
Constraints and Prospects of Small Scale Industries in Punjab: An Analytical Study

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Abstract: Small scale industries are well recognised for its contribution to innovation, employment and economic dynamism. Small firms have been the chief source of creating new jobs in almost all the developed countries. It has been seen that number of existing industries in Punjab has been dominated by small scale firms. Despite the recognition of significant role played by small scale industries in economy, some critical barriers prevent them from developing and contributing sufficiently. The present paper attempts to find out the major constraints faced by small scale industries selected from five sub sectors i.e. Machinery Parts, Hand tool, Spare Parts, Auto Parts and Pipe fitting industries in Jalandhar district. Data was collected through primary sources by framing a well structured questionnaire. Factor Analysis was applied on data to get the authentic results. The results revealed that the five major factors that affect the growth and development of small scale firms are Power Constraints, Approach up to Local Market, Absence of Effective Administrative Support, Lack of Basic Facilities and Financial Constraints.

Keywords: Small Scale Industries, Economic Dynamism, Constraints and Factor Analysis.

I Introduction

Industrialization has a foremost role to play in the economic development of the developing nations. The small scale industries (SSIs) are well recognized for its contribution to employment, innovation and economic dynamism and are considered as an engine of growth and act as indispensable part of a healthy economy. Small scale firms have been the chief source of creating new jobs in many countries. Hence, the overall health of the economy depends, to a great extent, on the health of the SSI sector of a country. (Lingesiya, 2012)

A small-scale industry is presently defined as, "A unit engaged in manufacturing, servicing, repairing, processing and preservation of goods having investment in plant and machinery, at an original cost ranging from Rs 2.5 million to Rs 50 million" (Velsamy, 2012).

It has been seen that most of the small-scale industries have low capital concentration and high potential for employment generation. According to Fourth All India Census on Small Scale Industries, this sector contributes about 7 percent to the Indian Gross Domestic Product and provides employment to over 28 million people. The Indian SSI segment's current production value is almost Rs. 81,600 million. It contributes to around 40 percent of industrial production & exports. It produces more than 8,000 varied products, ranging from low-tech items to technologically advanced products.

II Status of Small scale Industries in Punjab

The industrial scenario in Punjab has suffered from the lack of modernization as far as small scale units are concerned. The sector with high employment potential is facing various hurdles like inadequate funds, lack of infrastructure and red tapism. During the year 2017-18, there were 1,60,000 small scale industrial units with an investment of Rs 144.60 billion which generated employment to 1148100 persons, with a production value of Rs. 862.40 billion. (Statistical Abstract of Punjab, 2018-19).

Jalandhar district has prominent share in Punjab regarding number of small scale units registered, fixed investment and employment generated. Jalandhar contributes 12 percent of total number of small scale units registered in Punjab, comprises 13.5 percent share of employment generated and accounts for 10.4 percent share of total fixed investment by SSIs in Punjab (District Industrial Centre, 2018-19).

Table I highlights the status of small scale industries in Punjab regarding number of registered units, employment, fixed investment, production and exports.

Table-I: Growth of Small Scale Industrial Sector In Punjab

Description	Units (working)	Employment (No.)	Fixed Investment (Rs in billions)	Production (Rs in billions)	Exports (Rs in billions)
2003-04	200603	897642	41.09	183.25	22.64
2004-05	201736	909266	43.74	203.39	24.86
2005-06	202537	920077	46.41	225.24	39.60
2006-07	203224	930036	48.16	249.84	51.50
2007-08	203984	943664	49.73	284.74	46.00
2008-09	204522	951318	51.06	308.74	58.00
2009-10	191639	938684	55.03	332.73	70.97
2010-11	167722	954769	57.84	364.38	64.26
2011-12	162559	944241	59.72	418.97	84.00
2012-13	160062	978932	69.15	463.57	96.60
2013-14	152583	1002860	82.65	509.63	104.58
2014-15	151977	1033553	98.15	561.84	128.00
2015-16	154421	1077616	114.59	629.71	-
2016-17	156518	1112858	129.60	746.06	-
2017-18	160000	1148100	144.60	862.40	-
CAGR	-1.50%	1.65%	8.75%	10.88%	15.53%

