quality of livelihoods of the rural community in the study area, by giving employment loans and creating a stable and profitable job in exchange for the abandonment of seized land, land reclamation and restoration can be realized.

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محرک‌های تصرف اراضی ملی جنگلی توسط اجتماعات محلی در نواحی زاگرس مرکزی: یک تحلیل عاملی

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چکیده

یکی از مهمترین مسائل و مشکلات جاری مدیریت منابع طبیعی در ایران، تخریب و تصرف اراضی جنگلی و مراتع ملی به طرق مختلف است. این مسئله می‌تواند دلایل متعددی داشته باشد که نیاز به بررسی علمی برای هر منطقه به

صورت جداگانه دارد. این پژوهش با هدف ارزیابی عوامل اقتصادی، اجتماعی، فرهنگی و حقوقی به‌عنوان محرک‌های اصلی تصرف اراضی ملی در جوامع روستایی مناطق زاگرس‌نشین جمهوری اسلامی ایران انجام شد. این مطالعه از روش تحقیق ترکیبی مبتنی بر مطالعه موردی اکتشافی و یک بررسی توصیفی- اکتشافی استفاده کرده است. این روش با استفاده از تکنیک های تحلیل اسناد، مشاهده مستقیم تصرف اراضی در منطقه زاگرس، مصاحبه نیمه ساختاریافته و ساختاریافته با استفاده از پرسشنامه انجام شد. جامعه آماری شامل ۸۰ خانوار با سابقه تصرف اراضی ملی در روستاهای منطقه مورد مطالعه بود که همگی مورد سوال قرار گرفتند. نتایج تحلیل عاملی و رگرسیون نشان داد که مولفه‌های اقتصادی (با ضریب بتای ۰/۸۸۱) مانند فقر، بیکاری، درآمد پایین و نبود شغل دائمی بیشترین تأثیر را در تخریب و تصرف اراضی ملی دارند و مولفه های اجتماعی-فرهنگی (با ضریب بتا ۰/۷۹۷) در سطوح بعدی قرار گرفته‌اند. همچنین نتایج این بررسی نشان داد که موضوعات حقوقی از جمله ضعف قوانین موجود و ضعف متولیان امر در حفظ و حراست از منابع ملی کمترین تأثیر را در مقایسه با سایر عوامل داشته است. با توجه به افزایش روزافزون تخریب و تصرف اراضی ملی در ایران، به منظور حفظ اراضی موجود و جلوگیری از افزایش تخریب و تصرف جنگل‌ها و مراتع، برنامه‌های حفاظتی دولت و مسئولان حفاظت منابع طبیعی باید با هدف بهبود معیشت جوامع روستایی و ایجاد مشاغل پایدار مورد توجه قرار گیرد.