



ORIGINAL ARTICLE

Analysis of the Role of Horticulture in the Sustainable Development of Rural Economy (Case study: Rural District of Fasarood - City of Darab)

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ABSTRACT

Economic development in rural areas is one of the main goals of the rural planning. In this context, it is essential to understand the actual and potential capabilities and capacities of each region. Horticultural activities as one of the most important subsectors of the agriculture, has played an important role in creating employment, making income, and development of the rural economy of rural district of Fasarood, Darab City; as well, the subsistence of most of villagers in this area depends on it. This study has been aimed to analyze the place of horticulture in rural economy in rural district of Fasarood, Darab City. This research is descriptive - analytical and documentary; and its data is collected using the techniques of scanning of the sample villages by designing two separate questionnaires from the whole statistical population (6781), 164 questionnaires from the heads of households, and 97 questionnaires from gardeners. They, then, have been analyzed by the Friedman's test, the model of factor analysis and the model of SWOT. The results related to the Factor analysis states that the first and second components are describing 52 and 18 percent of variance, respectively, which are called economic and environmental factor, respectively. Hence, the effects of the Horticulture in the economy of the region have two main principals that explain about 70 percent of the whole variations. Also, we investigate, by using the SWOT model, about the most important problems which prevent horticulture activities from development, present suitable strategies for addressing these issues and thus, the development of economic activities in accordance with the conditions prevailing in the gardening of the area.

Keywords: Rural Economics, Horticulture, factor analysis, Darab City

Received 24/01/2014 Accepted 10/02/2014

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INTRODUCTION

Village and villager there have been from ancient times. Production of agricultural products is counted as the first human's productions that have developed over the times and parallel to the history of the human civilization, and is keeping continuing today. Economic and agricultural science development has had a huge impact on the emergence and development of the rural economy. Yet, like other sciences, this evolution has not reached to its fullest extent, and is just beginning in most of the developing countries. Economic scientists in the eighteenth century have called the basic economic principles of in agricultural activities as "Rural Economy" [1]. After decades of unsuccessful experiences in development and industrialization, it is clear that it is necessary to consider the villages and rural sectors as the main part to achieve to a comprehensive development. Rural society, not only in terms of the population is important but also economically. Economic position of the rural sector, in terms production of the societies' food, production of raw materials required for industry, employment and GDP (Gross Domestic Product), is significant [2]. This sector owns 15 percent of GDP, 22.7 percent of the total employment in

the country, and four-fifths of the country's food supply and more than a quarter of non-oil exports [3]. Rural economy discusses about the economic issues in framework of a village. In the other word, rural economy is all individual and social activities that occur in the rural environment in order to make living and achieving economic wellbeing of villagers [4]. Therefore, this study intends to identify and evaluate regional potentials and provide guidelines for the development of horticulture in the villages of the district accordance with the terms and capacities of the area, that offer economic development in rural areas; it also increases the economic functions in the field of horticulture and thereby improve living standards, social and economic prosperity in rural areas in a sustained way and has a significant role in the economy of the district and the city.

RESEARCH METHODOLOGY

Type of research in this study is applicable and its materials and methods are descriptive - analytical and field. To gather the data required in this study, the method of library and documentary research, field studies and questionnaires have been used. In this study, the total number of households in our sample was 6781 people of which 164 questionnaires from households and about 97 questionnaires from farmers, using Cochran's formula, have been developed, thus, a total of 261 questionnaires have been prepared. To analysis the data, we have used Friedman test, Factor Analysis Models, and swot model.

Factor analysis: One of the techniques which have been of great interest in geography from the early 1960s until now. Gallstone, a scholar of the late nineteenth and early twentieth century, was the first person who established the basic foundations of the factor analysis [5]. Factor analysis is a technique for summarizing a lot of information. In the meantime, the summarizing is done in a way that the results will be a meaningful concept [6]. Model SWOT: SWOT is the beginning of the words strength, weakness, opportunity and Threat. Model SWOT offers a systematical analysis to identify these factors and develop a strategy to match them in a best way. From the perspective of this model, an appropriate strategy maximizes strengths and opportunities and minimizes weaknesses and threats. For this purpose, strengths and weaknesses and the opportunities and threats are linked together in four general situation sw, wo, st, wt and options are chosen from them [7]. Friedman test: If the dependent variable statistics are quantitative with interval or relative scale, to check out the differences can compare the averages and study the significant differences between the classes or groups [8].

