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Feasibility of Rural Industries Development in Rural Areas (Rural Areas of Kermanshah City)

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ABSTRACT

Technology deployment in rural areas with increase of stable income is associated with reduction in income differences and the patterns of consumption between urban and rural population. Rural areas like other communities have three sectors including; economy, agriculture, industry and services that a balanced relationship between the three sectors of agriculture, rural industries and services is a good way for the development of the developing countries. The main purpose of this paper is feasibility and measurement of establishing rural industries in rural areas of the city of Kermanshah. Analytical and descriptive method with an emphasis on survey and questionnaire is used. For extraction of guidelines, relevant experts in the SWOT model are used. The collected data was analyzed using SPSS software. The findings indicate that it is based on the opinions of the experts and the answerers, the area has a high potential for the creation and establishment of rural industries. As well as based on opinions of the experts, diversification strategy must be considered as the most important strategy regarding to the feasibility of rural areas.

KEYWORDS: Rural Industries, feasibility, rural areas, the town of Kermanshah

INTRODUCTION

The term "industrialization" in the economic literature is considered as the key to rapid economic development through which it can be a better future with production facilities, increasing job opportunities, updating of all aspects of the economy, finding a suitable place in the international arena and ... (Consultant Engineers Varzboom, 2003: 17). Industrialization of rural development in the rural economy of the area's population working mainly in agricultural production can be recognized to the point of non-agricultural production activities (Hannan, 1995:43).Todays industrialization of rural development is an important factor in policy of the developing countries (Wang, 2001:5) so that these countries have considered industrialization strategy of rural areas as the development programs in the mid-1970s (Rezvani,: 2003). Industrial policy in the developing countries are generally aimed at increasing production and creating new job opportunities. The goal of rural industrialization has been mixed with the strategy of rural development in creating focal points in the development of rural industrial in rural areas (Wang, 2001:16). Due to the many problems existing in agriculture economy such as restrictions on climate, water and soil, and most of all, rural-urban migration of Kermanshah, there are economic restructuring in rural areas from agriculture sectors to other sectors. One of the sectors that can provide economic development in rural areas is rural industries. To set up rural industries, special position should be primarily based on the abilities and talents in rural areas. The main purpose of this paper is to examine existing capabilities, weaknesses, strengths, opportunities and threats in order to create and develop the activity of rural industries.

Theoretical basics

Nowadays many studies with implications for the development of rural industries has been conducted (Illsley, 2007, Tambunan,1995, Jensen,2004 Li and Rozelle,2006, Arghiros,1997) also many studies have been conducted in conjunction with transformative and complementary industries (Harrison, 1993). Yao in 1999, examined the role of rural industries in rural economic development and reached to the conclusion that rural industries has improved the economy by creating job (Yao, 1999). In addition to the developing countries, the issues of rural industries have been considered in the developed countries. In this regard, a study by Keeler in 2005 as a rural industry and its environmental impacts in Pennsylvania was examined (Keller, 2005). In Iran, many studies related to rural industries and its impact in rural areas have been conducted. Following table shows a summary of these studies.

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Table 1 - Results of research on rural industries

Title	Researchers	Goal	Findings
Feasibility of rural industries in Ajab SHir(2008)	M. Mahdavi, V. Barani	Surveying of the capabilities in creating industries in rural areas	Many rural areas have the ability to create rural industries, especially transformative and complementary industries.
Role of industries in rural development, case study: the central part of Damavand (2008)	**S.M.Langroodi, M.Mahdavi Leila Vosooqi**	**Survey of the Social and economic consequences**	**Significant differences in the pattern of consumption of durable goods, social insurance and private property before and after the industrial area**
Feasibility of rural industries development in Tarom town	M.Rezvani and M.K.Jamshidi	Surveying of the capabilities in creating industries in rural areas	Tarom town has many potentials for the settlement of rural industries
Analysis of socio - economic development effects of industrial zones in rural areas (about: S. Abad Tonekabon Industrial Area)	M.R.Rezvani, M.Ramezan zade, M.M.Jaberi	Survey of the Social and economic consequences	The findings indicate that industrial districts have many lasting effects on rural areas
Rural industries policies in rural development (pulp and paper industries in Alabama 1997).	Mahandral Jooshi	Surveying of the macro policies in rural industries development	Policy development in rural industries with an emphasis on environmental and potential studies has provided rural developments in India.
Working For Independence: The Failure of New Deal Politics in a Rural Industrial Place	By Lou Martin	The effect of industrial areas on occupation	Sever effect of occupation
Rural industries planning, spatial analysis of rural industry in Mashhad city by using GIS	S.M.Langroodi H.A.Sabokbar	Analysis of special industries	Selecting the optimum location for rural industries
Establishment of industrial zones in rural areas: a case study; Kamard village of seihrood, Tehran (2006)	S.R.Moshiri and N.Azarbad	Effects of implications of industrial areas in the country.	The sum of the positive outcomes are more than negative consequences

