

# Research Paper: Causes and Consequences of Extending Cash Farm Lease (Case Study: Kermanshah's Mahidasht County)

Maryam Ghanbari<sup>1</sup>, Farahnaz Rostami<sup>2\*</sup>, Shahpar Geravandi<sup>2</sup>

1. MSc, Department of Agricultural Extension and Education, Campus of Agriculture & Natural Resources, Razi University, Kermanshah, Iran.

2. Assistant Professor, Department of Agricultural Extension and Education, Campus of Agriculture & Natural Resources, Razi University, Kermanshah, Iran.



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## ABSTRACT

**Purpose:** This qualitative research aims to investigate the causes and consequences of the expansion of tenancy in the Mahidasht region.

**Methods:** In this study, the fault tree analysis technique (FTA) was used to investigate the reasons for the expansion of the tenancy phenomenon in the region. Also, the event analysis technique (ETA) was used to investigate the consequences of developing this exploitation system. Data were collected through unstructured in-depth individual interviews, focus groups, group discussions and direct observations.

**Results:** The results showed that the main reasons for creating motivation among farmers are mainly organizational, economic, individual, social and environmental management. In the other side problems include adopting inappropriate agricultural policies, lack of proper government support for farmers, lack of capital and money to provide tools and inputs, lack of skills to carry out profitable crops, lack of storage and lack of cooperation and trust between local people.

**Conclusion:** By identifying the causes and consequences of the expansion of the tenancy system and providing practical solutions, this study can lead to achievements for the rural development officials of the province in such a way that by adopting measures such as extensive training to the owners and introduction of new farming methods, providing credits and easing the loan obtaining, creating appropriate insurances, establishing a two-way and proper relationship between the university and Agriculture Jihad with farmers and gaining their trust, providing facilities and welfare health services for the villagers, persuading the owners to stay in the village and engage in the agricultural profession.

## \* Corresponding Author:

Farahnaz Rostami, PhD

Address: Department of Agricultural Extension and Education, Campus of Agriculture & Natural Resources, Razi University, Kermanshah, Iran.

Tel: +98 (918) 3395753

E-mail: fr304@yahoo.com

## 1. Introduction

The leased exploitation system is one of the forms of the existing exploitation system in Iran. Despite the increasing expansion of this system, a few studies have been conducted on its stability and details.

The form of tenancy is cash-rent farming. Caring for the country's cash-rent farming phenomenon and its development is essential. One of the important subjects that needs much attention is the stability of the environmental dimension; though, according to some researchers like Foudi (2022), the tenants usually use land significantly and are less willing to invest in the stable management method. Due to a short-term period of conventions, tenants often produce annual products as the duration of exploitation is short and granted investment return and enough benefit for them, which causes them not to have a motive adequately and use unstable production methods (Soltani & Najagh, 1984).

In the same way, studies demonstrated that with the development of a cash-rent farming system, the owners of most farms change their job as farming landlords and leave aside from employment and the production cycle. The immigration of villagers to the city for better facilities and to obtain secondary income resources occur as well. Following the migration, the province confronts various problems such as urbanized difficulties and high statics unemployment. Based on the investigation, the cash-rent farming system in the west of Iran has significantly grown, especially in the fertile districts of the Kermanshah province. Attention is required as most of the tenants were strange and came to this district from a close region to rent the native landlord's ground (Ghanbari & Zarafshani, 2019). Thus, Kermanshah province accounts for the target places of these beneficiaries. At first, it may seem less important. Still, internal resources show the auction of water and soil of Kermanshah province to strange farmers will cause them to quibble the work culture and struggle in the region. It means numbers of native farmers prefer to offer their land and water, which can benefit them with the culture of various products with mean value to the migrant farmers. Also, attention to this point is essential because Kermanshah province doesn't have industrial and infrastructural services for attracting surplus labor in the rural areas. This can be a factor for immigration to industrial and capital cities, enhancing the population in big towns and increasing the unemployment rate. Therefore, developing a cash-rent farming system is one of the severe problems that the agriculture sector of Kermanshah province ap-

position it at the moment. The applicants for agricultural lands notice the Mahidasht district because it is capable of natural resources like abundant water and fertile soil between different places of Kermanshah province.

