# The Analysis of Obstacles to the Capacity Development of Gardening Exploitation in Rural Areas
# (Case Study: Padena Olya Dehestan of Semirom County)

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## Abstract

**Purpose-** The aim of this study is to identify and prioritize the obstacles to capacity development in gardening exploitations of the villages of Padena Olya in Semirom County.

**Design/methodology/approach-** The present study has been done with causal **-**descriptive research method and the data has been completed using questionnaire and interview tools. In addition, 273 samples were chosen (using Cochran formula) from the family farming of Padena Olya Village as the statistical population and it has been completed by the random sampling method. Data analysis is done using both quantitative method, including descriptive and inferential statistics (path analysis and structural equation modeling using Amos Graphic software), and qualitative method, including Atlas software.

**Findings-** The analysis of qualitative findings based on semi-structured interviews and focus groups showed that the main obstacles related to capacity development are of social, economic, and environmental dimensions. Data coding based on the grounded theory also showed the most important obstacles in marketing categories, the environmental obstacles, the obstacles of participation, also and educational and promotional obstacles. Finally, the quantitative data analysis using structural equation modeling, in addition to the obstacles presented in the qualitative model, has estimated production capacities and empowerment as mediating variables in the final model of capacity development obstacles in the study area. The economic obstacles with 0.33 and environmental obstacles with 0.17 have the greatest effect on the lack of capacity development of the exploitations in the study area, respectively.

**Research limitations/implications -** They include the lack of cooperation of relevant organizations in the presentation of information, as well as the low interest of operators to participate in the interview and cooperation to collect the qualitative data which led to an increase in the duration of attendance within the study area, held more group sessions, and thus slowed down the process of study.

**Practical implications-** We propose a plan for increasing government support to gardener in various affaires, such as increasing the share of insurance premiums. It is also advisable to attempt to determine the fair price or the guarantee purchase of the gardeners' products and create cooperatives to manage the sales and marketing of the product to remove the brokers and dealers.

**Originality/value-** The present study stresses the capacity development process of horticulture through identifying and analyzing the effects of obstacles and capacity building and empowerment of farmers. This research explores the hidden variables and the barriers to capacity development in gardening exploitations.

**Keywords-** Capacity building, Empowerment, Gardening exploitation, Isfahan Province.

**Paper type-** Scientific & Research.

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# 1. Introduction

Horticulture as one of the activities of the agricultural sector plays an important role in creating employment, revenue generating and economic development in rural areas (Nouri Zamanabadi & Amini, 2007). In line with horticultural development, other rural economic sectors also grow faster and increase their weight in the rural economy (Alavizadeh & MirLotfi, 2013).

Considering its nature and the positive aspects, Horticultural activity, in the case of proper management of sustainable agricultural development, is better than agriculture. In pursuit of sustainable development, it has the benefits such as providing food and biological facilities, storage and supplying the needs of other plants, cultivation of crops in shelter, protection of soil and green cover, freshen the air, increasing atmospheric precipitation and lower consumption of chemicals (Fathi, 2012). This can contribute to achieve sustainable development goals, such as acquiring economic independence, improving farmers' situation, preventing migration, increasing the welfare of the rural community, self-sufficiency and production of food required by farmers, increasing production to achieve food exports, creating welfare, rural credibility and attraction, the promotion of historical and cultural values, natural perspectives, and finally the creation of individual ecosystems in rural areas (Antriyandarti, 2012). The development of horticulture activities, increasing its income and efficiency of horticultural activities depends on empowerment, increasing capacity development and building opportunities; but the realization of the development of this sector in different regions faces with many obstacles and problems that these obstacles can be classified in three categories: environmental, economic and social factors. The economic obstacles affecting the development of horticultural activities include the lack of a comprehensive marketing and marketing system for the supply and distribution, storage and export of products, the lack of conversion and complementary industries, the absence of supportive systems, the lack of qualitative diversity of products, lack of opportunities for job and income sources, vulnerability to market fluctuations and the change of product prices, the

lack of utilization of new methods of exploitation, and also the lack of access to institutions.

From the environmental dimensions, there are some constraints, such as climate fluctuations, droughts, severe limitation of water resources, frostbite of crops and vulnerability to natural hazards including floods, environmental pollution, the lack of development of new irrigation practices and the lack of protection of water resources. From the social dimensions, there are also some constraints, such as the low level of technical knowledge and the awareness of farmers, the lack of attention to indigenous knowledge, the illiteracy of some farmers, the high age of exploiters, hidden unemployment, the lack of proper welfare, migration and the lack of willingness to stay at the village, and the lack of promotion activities.

Semirom County is one of the main poles of horticulture in Isfahan Province, which has many capacities and talents in this field. Having suitable climate and fertile soil, abundant manpower, and other features, this county can have the best performance in horticulture.

Despite the empowerments and capabilities of Semirom County, the city has not been able to utilize its facilities and capacities for horticulture development for various reasons, including the severe vulnerability of the region's economy to environmental conditions, and the climate fluctuations such as frostbite and drought, product fluctuations and market constraints, and high fluctuation of prices, the lack of modern infrastructure of development for horticultural crops such as lack of packaging facilities, the lack of warehouses and refrigerators, the lack of conversion and complementary industries to complete the cycle of production, and the creation of added-value products. Also, the coincidence of extensive imports of agricultural crops with the high volume of production in some production periods, and its limited export, lack of supportive system, lack of necessity training, lack of promotion activities and lack of labor force during harvesting caused the planning process of horticulture development in this region cannot reflect the real capacities of this sector in the economic structure of rural areas.