Rural industries

Rural industries are those which are located in rural areas or rural centers and mainly use rural workforce (Khazae, 1998, 102). All non-agricultural activities in rural areas are known as rural industries (Handicrafts Organization of Iran, 1897, 10). In other words, rural industries, manufacturing industries that require skilled and professional forces for production , all family members can help and all or part of their time is spent on working - (Darban Astane, 2006, 27).Rural industries units are independent and have no affiliation with units and large firms (Vossoughi, 185, 28). Rural industries are being moved of the village, however, the premium mobile can come outside the village, so the role should be placed over the villager and participate actively. Thus many industries can be placed in rows of small industries. Small industries that are more of a workshop, in addition to the establishment in towns are also established in rural areas. This industries, compared to light industries, require less workforces and equipment and macro-investments are not needed (Vossoughi, 2008, 29). Rural industries must innovate in order to find a suitable position. Rural industry is currently said to all activities of industrial production which by using the local and regional environment are settled in rural areas (M. Langroodi, 2003, 154).

Characteristics and features of rural industries

The main characteristics and features of rural industries include;

1 - An indigenous industry that provides well employment for the seasonal unemployed.
2 - Easy to process and require little investment (Jahangard, 1995, 89).
3 - Fit to the needs of the population, agriculture, rural livestock and tribal areas.
4 - Training technology and its fitness to the technical level of rural population (Studying various sources of Ministry of Agriculture).
5 – Absorbing part of the investment and surplus of agriculture products with diversification of the rural economy.
6 - Employment of women and children in rural industries such as handicrafts (Rahimi, 2003, 17).

One of the main problems emphasized by many owners of industries and experts .is lack of capital and credit especially current capital for providing current prices of production units (Khazaee, 1998). In addition to the lack of credit institutions (finance) in rural areas, lack of private capital causes reduction of development process of rural industries. Most of the employed labor forces in rural industries have elementary education and skills, so because learning new profession usually is student- master,it is obvious that these forces cannot meet the requirements of modern workshops, which results in increased production costs, continuous failure of the means, frequent closure of production units, high cost of repair and service work, and finally reduction in quantity and quality of devices. This has been confirmed in other studies in Iran (Darban Astaneh, 2000).

Basically, settlement of modern rural industries require the recognition of indigenous and foreign technologies adaptable to the village. The level of technology and new technology in rural communities should be a reasonable distance to people be able to teach, learn and understand new technology. Generally, characteristics of appropriate technology for rural industries can be classified in the following cases;

• Should be based on local raw materials and foreign materials should be slightly.

• Should be compatible with local economic, social, cultural situation and in other words, be people-oriented. It should be able to meet the needs of people and contemporarily have the least amount of harmful effects of technology transfer.

• Due to the limited financial resources of rural surplus labor, it should be user and capital-saving technology .Therefore, large-scale and capital-intensive technologies are not suitable for rural communities.

• The required technology should improve the distribution of income through increasing per capita income of rural people and improve their quality of life.

Nowadays, there are two prevailing view point with emphasis on industries about rural development;

A: Establishment of industry in rural areas

In this regard, most attention is the question of what types of industries and how they should be deployed in rural areas and how can be the establishment of industry. In this view point, three types of programs to assist rural industrialization are:

• Establishment of large plants near the village which their premium productions are supplied of crops in the area.