Source: Statistical Abstract of Punjab, 2018-19

As seen in the Table-I, there is a continuous increase in the figures over the years. Exports have the highest CAGR of 15.53 percent followed by Production (10.88 percent), Fixed Investment (8.75 percent) and Employment (1.65 percent). As per the Table-I, numbers of working units in 2003-04 were recorded as 200603 which further shows consistent growth till 2008-09 but after that, number of working units started decreasing and recorded negative CAGR of 1.50 percent. This might be due to the increasing problem of industrial sickness in Punjab. The sickness in industries is basically caused by various external and internal factors. Former include factors which originate outside the organisation and therefore are not under the control of the unit such as power cuts, market depression, irregular availability of inputs, government policies etc. The latter include factors which originate within the organisation and therefore said to be under the control of the unit such as production, management, finance, marketing, defective plant and machinery, labour problems etc (Mishra and Jain, 2012). Identifying the sickness of SSIs timely and taking remedial action for rehabilitation is the key precedence now. Since 1990's, economic growth in Punjab has fallen short of the growth rate of the Indian economy, and the discrepancy has widened with the passage of time. According to Ahluwalia, et al, 2008, "In the Tenth Five Year Plan (2002-2007), Punjab's economic growth at 5.1 per cent per annum was significantly below the growth rate of 7.8 per cent achieved in the country as a whole." Punjab has major clusters of small scale industries in Jalandhar, Amritsar and Ludhiana. As many as 18770 industrial units had been closed down in the state during the last seven years. Out of 18770 units, 1850 units were from Jalandhar district, 8053 units were from Amritsar and 2819 units were from Ludhiana. (The Tribune, 2014)

In this context an earnest attempt has been made in this study to present a wide picture of the multifarious problems faced by the small-scale industrial units in Jalandhar district and to suggest appropriate measures to resolve the problems. Jalandhar is India's leading producer of sports goods. Its electric goods, automobile parts, hand tools, steel and iron rolling mills, rubber goods and pipe fitting products are also well-known. It is a city of great antiquity which has become highly industrialised centre of Punjab. Jalandhar has about 20,000 small scale industries with an estimate of an annual turnover of approximately Rs 45 million.

In spite of this, Jalandhar is facing problems of varied nature, some of them are purely of an internal nature and some others are caused by some extraneous forces, conditions and circumstances. In order to have a firsthand information and practical insight into these problems, questionnaire has been constructed and administered to the managements of the SSI units for getting their responses to the various questions posed therein.

The paper is divided in to five sections: Section I deals with introduction regarding overview of SSIs in India. Section II highlights the status of SSIs in the Punjab. Section III deals with review of literature and research methodology. Section IV identifies the problems of SSIs in Jalandhar district by applying Factor Analysis. Section V concludes paper with findings and policy implications.

III Review of Literature

A number of studies found that SSIs are frequently faced with constraints and challenges. Sharma (2012), Kumar (2010), Kaliselvan (2009), Velsamy (2012) identified the multifarious problems faced by SSIs which include quality of products, lack of effective executives, technology up gradation, lack of finance, protection of domestic trade from foreign countries, terms of payment, export import procedure and regulation in India, high cost of production and regulation of export market. The above literature revealed the industrial finance to be the most important problem of small scale producers which is further identified as shortage of working capital, inadequate assistance from commercial bank and hostile attitude of government agencies.

Ahluwalia, et al. (2008) proposed industrial strategy that help in creating conditions for growth in the technologically advanced sectors like information technology, biotechnology, pharmaceuticals and health care which could become catalyst of change in the industrial sector of Punjab. The projected industrial strategy for Punjab addresses the numerous challenges of industrial development in the context of the overall economic development in the state.

Gupta (2009) presented the study in which forecasts has been done in terms of number of units, employment, capital formation and production of small scale industrial sector of Punjab for the decade till 2019-20. The analysis of forecasted figures has revealed that the fixed capital investment and production would experience significant growth during the lead time of thirteen years from 2007-08 to 2019-20.

Studies by Ramanaiha (2011), Suresh and Shashidhar (2007), Chakrabarty (2006), Pandey and Shivesh (2007), Dende and Joshua (2012) attempted to analyze the conditions of SSIs, challenges and future opportunities in India in the era of liberalisation, privatization and globalization. Major stress is given on self employment which could decrease dependence on government. Studies highlighted the importance of small scale industries and their role in the economy and the impact of economic reforms on growth pattern and performance of SSIs by using compound annual growth rate, correlation analysis and other statistical techniques. Results revealed that SMEs exhibited good performance in previous years and there is a need to concentrate on improved human resource development, appropriate technology, credit flows and funds for modernization.

