The Role of Small Industries in Employment Generation and Economic Development in Maharashtra and Khuzestan

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Abstract:
This study is a survey conducted by means of questionnaires. It analyzes the collected data using descriptive analysis as well as t and chi squared tests. In this study we have analyzed the status of small scale industries in Khuzestan and Maharashtra with a special consideration of the impact of these industries on job generation and regional development separately. Statistics show that Iran highly invested in the moderate to large industries such as petroleum and petrochemical, agricultural adapting industries, mines and non-metal minerals, steel and manufacturing machineries, while little attention has been paid to small industries within the framework of the industrial structure. The findings of the research showed that when small scale industries are developed in Khuzestan, job opportunities will be increased more than Maharashtra. The activities of small scale industries in terms of product, consumption, trade and revenue as well as in terms of workers recruitment in both countries clearly show a considerable impact on regional development.

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1. Introduction

The study of small industries in industrial countries such as U.S.A., Italy and developing countries such as India and China show that the industrial development of these countries are due to the growth of small industries and government programs performed for the small industries growth. In a country like Iran the government has invested huge amounts in large industries such as petroleum and petrochemical, agricultural industries, mines and non-metal minerals, steel and manufacturing machineries. In southern province of Khuzestan, the great plants of petroleum, petrochemical, sugarcane agricultural plant, cement and steel can be mentioned. All of these large industries increasingly require intermediate goods, accessories and facilities. Khuzestan plays the first role in large industries of petroleum, petrochemical, drilling and steel in Iran.

In Iran little attention has been paid to small industries within the framework of the industrial structure. Hence they fail to fulfil their expected functions in comparison with small size industries of the developed and developing countries. One of the ways of modifying the policies for the betterment of small industries is utilizing experiences and patterns of those countries that have been successful in this regard. One such country that can be named is India, which has had achievements in the field of small industries. The small industries of this country provide 70 percent of the employment and forms 55 percent of the exports. Comparing India's small industries status may prove to be fruitful in solving the issues of the small industries.

The reason of selecting India and Iran for this research is to compare the position of small industries in Iran with a country that took considerable steps towards industrialization and development. This study considers the role of small industries in economic development especially in job generation. An effort has been made to study the role of small industries in employment generation and economic development in Maharashtra in light of development in Khuzestan, Iran.

The objectives of the research are as follows:

1. To analyze the role of small industries in employment generation in Maharashtra of India and Khuzestan of Iran

2. To evaluate government policies of Maharashtra in respect of small scale industries performance

3. To assess different updates and capabilities of small scale and medium scale enterprises from Maharashtra (Pune) with particular reference to small scale industries cluster programs

Background information is collected for the small-scale sector in Maharashtra and potential clusters for development identified. This study reviews the Indian small-scale sector in terms of its specific features, structure, support institutions, government policies and programs, and performance in the past few years; and analyzes a total of 100 small scale industries, 50 in Maharashtra and 50 in Khuzestan.

The research is based on documentary and field studies according to spread, type of activity with the use of field observations, interviews and questionnaires.

The selection of respondents was done by random sampling method. Questionnaire was designed focusing on the scope of the study and gathering qualitative and quantitative information.

This paper is organized into seven sections. Section one Introduces the paper's subject. Section two discusses general overview. The third section reviews the literature. The fourth one is about profile of Maharashtra and Khuzestan. The next section is about role of industries in Maharashtra and Khuzestan. Section six presents analysis of collected data. Finally, section seven deals with recommendations.

2. General Overview

Clusters can be defined as sectoral and geographical concentration of enterprises, in particular Small and Medium Enterprises (SME). The advantage of proximity to and knowledge of markets and low transport costs have enabled local SMEs to hold a significant market share. SMEs could more easily achieve economies of scale in this agglomeration. There are about 350 SME clusters in India mostly containing small industries. The small scale sector in India contributes directly to 35 percent of the total exports

from the country. There is no special policy either of the central government or state governments for the promotion of the SME clusters in general. According to an estimate, there are also about 2000 rural clusters in India. These are mainly skill-based clusters which have grown in size with the passage of time. These clusters consist of unorganized sector tiny units with very little access to market, information and technology. The obstacles and ways of dismounting them are also included based on the data provided.