• Protection and promotion of handicrafts and products of local artisans.

• Encouragement for the creation of small units which supply crops or repair or manufacture some of agricultural foundations.

B: Industrialization of rural areas

This approach of rural industrialization can be considered as a process which in addition to diversification of the economic activities of the village can be considered as a means to improve the living condition of rural people and rural development.. The approach notes to the industrialization of rural areas as a means to achieve socio - economic development in the region and rural industries as a means to diversify and modernize community needs and considers the role of rural industrialization as a provider of these needs. (Mire, 1985:3).

RESEARCH METHOD

Feasibility studies are considered as the most important issue in the development literature and as a factor leading to the creation of any activity type. The main objective of this study was to evaluate the capabilities and talents for industrialization in rural areas. Research method in this study is cross - sectional with an emphasis on field surveys, questionnaires from households and strengths, Weaknesses, opportunities and threats analysis based on expert opinions related to the city of Kermanshah.One of the methods used in this study is the evaluation by experts based on **SWOT** model. This analysis is very useful for analyzing current situation of an organization or group, or a geographical area for development and application of geographic innovation, decision making, and outcomes evaluation of options to choose and will consider not only current visions but future opportunities and threats also.

SWOT analysis is based on the following principles:

• Strengths / Weaknesses: This aspect of the process is to analyze the strengths / weaknesses which are explored in a group situation.

• Opportunities /Threats: The best of the opportunities and threats in the external environment are explored. SWOT analysis of the internal and external factors is performed to Identify opportunities, threats, strengths and weaknesses and to be codify appropriate strategy in the current and future situation. SWOT analysis conducted for this study are the following:

Firstly: a list of prior opportunities, threats, strengths and weaknesses are provided and then comparison of internal strengths and external opportunities, comparison of internal weaknesses and opportunities, comparison of strengths

of internal and external opportunities, comparison of internal weaknesses and external threats, and providing appropriate strategies and corresponding to the comparisons will be listed.

CONCLUSION

Different studies of economic development noted the importance of non-agricultural activities in rural development and emphasize on its role as an important factor in reducing rural poverty and income differences (Hare, 1992:22). In this regard, almost a quarter of the rural population engaged in non-agricultural activities are relevant to developing countries (UNDP, 2000: 55). Structural transformation of traditional agriculture-based economy to an economy based on manufacturing and service sectors is considered by some development theorists as the development process (Goshi, 1997:11). Rural industrialization and economic independence of the developing countries is important, because when the settlement of industry is limited to cities, such a development would not be sustainable. (Rao, 1899: 147). Rural industries are those which are located in rural areas or rural centers and mainly use rural workforce which this industries generally have relatively limitations with market bonds; geographically (Rahim, 2003: 11).The goal of industrialization of villages is establishment of small and efficient industries in rural areas which help to the settlement of non-farm employment and income creation in rural areas. In addition, the goal of the settlement of these industries is optimal utilization of local resources and as well as strengthen the position of regional institutions. (Consultant Engineers DHV, 1995: 67). Industrialization is always considered to be as an essential element of economic growth and regarding to the positive effects on society and its respective per capita income is one of the main criteria for economic development (Goshi, 1997:11).