Based on the challenges mentioned above, the present study was conducted to examine the following:

First, what factors have caused the expansion of the cash rent system in the region?

Secondly, what are the consequences of expanding the cash rent system in the region?

## 2. Literature Review

Many authors (Faruge et al., 1997; Karter et al., 1998; Daigengur et al., 2001; Karte et al., 2002; Deningerdal et al., 2003, 2005) have recognized that the development of land lease markets plays an essential role in the progress and enhancement of village income. According to previous research for example Carter and Olinto (1998). In a research titled "Do the poor but efficient survive in the land market? Capital access and land accumulation in Paraguay, the evidence explains that the land lease market concludes the redistribution of land and facilitates the land transfer from poor people with fewer abilities to those with more skills and from wealthy to needy families. So, the development of land lease farming causes improved efficiency in small areas. The positive effects of participation in these markets are the improvement of welfare in Malawi and Zambia. Still, the results of some studies (Liptoun, 2009; Riddle, 2000), showed that the output of farming lands is severely related to production scale. Tenants with more production have more output about the rent price, and many small producers that rent farmland have few results and endure a detriment. In addition, farming effects (participation in farming markets as a landlord) have a more negative outcome for landlords (Chamberlin et al., 2016).

In contrast, Alfred Marshal believed that sharecropping as one form of the farming system was improper and inefficient. Because in this system, the farmer is forced to give a part of their crop to the landlord, they have less motivation for consuming the workforce and extra time on the land. This may reduce the production in a hectare. Generally, some scholars like Adam Smith, Stuart Mill, and Alfred Marshal justify that sharecropping is inefficient in source allocation. They believed the tenants lacked motivation for production in this kind of system (Riddle, 2000; Pender et al., 2001). However, the results of Benina et al. (2005) revealed that sharecropping could

be conducted as a natural solution to increasing farmer wages and applying novel technology in agriculture.

On the other hand, they represent that in the cash-rent farming system, farmers are more motivated to apply methods and new techniques. Still, in those agreements, the wage is constant, and the farmer has less activation for current production. So, sharecropping can raise two noted opposites. Also, Fukunaga et al. (2009) believed this system is a factor in the risk division and reducing expenses. Liptoun (2019) supposed sharecropping benefits both tenant and landlord as it reduces the costs and risk division between them. In addition, Cheungian schools believe that sharecropping reduces the motivation for preparation, and the import is saved with the landlord and constant tenant (Geravandi, 2015). Dhuyveher (1999) cited by Drake (1992), that lands with cash rent are more changed to those that rent by sharecropping.

For doing works related to land correction, keeping and investing in lands that exploit with helping of the farming system, there isn't adequate motive because of the short time of agreement (Soltani & Vanjagh, 1984). About the investment aspect in agriculture, Ayamga and colleagues (2016), with various researchers in Ghana, concluded that renting lands widely causes inhibition of investment progress for a long time. The results of the present study indicate that farming insecurity in different aspects affects decisions about the level of family investment. This investigation implied that the measure of marginal farms has an inverted relation with farming insecurity, so farming insecurity positively affects land value. Also, they conclude that singular ownership increases the possibility of investment and its level in improving farms, land and irrigation. This is probably because the landlord's family lives on private lands and uses its revenues. If the incomes of investment on land sources and the investment output are significant and relatively long, the investment is made. A study about agrarian system constancy in Khorasan-Razavi province and arable lands of Astane-Ghods-Razavi presented that the stability, protection of land and the production agents in rental lands is at a lower level than other forms of exploitation that include the contract of farm letting and based on trusteeship (Daneshvar-Kakhaki & colleagues, 2001). Many studies about cash-rent farming systems also demonstrated that in this kind of farming system, the tenant exploits from land exorbitantly, and they have less persuaded to invest by the method of stable management (Foudi, 2012).

