

CHALLENGES AND ISSUES OF BICYCLE AND AUTO MOBILE (TWO WHEELER) INDUSTRY: A CASE STUDY OF THE STATE OF PUNJAB

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ABSTRACT

Micro, Small and Medium Enterprises have been playing an important role in accelerating industrial growth, generating employment opportunities, eradicating poverty, reducing regional imbalances, utilizing local available resources, nurturing entrepreneurial talent, complementing large industries as ancillary and subsidiary units and contributing towards the socio- economic development of the country. The presence of MSMEs can be seen in a number of business activities, ranging from producing agricultural implements for the rural markets, the coffee shop, the internet café in a small area to a sophisticated light engineering components, sports goods, hosiery products , auto- parts, bicycles and sewing machines etc. Despite the importance of this sector to the economy, the industry is confronted by various problems such as inability to access finance, working capitals loans, lack of entrepreneurial skills, lack of R & D facilities, unaware of latest marketing techniques, competition from other countries, non-availability of skilled workers, infrastructure problems etc. The present paper aims at analyzing problems faced by bicycle and auto mobile (two-wheeler) industry in Punjab state.

KEYWORDS: Industrialization, Vendor Units, Ancillary Units, Socio- Economic Development, Subsidiary Units.

Introduction

For the economic development and growth of any economy industrialization plays a major role in eradication of poverty, solution to unemployment, overpopulation problem, creation of new markets, exploitation of new territories and bringing changes in economic, social, political, cultural and institutional aspects of the society. Industrialization serves the role of a catalyst that transforms agriculture, construction, transport and other service industries into highly productive sector. India has adopted mixed economy as a way of her development. The main objective of India's policy of development was to transform an agrarian and backward economy to an industrialized developed economy. Before independence, India had no industrial base and even sewing machines used to be imported. However, since 1947, the scenario has changed. Now the country has achieved an impressive industrial productive capacity in respect of mining and metallurgical industries, capital goods industry, even producing highly sophisticated equipments necessary for the production of engineering, steel, chemical fertilizers, medium and heavy engineering industries, power and transport industry etc.

The Industrial Policy Resolution, 1948 described the government policy regarding small scale industries in relation to the large scale industries. The resolution has recognized that the healthy expansion of small industries depends upon the safeguarding these small industries against intensive competition by large scale manufacturers besides many other factors like provision of raw materials, cheap labour, technical advice, organized marketing of their products and the education of workers in the use of best available technique. Industrial Policy Statement 1977 has offered a special favour for the development of small scale industries in India. Initially the fixed capital investment limit of the small scale

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units was restricted to Rs 5 lakhs and later on limit was raised to Rs 10 lakhs in 1975, Rs. 15 lakhs in 1980, Rs. 35 lakhs in 1985, Rs. 60 lakhs in 1990 and Rs. 3 crores in 1997. In 1999-2000, the investment limit for small scale and ancillary undertakings has been reduced from Rs 3 crores to Rs. 1 crore. In 2006, the Government of India has enacted the Micro, Small and Medium Enterprise Development Act (MSMED) 2006 which categorized enterprises into manufacturing and services categories. The limit for investment in plant and machinery /equipment for manufacture and service enterprises is as under:

Manufacturing Sector

Enterprises	Investment in Plant & Machinery
Micro Enterprises	Does not exceed 25 lakh rupees
Small Enterprises	More than 25 lakh rupees but does not exceed 5 crore rupees
Medium Enterprises	More than 5 crore rupees but does not exceed 10 crore rupees
Service Sector	
Enterprises	Investment in Equipments
Micro Enterprises	Does not exceed 10 lakh rupees
Small enterprises	More than 10 lakh rupees but does not exceed 2 crore rupees
Medium Enterprises	More than 2 crores rupees but does not exceed 5 crore rupees

There is a strong case for the development of small scale industries in a country like India. Small scale enterprises accounts for about 40% of the gross value of the output in the Manufacturing sector, about 80% of the total industrial employment and about 40% of the total exports of the country. Small scale units, are employment oriented through labour intensive process, having lower gestation period, focusing on balanced regional development, mobilizing local resources, promote equitable distribution of income and wealth, complement large scale industries, draw entrepreneurial talent, better industrial relations, get support from the government being less capital intensive etc. Small scale industries are highly heterogeneous in nature, producing a variety of products or services, using different technologies to cater to the demand of different markets. In India, small scale units can be seen proliferating in respect of number of industries like watches, clocks, cycles, refrigerators, motor vehicles, radio and television sets etc. Small scale units process materials into finished parts or sub-assemblies. Some large firms purchase components, parts and accessories from small firms, which serve as their ancillaries. The large firms look to the small ones for the job work and sub-contractors.