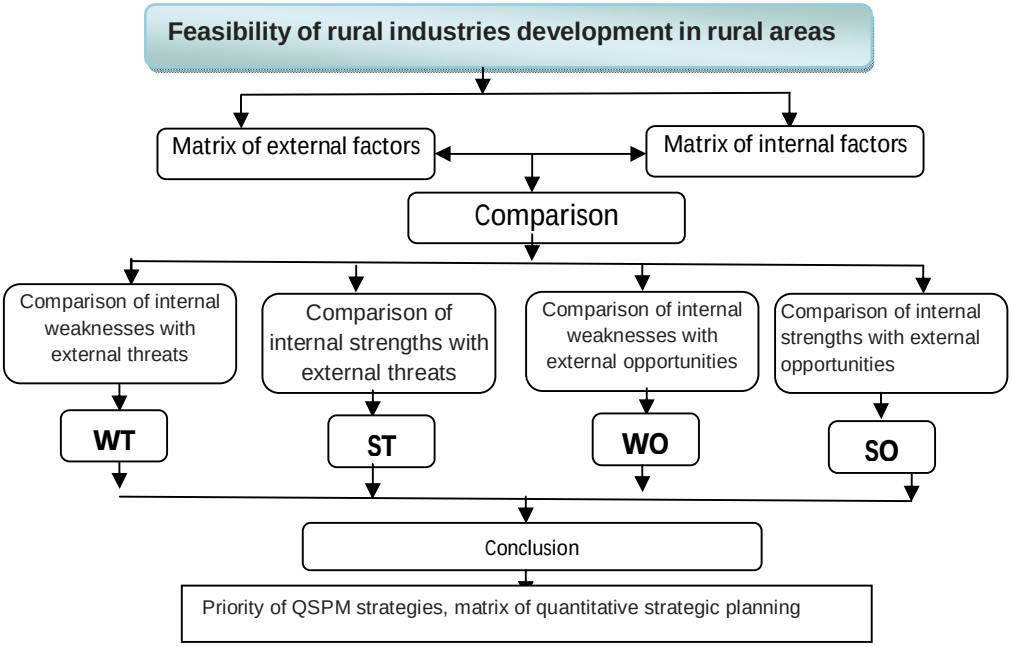


Table1. The stages of SWOT analysis

Case study area

Kermanshah city with an area of approximately 8547 square kilometers as one of the metropolises of Iran is the center of Kermanshah province. From north-west reaches to the city Kamyaran, from the west; city of Islamabad and Paveh, south part is the city of Shirvan and Chardavl, from the east reaches to the city of Harsin and Bisotoun Inscription and from the north-east limits to the city of Sonqor.

Kermanshah city is between 47 degrees and 4 minutes to 47 degrees and 16 minutes of east longitude, and 34 degrees 16 minutes to 34 degrees 33 minutes of north latitude (Figure 1-2). The city has an average elevation of 1410 meters above sea level and has four main sections namely; Firoozabad, Kouzaran and Mahidasht And thirteen districts and 815 villages and its population in 2008 was equal to 967.196 people.

Table 2 - Demographic developments in rural settlements of Kermanshah city.

20081995-growth rate	Population2008	Population 1995	town
1.9	163.096	102149	kermanshah