The central and state governments in India have together set up an elaborate 3-tier structure for promoting the small scale sector: at national level, in pursuance of the recommendations of International Perspective Planning team (1953-54), several institutions have been set up, largely meant for the modern small scale industry. At the state level, the governments have set up institutions to develop infrastructure in the form of industrial plots and industrial sheds, to provide long term credit facilities, marketing assistance for exports from the small scale sector, technical, financial and marketing consultancy to the sector, and ultimately to promote entrepreneurship through training. At district level, in the year 1978, the central government launched a program of establishing (more than 400) District Industries Centers to provide under a single roof all the support services, clearances, licenses and certificates required by the small entrepreneurs. There are three national associations representing all types of industries, small and large building up the non-government promotion structure. There are also numerous agencies which provide finance to small scale industries sector directed by the Reserve Bank of India. These agencies work at national, state, regional and district levels.

SMEs can be considered as the backbone of most countries all over the world. In the world, 99.7 percent of all organizations are SMEs. They employ nearly 80 percent of the workforce, 80 percent of trainees, and participate in more than 80 percent, directly and indirectly of the GDP, exports and economy of most countries of the world. The SME is patronized in order to boost the rural economy with umpteen employment opportunities.

Investment limit is the main criterion for making a definition of a small-scale industrial undertaking. Generally, this limit is up

to Rs. 1 Cr. But very recently, the Small-Scale Industry Ministry has raised this investments limit to 5 Cr. for 71 items. For tiny enterprises, investment ceiling is Rs. 25 lakh while for small-scale business enterprise the investment ceiling is up to Rs. 10 lakh (Reserve Bank of India, p. 557).

Efficiency of the Small-Scale Industries (SSIs) in India is treated in various studies. In a study carried out by Dhar and Lydall, it was concluded that modern SSI unit is fair capital intensive so SSI units do not generate more employment per unit of capital than large scale industry. Sundesara used CMI data for 28 industries and found that for a given volume of investment, small-scale units neither generated more employment nor produced more output compared to large-scale units. In his paper published in 1976-77, he found that the SSIs (compared to large scale industries) generally have low labor productivity, high capital productivity, low capital intensity (measured as capital per employee) and low total factor productivity. According to SIDBI, the small scale sector is more efficient than the large scale sector. There was an increase in the share of SSI in the total exports of the country from 9.6 percent in 1971-72 to 33 percent in 2003- 4. The share of the small scale industry in manufacturing exports is about 45 percent.

Relative labor productivity of SSIs is studied in different states. Labor is definitely more productive in Maharashtra for eight industries like non-ceramic bricks, structural metal products and utensils. Relative Capital Productivity follows the same pattern. It is seen that there is a strong positive correlation between relative labor productivity and relative capital productivity in each of the industries across states and across industries in each of the states. This suggests that labor and capital are complementary rather than substitutes to each other.

To test the appropriateness of the two-factor production function of the study we obtain relative efficiency measures of the SSIs by an alternative method based on weighted average of relative productivity indices of three factors of production: capital, labor and intermediate input. There is a review of literature in the next section including a number of studies on the efficiency of SSIs in India.

A use-based classification of industries reveals that consumer durable industries have some of the highest average efficiency indices and relatively smaller coefficient of variations. It could be because of greater diffusion of technical knowledge, and more uniform demand for the products across the states. On the other hand, the intermediate product industries and the consumer non-durable industries have wider variations in their relative efficiency indices across states. In case of the intermediate product industries, it could be ascribed to greater variation in technological knowledge and opportunities for vertical integration among the states.

The proportion of SSI units using power-which has been taken as a proxy for the level of technology, is found to be positively correlated with relative efficiency in seven industries. A careful perusal of the data on this important ratio will reveal that in industrially developed states like Maharashtra, the industries with higher proportion of power using units are relatively more efficient. However, even if this proportion is high, with irregular and insufficient supply of power the industries may be relatively inefficient as it is the case in some backward states.

3. Review of literature

A number of studies on efficiency of SSIs in India were undertaken. Most of the earlier studies used the partial productivity ratios for a measure of the relative efficiency of SSIs.