About the Area

DarabCity is located in the southeastern of Fars province, at 54 degrees 30 minutes eastern longitude and 28 degrees 40 minutes of northern latitude, and in the extreme south-eastern of Zagros Mountains, in the southern catchment if this mountains. It is bordered on the west by Fasa City, on the east by Hormozgan Province, on the north by Neyriz and Estahban, and on the south by City of Zarrindasht . This City with an area of 4560 square kilometers, includes 3 Districts, 2urban locations, 21 rural districts and 297 inhabited villages, in 1379 .Darab, the capital of this city, is located at the distance of 230 kilometers, on South-East of Shiraz. According to the 1390 population and housing census, the city population was 189,345 people. Average rainfall, based on 30 years of weather data, is reported 250 mm [9].The city's climate is hot and arid to semiarid. Air temperature during the year is varied from 2 - to 46 ° C range. The variations in different seasons, other than in exceptional cases, are not deterrent for growing crops and raising livestock. Fasarood Rural district is one of 21 Rural districts in Darab where is located on west. Most people in in this rural district are farmers; and farming and gardening accounted the largest share in agriculture of the district.

In this section, considering that three models were analyzed, each item is tested separately; first we analyze the Friedman test. Table 1 shows the status of accessing to Factors and horticultural services.

Number of Samples	97
Statistics Chi - Square	189.207
Degrees of Freedom	7
Significant Level	.000

Resource: Research Findings

Table 1 - Distribution of chi - square of state of access to factors and horticultural services

In this table, Number of Samples refers to the questionnaires were asked only of gardeners.

Table 2 can be used to compare gardeners' access to factors and different services for horticulture. Using the Friedman test, in this table, the average rating of gardeners' respond to the status and availability of factors and gardening services are identified and compared. In Table 2, to obtain the ranking of factors, Index scores were rated from 1 to 8. 1 is the highest score and 8 the lowest one. Thus, according to these criteria, inputs were ranked in the form below. Thus, access to factors and services at the highest rate is for pesticides and spraying with an average rating of 2.97, and the lowest access was to the warehouse and cold storage with an average rating of 6.47.

Factors	Average	Ranking
Pesticides and spraying	2.97	1
Fertilizer	2.98	2
Plant breeding	4.40	3
Roads and Transportation	4.24	4
Agricultural Machinery and Repairs	4.64	5
Consulter	4.80	6
Facility for Packaging	5.70	7
Warehouse and refrigerating	6.47	8

Resource: Research Findings

Table 2 - Average rating of status in access to factors and horticultural services (Based on Friedman test)

Effectiveness of Agricultural Activities in the Regional Economic Development:

Horticulture has a variety of impacts on the local economy. Our goal in this part of study is to find out which items in horticulture in the region the horticulturalists consider more effective. For this purpose, we use the Friedman test. The null hypothesis is that the various indicators have the same impact on the region's economic, considering the Table 3 which significant level is lower than 0/05 the null hypothesis is rejected; then we conclude that the influence of various horticultural indications on region 's economy is different and not the same.

Number of Samples	97
Statistics Chi - Square	46.947
Degrees of Freedom	5
Significant Level	.000

Resource: Research Findings

Table 3 - Distribution of chi – square of influence of horticulture on the reign's economy

According to Table 3, the average of ratings can be used to compare the influence of gardening activities in the economy of a reign. Low rank of an indicator shows its more influence on the economy of the region. In this table, using the Friedman test, the average rank of gardeners' response to status and access to factors and different services has been determined and compared. Table 4 is rated from 1 to 6 to obtain the rating of factors and indexes. Thus, according to the results of Table 4, the greatest impact is related to creating friendly environment and adequate landscape in the region, with an average of 2.91. The minimal impact is related to generating income for the local economy with an average of 4.24.