Quader and Abdullah (2009) attempted to find out the major constraints faced by SMEs in Bangladesh using varimax normalisation method. Study revealed the major constraints to be high lending rate, small domestic market size, collateral requirement, lack of technically skilled workers and government regulatory constraints.

The potential of small-scale enterprises is not always realized due to problems faced by these enterprises. Kotty (2008) marked that “the problem of sickness in small scale industries is due to under utilisation of capacity, shortage of working capital, lack of demand, non availability of raw material, technological obsolescence, absence of organised market channels, constraint of infrastructural facilities, power, deficient managerial and technical skills.” The study revealed that non availability of timely credit is the major cause of small firm’s sickness.

The above review of literature focuses mainly on the problems at the national level. A limited number of studies are available at state as well as district levels. The proposed study aims at filling the gap in this context by focusing on problems faced by SSIs in Jalandhar district.

Objectives of the Study

1. The main objective of the present study is to understand, identify and determine the major problems of small scale enterprises in Jalandhar district comprising of Machinery Parts, Hand tool, Spare Parts, Auto Parts and Pipe fitting industries.
2. To suggest measures for solving the various problems conferred by the small scale industries.

Database and Research Methodology

The study is based on primary data. For the data collection a questionnaire was developed based on relevant studies. The questionnaire comprised of two parts. The first part was related to demographic profile of the small scale firms. Second part consists of statements relating to factors which are considered as important constraints by SSIs.

Data was collected from 120 small scale firms comprising of five sub sectors: machinery, hand tool, spare parts, auto parts and pipe fitting industries in Jalandhar district. Field survey method was adopted to collect the first hand information from the entrepreneurs of SSIs of Jalandhar. Nineteen variables were derived, regarding the various problems of small scale industries, from exploratory research and the relevant theoretical and empirical literature. A five- point scale ranging from 1 to 5, 1 being “strongly agree” to 5 being “strongly disagree” was used. In order to analyze the collected data, Factor Analysis has been employed. The secondary data was collected from district industrial centre, websites of government and leading journals.

Sample Characteristics

As far as the demographic profile of the small scale firms is concerned, the sample comprised of variety of firms belonging to different age of firm, form of ownership and level of investment. As far as the age of sampled

small scale firms are concerned, 46 percent of the firms belong to the age between 11 years to 20 years. As per the type of ownership categorisation, 69.2 percent are partnership firms and 30.8 percent are sole proprietors. As far as the level of investment is concerned, majority (around 44.2 percent) have investment in plant and machinery between Rs 5.1 million to Rs 7 million followed by 25 percent which belong to investment level of Rs 3 million to Rs 5 million. Only 10 percent of SSIs belong to investment level of Rs 9.1 million to 20 million. However 15 percent of sampled small scale firms lie in investment level of above Rs 20 million.

IV Results and Discussion

Data so collected was subjected to Factor Analysis to bring out the important factors which act as major constraints in their growth and development. Factor Analysis is a mathematical tool that can be used to identify a large number of observed variables. Variables that have a high correlation between them and are largely independent of other subsets of variables are combined into factors. In other words, Factor Analysis is a data reduction technique which reduces a large number of related variables to a more manageable number and help to find the extent to which each original variable depends upon each common factor (Pallet, 2002).

Before using the factor analysis, a number of initial tests were conducted to determine the suitability of our data for such an analysis. Initially 27 statements were taken. After running reliability test through split half test, 8 statements were found with low inter item total correlation. So these 8 items were deleted from the scale and factor analysis was conducted on remaining 19 items. To establish reliability and validity of the questionnaire, Cronbach's alpha was used. Cronbach's alpha is a measure of internal consistency of the scale.

A high value of the Cronbach alpha coefficient suggests that the items that make up the scale "hang together" and measure the same underlying construct. A value of Cronbach alpha above 0.70 can be used as a reasonable test of scale reliability (Gaur and Gaur, 2006). In this study, numerical value of alpha is .826 which is considered as good value and hence questionnaire was taken as an acceptable instrument to be administered.

Here Bartlett's test of sphericity and the Kaiser-Meyer-Olkin measure of sampling adequacy are used. Both of these tests can be used to determine the factorability of the matrix as a whole. The overall significance of correlation matrices is tested with Barlett's test of Sphericity, statistically significant at ($p < 0.05$) that supports the validity of data and if the Kaiser- Meyer-Olkin measure is 0.6 or above, then Factor Analysis is appropriate (Field, 2000).