Reference: Iran Statistic Center

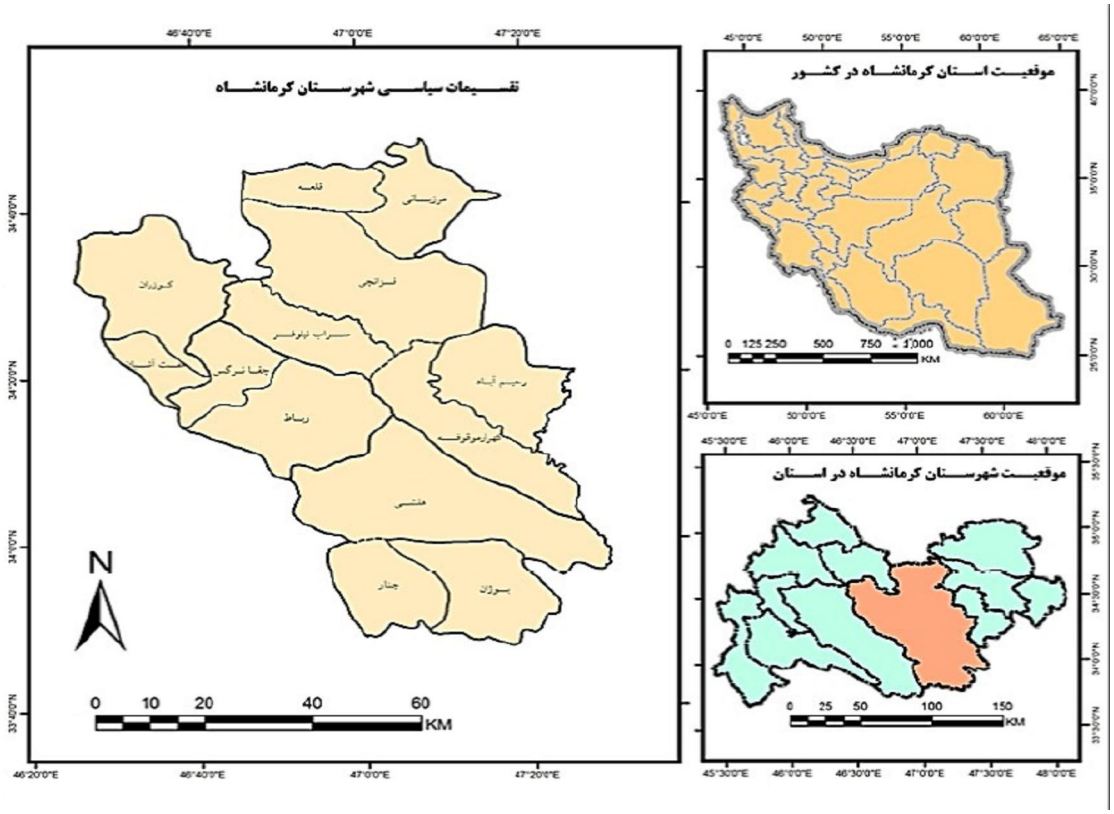


Figure 2 - Map of the case study area
Reference: the writer

Findings

Feasibility of rural industries should be in rural areas based on the potential and capabilities which can be found in rural areas. In this research, based on surveys and preliminary observations from the study area, some components were identified to assess the feasibility of establishment and development of rural industries and were delivered to the sample population (rural residents) in the format of questionnaire. To examine the feasibility of needed data, two types of indicators of objective and subjective indicators have been used. Objective indicators are the same that have objective criteria such as crops, livestock and so on ..., and more subjective indicators variables are based on residents' attitudes and perceptions such as tendencies, participation in industrial activities, tendency to remain, tendency to be consistent with the investment and ultimately to strengthen and create conditions more favorable for feasibility of rural industries. In rural areas of the case study appropriate strategies are provided based on SWOT strategic assessment.

Descriptive findings

Surveying of the characteristics of Guyana's response indicates that 91.4% of response are men and 5.9 percent of Guyana's response belong to women. In overall, 20 percent of response are single, and 80% are married. Average number of household members were 5.1 and in general more than 80% of Guyana's response was less than high school education. Surveying of the factors associated with the development of rural industries in the study area indicate that the construction and development of infrastructure such as roads are allocated to the government with the best average 3.2, and private sector investment is allocated to the least mean. The findings indicate that encouraging private sector investment should be a priority in the work of the planners (Table 3).

Table 3 - Evaluation of existing components associated with rural industries

	Maximum	Minimum	SD	Mean	Number of observations
Governmental investment	4	1	0.80	2.7	320
private sector investment	4	1	0.73	2.1	320
Cooperative sector investment	4	2	.0.61	2.8	320
Construction and infrastructure developments such as roads by state	4	2	0.69	3.2	320
Development of agricultural activities	4	2	0.69	2.6	320
Percent of the loan with the lowest fees	4	1	0.88	2.3	320
Giving land to establish industrial units	4	1	0.75	2.6	320
Workshops and training classes for rural women to make crafts	4	1	0.83	2.7	320
training farmers for development and planting needed products to create transformative industries	4	1	.0.85	2.7	320

Reference: the field information

Analytical findings

The important criteria for the establishment of rural industries in rural areas that have been studied in this research include sufficient raw material, existence of agricultural products to establish transformative and complementary industries, existence of critical infrastructure such as road network for the rural industries, existence of work forces in rural areas, nearness to the consumption market and existence of craft. For general understanding of the status, the six criteria are combined. Regarding to the answers which is 4 optional, number 15 is estimated as the theoretical median of the response .In this regard, Ho hypothesis, from society point of view, deem to these criteria unsuitable for establishing rural industries, and H1 is involved on the suitability of these criteria. The data extracted from the questionnaires about the feasibility of criteria indicate that these criteria about sample population are at a favorable condition. Indeed, there is significant difference between the mean of obtained responses 19.6 with the theoretical mean 15. In other hand, the calculated significant level was in the alpha region 0.05 equal to 0.000 showing the significant agreement of the residents in this area. In this situation, assuming Ho as an inappropriate criteria based on the feasibility to establish rural industries in facing to disaster is rejected or in other words, the hypothesis H1 is confirmed. The significant level of alpha 0.05 indicates that there is significant agreement among residents (Table 4).