Dhar and Lydall (1961), Hajra (1965), Sandesara (1966 and 1969) and Mehta (1969) use CMI/ASI[1] data for their analysis. The first three studies report a positive relationship between size and output-capital ratio. This is attributed to economies of scale and better management in the relatively bigger units. Mehta's conclusion is contrary to those of others. However, he uses a different criterion for size classification of the firms. He classifies the firms into different size classes according to the value of fixed assets. Earlier studies, on the other hand, use employment

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[1] Census of Manufacturing Industries (CMI), Annual Survey of Industries (ASI)

as the criterion for size classification. Also, Dhar-Lydall and Sandesara use total productive capital (fixed plus working capital) as a measure of capital input while Mehta uses fixed capital. However, it is difficult to fully understand the reasons for contradictory conclusions arrived at by these studies. It is possible that 'since the ratio of working capital to fixed capital is high in small scale units, efficiency comparisons based on fixed capital favor small scale units' (Goldar, 1988).

Study of Bhavani (1980) is an improvement over the previous studies in the sense that the basic data source for her study is the census of SSI units (CSSI), conducted by the Development Commissioner of Small Scale Industries (DCSSI) in 1973-74, which has a wider coverage than CMI/ASI does. The conclusion reveals that the capital productivity of SSI units is lower than that of large scale units suggesting efficiency differences in line with the findings of Dhar- Lydall-Sandesara.

Goldar (1985) estimates a frontier production function (of Cobb-Douglas form) using firm level data from CSSI for the small scale Washing Soap industry to obtain measures of technical efficiency. Measures of partial and total factor productivity and an analysis of technical efficiency reveal that tiny units are inefficient compared to relatively bigger units within the small scale Washing Soap industry.

Little et al. (1987) discover very little regularity in the patterns of partial and total factor productivity, and in their relationship with firm size in five SSIs when size is measured either by number of workers employed, or by the value of fixed assets. An analysis of technical efficiency, based on a three factor translog production function, reveals that there are wide variations in total factor productivity. Within each of the five industries, variation in technical inefficiency (measured by the difference between actual and predicted output) is substantial and there is no systematic relationship between employment size and technical efficiency. Only in Machine Tools industry, technical efficiency is correlated with firm size. As for the sources of variations in technical efficiency, four variables: the average experience of the labor force, the age of the capital stock, the

experience of the entrepreneur and the level of capacity utilization are found to be significant in one or more industries.

Goldar (1988) uses a total factor productivity index based on the Cobb-Douglas production function to assess relative efficiency of 37 three-digit industries of the NIC18 in 1976-77. It is observed that in almost all industries labor productivity in small-scale units is less than that in large-scale units. On the other hand, capital productivity in small units is higher in 22 industries when gross invested capital is at work and in fifteen industries when net invested capital is used as a measure of capital input. The study observes that economies of scale (as captured by relative size) and better management (as captured by the ratio of closing stock to consumption of raw materials) are significant sources of efficiency for large units. Similarly, higher relative efficiency can also be attributed to mechanized technologies.

Ramaswamy (1990) estimates partial productivity of labor and of capital, and relative efficiency using unit level data for four industries: Motor Vehicle Parts, Agricultural Machinery and Parts, Machine Tools and Parts, and Plastic Products. He uses the same relative efficiency index as Goldar (1985) does. His analysis indicates that capital intensity and partial productivity are sensitive to alternative measures of firm size. There is little regularity in the behaviour of capital-labor ratio and employment size. Partial factor productivity of labor and of capital also does not exhibit any significant relationship with firm size when size is measured in terms of employment. However, a positive relationship is observed between capital-labor ratio and investment size of the unit. Labor productivity rises while capital productivity falls as the investment size of the unit increases. Efficiency indices show neither systematic nor substantial differences between employment or investment size classes of units. Ramaswamy's analysis suggests existence of increasing returns to scale and thus rejects the assumption of constant returns to scale. His results are consistent with those reported by Little et al. (1987).