Calculated value of KMO measure of sampling adequacy in the present study is .787. This indicates that the sample is adequate for applying the Factor Analysis. So Factor Analysis has been applied to extract various factors using principle component analysis.

Extraction of Factors

Factors are extracted on the basis of Eigen value. Only those factors which have Eigen values greater than 1 are retained, and other factors are not included. An Eigen value represents the amount of variance associated with the factor. Total variance explained is 77.966%.

Table-II: Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sum of Squared Loading			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of variance	Cumulative %	
Factors	1	6.933	36.487	36.487	6.933	36.487	36.487	3.998	21.041	21.041
	2	3.566	18.769	55.256	3.566	18.769	55.256	2.998	15.779	36.820
	3	1.686	8.874	64.130	1.686	8.874	64.130	2.737	14.403	51.223
	4	1.518	7.989	72.119	1.518	7.989	72.119	2.664	14.022	65.245
	5	1.111	5.848	77.966	1.111	5.848	77.966	2.417	12.721	77.966

Extraction Method: Principal Component Analysis.

From the Table II, five factors have been extracted and total variance explained by these factors together is 77.966%. The results were obtained through orthogonal rotation with varimax method and all factors loading greater than 0.4 (ignoring the sign) were retained.

Table III shows the factor loading on the various statements. This approach helps in identifying which variables are associated with the particular factors. Higher the factor loading, the more likely it is that the factor underlies

that variable. All the variables have been given appropriate names according to the variables that have been loaded on each factor. The names of the factors, the statements and factor loadings are summarized below (Table-III)

Table-III: Summary of factors underlying the constraints faced by SSIs

Name of the Factor	Factor loading
Factor I: Power Constraints (21.041%)	
1 Rate of interest charged by banks is high	.569
2 Fluctuation in voltage effect production	.824
3 Power supply is not properly regulated	.904
4 SSIs cannot go for installing alternatives like generators and thermal power unit	.686
5 Many labour hours are wasted and unutilised during power cut	.892
Factor II: Approach up to Local Market (15.779%)	
1 Small SSI units are forced to sell their products in a local market	.828
2 The variety of raw material offered by private agencies is limited	.813
3 SSIs suffer from the problem of high labour turnover and absenteeism	
Factor III: Absence of Effective Administrative Support (14.403%)	
1 Non availability of loan from bank leads SSIs to take loan from other sources	.718
2 Private moneylenders demand high rate of interest	.810
3 High power tariff restrict production	.639
4 Absence of well defined system creates big problem of marketing	.689
Factor IV Lack of Basic Facilities: (14.022%)	
1 Lack of procuring the distant markets minimise the operations	.816
2 Within the limited hours of power supply, it is difficult to complete the production	.705
3 SSIs have to face the problems of infrastructure like sheds, transport, water, power and other civic amenities	.622
Factor V Financial Constraints: (12.721%)	
1 Amount granted by bank relative to the amount requested is less	.588
2 Enthusiasm and energy of SSIs is wasted in proving the eligibility and quantum of assistance sought	.856
3 Creditworthiness of SSIs is weak	.823
4 Documentation is too much while dealing with banks	.611

Source: Calculated through SPSS

The first important factor as perceived by small scale producers was ‘Power Constraints’. It consists of five statements namely rate of interest charged by banks is high, fluctuation in voltage effects production, power supply is not properly regulated, inability to install generators and thermal power unit and many labour hours are wasted during power cut. The factor accounts for 21.041 percent of the total variance with an eigen value of 6.933.

Second factor was termed as ‘Approach Up to Local Market’ accounted for 15.779 percent of total variance with an eigen value of 3.566. This factor is loaded with three statements namely Small SSIs units are forced to sell their products in a local market, The variety of raw material offered by private agencies is limited and SSIs suffer from problem of high labour turnover and absenteeism as labour usually come from local area only.

The third indispensable factor was named as 'Absence of Effective Administrative Support' as four statements were loaded on it namely non availability of loan from bank leads SSIs to take loan from other sources, Private moneylenders demand high rate of interest, High power tariff restrict production, Absence of well defined system creates big problem of marketing. It comprises of 14.403 percent of total variance with an eigen value of 1.686.

The fourth major factor was labelled as 'Lack of Basic Facilities' i.e. Lack of procuring the distant markets minimise the operations, Within the limited hours of power supply, it is difficult to complete the production, SSIs have to face the problems of infrastructure like sheds, transport, water, power and other civic amenities. This factor accounted for 14.022 percent of total variance with an eigen value of 1.518.