Therefore, in this research, we are trying to identify and investigate the problems i.e. what are the obstacles in gardening exploitations of

Padana, Semirom? Which of the following deterrent factors have the greatest impact on capacity development?

## 2. Research Theoretical Literature

The ability of a country to pursue a sustainable development path is largely determined by the capacity of its people and institutions as well as its geographical and ecological conditions. In particular, capacity building involves human, scientific, technological, and institutional capabilities and resources. In connection with sustainable development within local governments, efforts to develop sustainable capacity building within existing institutional structures can be considered as actions for forming the government's structure to meet the needs and demands of sustainable development or actions for creating the capacities in partnership with civil society (Evans, Jowz, Sandbick, & Theobald, 2013).

In general, the sustainable development strategy manages both natural and human resources as well as financial and physical resources to increase wealth in the long run. Sustained development is opposed to any policy or practice that endangers the interests of subsequent generations (Zargham & Hajji, 2010). Sustainable development requires a holistic view of environmental, social and economic development policies and the integration of these three dimensions. In the theoretical explanation of the concept of sustainable development, which emphasizes the interaction of the three dimensions of economic, social and environmental development, approaches such as conservationism, environmentalism and socialism have been formed. The ultimate goals of economic development are to achieve sustainable economic growth, maximize benefits, protect and recycle resources, and reduce waste. These goals make sense in social development by satisfying needs and increasing self-reliance. (Arlemalm & Sandberg, 2011).

On the other hand, the empowerment and capacity building of human environments is also a new form of participatory, decentralized, institutionalized development according to the sustainable development approach (Warm, 2010). In addition, farmers empowering as a new approach of intrinsic motivation of agricultural activities in rural areas is to liberalize the forces of the farmers as well as to provide opportunities for the development of talents, their abilities and competencies (Byham, 1991).

Building capacity as complementary to other ideas that has been implicit in development thinking in the last four decades and still plays an important role in the development process. These concepts include institutionalization, institutional development, human resource development, administrative and managerial development, and institutional strengthening (Ghasemi Viry, 2012).

The ability of rural exploiters to grow effective and efficient use of existing resources and effective control over the forces shaping the agricultural activity system. Agricultural planning addresses the issues of production and supply of agricultural products and tries to improve farmers' economic performance in addition to meeting the nutritional needs of the community and environmental issues (Zare Shahabadi, Zare Shahabadi, Samimi and Khorasani, 2010). The success of this strategy depends on the two components of investment in the production process and the improvement of the market mechanism (Khosrobeigy, Shayan, Anabestani, and Bozarjmehri 2014).

In general, there are five perspectives can be considered based on the modernization, exploitation and conservation of resources, location and dissemination, the use of high-level institutions and the theory of innovation in relation to the development of operational capacities, which are based on value-oriented, pragmatic and goal-oriented approaches. The theory of innovation helps to explain and select the optimal method of the agricultural and technical inputs of a community. The transformation of structure in agriculture reflects the response to natural resources and the growth of demand for products and changes in inputs that lead to changes in natural resources and technology (Hosseini and Sharifzadeh, 2015)

The combination of factors and inputs and investment in gardening exploitations should be defined in terms of innovation and in an optimal way. So that production capacities include water, soil, capital and human resources are investigated, and the obstacles of developing these capacities are identified to provide the necessary solutions to solve the problems.

In the meantime, the role of horticulture and gardening exploitations are remarkable in the

development of rural areas. Iran has been ranked among the top 10 producing countries in the field of horticulture production. Intelligent intervention and strategic planning, both comprehensive and realistic, are associated with exploitation gardening and horticulture, in accordance with the conditions of each region, that will be able, while releasing communities especially villagers, to provide the grounds and areas that will contribute to the development of these areas and thus the country (Fathi, Nuri and Seddisi, 2012, p. 199) Weinberger and Thomas (2007) concluded that the development agency should focus more on horticulture research and development, because it can provide a good ground to reduce poverty by increasing income and creating employment opportunities. Because horticulture can provide a good ground to reduce poverty by increasing income and creating employment opportunity.

The employment opportunities can provide a suitable basis for poverty alleviation. In this regard, recognizing priority areas, improving the genetic status of plants, and producing commercial seeds are considered as effective factors.

Yasouri (2007) divided the factors affecting the low productivity of rural production into two categories: internal and external causes. He concluded that these factors t prevent from the formation of capital in rural areas. In a study on the development of rural economy on the horticulture axis in the Baghbahadoran in the city of Lenjan, Fathi (2008) showed that horticulture has an important role in the development of rural economics in the region. In a study by Maertens (2009), it was concluded that the export of horticulture products and agricultural industrialization in small crops have been beneficial to rural households through increased investment, as well as employment opportunities. Also, the acquisition of non-specialized careers in export agricultural industries helped reduce the pressure put on the farmers. In his field studies on (education and empowerment), Vroom (2010) found that the factors in agricultural empowerment included increasing self-awareness, the fair distribution of power and wealth, social status, freedom, fair access to resources and opportunity, the rational use of input and its correct cropping, the use and application of new agricultural techniques, the improvement of the quality of work, the promotion of resource allocation, and the effective production methods.

In Argentina, Hancer (2010) studied the program of agricultural credits by comparing two empowerment and empowerment groups and found that farmers' adaptation to the changing conditions of the environment and the favorable environment are the factors involved in the empowerment of farmers. Parsaei (2011) investigated the role of horticulture in the rural economy development of Esfarjan District of Shahreza. Results showed that horticultural activities have a significant role in the development of the rural economy of Esfarjan District. The main problems which hinder the development of horticultural activities had been investigated and some soulltions for these problems had been addressed.

