CHAPTER -II

LOCK MANUFACTURING INDUSTRIAL UNITS IN
DINDIGUL DISTRICT – A PROFILE
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DISTRICT- A PROFILE

The researcher has briefly discussed the status of the Lock Manufacturing Units in Dindigul District in this chapter. The chapter is organized in the following manner.

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2.1. Micro, small and Medium Enterprises

The Micro, Small and Medium Enterprises play a vital role in global market and are considered the engine of growth in most countries. The MSMEs are labor-intensive and provide employment to nearly 1.86 crores persons in the country. MSMEs ensure a more equitable distribution of national income, enhance balanced regional industrial development, act as a nursery for Entrepreneurship and facilitate mobilization of local resources and skills which might otherwise remain unutilized. They also play a key role in the development of economy with their effective, efficient, flexible and innovative entrepreneurial spirit. Now the small scale industry is called Micro, Small and Medium enterprises based on their investment.

In comparison to medium and large scale industries, small industries are small in operation employment, products, capital, technology etc. Small – scale enterprises, fall into two categories such as cottage industries and small scale units. Cottage industries are mostly traditional industries employing traditional methods of production. They are essentially household enterprise employing small hired labour. On the other hand, small–scale enterprise generally employs limited number of wage workers and thus represents petty or small capitalism. The Industrial policy resolution, 1956 clearly stresses on the role and significance of Small Scale Industries. The economic liberalization process since 1991
has provided opportunities to the small scale sector to access larger markets, improve manufacturing techniques and management processes.

Today 95 percent of country’s industrial units come under Micro, Small and Medium Enterprises. This sector has around 298.08 units (provisional 2009/2010) and produced thousands of products. Small industries in India produce a diverse range of products against the very simple products produced by household enterprises at one end of the spectrum and highly advanced ones at the other end. The Micro, Small and Medium sector has emerged as a dynamic and vibrant sector of the Indian economy in recent years, displaying extraordinary growth in the field of production, employment and dispersed development in general and exports in particular. Consequently, the Government of India has been encouraging and supporting the promotion of Small-Scale Industries through deliberate policies such as protection from large-scale industries, capital subsidies, differential tax treatment and reservation etc.¹

2.1.1. Definition of MSME

Micro, Small and Medium enterprises as per MSMED Act, 2006 are defined as industries based on their investment in plant and machinery (for manufacturing enterprise) and on equipment for enterprises rendering services. The limit on investment for enterprises to be classified as micro, small and medium enterprises is as follows,

<table>
<thead>
<tr>
<th>Classification</th>
<th>Manufacturing Enterprises*</th>
<th>Service Enterprises**</th>
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<tbody>
<tr>
<td>Micro</td>
<td>Rs. 2.5 million / Rs. 25 lakh</td>
<td>Rs. 1 million / Rs. 10 lakh</td>
</tr>
<tr>
<td>Small</td>
<td>Rs. 50 million / Rs. 5 crore</td>
<td>Rs. 20 million / Rs. 2 crore</td>
</tr>
</tbody>
</table>
Now-a-days small scale industries have undergone enormous changes. In 2006, “Service Sector” was introduced through Micro, Small and Medium Enterprises Development Act. It segregated the manufacturing enterprises and service sector units and accordingly defined and raised the investment ceilings to provide the small scale sector an opportunity to compete globally. This sector contributes and supports hugely to our economy and hence the study has been done to find out the performance of Micro, Small, Medium enterprises in India.²

2.1.2. Informal Organization

Village Industries come under the informal sector in India. Informal sector has been defined as the one, which is not regulated by the government and is compelled by circumstances to operate outside the framework of law. The term home based has generally been used in reference to price-rate workers who complete specific steps in the production process for an employer or sub-contractor from their homes. They work at home and look independent, but in reality they are mostly dependent on employers and intermediaries for work. The earnings of the home-based producers are generally lower than other workers and often less than the minimum wages.

The informal sector is highly homogeneous encompassing production units of different features and in wide range of economic activities as well people working and producing under many different types of employment. Due to its multiple dimensions, it is difficult to describe the informal sector. Informal sector or unorganized sector is rapidly growing in India due to shutting down of the state enterprises or privatization.³

2.1.3. Importance of Micro, Small and Medium Industries
Micro, Small and Medium industries play a dominant role in the economic development of both developed and developing countries. In developing countries cottage and small-scale industries are especially important in the context of employment opportunities, equal distribution of national income, balanced regional growth and development of rural and semi urban areas. This sector is considered to be an engine of growth, especially in a developing country like India due to their contribution to income generation, employment, GDP and export earnings.

Small and cottage industries are those industries whose capital is supplied by the proprietor or through means like partnership or from financing agencies setup for this purpose etc. Those industries generally use power driven machines and also employ modern methods of production, engage labour on wage, produce for expanded market. Their work pattern is on permanent basis. Such industries can be managed with little resources and in terms of returns provide much better results.