Index of the impact of Horticulture on Regional economy	Average Rating	Rank
creating friendly environment and adequate landscape in the region	2.91	1
Using of Water and Soil and Conditions appropriate to Region	3.26	2
Creating Job Opportunities and Economic Activities	3.27	3
Creating a Proper Economic Activity in the Region	3.38	4
Possibility of Generating Income for the Horticulture as a Member of the Region	3.93	5
Generating Income for the Local Economy	4.24	6

Resource: Research Findings

Table 4 - Average of rating the impacts of horticulture on local economic development (Based on Friedman Test)

Restrictive Indicators of the Horticultural Impacts on the Regional Economic Development

As shown in the Table 5, the significance level is less than 0/05; therefore with 0/95 percent certainty we can say that the effect of restrictive indicators of horticultural activities on the local economy is different and not the same. To determine restrictive parameters of Horticulture on the Local Economic Development, 97 questionnaires have been provided from the gardeners.

Number of Samples	97
Statistics Chi - Square	27.743
Degrees of Freedom	3
Significant Level	.000

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Table 5 - Distribution of Chi - Square of Restrictive Parameters of Horticultural Impacts on the Regional Economic Development

By comparing the mean ranks in Table 6 we can compare the effects of restrictive indicators of the horticultural activities. According to the Friedman test, we scored the indexes from 1 to 4, that the score 1

represents the highest score and the lowest score is the number 4. The table, also, suggests that the lack of governmental supports has the highest impact on limiting horticulture on local economic development with the mean rank of 1.60; and lack of suitable conditions for the gardener with a mean rank of 3.53 has the lowest impact.

Restrictive Parameters in Horticulture	Average Rating	Rank
Lack of Governmental Support from Horticulture	1.60	1
Many problems in horticulture	1.97	2
No Economic Benefits in Horticulture for Gardner	2.90	3
Lack of Proper Situation for Horticulture in Region	3.53	4

Resource: Research Findings

Table 6 - Average of rating the restrictive indexes on impacts of horticulture on local economic development (Based on Friedman Test).

As the above results show lack of governmental support from gardeners will influence on the regional economy.

Factor Analysis for the Horticultural Parameters Affecting the Regional Economy

Parameters involved in the analysis are:

- Creating appropriate conditions for horticulture in the region
- Creating income for the region
- Creating employment
- Creating proper economic activity in the region
- Creating friendly environment and adequate landscape in the region

To analyze the effectiveness of horticulture on the regionaleconomy, we, first, have analyzed the data through Bartlett's test to use them in Factor Analysis Techniques. According to Table 7,value of KMO indicates the validity of the Factor Analysis and sig=000 shows the significance of Bartlett's test.

Bartlett's Test Statistic	.770
Chi-square test statistic	662.176
Degrees of Freedom	15
Significant Level	000

Resource: Research Findings

Table 7 - Bartlett's test statistic for the impact of horticulture on rural economy

The results of analyzing the indicators through analyzing principal components are shown in Table 8. According to the results, the components which values are more than one are included in this table. The other components are not listed here because of their low influence.

Component	Special Value	Percentage of Explaining Variance	Percentage of Explaining Cumulative Variance
1	3.13	52.3	52.3
2	1.08	0.18	70.3

Resource: Research Findings

Table 8 - Percentage share of the principal components from the variance of the whole indices

In this analysis, the first and the second components explain 52% and 18% of the variance, respectively. Therefore, the impact of horticulture in the region's economy has two main components, which explains about 70% of the variations. Considering the rotation which is done (Table 9), loading and factorial structure indicates that the first factor as the most important factor explained 52% of variance and has a high positive correlation with the variables such as economic income generation for the region, income generation for the horticulture and creating job opportunities. Therefore, this factor has the greatest impact on determining the role of horticultural activities and development of rural economy. This factor is called the economic factor. The second factor in explaining 18% of the variance has more correlation with variations of using soil and water resources, appropriate economic activity in the region, and creating a friendly environment and an adequate landscape in the region. This factor will be called environmental factors.