### 3. Methodology

#### Study Context

Mahidasht city is located in Kermanshah province and is considered one of the agricultural poles with fertile lands. Agricultural activities are the basis of the income of the people in the villages of this region and play an essential role in their life and livelihood. Its fertile lands have a high potential to produce various agricultural products. This area is identified as one of the target areas for rent and production by tenants from Isfahan, Hamadan and Lorestan provinces. The development of this trend has caused land owners to rent their lands to tenants in exchange for a certain amount and leave the production line.

#### Research method

The research method of the present study is the case study. In terms of purpose, it is qualitative research. The study population was landlords of the Mahidasht district in Kermanshah province. Research data was obtained by criterion sampling and by fixing specified basis and critical individuals like landlords, previous landlords for at least two years, and present landlords without land. In addition, data was gathered through singular unstructured in-depth interviews, concentrated groups, group discussions and direct observations. In this study, the fault tree analysis technique (FTA) was used to investigate the reasons for the expansion of the tenancy phenomenon in the region. Also, the event analysis technique (ETA) was used to investigate the consequences of developing this exploitation system. The following method was used to ensure the reliability of the study: triangulate method, techniques for using multiple methods, designing similar questions with different formats, various data collection methods, obtaining parallel information by using other sources of data like the comparison of obtained information with the existing data in Jahad center and expert's opinion, members control, and researcher self-review.

### 4. Findings

#### Analysis of the aggravating factors of extending the cash rent system in the Mahidasht region

The technique of fault tree analysis (FTA) was used to investigate the influencing factors of the expansion of the tenancy system in the Mahidasht region. The essential elements of the diagram, placed at its lowest level, show the main problems (managerial and organization-

al, economic, individual and social, and environmental factors) which have caused the expansion of the tenancy phenomenon in the region (Figure 1).

**Managerial and organizational factors**

Prices of agricultural products are set by brokers resulting from the lack of supportive policies. Consequently, farmers lost motivation for work and were more inclined to rent out their lands. Failure to timely pay the cost of goods sold to the government in a guaranteed purchase of products has caused the region’s farmers to be excluded from the financial support for reproducing the goods and are forced to turn to the leasing system. As a result of poor services of agricultural insurance, most farmers, regrettably, consider insurance as an unnecessary expenditure. Farmers believe that the insurance does not perform its obligations adequately, and just the insurance cost is imposed on them.

**Economic factors**

The high freight costs imposed on farmers are due to the geographical distance from the sales markets or the capability to store the product. Moreover, the high-interest rate on bank loans provided for farmers incurs extra charges against them. The long-term efficiency in producing agricultural products, among other economic factors, has reduced the productivity of the farming sector. A small income is earned compared to the time spent creating the product. Therefore, considering the job difficulty, the payment is unacceptable, and it takes too long to make money. Therefore, many farmers earn substan-

tial income to cover their living expenses by renting out their land without any effort.

**Social and individual factors**

Graduates of the Mahidasht region cannot find rewarding jobs in their fields, so they migrate to cities for rewarding employment. Through the migration of youths from villages to cities, population aging has occurred in villages, and the labor force participation of family members has reduced. Since higher labor costs daily reduce the products’ net profit, the owners arrived at the best solution to rent out their lands.

**Environmental issues**

Water scarcity and drought crises are more apparent in the studied area. The groundwater levels have drastically declined, and several wells have run dry, while the remaining wells are also under severe water shortage. The excessive use of water resources will cause irreparable damage to the region. Farmers consider water scarcity the most acute problem facing agriculture and avoid it by turning to the tenancy system.

The process of event tree analysis (ETA) was carried out. Additionally, the consequences were identified and categorized to investigate the effects of the development of the cash rent farming phenomenon. The following shows the stages of the event tree analysis technique (ETA) procedure.