Punjab's performance in the field of industry is characterized by the predominant role of small scale industries; Punjab has been the traditional leader in engineering industries in the cluster of bicycles and parts, auto parts, machine tools and agricultural implements etc. The concentration of industry is mostly in Ludhiana, Amritsar, Jalandhar, Rajpura. Apart from Hero, BSA, Hercules, Avon and Atlas, the Indian Bicycle market is seeing international players also. Major markets for high end bicycles are Pune, Bangalore, Hyderabad, Chennai and Mumbai. The bicycle and cycle parts industry is one of the most important industries in Punjab. Its origin can be traced back to 1936, when certain repair shops took up the manufacture of some accessories which were used for replacement. After 1951, this industry developed steadily at Ludhiana and in haphazard manner at other places. India is manufacturing around 12 million bicycles annually. Ludhiana (known as the bicycle capital of the country) in Punjab state manufactures more than 6.5 percent of the total bicycles, contributing 35 to 40 percent of the country's production. The industry exists in both small and large sectors. Bulk of the parts and components are manufactured in the small scale sector while complete bicycles are manufactured by large scale units and unorganized sector. Another prominent engineering industry is automobile industry. The automotive industry comprising of automobile and auto component sectors came into existence after, World War II, when nuts and bolts began to be manufactured in the state. Auto component sector is mainly organized on small scale basis.

Bicycle Industry in Punjab

The year after 1950, saw a progress in the bicycle industry with the setting up of three units, all with indigenous technology, M/s Avon cycle Ltd. was established in 1952 at Ludhiana and M/S Road Master Industries Ltd. at Rajpura was established in 1954 and M/S Hero cycles Ltd. at Ludhiana was established in 1956. The industry also came into existence in other districts such as Amritsar, Rajpura, Malerkotla, Khanna. But, Ludhiana districts occupies a unique place in the manufacture of bicycles and its components, accounting for 80% of bicycles and parts. Small scale sector plays a significant role in the development, growth and export contributions of cycle industry.

Automobile Industry in Punjab

The development of auto parts manufacturing industry is yet another shining example of Punjabi ingenuity and enterprise. The automobile (two-wheeler) industry has flourished well producing a range of products, varying from simple items like nuts/bolts to complex items like axles, propeller shafts, radiators, universal joints and fuel injection pumps. The automobile industry is also dominated by small scale units and is also concentrated at Ludhiana.