Variables	Component 1	Component 2
Proper Conditions for Horticulture in the Region		0/579
Creating Economical Income for the Region	0/872	
Creating Income for the Gardeners	0/786	
Creating Job Opportunities	0/494	
Proper Economical Activities		0/340
Creating A Friendly Environment		0/472

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Table 9 - Weighted matrix components in a rotated state

Considering the factor analysis that was conducted in response to the question of how much the horticultural activities could be involved in the economic development of rural areas, we can say that it can generate income for gardeners, generate economic income for the region, and creating job opportunities, which in overall, they are called economical factor and accounts for 52% of the variance, and have a very effective role in rural economic development in the region. The factors are shown in table 11.

Economic Factor	Grad	Environmental Factor	Grad
Creating Economic Income for the Region	0/872	Appropriate Conditions for Horticulture in the Region	0/579
Creating Income for the Gardeners	0/782	Proper Economic Activity	0/340
Creating Appropriate Job Opportunities	0/494	Creating A Friendly Environment	0/472

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Table 10 - Economic factors and environmental factors

Evaluation of Horticulture in Roudbal District Based on Model SWOT

In this study, SWOT model has been used in order to provide an appropriate strategy for the development of horticulture. The purpose of this analysis is to show that the horticulture in the area presently is in whereabouts and what a way should follow in the future. SWOT analysis is designed in the form of tables and stages are as follows:

- Making a list of opportunities, threats, strengths and weaknesses in the tables
- Describing any of the opportunities, threats, strengths and weaknesses
- Providing a proper strategy for the region

The purpose of investigating the internal factors affecting horticulture in the studied region is to identify the strengths and weaknesses, which are the aspects which have conducive or obstructive are as in achieving to the planned objectives, and implementation of their techniques. The purpose of studying the external factors influencing the horticulture of the region is to explore the effects of the external environment to identify the opportunities and threats which the studied region is facing in in connection with the development of horticulture. In fact, opportunities are the facilities and competition from outside the department that directly or indirectly contribute to the development of horticulture. Then, threats are the external damaging factors. In this analysis, the internal and external factors are classified in four dimensions, economic, social - cultural, ecological and symbolic. The results are shown in Tables 11 and 14.

Economic			
Internal Factors		External Factors	
Weakness	Strength	Opportunity	Threats
<ul style="list-style-type: none"> - Dealing with a difficult situation - Absence or lack of appropriate packaging - Lack of access to refrigeration and storage - No change in packaging. And cold storage in recent years. - Lack of workshops and industries In the absence of market gardeners. - Harvest losses of horticultural products - By offering products for sale - Lack of maintenance by the farmers and provide products to market on time 	<ul style="list-style-type: none"> - Access to machinery and gardening tools and garage - Access to roads and transport - Development of machines and the technology used in recent years - Economic income for local - Creates income for farmers - There is a convenient and economical activities in the region - Provide all or part of the household income 	<ul style="list-style-type: none"> - Job opportunities and job creation - Development of domestic industries and dried as - Existing of surplus to requirements and for the sale of products on the market - Market for the supply of goods - Darab winter supply of goods and golden plains and surrounding cities 	<ul style="list-style-type: none"> - Get credit restriction in horticulture - No change in credit status in this field - Fluctuations in market prices

Resource: Research Findings

Table 11 – Internal - External factors influencing economic activities in the studies area based on SWOT

Socio – Cultural			
Internal Factors		External Factors	
Strength	Weakness	Opportunity	Threat
<ul style="list-style-type: none"> - Improving, promoting and practical investigations in recent years. - Increasing educated and skilled workforce in the region - Having experienced farmers and indigenous knowledge in horticulture - Women and their good experience in processing - Existing of young and active force 	<ul style="list-style-type: none"> - Lack or security deficiencies in conservation, particularly in the fruit orchards. - Give up the job and go to work in agriculture and horticulture, agriculture and services due to the recent drought - Immigrant farmers and their families and its related - Low literacy or illiteracy Garden - Lack of scientific expertise (seeing teaching) in the field of horticulture 	<ul style="list-style-type: none"> - The larger urban population centers (Shiraz, Bandar Abbas, Fasa and Darab) to purchase goods - Interest and investment in this sector by non-native garden - Increase graduation specialist in the field of agriculture 	<ul style="list-style-type: none"> - The existence of middlemen and intermediaries in disputes between farmers and Bidets - Lack of sufficient awareness and understanding amongst the protection of the environment and community gardens - Environmental pollution (water, gardens and destruction by non-native)