Cottage industries, on the other hand also called household industries, are organized by individuals with private resources and with the help of family members and are pursued as full-time or part-time occupation. The capital investment is small and the equipments used are simple. These industries generally use locally available resources, raw materials and indigenous skills. The output produced in each industrial unit is generally sold in local market. Small scale industries, including traditional cottage and village industries and modern small enterprises have been given an important place in India’s economic planning for ideological and economic reasons.

Micro, Small and Medium Enterprises show their impact on national and regional economies throughout the world. They have been recognized in both developed and developing countries as an effective instrument for creating employment opportunities with a small amount of capital investment. The small scale and cottage industries also play an important role in removing regional disparities. The industrial development in a backward
area can only be achieved by the rapid development and promotion of small scale industries.⁶

Traditional small scale industries include Khadi and Handloom, Handicraft, Village industries, Bamboo based industries, Sericulture and lock etc. Modern small scale industries produce a wide spectrum of goods ranging from comparatively simple items to sophisticated products such as television sets, electronic control system, mixer grinder and various engineering products particularly as ancillaries to the large industries. The traditional small industries are highly labour intensive, while the modern small scale units use highly sophisticated machinery and equipments.

2.1.4. Performance of Micro, Small and Medium Industries

The Micro, Small and Medium enterprises are the most essential sectors of the Indian Economy in terms of employment generation with the strong entrepreneurial base. It helps to create and share in production. The Micro, Small and Medium enterprises sector contributes significantly to the manufacturing output such as production, employment and exports of the country. The sector accounts for about 45% of total production and 40% of the total exports of the country. The sector provides employment opportunity to 59 million units throughout the country. There are over 6000 products ranging from traditional to high-tech items. The products are Food parts, Metal products, Rubber and plastic products, Electrical and Machinery parts, Basic metal industry, Chemical and Chemical products and so on.

2.1.4.1. Growth of Small Scale Units

The MSMEs play a very important role in the socio-economy development of the country during the past 50 years. It has significantly contributed to the overall growth in terms of the Gross Domestic Product (GDP), employment generation and export. The performance of the SSI, therefore, has a direct impact on the growth of the overall economies.
The MSMEs registered a remarkable growth from 1992-93 till 2009-2010. Sluggish growth is seen in number of units till 2005-2006. In 2006-2007, growth in small scale units is rapid. This aspect points out that government protection has helped the growth of units under the competitive business environment. Ministry of Micro, Small and Medium Enterprises reported that SSI units have rapidly increased after 2006. Government policies are motivated to protect the SSI units and protect them.

2.1.4.2. Performance Of MSME Production

Performance of Micro, Small and Medium products have discouraged large scale industries from specializing in labour intensive products in which India has a comparative advantage. In fact, the growth rate of large scale industries had been at least 1.5 times larger than small scale growth. When we compare 2005 with 2006, the production rate has increased twice. The Gross output of MSME in the year 2006-2007 was estimated to be Rs. 7,09,468.15 crore whereas in the manufacturing sector and service sector it was 6,68,937.31 crore (94.29%) and Rs. 40,530,84 crore (5.71%) respectively.

In 2011, the production rate has been estimated to increase to 100,00,00 crores.

2.1.4.3. Employment Opportunity:

The MSMEs provide employment to about 60 million persons through 26 million enterprises producing more than six thousand products. A major strength of the sector is its potential for greater innovation both in terms of products and processes. An inherent strength of the sector is that these enterprises can be set up with very small amounts of investments and have the location flexibility to be located anywhere in the country. Their employment potential is higher when compared to large enterprises and are presently estimated to employ 6 crore persons. The total employment from the MSME sector in the
country as per the Fourth Census of MSMEs with Reference to Year 2006-07 was 594.61 lakh. As per the estimates compiled for the year 2009-10, the employment was 695.38 lakh persons in the sector. However, employment generated by the MSME has not solved the problem of unemployment in rural areas.

2.1.4.4. Exports:

The MSMEs contribute hugely to India’s exports. The total exports of MSMEs increased from Rs.400 crores during 1973-74 to Rs.13883 crores in 1991-92. In 2005-06, the total exports from MSMEs amounted to Rs.150242 crores. Surprisingly, the total exports in 2007-08 amounted to Rs.2,02,017. India uses low level technology and low level capital but compete with other countries. New opportunities are being created for linkages among MSMEs across the globe under the World Trade Organization (WTO) regime. The Garment exports are main contribution of MSMEs sector. Other sectors, such as bio-tech, IT and IT-enabled services, footwear, etc. have shown a promising potential.

2.1.5. Scope of Micro, Small and Medium Enterprises

Planning commission of India has unambiguously stated that the scope of village industries depends in part, on their relation to the corresponding large scale industry and in part on the development of agriculture and the growth of rural amenities. As agriculture becomes more intensive there will be greater demand for certain articles of consumption and tools and implements, which could be met by village industries. Amenities in rural life such as supply of pure drinking water, street lighting, sanitation, hospitals, recreation grounds, community centres and roads widen the scope for village industries. The possibility of turning waste into wealth, for instance, production of gas from cow dung and other refuse of the village through gas plants in so far as the operations prove economic, production of bone manure through bone digesters, soap making out of non-edible oil etc. will further provide scope for the development of village industries. Rural arts and crafts
which have both social and economic significance, village printing, lock manufacturing and pottery and the crafts of the tribal people for instance have not only a long tradition but have also been essential elements in the organic unity and culture of the villagers.