Table 4 - Results of T-test for understanding the feasibility of the development of rural industries in the rural areas of Kermanshah.

Feasibility of development and establishment of rural industries	standard error	SD	Mean	Number
	.1562	2.7735	19.6889	315
	Significant level	Degree of freedom	T value	T percentage
	0.000	314	15	30.004

Reference: the field information

SWOT Analysis

Investigate the potential of rural areas of the city of Kermanshah in connection with the rural industries demonstrated various strengths and weaknesses which are considered in the cases of natural, social, economic and so on... .According to preliminary studies by experts and questionnaire prepared by experts in the area of agriculture and rural industries, key strengths and weaknesses opportunities and threats were identified and then were delivered to the experts and scholars in the form of a new questionnaire which finally, the mean score for each factor and its strengths and weaknesses and opportunities and threats are listed in the tables below. The opportunities aggregation were equal to 1.79 and the threats aggregation were 2.90. Finally sum of the opportunities and threats were equal to 2.90 and the sum of the strengths and weaknesses were equal to 3.69. Finally was placed on the four house table, and then needed strategies were identified and extracted (Tables 5,6,7,8).

Table 5 - Matrix of external factors (opportunities) (EFE).

Column	Opportunities	Mark	Rank	Coefficient
1	Nonindigenous investment in the development of rural industries	0/48	4	0/12
2	Specific support of the government	0/36	4	0/09
3	Development of tourism activities	0/15	3	0/05
4	Governmental encouragement such as low-interest loans	0/18	3	0/06
5	Tax exemptions and reduction in insurance costs	0/18	3	0/06
6	Existence of technical knowledge	0/44	4	0/11
	Totality	1/79	21	0/49

Reference: the field studies

Table 6 - Matrix of external factors (threats) (EFE).

Column	Threats	Mark	Rank	Coefficient
1	Lack of information about production capacity of raw materials in rural areas	0/09	1	0/09
2	Lack of investor in rural areas	0/04	2	0/02
3	Lack of a culture of partnership and co-operatives in the country.	0/04	2	0/02
4	The villager general deficiency in the process of changing livelihood.	0/06	1	0/06
5	Continuum problems and changes in laws and regulations.	0/05	1	0/05
6	Lack of shows and markets in other provinces	0/09	3	0/03
7	Importing the equivalent goods	0/20	1	0/20
8	Absence or weakness of the authorities of the potentials	0/27	3	0/9
9	Paying too much attention to the city's Industrial Development	0/12	1	0/12
10	Lack of resources and guidelines in raw materials products and farming and gardening products regarding to the development of transformative and complementary industries.	0/15	3	0/05
	Totality	1/11	17	0/73
	Totality of the threats and opportunities	2/90	38	

Reference: the field studies

Table 7 - Matrix of internal factors (strengths)

Column	Strengths	Mark	Rank	Coefficient
1	Sufficient and cheap force work	0/18	3	0/06
2	Cheap raw materials	0/15	3	0/05
3	Cost and availability of land	0/09	3	0/03
4	Adequate livestock production to establish transformative and complementary industries.	0/24	4	0/06
5	Crop and gardening productions to establish transformative and complementary industries.	0/20	4	0/05
6	Cultural and historical potential to establish craft workshops	0/16	4	0/06
7	Efficient infra-structures such as water and electricity	0/28	4	0/07
8	Variations in raw materials	0/20	4	0/05
9	Availability to the consumer market, especially in the villages near the city.	0/24	4	0/06
	totality	1/74	33	0/47