Resource: Research Findings

Table 12 - Socio - Cultural external and internal factors influencing on horticulture activities in the studied area based on the SWOT

Ecologic			
Internal Factors		External Factors	
Strength	Weakness	Opportunity	Threat
<ul style="list-style-type: none"> - Use of improved varieties of horticultural races - Convenient access to fertilizer - Access to appropriate spraying and pesticides and other institutions - Development of fields in the years - Increasing performance and yields in recent years. - Improved irrigation practices in recent years. - There is fertile soil for gardening - High quality water for gardening - The climate is suitable for growing trees - Create a suitable environment and beautiful landscape of the area 	<ul style="list-style-type: none"> - Low irrigation efficiency - Failure to protect the springs and Qantas - the limitation of water resources available and fluctuations in different years - Chilling - Pests and diseases of trees. - Aging and low fertility of some of the gardens - Combination of some of the gardens 	<ul style="list-style-type: none"> - Expanding the modern and adequate methods of Irrigation and Water Supply 	<ul style="list-style-type: none"> - Drought and low rainfall - 75 percent of the rainfall in the cold season.

Resource: Research Findings

Table 13 – Ecological internal and external factors affecting the horticulture activities in the studied area based on SWOT

Entity			
Internal Factors		External Factors	
Weakness	Strength	Opportunity	Threat
<ul style="list-style-type: none"> - Not supporting and not training the gardeners in the area on how to use the capacities 	<ul style="list-style-type: none"> - Revolution on factors - accessing to exports for the goals of consulate 	<ul style="list-style-type: none"> - Holding conferences and planning for a stable development - Paying more attention to creating small industries in villages and conversion industries and improving the budget 	<ul style="list-style-type: none"> - Variations in prices and weakness on pricing from the related organizations - Lake of a comprehensive plane and making policy for expanding gardens - Lake of a comprehensive and supportive planning from the related organizations

Resource: Research Findings

Table 14 – Entity external and internal factors affecting the horticulture activities in the studied area based on SWOT

As shown in the tables above, in the studied area a total of 25 internal strengths, against 21 internal weaknesses, against 11 external threats have been identified. Overall, a total of 36 strengths and opportunities as the advantages, and 32 weaknesses, and threats as the limitations facing the horticulture of the area are identified. In other words it can be said that of the rural districts of Fasarood enjoys of 36 advantages, 32 restrictions. It is noteworthy that the major limitations and weaknesses of the district horticulture are rooted in economic issues. Existing of more advantages in gardening in contrast to its constraints, primarily, reflects the importance of a comprehensive plan to deal with the threats and reduce various points. Summed up in a simple analysis, important opportunities for the development of horticulture in the region can be noted. Also, adopt the necessary measures in the fields of economics can be reduced from the boom that added vulnerability Horticulture. Also, in the case of adopting the necessary measures in the fields of economics issues, the vulnerability of the horticulture will reduced and it will developed.

CONCLUSIONS AND RECOMMENDATIONS

As we know, a large part of the rural population in our country is living through a variety of subsistence agriculture; however, this sector as a significant part of the rural economy is less interest in rural planning and management. District Fasarood has an important part in citrus production is Darab City. This rural district has a high potential in development of gardens. But in recent years, it has dealt with many problems. Something that is noteworthy is an increase in the cost of water in drought years (Recently, it has severely affected by drought) when farmers are forced to buy water. Packaging costs due to simplified packaging (such as bags and boxes of fruit) is low, but often insufficient packaging causing the loss of particular products in various stages of transportation. Storage in the area is in the form of home storage, most of the villages in rural district of Fasarood are not equipped with refrigerator; therefore, most products are sold either before or immediately after harvesting purchased by the buyer and does not stay in the village. Thus, the gardeners do not spend much. But shoppers will benefit most from the sale of products, since they store the products in the equipped warehouses and when the market is provided more profitably, sells them. Gardeners believe that lack of governmental support from horticulture in the first place, and then many problems against Horticulture provide the most restrictions in horticultural effectiveness on the regional economy. Evaluation of Horticulture condition based on SWOT has identified 25 internal strengths versus 21 internal weakness and 11 external opportunities versus 11 external threats. Totally, 36 points of strengths and opportunities as the advantages and 32 weaknesses and threats as constraints faced by horticulture of the region can be identified. It should be mentioned that most of the limitations and weaknesses of horticulture in Fasarood rooted in economic issues. Existing of more advantages of gardening in contrast to its limitations, primarily, indicates the importance of comprehensive planning to counter the threat and reduce the weaknesses in order to improve the present situation; and in the next step it represents the need to strengthen further the opportunities and strengths. In a simple analysis, we can indicate the importance of the regional opportunities for development of horticulture. Also, in the case of adoption the necessary measures in the fields of economics we can reduce vulnerability of the horticulture. In the following some strategies to improve horticultural condition in this rural district are presented:

- Using of specialized equipment and technologies at different stages of Horticulture and sufficient training on how to use of devices in different periods
- Using of young specialists in the field of agriculture to create employment for youth
- Scheduling in irrigation to maximize water efficiency
- Improving the effectiveness and productivity in the production sector
- Building factories for conversion industries and small packaging workshops appropriate to the local circumstances

REFERENCES

1. Asayesh, H. (1384), *The rural economy*, Tehran, Payam Noor University.
2. Asayesh, H. (1385), *Introduction to the rural economy in Iran*, First Edition, Kermanshah, Islamic Azad University Press.
3. Mahdavi, M. (1387), *An introduction to rural geography of Iran*, Volume I, To identify issues of rural geography, Eighth Edition, Tehran, Samt Publications.
4. Allen J. Scott and Michael S. (1990), *Regional development reconsidered*, Lewis Center for Regional Policy Studies University of California, Los Angeles. December 1990.
5. Hekmatnia, H. and Mousavi, M. (1385), *Use of models in urban and regional planning geography emphasis on modern science publishing*, printing, Yazd.

6. Talebi, H. and Zangiabadi, A. (1380) *Analysis of factors affecting human development indicators and the major cities of the country*, Geographical Research, No. 6, Mashhad.
7. Harrison, G and John, C. (1382), *Strategic Management*, translator BehroozGhasemi, Academic Press, Tehran.
8. Kalantari, K. (1382); *processing and data analysis in social research - economic*, Noble Publishing, Tehran. Sharif publications.
9. Darab City's township governor (1391), Department of Information
10. Amin Beidokht, AA. (1385) ranked the level of development of Semnan province, Geographical Magazine, Volume Twenty Number 1, Semnan University, Fall.
11. Jarivand, A. (1375) *Economic Development (set of believes)*, Tehran, Mowlavi Publications.
12. Mowla'ii, M. (1387), *Comparison of the degree of development of the agricultural provinces between 1373 and 1383*, the Journal of Agricultural and Development Economics, Year XVI, No. 63, Fall.
13. Naraghi, J. (1370), *the development and the undeveloped countries*, IntesharInc. Publication, Tehran.
14. Nastaran, M. (1380), *Analyze and measure the concentration and distribution of health indicators in Isfahan*, Isfahan University Journal of the Faculty of Literature and Humanities, Fall - Winter 1380, Isfahan.
15. PapyYazdiandEbrahimi, M. (1391), *theories of rural development*, the publisher, Tehran
16. Parsaie, M. (1390), *The role of horticulture in rural economic development case studies Asfarjan District*, MS Thesis in Geography and Rural Planning, University of.
17. Planning and management of the Fars, 1379.
18. Rezvani, M. (1381), *Measuring the degree of development of the provinces of taxonomic analysis*, Journal of the Faculty of Engineering, Tehran University, Summer and Autumn.
19. Zarrabi, and Asghar Rumi, E. (1388), *analysis of development indicators in Hamedan province*.

Citation of this article

Mohsen S, Yusef G, Asieh H, Sajjad B, Younes T, Alireza R, Mohammad A. Analysis of the Role of Horticulture in the Sustainable Development of Rural Economy (Case study: Rural District of Fasarood - City of Darab). Bull. Env. Pharmacol. Life Sci., Vol 3 (5) April 2014: 130-137