Hansen and Duveskog (2012) in their study " The Empowerment Route to Well-being: An Analysis of Farmer Field Schools in East Africa" also found that the most important impact of this approach to empower farmers is due to its impact on creating new capacity in the locals for choices and decisions that enhance agricultural innovation, access to services and market access. The results of the research were done by Yeganeh and Nabati (2013), on analyzing the obstacles of agricultural development in rural areas, showed that structural factors in the rural district were the most important obstacle to agricultural development. cultural, environmental and marketing factors were placed in the next priority. Dolinska and D' aquino (2016) focused on research on key interactions, and learning between farmers and other players. Not only collective knowledge, but also the production and re-production of discourses and the presentation of a framework for the implementation of a person can both prevent from innovation or be the sponsor of it.

## 3. Research Methodology
### 3.1 Geographical Scope of the Research
The study area is located in the village of Padena Oliya in Semirom, Isfahan province. The city of Semirom has an area of 5224 square kilometer located between 51° and east 34' longitude, and 31° and north 25' latitude. According to the 2016 census, the city has a population of 128.55 with 3759 households distributed in 26 villages (Statistics Center of Iran, 2016), a total of 1770

households are rural gardeners. Horticulture has been dedicated to the production of apples, accounting for about 90% of the region and household's income. According to the statistics, about 83.64% of the income of natural products and 78.09% of the total agricultural products of the village is allocated to the apple trees (Agricultural Jahad of Semirom, 2016)

Simple random sampling method was employed to determine sample size due to the wide range of statistical population. Selected sample size is selected to be the minimum sample size in the communities that can be categorized based on the personal estimation methodology of the researcher of 12 villages (50% of the villages) (Hafezniya, 2014, p. 136)

Also, in the selection of sample villages, it has been tried to select the sample villages from active villages in the field of gardening exploitations. In addition, in the selection of these villages the accuracy is taken to be highly diverse, variety and random in terms of spatial distribution. Totally, 842 gardeners have been studied as a statistical population.

Finally, using the Cochran formula, 273 questionnaires and according to the relative share of each village have been distributed among exploited households. The table (1) and Figure (1) show the specifications and positions of the twelve selected villages in the study area.

**Table1. Introduction to studied villages**
(Source: The General Population and Housing Census, 2016)

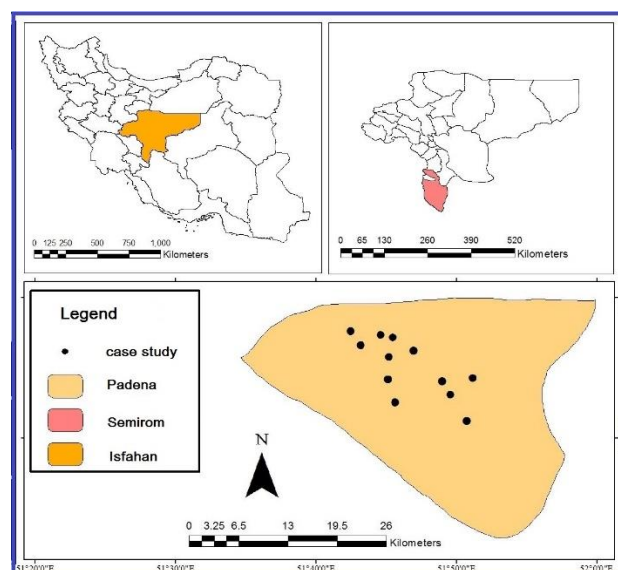| Village's Name | Horticulture | Number of sample |
|---|---|---|
| Bideh | 136 | 44 |
| Barand | 71 | 23 |
| Shahid | 101 | 33 |
| Kifteh | 143 | 46 |
| Sarbaz | 67 | 22 |
| Nourabad | 47 | 15 |
| Dourhan | 44 | 14 |
| Valadkhani | 37 | 12 |
| DehBozorg | 37 | 12 |
| Noghl | 55 | 18 |
| Bazargah | 55 | 18 |
| Pahloushekan | 49 | 16 |
| Sum | 842 | 273 |



**Figure 1. Geographical Location**
(Source: Provincial Government of Isfahan, 2016)

### 3.2. Methodology

This study is a descriptive-casual research and based on purpose is exploratory and applied research. In order to collect data have been used library and field methods such as questionnaire, semi - structured interview and collaborative observation.

The research method has been done in combination of qualitative and quantitative methods. In a qualitative method, with the formation of focus groups, interview sessions and discussion are conducted in similar and consistent among the group members. Selection of participants for interview was done in the theoretical sampling method.

In this way, Information sources such as interview and observation were among examples that complete the theory created in the research process. Also, the theoretical saturation of the data and determination of sampling adequacy are carried out through continuous data comparison and continue to replicate the data and the end of classification. Finally, based on the grounded theory method after each interview, first the open coding stage, the extraction of concepts and the formation of categories has been carried out so that in the next stage it is possible to develop the generated categories or use the new categories to complete the previous categories. The formed categories were developed with axial coding procedure and classified in three categories of economic, social and environmental obstacles that were analyzed in the qualitative data analysis software (Atlas).

### 3.3. Variables and research indicators

Research variables, in addition to demographic and productive-agricultural characteristics of the household, include items for indexing and operationalizing independent and dependent variables.

These variables mainly focus on investigating the earnings, product pricing, marketing and distribution services, promotional services and training for beneficiaries, government support, the level of technical knowledge and beneficiary awareness, resource management, and willingness to use gardening exploitations in the future. In order to ensure validity, the questionnaire has been approved by experts in the sciences related to the topic of research. The validity coefficient of the questionnaire has also shown a relatively high reliability in the process of operating the independent and dependent variables on the basis of pre-test of Cronbach's alpha.