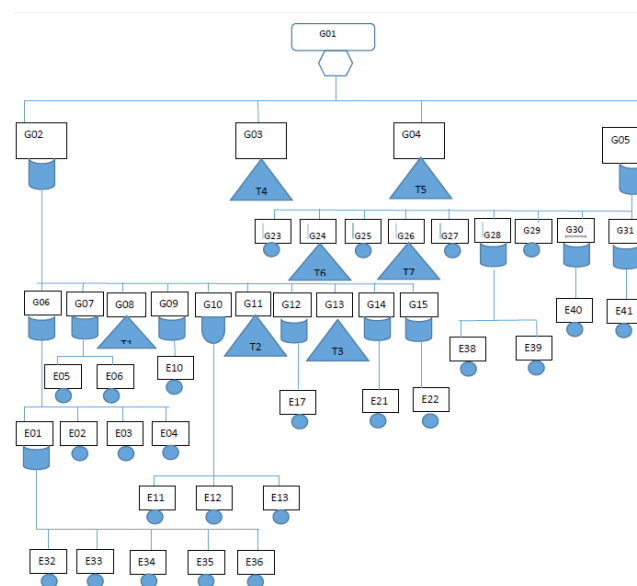


Figure 1. Fault tree analysis (FTA)

**Table 1.** The procedure of creating the event tree of the farming phenomenon development

Type of gate	Inputs				Node Name	Step
	Type	Text	Name	Text		
And	medium	Environmental consequences	G02	The consequences of farming system development in the Mahidasht district of Kermanshah province	G01	1
	medium	Sociocultural consequences	G03			
Or	Secondary	Changes in the soil structure and texture	G04	Environmental consequences	G02	2
	Secondary	changes in the quality and quantity of water sources	G05			
	Secondary	Incidences of plant pests and diseases	G06			
Or	Primary	Soil acidification	E01	Changes in the soil structure and texture	G04	3
	Primary	changes in the soil structure and land surface roughness	E02			
	Primary	Soil contamination by chemical substances	E03			
	Primary	Soil erosion	E04			
	Primary	Soil salinity	E05			
Or	Primary	Chemical contaminations caused by chemical fertilizers and pesticides infiltration	E06	Changes in the quality and quantity of water sources	G05	4
	Primary	Decline in groundwater	E07			
	Primary	A decline in the flow rate of wells	E08			
	Primary	Groundwater salinization	E09			
Or	Primary	Fungal disease of potato cultivation	E10	Incidences of new plant pests and diseases	G06	5
	Primary	Spread of plants pests caused by new harvest cultivation	E11			
Or	Primary	Increase in rural-urban migration	G07	Sociocultural consequences	G03	6
	Secondary	Constructing social problems in villages	G08			
	Secondary	Increase in the legal implications between landlord and tenant	G09			
Or	Primary	Spread of addiction in rural communities	E12	Constructing social problems in villages	G08	7
	Primary	Rise in unemployment	E13			
	Primary	Turning to dead-end jobs	E14			
	Primary	The decline in the surplus value rate	E15			
Or	Primary	Implications arose for non-compliance with the agreement commitment by the tenant	E16	Increase in the legal implications between landlord and tenant	G09	8
	Primary	Late or overdue rent payment	E17			
	Primary	Cause damage to irrigation equipment...	E18			
	Primary	Misuses of lands and non-stop harvest in a season	E19			