Using firm level data drawn from CSSI, Bhavani (1991) makes an attempt to measure technical efficiency of four-digit

level metal products industries using a translog production frontier with three inputs, viz. capital, labor and materials. It is observed that for all the four metal products industries and five size groups within each one of them, the average level of efficiency is quite high and that efficiency measures increase with the increase in size up to a size class and then decreases.

4. Profile of Maharashtra and Khuzestan

In this section the profiles of Maharashtra and Khuzestan are examined and compared to each other.

4.1. Profile of Maharashtra

Maharashtra State was formed on 1st May 1960 as Marathi speaking state. Maharashtra is the third largest state of India in the area, second largest in population. About 70 percent of the people in Maharashtra depend on agriculture. Agriculture contributes about 20-22 percent of the state's income. Maharashtra is the largest producer of number of items such as Alphonso Mango, Grapes, Bananas, Pomegranates, Sugar, Cotton, Oilseeds and Cashew. Important cash crops are Cotton, Sugarcane, Groundnut and Tobacco. The state accounts for 9.2 percent of the total population of the country. It produces 19 percent of national output and shares about 11 percent of industrial units, over 17 percent of labor, about 16 percent of investment and 23 percent of the value of industrial output. The growth rate is 22.57 percent in 1991- 2001. But last three years the average annual growth rate stands at 9.3 percent. Maharashtra is one of the industrially advanced states of India. Nearly 43 percent of urban area of India is occupied by Maharashtra. It gives the higher productivity in India. A factory in Maharashtra employs 16 percent more capital and 2 percent more labors. It is remarkable to note that Maharashtra produces 37 percent more output which adds 51 percent more value than a factory in other parts of India. Maharashtra has the highest literacy rate of 77 percent.

4.2. Profile - Khuzestan

Numbers of total manufactories by 1996 in Khuzestan province were 10189 units. The total number of manufacturers was around 13191 by 2002. Khuzestan small industries in 1996 were 10114 units, 29.52 percent have been added to this number by 2002 and total small industries in Khuzestan reached 13100. According to industrial census of 2002, from total factories, number of private units in Khuzestan was 10116 (99.3%) and public sector units were 73. It is noteworthy that there is no small public industrial unit in Khuzestan. According to ISIC classification, the highest number of active units in Khuzestan includes: food and beverage industries with 3958 (30%) units, fabrical metals products with 3071 (23.28%) units in the second place and textiles and fur processing with 1422 (10.78%) units are in the third place.

Number of total employees of industrial units of Iran according to 2002 census was 2151476 persons. Total employees of factories in Khuzestan were 85721 persons, which is equal to 4 percent of total number in Iran. The number of employees in factories with less than 50 workers in Iran was 1364291 which was equal to 63.4 percent of total employees in industrial units in 2002. Number of employees in small units (less than 50 workers) in Khuzestan in the same year was 39549 persons (46.1%) which were equal to 2.89 percent of total number in Iran.

According to statistical findings in 2002, most employees in major industrial groups in Khuzestan are in food industries, fabricated metals and non-metallic minerals.

With the number of employees in industrial sectors between 28 provinces in 2002, Khuzestan province stands on the fifth scale and the share of occupation in Khuzestan from total country is 3.98 percent. Also by the number of employees of small industrial units (less than 50 persons) among other provinces, Khuzestan stands ninth and in terms of occupation Khuzestan's share is 2.9 percent.

The result of the census in regard to the features of employment and unemployment of the households during 2002 reveals that among 10 year-old or more group of the population

of the province, 35 percent were active and the ratio of this figure for women and men were 8.94 percent and 61.74 percent, respectively. The employment rate for the year under study was 83.64 percent. In other words, the unemployment rate during 2002 was estimated to be about 16.26 percent (Iran's Statistical Centre, 1381, p. 69).

Total demand for manpower in Khuzestan province during 2001 was estimated about 1,030,896 persons, of whom 67.73 percent was in the private sectors and 31.96 percent in the government sectors and 0.31 percent were employed in the cooperatives. The share of agriculture, mine and industry and services from the total figure of employment were 23.3 percent, 28.81 and 48.17percent respectively.