The analysis of relationship between variables and the identification of each factor on the research dependent scale (capacity development of gardening exploitations) has been analyzed with the statistical approach of path analysis and structural equation modeling in AMOS software as latent and observed variables. In Table (2) the variables and research indicators are analyzed as follows: social, economic and environmental dimensions.

**Table 2. Variables and research indicators**
(Source: Research Findings, 2017)

| Dimension | Competent | index |
|---|---|---|
| Economic | preoccupation & income | Income, livelihood diversification, savings and cash investment |
| | | Satisfaction with income and occupation |
| | Marketing | Pricing products |
| | | Market fluctuations |
| | | Production cost |
| | | Value-added |
| | | Product diversity |
| | | Distance from market |
| | | Product transportation |
| | | Facilities and technology of product maintenance |
| | Services and Facilities | Financial and credit services of banks |
| | | Guarantying for buying products |
| | | Government supports |
| | | Status and conditions of insurances |

**Table 2.**

| Dimension | Competent | index |
|---|---|---|
| Social | Teaching | The education level of exploiter<br>Technical knowledge level and attention to indigenous knowledge<br>Participate in educational and promotional classes<br>Access and contact with promoters and experts |
| Environmental | participation | Empathy and intimacy<br>Coherence and communication with each other<br>Doing group works<br>Activity in routine agricultural affairs<br>Consulting in affairs |
|  | Place attachment | Immigration and leaving the village<br>The desire for agricultural employment by the children<br>willingness to live in the village |
|  | Land resources | Water resources status<br>Quality and quantity of water<br>Land user changes<br>Erosion and gradient of the earth<br>Soil Salinity<br>Spatial dispersal and being driblet of gardens |
|  | Hazards | Drought, Herbal diseases, Climate change, Dusts |
|  | Compatibility with the environment | Use of pesticides<br>Irrigation practices<br>Status of exploitation of natural resources<br>Use and store atmospheric weather |

## 4. Research Findings

### 4.1. Statistical description and characteristics of respondents' exploitation

According to the scope of the study, the respondents were male. Their average age is nearly 51 years old (from the age of 25 to over 55) of which 8% are illiterate, 38.2% have elementary education, 14.9% have secondary education, 22% were graduated with a diploma and 16 % of them had a bachelor 's and higher education. The main source of income and employment of 64 % of respondents was horticulture, 16 % had a free job and rest had horticulture alongside their second job, such as such as employees or laborers. On average, the respondents had 25 year experience in horticulture.

### 4.2. Conceptualization and classification of qualitative data by Grounded theory

The interview questions were originally outlined in an open and comprehensive manner and have been gradually developed during the research process and focused more on the core issues. The data from focus groups are encoded with three procedures, in the first step; the formation of concepts and categories is addressed through open coding. In the next step, it was possible to expand

the categories and even create new categories related to the previous categories.

The extraction of each concept of data is based on the topic given each data. Some of the concepts extracted from primary raw data include the lack of livelihood diversification, higher production costs, the high share of intermediaries, lack of cooperatives associated with products ' marketing, the lack of guaranteeing the product purchase, and the lack of conversion and complementary industries in the village.

Given the high volume of data, after coding all the concepts are compared and the concepts that are matched to each other in terms of meaning and semantically have given the formation of a category. In this way, the data obtained from each interview determines the type of questions in the next interview. Questions that contributed to the development of this research were: Who? When? Where? What? How? And how much?

So, the related categories were also grouped together and formed a wider set which four categories are defined as the main categories that include other subcategories (Azkia, Zaree and Imani, 2008).

These categories, which are considered as the most important obstacles to the capacity

development dimensions of gardening exploitations, are: Obstacles to marketing, environmental damage, lack of water resources and lack of network promotion services. In the axial coding of the data, as shown in Table 3, each category contains subcategories.

Finally, the classified concepts are processed in the qualitative data analysis software and, as Figure 2 shows, the obstacles to capacity development in the study area are grouped into three main categories: economic, social and environmental obstacles associated with each group.