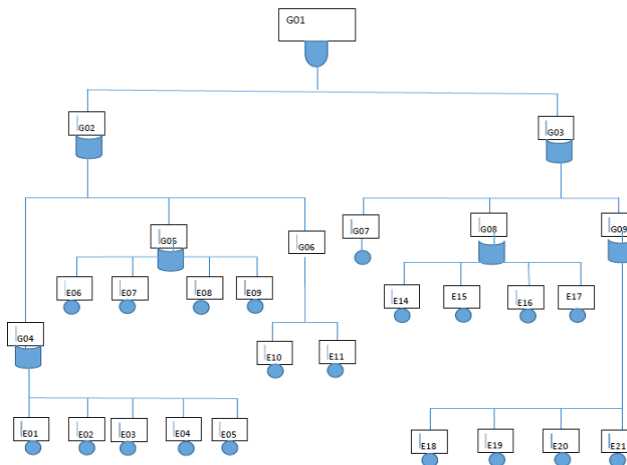


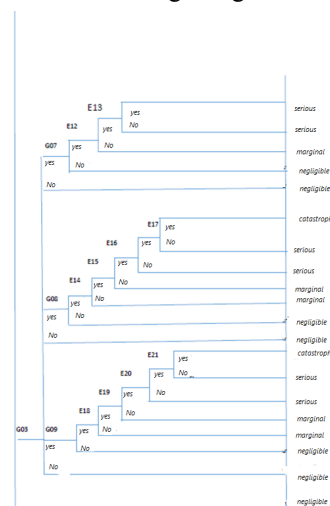
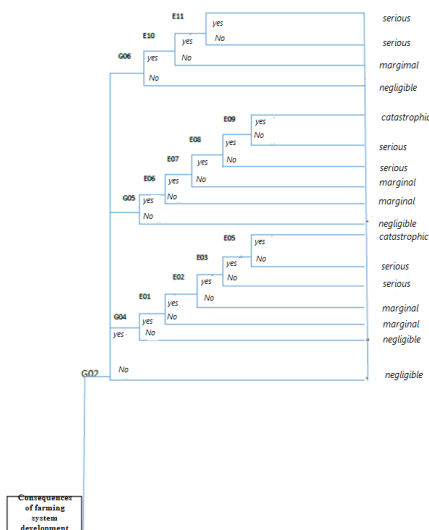
Figure 2. Event tree analysis (ETA Analysis)



Scenarios for Consequences of Cash Farm Lease Development

Generally, the development of the cash farming phenomenon in the district includes two types of consequences: environmental and sociocultural. The environmental problems can be divided into three categories: changes in the soil structure and texture, changes in the quality and quantity of water sources, and the incidence of plant pests and diseases. Problems that occur because of developing the cash farming phenomenon for soil and factors of soil structural and textural changes have different reasons: landlords use harmful fertilizers and pesticides in the ground of the district, which changes the soil structure and chemical properties such as soil pH. Soil acidifies and cannot be used for further cultivation. Soil acidification causes the prevention of nutrients elements uptake in plants, a drastic decrease in plants' dry

weight, and a decrease in the yield per hectare. Land surface roughness, acidification and erosion of soil, causing damage to the soil microorganisms, and indices of new and rare diseases are issues landlords face. Because they fail in soil correction, they always rent their lands. One of the major problems of the changes in the quality and quantity of water sources is wasting water and declining of groundwater., Although recent droughts have had a considerable effect on the groundwater decline, the production of water-intensive crops and excessive exploitation of the region's water sources by landlords were also essential factors in the groundwater decline. If this continues, it will create many problems that can severely challenge the region's agriculture. The decrease in groundwater level is accompanied by contamination of water sources because the high volume of applied fertilizers and pesticides infiltrate into soil and leach into the groundwater sources through irrigation.



Considering the indices of new diseases and pests, the cultivation of products in the region was limited, and the pests were identified for years. However, recently the extent of the product's range by landlords demonstrates the spread of fungal diseases and new pests in the region that farmers don't know how to cope with new conditions and are faced with severe problems and damages.

What are the sociocultural consequences of investigating the development of the farming phenomenon in the Mahidasht district of Kermanshah province?