Review of Literature

- **Khurana in his article (2000)** entitled "Indian bicycle industry: Waking up to the challenge" has discussed the problems of Indian bicycle manufacturers. He has observed that research and development efforts are not directed towards raw material testing or the use of alternative light materials. Technological up gradation is another problem faced by these units. There is no serious attempt towards design and process development. Generally, the production takes place in small scale units where the resources for technological improvement are very limited. The Indian manufacturers are operating at low quality end of the market and it becomes difficult to obtain adequate price for the product. He has suggested that the survival as well as the expansion of the industry depends upon strong commitment to quality, latest technology, creating brand awareness and promotion of trade fairs etc.
- **Rattan in his lecture at a seminar (2000)** conducted by Confederation of Indian Industry (CII) entitled "Cost Reduction and Value Engineering " has discussed the modalities in cost management and meeting the stiff global competition. Effective cost management is an important tool for improving productivity and competing in the market. The only way to retain customers is to offer a product at the lowest price. He has highlighted the importance of total productive maintenance in the cycle industry. He has also maintained that cost reduction is not a one time effort but an ongoing activity which can be achieved by better design and replacement of material with cheaper costs. He concluded the cost management should be top priority without any compromise with the performance, reliability and appearance of the final product. Desh Raj Singh (2010) in his study "A Comparative study of Customer Satisfaction towards performance of Hero Honda, TVS and Bajaj Bikes" has pointed out that most of the Flame, Apache, Pulsar, CBZ and Karizama are the preferences of young generation (18 to 30 years) and rest of the models are purchased by daily users who need more average of bikes than looks. Hero Honda is considered to be most fuel-efficient bike on Indian roads. Service and Spare parts are available throughout India in local markets also. While buying a motorcycle, economy is the main consideration in the form of maintenance cost, fuel efficiency."
- **Dr. K. Mallikarjuna Reddy (2005)** in his study "Consumer Behavior towards Two Motor Bikes" has stated that the marketing concept is consumer oriented and emphasis is more on the consumer rather than on the product. The essence of modern marketing lies in building of profit along with creating meaningful value satisfaction for the customers, whose needs and desires have to be coordinated with the set of products and production programmes. Therefore, marketing success depends upon the satisfaction of the consumer needs.
- **Das and Kalita (2009)** in their study entitled "Are Labour-Intensive Industries generating employment in India? Evidence from the Firm level Survey" have addressed the issue of declining labour intensity in India's organised manufacturing labour- intensive sectors (apparel, leather, gem and jewellery, sports and bicycles). The study has highlighted non availability of trained skilled workers, infrastructure bottlenecks, low level of investment, tedious labour rules and regulations etc. The study has also suggested a set of policy initiatives to improve the employment potential of these sectors.
- **Bikramjit and Dinesh (2010)** in their article "SME sector of Punjab (India) from renaissance to recession" have highlighted the negative and positive impact of an ongoing economical recession on small and medium scale industries in the state of Punjab. The study not only explores the post-independence industrial development but also uncovers the present industrial potential in the state by performing SWOT analysis. The paper highlights the real problems being faced by entrepreneurs and upcoming opportunities in SME sector to motivate entrepreneurs to invest in small and medium scale industries in Punjab state.

- **Deepak and Dheeraj Dhingra (2016)** in their case study, "Application of Quality control in a Bicycle industry": a Case study, has emphasized on the importance of quality control in highly competitive industrial environment, to reduce process operational cost and variations in product. The study has been conducted in a bicycle industry in Ludhiana to improve the quality of the bicycle rims. The various process parameters such as heating voltage, temperature of heated water, time of chemical coating process, chemical composition of the material and quality of heated water etc. need to be controlled by using quality control tools. Pareto chart, Fishbone diagrams have been applied to improve the quality of the products.

Need of the Study

The development of an economy and self-sufficiency in various sectors depends to a large extent, on the development of industry. The small and medium organizations have emerged as the dynamic and vibrant sector of the economy. Owing to changes in the lifestyle and the culture and environment awareness has pushed people to opt for cycling. In the state of Punjab, small scale industry has grown much faster than the large sector. But at the same, time, small scale units face various problems despite its potential for employment generation and strategic importance in industrialization strategies. The present paper emphasizes on the problems faced by small scale units in bicycle and automobile (two wheeler) sector in the state of Punjab.

Research Methodology

The research consists of Primary and Secondary data. For Primary data, a sample of 100 small scale units was selected on Convenience basis divided as 75 from bicycle industry and 25 from automobile (two wheeler) industry and personal interaction with entrepreneurs was also undertaken. The sample included 25 ancillary, 60 vendor units, 1 subsidiary unit and 14 other units. The required information could not be had from two small units from automobile (two-wheeler) industry, one belonging to ancillary and another to vendor category. Therefore, the final sample includes 98 small units, out of which 75 belongs to bicycle industry and 23 units belong to automobile (two wheeler) industry. Area wise representation of the sample consists of Ludhiana (81 units), Malerkotla (7 units), Rajpura (8 units) and Khanna (2 units).

Bicycle Industry

Sample size

Category	No. of units
Ancillary	15
Vendor	45
Subsidiary of Large Units	01
Others	14
Total	75

Auto Mobile (Two Wheeler)

Category	No. of units
Ancillary	09
Vendor	14
Subsidiary of Large Units	00
Others	00
Total	23

Analysis of Data

The primary data collected from the sample units has been tabulated and analyzed with the help of percentages, based on open ended as well as closed ended questions being asked from respondents. The secondary data was collected from magazines, publications, research websites and reference books and reports.