**Table 3. Broad classes and subcategories derived from concepts**
(Source: Research Findings, 2017)

| Wide Classes | Subclasses |
|---|---|
| Obstacles to Pricing | High production cost, involvement of intermediates in the process of Pricing, low share of gardener form sales, the high share of intermediaries, involvement of intermediaries, Price fluctuations, lack of cooperative for product marketing (mainly apples) |
| Distribution and packaging | Lack of proper market, lack of guarantee to buy Product, lack of conversion and complementary industries, low quality of stored products, lack of refrigerator, transportation costs, distance from the market, inadequate packing, inability of product competition (mainly apples) with other products |
| Lack of Facilities | Lack of government supports, lack of access to inputs, high cost of inputs for exploiter |
| Obstacles to participation | Migration, Unwillingness to work in the village, Lack of desire to continue work by children |
| Educational and promotional obstacles | Low level of technical knowledge, lack of promotional and training classes, lack of access to experts and promoters |
| Environmental obstacles | Distribution of gardens, small gardens, dusts, droughts and climate change, herbal diseases, lack of water resources, lack of storage atmospheric precipitation and lack of water resources protection |
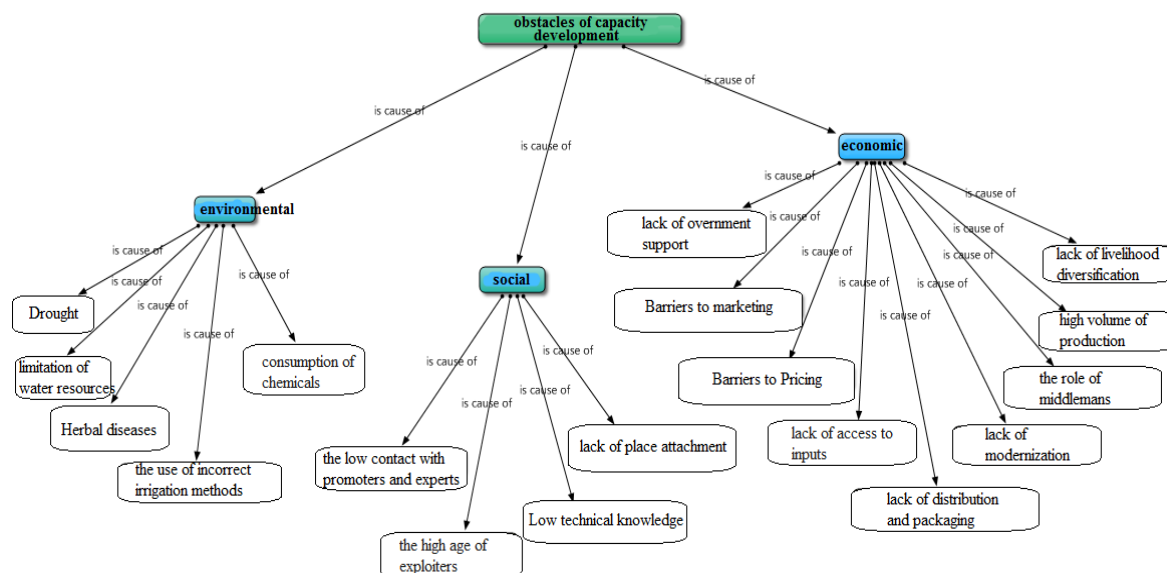


**Figure 2. Obstacles to capacity development of gardening exploitations in Atlas software output**
(Source: Research Findings, 2017)

### 4.3. Modeling of capacity development obstacles in gardening exploitations in the study area

The study of correlation relations and the effects of the observed and latent variables were modeled using AMOS graphic software. In Figure 3, the path analysis of the observed components such as economic, social, environmental obstacles, empowerment obstacles and non-expansion of production capacities are presented.
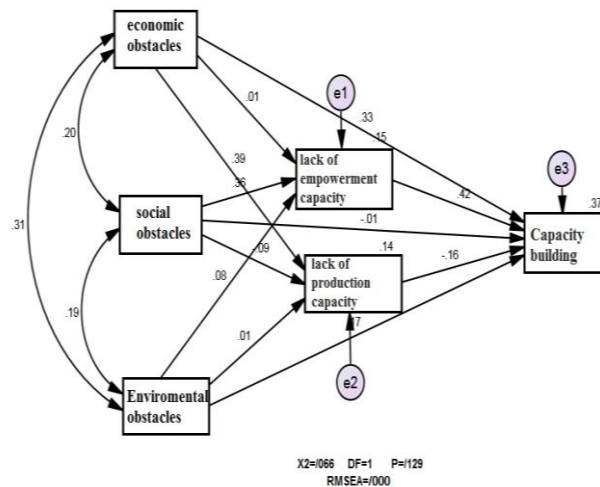
**Figure 3. Path analysis model for capacity development obstacles within the study area**
(Source: Research Findings, 2017)

**Table 4. Goodness of Fit Index**
(Source: Research Findings, 2017)

| Indicator ID | Goodness of Fit Indexes | Research Model | Decision making criterion |
|---|---|---|---|
| CIMN | Chi-Square | 0/066 | - |
| P | P-value | 0/129 | >0/05 |
| DF | Degrees of freedom | 1 | - |
| CIMN/DF | Chi-Square/ Degrees of freedom | 0/066 | <3-2 |
| GFI | Goodness of-Fit-Index | 0/95 | >0/9 |
| CFI | Comparative fit Index | 0/98 | >0/95 |
| NFI | Normed fit Index | 0/98 | >0/9 |
| RMSEA | Root Mean Square Error of Approximation | 0/000 | <0/05 |
| PRATIO | Parsimony ratio | 0/067 | 1-0 |

The presented data in Table 4 shows the Goodness of Fit Indexes relative to the proposed criteria. As we observe, the developed model is estimated by favorable and valid goodness of fit indexes. The high level of coverage of 0.05 confirmed the significance of chi-square.

Also, the other value of fit indices (comparative fit, goodness of fit and norm fit) is also close to one and thus confirms proper fitness of the model (Hooper, Kaflan & Moulen, 2008, p. 56). Estimation levels and impact coefficients of components (total impact, direct effects, and indirect requirements) are presented in Table 5. The existence of positive coefficients indicates the direct relationship of independent variables on the dependent variables. In other words, each increment unit in each of the independent variables increases the dependent variables. The proposed regression model shows that the economic obstacles with the total coefficient of 0/267 have the greatest impact in explaining the lack of capacity development.

**Table 5. coefficients of total, direct and indirect effects of variables**
(Source: Research Findings, 2017)

| Observed variables | Total effect | Direct effect | Indirect effect |
|---|---|---|---|
| Economic obstacles | 0/267 | 0/326 | -0/059 |
| Social obstacles | 0/153 | -0/013 | 0/165 |
| Environmental obstacles | 0/206 | 0/174 | 0/032 |

Structural equation modeling approach is based on all calculations and estimates into the matrix of variance and the covariance between the observed variables and their decomposition.