The GNP at market price during 1999 was estimated to be about 5940.1 billion rials; in other words, the income per capita in the year under study was equal to 15.7 million rials. The share for agriculture, mine and industry and services were 12.57, 15.4, and 70.0 percent, respectively.

4.3. Comparative Study of Pune and Ahvaz

The major industries from Pune of Maharashtra are auto ancillary related fabrication units, foundries and forging units. There are about 3500 units constituting the major industries of Ahvaz in Khuzestan. They are mainly fabrication units, manufacturing tanks, cryogenic vessels, distribution lines, heat exchangers and column type separators required by oil and Petro-chemical units. The turnover of SMEs from Pune is from Rs 50 lacs to 6 crores with manpower ranging from 10 to 150 depending on the nature of the work. The SMEs from Ahvaz has a turnover from Rs 30 lacs to 10 crores and the manpower which ranges from 5 to 200. In Indian SMEs, the main tool for growing is adoption of sub-contracting work culture. Indian SMEs are undergoing revolutionary changes by adopting, automation, high-end machineries, utilization of advance manufacturing techniques and thus resulting in reducing the cost and enhancing quality standards. The concepts of cluster formation at specific locations in India are gearing up for the challenges of international competition from third world countries.

In Iran, it has been observed that the SMEs are still functioning on the conventional and traditional machinery, which results in low efficiency of the unit. Now many units have started upgrading their existing set-up. The OPEC body monitors the overall cost, production and distribution of oil and natural gases which reflect the efficiency of the unit, since most of the decisions are thrust by OPEC and there is very little scope for the SMEs to perform freely. The sub-contracting culture is slowly and gradually getting introduced in the major SMEs belts of Khuzestan. SMEs in Maharashtra are located in the near vicinity of their parent company, thus maintaining proper network between them.

Taking care of infrastructure development is required by industries like water supply, drainage, common effluent plant, electricity, truck terminus and warehousing facility. SMEs in Khuzestan are very strong on selective infrastructural development, like power supply. The units are located very far from the parent companies and townships, which result in high transport cost and time delays. The growth of the SMEs in Pune is directly proportional to the growth of Automobile Industry. Because of globalization, drastic changes occurred in structure of SMEs: technology improvement, business growth and automation which took place in last five years very rapidly. The outstanding growth of SMEs in Pune began in the year 1998 and went on continuously till today laid by export.

5. Role of Industries in Maharashtra and Khuzestan

The economies of Iran and India (with special focus on SSIs in Maharashtra and Khuzestan) have been taken into consideration for this study in order to compare their respective employment generation policies of SSIs. They share many similarities in culture and tradition, densely populated areas and have nearly the same unemployment rate; both are developing countries and situated in the South Asian region with rich natural and human resources, vast areas of arable land and weather conditions favourable for agriculture and industry. Structural reforms have been carried out to some extent in both countries, but they need to be accelerated by using the exemplary successes

of the developed countries. Iran and India are struggling with more serious challenges, and the reforming process has been initiated. It only needs a greater push by the formulation of ambitious policies in prospective plans.

Iran and India are still facing complex problems concerning employment generation, which are being extensively researched in this study. These give rise to many speculations about future trends in policy-making at the sectoral and regional levels.

There are also differences between the two countries. The economy of Iran is based largely on revenues coming from crude oil and gas exports to other countries, which is not the case for India. Both countries have faced (and are still facing) basic problems of the Third World like over-population, unemployment, poverty, lack of infrastructure, inflation, financial liabilities, political changes, etc. In spite of these hurdles, India has been able to manage its economy better than Iran as is evident in its recent rating as the second fastest-growing economy in the world after China (though India is ranked after Iran in the HDI, which measures world-wide human development).

The roles of small industries in creation of added value in comparison with countries such as South Korea, India and Malaysia are much lower. In 2000 the grant total figure for Iran's non-oil export value amounted up to $ 4.18 billion which with respect to 1999 shows a growth of 6.1 percent about $ 240 million out of this figure, while taking the petrochemical product into the account, a total of $ 1.9 million is related to the export of minerals, industrial, and metals.