The fifth significant factor was termed as '**Financial Constraints**' with four statements loaded on it namely Amount granted by bank relative to the amount requested is less, Enthusiasm and energy of SSIs is wasted in proving the eligibility and quantum of assistance sought, Creditworthiness of SSIs is weak and Documentation is too much while dealing with banks. This factor accounted for 12.721 percent of total variance with an eigen value of 1.111.

V Findings and Policy Implications

This section provides the findings of the study with implications for SSI activities, prospects and problems of SSIs in Jalandhar district and provides a scope for further research along with suitable suggestions for the development of SSI activities.

The present study can contribute a greater understanding of the problems faced by small scale firms. The Factor Analysis of data on the various factors cumulatively explained 77.966 percent of the variance in the original dataset. Total five factors were developed namely power constraints, Approach up to Local Market, Absence of Effective Administrative Support, Lack of Basic Facilities and Financial Constraints.

The factor 'Power Constraints' helps in identifying and determining the significant problems of SSIs relating to power and high lending rates. The results revealed that the small scale industrialists were reluctant to go for modernisation due to shortage of power owing to the high cost of installing alternative sources of power associated with increased rate of interest regarding taking loan from the banks for this purpose. Further, high power tariffs and fluctuations in voltage of power supply hinder the growth of the sector. The Government need to play a vibrant role by providing timely credit at reasonable rate of interest to small scale manufacturers. The generating capacity of the existing power station should be maximised. It is suggested that new power projects should be implemented by taking in to consideration the prevailing demand and future requirement.

The second important factor determined by SSIs as a hindrance in growth is 'Approach up to Local Market'. Firms are forced to sell their products to specified buyers with fixed profit. The variety of raw material offered by private agencies is also limited and not available on time. This attitude of suppliers affects the continuous flow of production of SSIs. Firms are suffering from the problems of labour turnover and absenteeism due to access up to local market only. The labour available in the market is unskilled and needs proper training.

The factors like 'Absence of Effective Administrative Support' and 'Lack of Basic Facilities' are treated as equally significant constraints by SSIs. It has been found that non availability of loan from banks lead SSIs to take financial assistance from private moneylenders which charge high rate of interest. Due to lack of funds, SSIs are unable to fulfil the requirement of basic infrastructure required for their growth. Infrastructure development is vital for the growth of small entrepreneurs. As the industry has potential for notable growth, subsidies for sufficient infrastructural facilities by Government will prove more productive.

Another major factor that acts as a hindrance in the smooth functioning of firms is 'Financial Constraints'. Industrialists feel that the amount which is granted by banks is relatively less than the required amount. The procedure and documentation of getting financial assistance from banks is very cumbersome. Some of the entrepreneurs are of the view that their energy and zeal get wasted in proving their credit worthiness to banks to get sufficient financial support. Firms of age between 11-20 are suffering more financial problems as they are in developing stage and need more resources and capital. Central Government should direct public sector banks to issue loans to SSIs for entrepreneurial development with less documentation and formalities.

CONCLUSION

The main aim of the present study was to identify the problems faced by small scale firms which act as hindrance in the way of their growth and development. Factor Analysis was applied on the data to get the authentic results. The results identified the five major factors that affect the intensification of small scale firms namely Power Constraints, Approach up to Local Market, Absence of Effective Administrative Support, Lack of Basic Facilities and Financial Constraints. Such constraints cannot be removed without the support of government and financial institutions of country. The banking and non banking financial institutions need to understand the importance of small scale industries in the economy.

Emphasis on the development of SSIs in India has emanated from the belief that the small scale sector serves diverse objectives such as mobilization of resources, distribution of economic power, decentralization of industry, generation of employment and rural development. It has been realized in all the developed and developing countries that the SSIs directly helps the needy and poor to develop their economic stability.

In a nutshell, the growth and development of the small scale industries can be assured by providing sufficient and appropriate finance, upgrading the technological base by connecting all the DIC and SIDCO under separate network and also by providing marketing support to the units in the study area.

Limitations and Further Research Suggestions

The study has been confined to Jalandhar district only, so the findings of the study cannot be generalized. The findings of the study are based on the subjective opinion of the respondents and truth of the answers given by them cannot be assessed. Both the time and cost factors have been the constraints while conducting the study. Further study can be conducted by taking larger sample and with other districts. Research can be further carried out by considering impact of lending by banks on performance and growth of MSMEs.

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