Table 6 also shows the variance and covariance values of the research model paths. Apart from social obstacles in production capacities and capacity development, all regression weights between the parameters of the measurement and structural equation model are greater than zero at the confidence level of 90 % or more. This indicates the existence of significant relationship between the observed variables and in other words, the explanation of the variance of obstacles affecting the lack of capacity development

As it is evident, the design of model paths is influenced by the impact of indicators between the lack of empowerment capacity and the lack of production capacity and the impact of economic, social and environmental obstacles.

The data show that each unit increase in the economic and environmental obstacles, respectively, how much increase in the lack of capacity development results in gardening exploitations.

**Table 6. Estimating the standardized coefficients between the parameters of the measurement model for measuring the impact of obstacles**
(Source: Research Findings, 2017)

| Variables and Components | | Regression Weight | Standard Error | Critical Ratio | Significant Level |
|---|---|---|---|---|---|
| Economic obstacles | empowerment | 0/009 | 0/103 | 2/157 | 0/04 |
| | Production capacities | 0/386 | 0/139 | 6/393 | *** |
| | Capacity development | 0/326 | 0/071 | 5/868 | *** |
| Social obstacles | empowerment | 0/357 | 0/071 | 6/095 | *** |
| | Production capacities | -0/092 | 0/097 | 1/565 | 0/118 |
| | Capacity development | -0/013 | 0/049 | 0/239 | 0/811 |
| Environmental obstacles | empowerment | 0/08 | 0/086 | 1/975 | 0/187 |
| | Production capacities | 0/007 | 0/117 | 2/117 | 0/04 |
| | Capacity development | 0/174 | 0/056 | 8/023 | *** |

Given that the validity structure, other than two, in all directions is more than 1/96, it can be inferred that the covariance of the paths is significant at 0.05. The test statistic, or the critical ratio that is obtained by dividing the coefficient estimation on the criterion error, has a standard normal distribution with a significant level of 0.05. Thus, the null hypothesis of the coefficients is rejected on the specified error level and therefore all the path coefficients are significant (except for the three paths).

Standard errors of coefficient estimation or standard error indicate how much of the independent variables are effective in explaining the dependent variable or the capacity development of a garden. Criterion error of coefficient estimation or standard error indicate shows how much independent variables influence the explanation of the dependent variable, or the capacity development of gardening exploitations. Given that the error criterion is smaller, the independent variable is more effective and in the presented model, the criterion error in most of the coefficient estimates is less than 0.1. This is one of the impacts of any barrier in the lack of capacity development.

## 5. Discussion and Conclusion

In general, the rural development process is a multilateral category that many variables are effective in this process. The sustainability of development in rural areas is very close to agriculture and its subdivisions, particularly agriculture and horticulture.

In the studied area, horticulture activity has a significant role in development with regard to existing empowerments. Given that in recent years the conservation and development of gardens has been encountered with some problems in this area and it increased the vulnerability of the gardens, thus, it has created negative consequences.

In line with the research question to discovery and identify the main obstacles to capacity development, the results show that, in general, the

obstacles to the development of gardening exploitations can be considered in three categories: economic, social and environmental factors.

According to the results of structural equation modeling, the most influential factor is economic obstacles and among the economic obstacles, the greatest impact is related to the product marketing section which in this section, dealers and brokers, high production costs and low gardener share of product sales is the most important obstacles in this sector. The results are consistent with the results of Fathi, Nouri and Taghdisi (2012). Also lack of governmental support and dissatisfaction with payment of insurance damages is the most important obstacles to access to services and facilities. Moradi, Heydari, Azizi and Yaghoubi (2011) have also achieved same results in their study.

In the social dimension, the most important obstacles to the low level of technical knowledge and productive skills of operators were the lack of experts and promoters which is consistent with the results of Alston's research (2007), which has shown that in developing countries, promotion and training are the key elements in promoting the exploitation in agricultural sub-sectors.

In the environmental dimension, drought and insufficient water resources are considered as the most important obstacles to farmers. The data obtained are consistent with the results of Yeganeh and Nabati research (2013). Also the lack of new irrigation methods has also been indirectly effective in the category of social obstacles in the development of horticulture capacity. Although, the use of incorrect irrigation methods in the short term have satisfied gardeners and have even discovered the efficiency of gardener's crop but in the long time, by removing soil and water resources, as the empirical model of the study shows, it has led to the strengthening of environmental obstacles with direct impact on natural resources.

Finally, based on the results of structural equation modeling among the main obstacles, economic obstacles with 33 percent have the greatest effect on the lack of capacity development of the existing explanations in the study area. Then, environmental obstacles have the highest impact on capacity development reduction with %17. In other words, we can infer that with each unit increasing economic obstacles, we face /033

negative effect on the capacity development of the gardening exploitations. Also, with each unit increase in environmental obstacles, including water resources shortages, which is more pronounced, we can expect a 0/17 reduction of capacity development in the gardening exploitations. Social obstacles also indirectly affected 15%.

Empowerment and production capacities as two mediating variables are able to reduce or increase the impact of economic, environmental and social obstacles to capacity development of gardening exploitations. As the empirical model of this study has shown that social obstacles have had 0/36 direct effect on empowerment of society. Also, the status of production capacities, such as quantity and quality, or diversity of produced crops, is considered as a mediating factor which also influences social, economic and environmental factors and thus improves the development of the gardening exploitations or is as a barrier to development. If the results of the model show that the decrease in product quantities and the low diversity of products has had a reverse effect on capacity development. So that the lower the production rate is, in general the possibility of developing and improving the capacity of gardening exploitations is greater.