The share of small industries in the non-oil sectors in the mentional year was less than 8.5 percent, while the small industries comprise 95 percent of the total industries of the country. The share of export of small industries in Iran in comparison with countries like Malaysia is so weak. An example could be the auto industry. After spending 22 billion dollars, the export value has been 1.9 billion dollars (43 percent less than international monetary market).

The share of small industries in the total jobs of India is about 56 percent. The insignificant and low share of this sector in industry

added value is not only acceptable but also an indication of low level productivity of the labor force in this manufacturing sector of the country. Thus the role of small industries in growth and productivity is not so remarkable. It is said that the main reason for that is the omission of expertise in industrial management and also the omission of qualification. Other reasons include the lack of an organized strategy and a definite planning in development of small industries.

According to published static census in 1995, the whole number of industrial factories in Iran has estimated to be 400 thousand. Central Bank declared that all units which possess 10 members are considered as big industrial factories and the number of employees in these factories was declared 708000. According to the definition of Central Bank, the share of small industries in country's job creation is 3.7 million.

According to the agreement of industrial ministry with Iran's statistical centre, the industrial units which possess 0-49 employees are considered as small industrial units. With regard to this definition the number of employees in these of factories equaled 4 million, and big industrial factories (50 or more) had 313 thousand workers. So, taking into consideration the agreed definition between the ministry of industry and Iran statistic centre, the share of small industries in industrial employment of the country is close to 76.3 percent. Allocation of 76.3 percent of whole employees of industrial sectors in small industries is an indication that realization of job creation in small industries necessitates special attentions to be paid to this sector.

If the above figure of $ 49.2 billion funds allocated for the industrial sectors, claimed by the Central Bank, is assumed to be true, the costs for the creation of each job adds up to about $ 200 thousand. This expense cannot be compared with any norms and standards, except for the space industries, which can be accepted. So if we make our assumption based on the soundness of the statistics rendered, we can conclude that with the same amount the government could provide 3 million job opportunities in small, medium, and big industries.

6. Analysis of collected data

Considering the type of small industries activity, the result obtained from answers to related questions shows that these industries in Khuzestan are more related to food industries, fabricated metals and non-metallic mineral, as the secondary data indicate. In the case of Maharashtra, the type of small industries' activity is more like related activity to food processing industries, floriculture industry producing tools, electric and electronic facilities and other industries. The dispersion of the type of small producing industries' activity in Maharashtra in comparison with Khuzestan province is less.

The results also show that the average distance of industrial workshop to city in Khuzestan is 1.86 km, while this figure is 2.10 for Maharashtra. About 64 percent of these workshops in Khuzestan and 74% of the workshops in Maharashtra are located less than 5 km from the city or country. The area of the base and total grounds of a small industry in Khuzestan on average is 1260.1 square meters and the area of total grounds of every workshop on average is 5540.9 square meters. As regards Maharashtra, these figures are 1774.3 and 2564, respectively.

In relation to the year of establishment and exploitation of small industries, the findings indicate that the age average in Khuzestan is 15 years and in Maharashtra is 19. The important case in this research is that the distance between the year of establishment and the year of exploitation in the workshop in Khuzestan is almost 5 years, while in Maharashtra, on average, each workshop exploits in the same year which is established.

The results show that 69 percent of workshops in Khuzestan and 96 percent of small industries in Maharashtra produce under the nominal capacity. Somehow, on average, small industries in Khuzestan exploit only 54 percent of their nominal capacity and in case of Maharashtra this amount is equal 45 percent.

These findings also show that 76 percent of small industries in Khuzestan are private and only 22 percent of small industries in India are of private ownership.

On average every workshop in Khuzestan could constantly employ 20 men and 5 women. Moreover, each workshop

generates 30 seasonal jobs. The female share in this part is 20 workers. In Maharashtra the average job generation of each workshop is 22 (16 male and 6 female) workers as permanent and 19 seasonal jobs (16 male and 3 female workers).

The percentage of the permanent employees of small scale industries in Khuzestan who come from the town or village where the workshop is established amounts to 65 percent, while those who come from other parts of the province comprise 28.2 percent. The case is different in Maharashtra. The permanent workers of the small scale industries who come from the place where the industry is situated is 31 percent, while 38 percent come from other parts of the state; 31 percent come from other parts of India.