Reference: the field studies

Table 8- Matrix of internal factors (weaknesses)

column	Weaknesses	Mark	Rank	Coefficient
1	Lack of skilled workforce	0/36	3	0/11
2	Lack of women's participation	0/12	2	0/06
3	Peasant resistance against change in employment	0/18	3	0/06
4	Lack of co-operatives	0/05	1	0/05
5	Unwillingness of private sector investment in the	0/20	2	0/10

	industrial sector			
6	Unwillingness of villagers in rural areas to settle the industry because of environmental problems	0/08	2	0/04
7	Lack of bank facilities or long process to get credit or employment loans	0/06	1	0/06
8	lack of the cooperation of Agricultural Administration in the field of justifying plans	0/30	2	0/15
9	Investors tendency to invest in other areas of economic	0/60	4	0/15
totality		1/95	20	0/78
Totality of strengths and weaknesses		3/69	58	100

Reference: the field studies

Developing and extracting strategies tailored to each area requires an understanding of the strengths and weaknesses of each region. Therefore the basic principles in the formulation and adoption of policies and strategies in the development of rural industry with developmental viewpoints should be based on the demands of local communities. Extraction of quadruple strategies based on a SWOT matrix comparison to rural city of Kermanshah are drawn in Table (9).

Table 9 - Extraction of quadruple strategies based on the strengths, weakness, opportunities and threats

Internal and external factors affecting the development of rural industries	**Strengths (Green)** **• Adequate and cheap force work** **• raw materials and cheap land** **• Adequate livestock, farming and gardening production** **• Potential cultural and historical for crafts workshops** **• the existence of appropriate infrastructure such as water and electricity** **• Market access for consumers, particularly for villages that are located near city**	**Weaknesses (yellow)** **• Lack of skilled workforce** **• Lack of women's participation** **• Resistance to change in rural employment** **• Lack of co-operatives** **• unwillingness of private sector investment in the industrial sector** **• unwillingness of villagers in rural areas to settle the industry because of environmental problems** **•Lack of bank facilities or long process to get credit or employment loans** **lack of the cooperation of Agriculture Administration in the field of justifying plans** **Investors tendency to invest in other areas of economic**
-Nonindigenous investment in the development of rural industries **-Special support of the government** **-development of the tourism activities** **- Governmental encouragement such as low-interest loans** **-Technical knowledge in the country**	**SO aggressive strategies** -Force work management Governmental help - Absorbing(tax exemption) -Tourism planning and reforming • Holistic and integrated management for the development of rural industries	**Reviewing WO Strategies** • facilitate the transfer of credits to the private sector • inform local residents in order to accept the establishment of industries in rural areas • Cooperation of Agriculture Administration with other centers in the city to remove obstacles and challenges facing the establishment of rural industries
Threats **• Lack of information about capacity of raw materials in rural areas** **• lack of suitable shows and markets in other provinces** **• Rules** **• Lack of investor in rural areas** **• Lack of resources and guidelines in raw materials products and farming and gardening products regarding to the development of transformative and complementary industries.**	**ST diversification strategies** • Create databases related to the study area potentials • attracting investors by giving some advantages • Optimal farmers training to produce raw materials to establish rural industries	**WT defensive strategies** • Enhancing cultural and social knowledge and monitoring cultural needs • Establishment of industrial complexes with emphasis on raw materials in the region • Managing and developing cooperative marketing related to the products • identifying investors and facilitating in paperwork