According to the results of qualitative and quantitative studies and some research in the study area, there are obstacles and problems in the gardening exploitations which through its promotion and improvement, it can be increased empowerment, capacity building, capacity development and ultimately sustainable development of rural communities. Considering that in an interview with respondents which was emphasized on the lack of governmental support, especially in the marketing department of products, therefore, planning is offered to increase government support to gardener in different affairs, such as increasing the insurance premium contribution for the apple crops, trying to determine the fair price or the guarantee purchase of the gardeners' crops and creating cooperatives to manage sales and marketing of the crop in order to reduce the role of mediators. Also, given that the volume of produced crops is high in the region and the most agricultural wastes related to orchard crops; it is necessary to pay attention to processing industries to complete the production cycle process, create value-added product, expand

job opportunities and income sources, and motivate the younger generation to work in gardening activity in the village and prevent migration to the city.

Not having the proper facilities for product promotion and packing in accordance with international standards for exporting products

The lack of adequate facilities to promote product and packaging according to international standards for product exports, it is suggested that branding and conversion of Semirom's apple brand into a well-known and reputable brand among the country's top brands be done and hold festivals to identify this product to customers and create units for processing, packaging and sourcing to achieve diverse markets. The training classes will be offered in the field of production and supervision of experts on the product process of the crop.

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# تحلیل موانع توسعه ظرفیتی بهره برداری‌های باغی در نواحی روستایی

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## چکیده مبسوط

### ۱. مقدمه

با توجه به ماهیت فعالیت باغداری و جنبه‌های مثبتی کـه بـر ایـن فعالیـت حاکم است، تحقق اهداف توسعه پایدار نظیر کسب استقلال اقتصادی، بهبود وضع کشاورزان، جلوگیری از مهاجرت، بالا رفتن سطح رفاه جامعـه روستایی و خودکفایی کشور میسر خواهد شد. توسعه فعالیت‌های باغداری، افزایش درآمـدهای حاصل از آن و کـارایی فعالیت‌هـای باغداری تـابعی از توانمندسازی، افزایش توسـعه ظرفیتـی و ظرفیت‌سـازی اسـت؛ امـا تحقـق توسعه این بخش در مناطق مختلف بـا موانـع و مشـکلات بسـیاری مواجـه است که این موانع را می‌توان در سه دسته عوامل محیطی، عوامل اقتصـادی و عوامل اجتماعی طبقه‌بندی نمود. شهرستان سمیرم یکـی از قطب‌هـای اصلی فعالیت باغداری در استان اصفهان اسـت کـه بـا وجـود توانمنـدی‌ها و ظرفیت‌های فراوان به علل مختلف نتوانسته از امکانات و ظرفیت‌های خود برای توسعه باغداری بهره چندانی ببرد. بنـابراین، ایـن پـژوهش در پی شناسایی و بررسی این مسائل می‌باشد که: در بخش بهره‌برداری‌های باغی دهسـتان پادنا شهرستان سمیرم چه موانعی وجـود دارنـد؟ و از میـان ایـن عوامـل بازدارنده کدامیک بیشترین تأثیر را بر کاهش توسعه ظرفیتی دارند؟

### ۲. مبانی نظری

توانایی یک کشور برای دنبال کـردن مسـیر توسـعه پایـدار تـا حـد زیـادی بـه‌وسیله ظرفیت مردم و نهادهای آن و همچنین بـه‌وسیله شرایط جغرافیـایی و اکولوژیکی آن تعیین می‌شـود. بـه‌ویژه ظرفیت‌سـازی شـامل قابلیت‌هـای انسانی، علمـی، تکنولـوژیکی، سـازمانی، نهـادی و منـابع می‌باشـد. توسعه ظرفیتی به‌عنوان مکمل سایر ایده‌ها که در تفکر توسعه در چهـار دهـه

اخیر مطرح بوده شامل مفـاهیم نهادسـازی، توسـعه نهـادی، توسـعه منابع انسانی، توسعه اداری و مـدیریتی و تقویـت نهـادی می‌باشـد. ترکیب عوامل و نهاده‌ها و سرمایه‌گذاری در بهره‌برداری‌های باغی باید از دیدگاه نوآوری و به شکل بهینه تعریف گردد. بـه ایـن ترتیب کـه ظرفیت‌های تولید شامل منابع آب، خـاک، سـرمایه و توانمنـدی‌های نیروی انسانی مورد بررسی قرار گیرد و با شناسایی موانع توسعه ایـن ظرفیت‌ها، جهت‌گیری‌هـای لازم بـرای رفـع مشـکلات ارائـه گـردد. برنامه‌ریزی کشاورزی بیشتر بـه مسـائل و مشـکلات تولیـد و عرضـه محصـولات کشاورزی مـی‌پـردازد و تـلاش مـی‌کنـد تـا عـلاوه بـر درنظرگرفتن نیازهای غذایی جامعه و مسائل زیست محیطی، عملکرد اقتصادی کشاورزان را نیز بهبود بخشد. موفقیت این راهبـرد تـابع دو مؤلفه سرمایه‌گذاری در فرایند تولید و بهبود مکانیسم بازار می‌باشد. در این میان نقش باغداری و بهره‌برداری‌های باغی در توسعه منـاطق روستایی چشم‌گیر است. دخالت هوشـمندانه و برنامـه‌ریزی‌هـای راهبردی، همه جانبه و نیز واقع‌بینانه، در ارتباط با بهره‌برداری‌هـای بـاغی و باغداری متناسب با شرایط هـر منطقـه‌ای قـادر خواهـد بـود ضـمن رهـا ساختن جوامع، به ویژه روستاییان، زمینه و بسترهایی را فـراهم آورد کـه موجب توسعه این مناطق و در نتیجه کشور شود.