Results show that 76 percent of the given answers deem the development of small industrial workshop in Khuzestan province necessary and in Maharashtra this was 44 percent. When small scale industries are developed in Khuzestan, permanent jobs would increase up to 36 percent. Thus, 9 new permanent job opportunities are created. Seasonal jobs also increase up to 23 percent. So, industry development results in 7 new seasonal job opportunities. This development results in an increase in permanent and seasonal job opportunities in India by 23 percent each. It means almost 5 new permanent job opportunities and 4 new seasonal job opportunities are created, whereas major part of job opportunities are provided from among local applicants and the direct relation between regional expansion and workshop development is confirmed in this part. The intensity of relation between small industrial workshop development and regional expansion in Maharashtra does not reach that of Khuzestan province. Statistics in Iran show that the expense of creating each job by large industries is 12500 dollars (Zarra Nezhad, 2006), whereas the expenses as mentioned earlier amount to 5254 dollars in the whole industries. There is the same situation in Maharashtra. Statistics in India show that the expenses for creating a job in large industries are more than twice of such cost in small industries.

A comparison of the level of education of the personnel of small scale industries in Maharashtra and Khuzestan showed that the employees with graduate and postgraduate university degrees in small scale industries in Maharashtra are 36 percent, while it is 27 percent in Khuzestan. On the other hand, 73 percent of the employees in Khuzestan have or do not have even high school degrees; this is 66 percent in Maharashtra.

Comparing Khuzestan and Maharashtra in terms of investment, it becomes clear that, on average, every workshop in Khuzestan has enjoyed $188153 as its primary capital and $86085 in the form of banking facilities. Respective figures for Maharashtra are $141858 and $45490, respectively. This study shows that the required capital for generating a job in the small industries of Khuzestan is $5880 while it is $5254 in Maharashtra.

Regarding energy consumption, the results show that the only energy used in 90 percent of small industries in Khuzestan is electricity, and 10 percent of these industries use, in addition to electricity, other resources, while small industries in Maharashtra use only electricity as energy. This is why almost all respondents mentioned the power cut as the main problem. Such a problem has not been mentioned by Iranian respondents. The main problems highlighted by Iranian respondents are the lack of financial resources as well as the quality and prices of production factors.

The market for the products and services provided by small scale industries in both countries is mainly the local market (town or state). This phenomenon and the matter of local job generation clearly indicate that the activities of the industries in terms of product consumption, trade and revenue as well as workers recruitment have been functional at a regional level. This process clearly shows the considerable impact of small scale industries on regional development.

Only 4 percent of small industrial workshops in Khuzestan present technical services to overseas, where as in Maharashtra there is no workshop which pays to presentation of technical services out of India.

The effect of small industries in both Maharashtra and Khuzestan on public services of the region is not considerable. About 18 percent of small industries in Khuzestan and only 4 percent of such industries in Maharashtra gives aid to public services of the region.

The findings indicate that, according to the answers given by respondents, 38 percent of small industries in Khuzestan and 30 percent of such industries in Maharashtra have played a role in establishing new industrial and service units. It seems that the role of small industrial workshops in Khuzestan and Maharashtra, in creating other workshops for the cause of completing the production's circulation of the region, is almost the same.

For the purpose of development of small industries in Khuzestan there is need for 148293 dollars on average. The needed amount of financial resources for such a development is 111282 dollars. In lieu of these demanded financial resources, the average job creations proposed by respondents in Khuzestan are 8 and in Maharashtra is 5 job opportunities.

The circulation of financial resources made by small industries activities in Khuzestan is accounted for 36359 dollars, while the corresponding figure is 7206. According to these numbers, the rate of financial circulation in Khuzestan small industrial workshops is almost 5 fold of the amount in small industrial workshops from state Maharashtra.

Besides direct job opportunities which are created by small industrial workshops, indirect job opportunities are created because of these workshops' activities. On average, almost 5 indirect job opportunities are created by small industrial workshops in Maharashtra.

All responses to question regarding the relationship between small industries and other industries in both Khuzestan and Maharashtra are in favor of such relationship.