Objective

The present paper aims at studying the problems faced by bicycle and automobile (two wheeler) units in small scale sector and making some suggestions to improve the strength of small scale units. The following section highlights the problems relating to bicycle and automobile industry (two-wheeler) existing in small scale sector.

Table 1: Problems of Small Units (Bicycle Industry)

Category	Raw Material		Full & Power		Labour		Working Capital		Marketing the Product		Quality Control		Pollution Control		No Problems		Total
	Unit	% age out of 75 units	Units	% age out of 75 units	Units	% age out of 75 units	Units	% age out of 75 units	Units	% page out of 75 units	Units	% age out of 75 units	Units	% age out of 75 unit	units	% age of 75 units	
Ancillary	3 (20)	4	5 (33.3)	6.7	5 (33.3)	6.7	4 (26.6)	5.3	2 (13.3)	2.7	4 (26.6)	5.3	4 26.6	5.3	(6.6)	1.3	28
Vendor	5 (11.1)	6.7	14 (31.1)	18.7	(53.3)	32	(37.3)	22.7	21 (46.6)	8 (17.7)	16.7	5 (11.1)	6.7	4 (8.8)	5.3	-	-
Subsidiary of Large Units	-	-	1 (100)	1.3	-	-	1 (100)	1.3	-	-	-	-	-	-	-	-	2
Others	5 (35.7)	6.7	4 (28.5)	5.3	7 (50)	9.3	2 (14.2)	2.7	6 (42.8)	8	2 (14.2)	2.7	6 (42.8)	8	-	-	32
Total	13	17.4	24	32	36	48	24	32	29	38.7	14	18.7	15	20	5	6.6	160

Note Figure in parenthesis () show the percentage with total number of units in a particular category.

Table 2: Problems of Small Units (Auto Mobile Industry)

Category	Raw Material		Full & Power		Labour		Working Capital		Marketing the Product		Quality Control		Pollution Control		No Problems		Total
	Unit	% age out of 75 units	Units	% age out of 75 units	Units	% age out of 75 units	Units	% age out of 75 units	Units	% page out of 75 units	Units	% age out of 75 units	Units	% age out of 75 unit	units	% age of 75 units	
Ancillary	5 (55.5)	2.17	-	-	1 (11.1)	4.34	7 (77.7)	30.4	1 (11.1)	4.34	1 (11.1)	4.34	2 (22.2)	8.7	-	-	17
Vendor	4 (28.5)	17.3	-	-	8 (57.1)	34.7	1 (7.1)	4.34	2 (14.2)	8.7	-	-	1 (7.1)	4.34	5 (35.7)	21.7	21
Total	9	39	-	-	9	39	8	34.74	3	13.04	1	4.34	3	13.04	5	2.7	38

Note- Figure in parenthesis () show the percentage with the total number of units in a particular category.

Problem Relating to Raw- Materials

It is clear from Table 1 and 2 that 17.4 per cent units from bicycle industry and 39 percent from auto industry are facing the problems of procuring raw material. The category wise analysis shows that 20 percent ancillary units, 11.1 percent Vendor units and 35.7 percent other units in bicycle industry are facing this problem. Whereas in case of auto industry, majority of ancillary units (55.5 percent) and 28.5

percent vendor units are facing this problem. The specific nature of the problem relating to raw material faced by the small units as highlighted by them during personal discussion are stated below:

- Sometimes, ancillary units get the raw material from large units being served by them. Large units generally demand advance payments, for the supply of raw material to them.
- For units from vendor category, although availability of general type raw-material is not a problem, but special category raw material such as special alloy steel, special type of angles, flats, rounds, non-ferrous metal aluminum etc. create problem as time period of six to eight weeks is involved in procuring their supply. The cost of such material goes high due to freight charges and sales tax etc. and also due to the fact; these are purchased generally in small quantities. Rising steel prices (due to rising exports of iron ore) is the major concern for units.
- Some units also complained that rubber parts and plastic parts are not easily available in Punjab. As a result, there is generally delay in the receipts of such supplies.
- There is also a lack of knowledge about the sources of raw-material required for special products.