Many villagers who rent their lands have migrated to the cities and lived there since their main reasons for living in villages were farming and taking care of their lands, and now that they have rented those, they no longer have any reason to stay there. The 2013 estimate of the migrants to towns of the province reflects that 68.3% of the province's villagers have migrated to cities in search of a better life and job opportunities (Geravandi, 2014). In this way, Feng & Heerink (2008) confirmed a negative relationship between land renting and migration. Thus, the best solution for migration is creating desirable conditions in villages and campaigning against the development of the farming phenomenon.

Leasing lands by landlords cause family members who used to be engaged in agricultural work to have a dead-end job or to be a broker. Landlords do not have any jobs they can do except for forming. Most become unemployed, and others turn to other jobs such as brokerage and livestock agency. Such are works with high incomes yet hold no economic value added, which is remarkable and complicated for our province since it lacks infrastructure facilities to attract the unemployed. Statistics show that 71% and 19.18% of the rural population are farmers and unemployed, respectively (Geravandi, 2014). The continuation of the farming process raises the unemployment rate of the village.

Moreover, the solution to unemployment will be hard to find. Thus, it needs a solution to make people stay in the village and use the village's potential to reduce the province's unemployment rate. This issue is one of the significant consequences arising from the landlords in the district, which is not negligible. Hence, this process must be ended, and the landlords should be convinced that their farming causes irreparable damage to society and the environment. Foreign landlords use foreign workers to perform agricultural tasks, which increases the unemployment rate and causes social difficulties. Most of the workers are Afghan and are employed merely because of the low wage level. Most of them are ad-

dicted to drugs; these workers make friends with most of the village's youths which increases the risk of addiction for the natives of the district. Youth who rent out their lands to foreigners have experienced unemployment and will struggle with addiction which causes irreparable damage to rural communities with severe consequences. Another consequence of the development of the farming system in the Mahidasht district is the increase in the legal implications between landlords and tenants; tenants don't fulfill part of their commitments, for example, they default on the payment of rent, which is sometimes arranged for payment by installment, or those damages that are caused to the irrigation equipment; besides, not paying off their utility bills which under the agreement, had to be paid off before handing over the land at the end of the lease. Still, some tenants don't fulfill this responsibility. Implications arose for non-compliance to the agreements, as well as getting farmers involved in legal affairs for complaints and disposition of implications which creates stress in rural communities and waste time, expenses, and energy on both sides. Tragedy is when all the mentioned consequences happen in a village or a region. However, minor damages are also both serious and perceivable

#### Applicable policies

1- Formulating supportive policies to support farmers and monitoring the policy implementation.

2- Intending to support farmers under challenging conditions and reduce agricultural risks through implementing special agricultural insurance and monitoring how they carry out their responsibilities in the agricultural insurance market.

3- Providing adequate facilities to cultivate at the right time and reviewing the terms for receiving facilities and repaying loans by monitoring the credit allocation process.

4- Monitoring the markets, excluding brokers in this sector through daily marketing channels, and choosing direct marketing.

5- Provide monitoring solutions for the water sources consumption and the types of agricultural products in the region through monitoring the installation of smart meters and calculation of the quota based on the crop water requirement that is appropriate for the area.

## 5. Discussion

The farmers of the Mahidasht region have started renting out their agricultural land; this has led to problems such as excessive water use and jeopardizing of water sources, inappropriate application of pesticides, and soil contamination, followed by water pollution in the future and increased unemployment. It increased migration from the village to the city. In this study, the fault tree analysis technique (FTA) was used to investigate the reasons for the expansion of the tenancy phenomenon in the region. Also, the event analysis technique (ETA) was used to investigate the consequences of developing this exploitation system. Field interview revealed that the relatively rapid growth of cash farm lease rates in the Mahidasht in recent years underscores the timeliness of paying attention to rental market development within the region. In this way, Event Tree Analysis (ETA) was used to examine the consequences of this phenomenon. The findings of the present study indicate the essential and harmful attainments of the cash farm lease on environmental and sociocultural impacts.

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## Conflict of Interest

The authors declared no conflicts of interest.

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