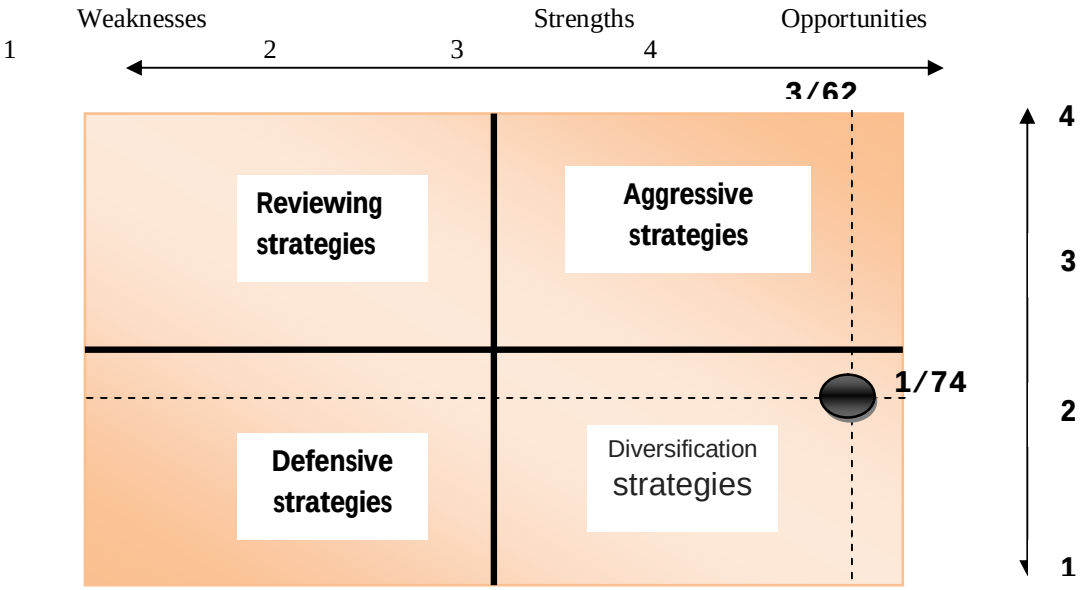
Reference: the field studies

Thus, regarding to the total score of the opportunities and threats, as well as strengths and weaknesses in rural areas of Kermanshah city as chart (23-4) shows diversification strategy. Diversification strategy is adopted strategy of combining the strengths and opportunities. In this type of strategy, planners should try to use the internal

strengths and external opportunities to benefit the greater geographical spaces for development. Based on findings from the field studies and expert opinions, the below diversification strategies are presented in order to develop the rural areas of Kermanshah.

• Create databases related to the potentials of the study area
• attract investors by giving some privileges
• Optimal training farmers to produce raw materials for the establishment of rural industries

According to the experts, the lack of basic information such as the exact level of agricultural production, areas at high risk of natural hazards, population centers, and related resources centers and... are the most important weaknesses for establishment rural industries. Based on this database with all of the above, the groundwork for the establishment of rural industries can be provided. Another important point is that there is a high risk grade and investment which unfortunately in rural areas are less. In some cases, investors facing challenges due to lack of investment security, do not tend to invest. Optimal farmers training to produce raw materials for the establishment of rural industries should be considered as a strategy.



As the industrialization is always considered to be essential for economic growth and development, the level of industrial development and its effects on society and economic development and per capita income is one of the main economic growth criteria. Experiences of successful countries suggest that the establishment of rural industries in the rural areas has improved economic aspect of people life. Rural areas of Kermanshah city have been faced in recent years with challenges such as soil and water resources and rural-urban migration. This paper aims to examine the feasibility of industry establishment in rural areas with emphasis on raw materials and geographic position of the rural location in the city of Kermanshah. The findings indicate that agricultural production in the study area for the establishment of rural industries (transformative and supplementary industries) have a high potential. In the topics related to the feasibility of deploying industry, infrastructures, capital, raw materials and skilled force work and consumer market is important. The observation of this study indicates that the study area is generally in good condition (Table 4).

Based on the finding extracted from the questionnaire, construction and infrastructure development such as roads by the state with average (3.2) could be the most important role in the development and establishment of rural industries. According to the view point of the various experts in the field of rural studies:

• Creation of databases related to the potential of the study area
• attracting investors by giving some privileges
• Optimal farmers training to produce raw materials for the creation of rural industries in the diversification strategy is a way to develop rural industries in rural areas in the city of Kermanshah. However, rural industrialization strategy for rural development is a positive experience in many developing countries. Implementation of these strategies were successful to control the rural – urban migration, employment and reduce unemployment, increase investment, promote industry , increased added value of agricultural productions and reduce poverty in rural areas.

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