Problem of Fuel and Power

Tables 1 and 2 shows that 32 percent small units from bicycle industry are facing the problem industry are facing the problem fuel and power, whereas none of the automobile units experienced such a problem. The category wise analysis shows that all subsidiary units, 33.3 percent ancillary units and 3.11 percent vendor units from bicycle industry are facing the problem of fuel and power The specific nature of problem relating to fuel and power faced by the small unit are stated as:

- Power supply is not available all time. Whenever it is available, is rationed out and limited to a few hours in a day. Unlike large industries, they cannot afford to go in for alternative means of generating power.
- Frequent power failures and interrupted supply of electricity results in under-utilisation of the capacity of small units and hence raises cost of production.
- Some units complained that the power supply failure for hours together causes loss of heat from hot iron pieces in furnace which leads to wastages, burning losses etc. Thus, it causes supervision of work for long hours and reduces productivity.

Problem of Obtaining and Retaining Labour

It is also clear from Tables 1 and 2 that 48 percent of small units from bicycle industry and 39 percent from auto industry are facing the problem of labour availability and their retention. The category wise analysis in bicycle industry shows that 53.3 percent vendor units, 50 percent other units and 33.3 percent ancillary units are facing this problem whereas in auto industry, 57.1 percent vendor units and only 11.1 percent ancillary units face the labour problem. The specific problems relating to labour retention faced by the small units are stated below:

- The vendor and ancillary units complain that there is a shortage of skilled labour. Unskilled and semi-skilled labour is available in plenty. But most of these laborers are migratory in character coming from states of Bihar and West Bengal. When these laborers go to their home towns, then it becomes very difficult to make alternative arrangement and small units have to go for overtime shifts, giving more wages to other workers. Moreover, Bihar Govt. has started providing employment to laborers in development works. As a result, laborers are migrating to their native places.
- The units from automobile industry complained that facilities for training unskilled workers in the modern methods of production are lacking.

Problem of Working Capital

It is visible from the tables that 32 percent small bicycle units and 34.74 percent small auto units are facing the problem of getting adequate finance as working capital. The category wise analysis of bicycle units show that all the subsidiary units, 37.7 percent vendors and 26.6 percent ancillary units from bicycle industry are facing the problem of working capital. On the other hand, majority of ancillary units (77.7 percent) and only 7.1 percent vendor units from auto industry face this problem. The specific nature of the problem relating to working capital is as below:

- Procedural formalities for sanction of loans are cumbersome. The institutions ask for a lot of information and data for sanctioning loans to small units. They are hardly satisfied with the information provided by them and raise queries, often not at one time but in stages with wide time gaps. This makes the matter very difficult for them.

- The shortage of finance also affects the ability of units to install modern machinery to maintain well-organised and fully equipped factories to buy and store good quality raw-materials etc. There is no financial support from the state Govt. to buy new machines to speed- up production.
- The other complaint of small unit is that they are less attractive as borrowers than large ones due to their smaller profit potential. These units are not in a position to offer the guarantee required by the banks and financial institutions due to their weak credit- worthiness and weak economic base.

Problem of Marketing the Product

It is visible from the tables that 38.7 percent of bicycle units and 13.04 percent of auto units face the marketing problem. The category wise analysis shows that 46.6 percent vendors and 42.8 percent other units and 13.3 percent ancillary units from bicycle industry are facing this problem. Whereas in auto industry, 14.2 percent vendors and 11.1 percent ancillary units face the problem of marketing their product. The specific problems relating to the marketing of product are summarized as:

- The number of small firms and their production has increased over the period and they cannot spend heavily on marketing through advertisements etc. Stiff competition from china is the another concern. Chinese bicycle parts are 15- 20 percent cheaper than Indian market.
- Other problems related to marketing highlighted by these units include absence of well defined pricing system, lack of trademarks, standardization, absence of familiarity with a wider market, imperfect knowledge of market conditions etc.