One of the effective factors on regional development is the presence of research and development section in productive units of the region. Considering the given answers shows that in 68 percent of Khuzestan small industrial workshops there is no unit of research and development. The situation is worse in

Maharashtra, because 72 percent of its small industries are lack of R&D departments. The comparison between these two numbers shows that the rate of real importance which the managers of considered workshops granted to the research is low in both regions.

About 68 percent of small industries in Khuzestan supply their products to final consumers. This percentage is only 18 percent for Maharashtra. Therefore, it seems that a considerable number of small industries in Khuzestan produce final goods, while their counterparts in Maharashtra are mostly intermediate goods producers.

In relation to green space of small industries, the findings indicate that the average green space in Khuzestan is 818 square meters and in Maharashtra is 1832.5 square meters. Comparing these two figures show that the green space of small industries in Maharashtra is more than twice that in small industries of Khuzestan. Concerning the effects of green space on local development, it can be said that small industries in Maharashtra have more positive effects on local development than their counterparts in Khuzestan.

7. Recommendations

In this section, based on the findings of the research, we give some recommendations aiming at helping small industries to overcome the problems they are facing with and to improve their productivity as well as to expand their role on job creation and regional development.

1. The first recommendation is to establish or to develop R&D departments and to increase the R&D budget. This will positively affect the improvement of quality and quantity of the output and leads to a better regional development.

2. Since almost all respondents stress the shortage of financial resources, we recommend the governments to encourage their banking system to increase their financial facilities for small industries. As findings show, the financial resources needed for establishing a small industry in both countries in comparison to the required resources for establishing

a unit in other industries are so low. Therefore, small investment in these industries can lead to large benefits embodied in the increase of output, more job creation and enhancement of regional development.

3. Due to the fact that the more the education levels of employees, the more the productivity of the firms, we recommend small industries to pay more attention to job training.

4. The main problem mentioned by respondents in Maharashtra is power cut. Such a problem also exists in small industries in Khuzestan, but far less than that in Maharashtra. The recommendation is to investigate factors resulting in cut power problem and the solutions for this bottleneck.

5. Since the main production factor is labor, it seems necessary to review and reconsider labor regulations and legal issues in order to find solutions for the labor problems faced by small industries.

As findings indicate, respondents were eager to promote and develop their economic activities by expanding their local enterprises. On the other hand, it was said that there is highly enough demand for commodity. Therefore, the recommendation is to study the ways for providing the required financial resources and facilitating the related regulations as well as providing incentives and motives for development.

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نقش صنایع کوچک در ایجاد شغل و
توسعه‌ی اقتصادی در ماهاراشترا و خوزستان

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چکیده:

این تحقیق به صورت مطالعه‌ی پیمایشی و از طریق پرسشنامه انجام شده است. برای تجزیه و تحلیل داده‌ها از تحلیل توصیفی و آزمون‌های t و مجذور کای استفاده شده است. در این تحقیق، وضعیت صنایع کوچک در خوزستان و ماهاراشترای هند از نقطه نظر تاثیر این صنایع بر روی ایجاد اشتغال و استراتژی توسعه‌ی منطقه‌ای مقایسه شده است. آمار نشان می‌دهد که در ایران صنایع بزرگ مانند نفت و پتروشیمی، صنایع تبدیلی کشاورزی، فولاد و خودروسازی اهمیت داده و سرمایه گذاری سنگینی در این زمینه‌ها انجام داده است، در حالی که به صنایع کوچک توجه کمتری شده است. نتایج تحقیق نشان داد که اگر صنایع کوچک افزایش یابد، فرصت‌های شغلی در خوزستان بیش از ماهاراشترا افزایش می‌یابد. همچنین، فعالیت صنایع کوچک در زمینه‌ی تولید، مصرف، تجارت و درآمد و نیز از نظر اشتغال در هر دو کشور مورد مطالعه تاثیر قابل ملاحظه‌ای بر توسعه‌ی منطقه‌ای داشته است.
طبقه بندی JEL: O14

واژه‌های کلیدی: صنایع کوچک، توسعه، ایجاد شغل، ماهاراشترا، خوزستان

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