### ۳. روش تحقیق

پژوهش حاضر از نوع توصیفی- علّی و بر اساس براساس هدف، اکتشـافی و از نوع کاربردی می‌باشد. به منظور گردآوری اطلاعات از روش‌های کتابخانه‌ای و میدانی از قبیل پرسشنامه، مصاحبه نیمه ساختاریافته و مشاهده مشارکتی استفاده شده است.

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روش تحقیق به صورت تلفیقی از روش‌های کیفی و کمی صورت گرفته است. محدوده مورد مطالعه در پژوهش حاضر دهستان پادنا علیا در شهرستان سمیرم واقع در استان اصفهان می‌باشد. جامعه آماری شامل ۸۴۲ بهره‌بردار باغی می‌باشد. برای تعیین حجم نمونه از روش نمونه‌گیری تصادفی ساده استفاده شده است. در نهایت با استفاده از فرمول کوکران تعداد ۲۷۳ پرسشنامه و براساس سهم نسبتی هر روستا، میان خانوار بهره‌بردار توزیع شده است. تجزیه و تحلیل داده‌ها به روش کمی با استفاده از آمار توصیفی و استنباطی (تحلیل مسیر و مدلسازی معادلات ساختاری با استفاده از نرم افزار ایموس گرافیک) و روش کیفی (با استفاده از نرم افزار اطلس) می‌باشد.

## ۴. یافته‌های تحقیق

مفاهیم حاصل از تحقیقات کیفی در قالب سه مانع اصلی اقتصادی، اجتماعی و محیطی دسته‌بندی شده است. بررسی روابط همبستگی و اثرات میان متغیرهای مشاهده شده و پنهان پژوهش نیز با استفاده از نرم‌افزار ایموس گرافیک مدلسازی شده است. تحلیل مسیر مؤلفه‌های مشاهده شده از قبیل موانع اقتصادی، اجتماعی، محیطی، موانع توانمندسازی و عدم گسترش ظرفیت‌های تولیدی صورت گرفته است. بالا بودن سطح پوشش آماره از مقدار ۰/۰۵ و همچنین نزدیک به یک بودن شاخص‌های برازش تطبیقی، نیکویی برازش و برازش هنجار مؤید برازش مناسب مدل می‌باشد. وجود ضرایب مثبت نشان دهنده رابطه مستقیم متغیرهای مستقل بر متغیرهای وابسته می‌باشد. همچنین مدل رگرسیونی نشان می‌دهد که موانع اقتصادی با ضریب کل ۰/۲۶۷ بیشترین تاثیر را در تبیین عدم توسعه ظرفیتی دارد. به غیر از موانع اجتماعی در ظرفیت‌های تولیدی و توسعه ظرفیتی، تمامی وزن‌های رگرسیونی بین پارامترهای این سنجش و مدل معادله ساختاری بیشتر از صفر و در سطح اطمینان ۹۰ درصد و بیشتر قرار دارند. با توجه به اینکه ساختار روایی به غیر از دو مورد در تمام مسیرها بیشتر از ۱/۹۶ برآورد شده است می‌توان چنین استنباط کرد که کواریانس مسیرها در سطح ۰/۰۵ معنادار است. آماره آزمون یا نسبت بحرانی نیز دارای

یک توزیع نرمال استاندارد با سطح معنی داری کمتر از ۰/۰۵ می‌باشند. به این ترتیب فرضیه صفر بودن ضرایب در سطح خطای مشخص شده رد می‌شود و به این ترتیب تمام ضرایب مسیر (به جز سه مسیر) معنادار می‌باشند. خطای معیار در اکثر برآوردهای ضریب کمتر از ۰/۱ می‌باشد که این مطلب حاکی از میزان اثرگذاری هر مانع در عدم توسعه ظرفیتی می‌باشد.

## ۵. بحث و نتیجه‌گیری

به طور کلی موانع توسعه بهره برداری‌های باغی در سه دسته عوامل اقتصادی، اجتماعی و محیطی قابل بررسی هستند. تاثیرگذارترین عامل، موانع اقتصادی می‌باشد و از میان موانع اقتصادی نیز بیشترین تاثیر مربوط به بخش بازاریابی محصول است که در این بخش نیز دخالت واسطه ها و دلالان، هزینه های بالای تولید محصول و پایین بودن سهم باغدار از فروش محصول مهم ترین موانع در این بخش هستند. بعد از آن موانع محیطی بیشترین تاثیر را بر کاهش توسعه ظرفیتی داشته اند. موانع اجتماعی نیز به طور غیر مستقیم اثرگذار بوده است. میزان توانمندی و ظرفیت‌های تولیدی نیز به عنوان دو متغیر واسطه‌ای قادر به کاهش یا افزایش تاثیر موانع اقتصادی، محیطی و اجتماعی بر توسعه ظرفیتی بهره‌برداری‌های باغی هستند. در محدوده مورد مطالعه موانع و مشکلاتی در بهره‌برداری‌های باغی وجود دارد که از طریق ارتقاء و بهبود آن می توان به افزایش توانمندی، ظرفیت‌سازی، توسعه ظرفیتی و در نهایت توسعه پایدار جوامع روستایی همت گماشت.

**کلیدواژه‌ها:** ظرفیت‌سازی، توانمندسازی، بهره‌برداری‌های باغی، استان اصفهان.

## تشکر و قدردانی

پژوهش حاضر حامی مالی نداشته و حاصل فعالیت علمی نویسندگان است.

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