Problem of Quality Control

It is clear from the tables that 18.7 percent of small scale bicycle units and only 4.34 percent of automobile units are facing the problem of quality control. The category wise analysis shows that 26,6 percent ancillary units and 17.7 percent vendor units from bicycle industry and 11.1 percent auto ancillary units face this problem. The nature of the problem relating to quality control faced by them is listed as follows:

- Sometimes, the products manufactured by them are not according to the specifications given by large units. In such cases, large units reject the products and small units have to bear the cost.
- There has also been the lack of testing facilities to find out whether the materials of right specifications have been supplied or not. Though testing facilities have been provided by the government in certain industrial estates but small units are not able to avail of these facilities. The units are still dependent upon old techniques and equipments. Due to limited capacity and capital they find it very difficult to modernise their plant and machinery. To conduct research and development on a continuing basis is not possible for small scale units. Customers demand good quality at cheaper price, which can be possible only with latest machinery & technology.
- Access to technical literature, professional journals or information about new product launches are not within the reach of most of the small scale business entrepreneurs.
- Lack of automation in technology leads to delay in completion of orders on time.

Problems of Pollution Control

From the data, it is clear that 20 percent of bicycle units and 13.04 percent of bicycle unities and 14.04 percent of automobile units face the problem of pollution control. The category wise analysis show that 42.8 percent other units, 26.6 percent ancillary units and 11.1 percent vendor units from bicycle industry and 22.2 percent ancillary, 7.1 percent vendor units from automobile industry are facing this problem. The specific problem relating to pollution control faced by small units is as follows:

- In this context, it was stated by small units that residuals of manufacturing activities, together with undesirable products having side reactions, chemical intermediates, water wastes, atmospheric emission, sludges etc. contribute to the problem of water and air pollution.
- Small units are also engaged in electroplating, heat treatment, grinding, general fabrications, galvanising, phosphating, discharge of paints etc. in manufacturing process. All these process result in noise and water pollution.
- Most of the units do not have water treatment plants as it is a very costly process for small units to install such plants.

Suggestions

Small scale organizations can exploit natural resources or labour or raise the standards of living of people depending upon social, political, economic and technological environment of an economy. The

Government should take initiatives to nurture entrepreneurship and to provide a favorable environment for small scale industries to develop their own. In 1999, the government has established the Ministry of Small Scale Industries and Agro and Rural Industries to make policies for the development of the small scale sector. With the help of Government, Small and Medium Enterprises having strong technological base, international business outlook, competitive spirit and willingness to restructure shall overcome different challenges and can make their contribution to Indian economy. The Indian bicycle industry needs latest R & D facilities to watch the World Leaders.

- The Government should develop good infrastructure for the development of cycle industry, keeping in mind the health of people, environment and fossil fuel saving.
- Traditional Skills and knowledge, infusion of technologies, capital and innovative marketing strategies can support and strengthen this sector.
- The State government must provide interest free loans to the small manufacturers to help them execute orders. People should also be made aware regarding bicycle usage.
- The Government should either suspend free trade agreements or to fix a minimum floor price for import of bicycle and its parts in order to provide protection to domestic bicycle industry. Freight Equalization Schemes should also be introduced.
- There is a need to release VAT refund of bicycle manufacturers lying with the Excise and Taxation Department of Punjab Govt. so that the money can be utilized by manufacturers to push production.
- More National Awards for Quality products should be given to outstanding small scale units enduring them to be more competent and exposure to export market.
- There is also an urgent need to impose strict anti- dumping laws to check rising cheap imports of bicycles and components from China which has been dumping its products into India.
- FTA's and SAFTA needed to be reviewed to safeguard the interests of the domestic bicycle industry.
- The concept of cycle valley announced by Punjab Government in June 2017 would help in revolutionizing bicycle production in India as well as the world. This step would encourage Punjab state, to become, a hub for export of bicycles and a centre for unique eco-system aimed at reduction of costs. The Govt. has assured to the investors setting up units in cycle valley would be given pre-cleared sites, cheapest power in the country, and availability of trained manpower, and best incentives as per labour policy.
- The Government should put efforts to improve infrastructure in rural as well as urban areas for the growth of two- wheeler market. The Governments aim to make automobiles manufacturing as the main driver in 'Make in India' initiative would help the two- wheeler market to leave behind China and Japan.

In the changed environment, the SSI sector needs to integrate itself with the overall domestic economy and global markets by gearing itself to greater interdependence by networking and subcontracting. To meet the present as well as future requirements of the sector and the national economy satisfactorily, the policies and projects for the SSI sector will have to be effective and growth oriented to achieve competitiveness, collective appeal and capacity to upgrade.

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