2.3. Lock Manufacturing Industry in India

Now-a-days umpteen number of lock manufacturing units are run in India. Many of the lock manufacturing units have come under the small and micro industries. In India, Aligarh and Dindigul are the lock manufacturing clusters in the past 70 years. The lock manufacturing units in Dindigul and Aligarh are conventional industries. The units enjoyed the regional advantage. Aligarh and Dindigul are called “Lock City”. Some of the private lock manufacturing industries are also run successfully in India.

Aligarh and Dindigul have about 6000 small-scale units and a couple of organized sector units making various types of locks such as lever locks and Pin Cylinder mechanism locks. Annual turnover of Indian lock industry is approximately Rs.250 crores. The industry provides direct employment to approximately 25,000 persons mostly belonging to weaker and minority sections of the society. 80% of the locks-manufacturing units are artisan based. Product designs in vogue are century old. Artisans are following handcrafting based processes. According to an estimate, the global market of locks will touch US$ 50 billion by 2005. The Indian lock industry can protect their share in domestic market and have share in the world market, provided cost-effective technologies are adopted and properly marketed. There is a need to protect traditional lock making. At the same time, it is necessary to introduce some mechanization to make the industry competitive in the post WTO regime.11

In post globalization era the challenges faced by the Indian lock industry have increased. The government policy is negative towards the small scale industries. Even small lock makers have to buy inputs like gas and electricity at commercial rates. The price of raw materials like brass, zinc and iron have been fluctuating and putting pressure on
margins. United Nations Industrial Development organization along with the ministry of small scale industries and government of India had agreed to implement the National Programme for the Development of the Indian Lock Industry in 2001. The programme noted that the environment for doing business in India does not match its international counterparts in factors like distribution channels, market intelligence for product design, cost of money, availability of skilled manpower, mechanization of the processes, introduction of electronics and information technology in product design.12

All India lock manufactures association secretary, Ramesh Arora said that Chinese locks are almost 40% cheaper compared to the Indian ones. The Chinese government gives incentive as well as export subsidy to their companies. So, it is necessary to motivate the lock manufacturing industry in India to compete with the foreign products to survive in the country.

2.3. History of Locks

A lock is a mechanical or electronic fastening device that is released by a physical object or secret information or combination of more than one of these.

Locks and keys were known long before the birth of Christ. Securing one's property has long been a concern of people throughout the world. Beyond hiding the objects or constantly guarding them the most frequently used option is to secure them with a device. Early solutions included knots to either detect, like the Thief knot, or hamper, like the Gordian knot. Historians are unsure where the first lock was invented, but evidence suggests that locks initially developed independently in the Egyptian, Greek, and Roman civilizations.

The oldest known lock was found by archaeologists in the Khorsabad palace ruins near Nineveh. The lock was estimated to be 4,000 years old. It was a forerunner to a pin tumbler type of lock, and a common Egyptian lock for the time.7
The first Egyptian lock comprised a wooden bolt securing a door, with a slot with several holes on its upper surface. A device attached to the door contained wooden pins which would drop into the holes and secure the bolt. The key, also wooden, was a large toothbrush–shaped affair, whose 'bristles' were actually pegs that matched the holes and pins in the lock. To open the door, it would be inserted into the keyhole located below the pins and lifted, raising the pins and allowing the bolt to be slid out.8

![Image of the First Mechanical Lock]

Fig. 2.1. The First Mechanical lock

Lock, a simple mechanical device at first sight, was broadly used to protect people’s security and privacy. The development and advances made of locks have been changed significantly in the past: from a simple bolt to various components, from a crude clumsy shape to ingenious and delicate one. And, the functions of the locks have been turned from merely protection to decoration and beautification.

Brass and iron padlocks found in Europe and the Far East was popularized by the Romans and the Chinese. They were particularly favoured because they were portable. They were operated by keys that turned, screwed and pushed. The push-key padlock was of simple construction, the bolt kept in locked position by the projection of a spring or springs. To unlock, the springs were compressed or flattened by the key, which freed the bolt kept in locked position by the projection of a spring or springs. To unlock, the springs
were compressed or flattened by the key, which freed the bolt and permitted it to slide back. Padlocks of this type are most universally used in the orient today. The decoration reflects the arts of the countries, and shapes often took the form of animals—dragons, horses, dogs, even elephants and hippopotamuses.

Traditionally, locks were designed by specialized technicians in order to prevent the knowledge of the mechanisms of locks from lawless people to further ensure security. But that also blocked the way of the public’s interests to understand the mechanisms of locks, consequently, only very few people have been interested in tracing the origin, existence and development of locks. Through the literatures about Chinese and western locks, one can clearly see that in the west, people thoroughly recorded the history of the locks and as time progressed, they were numerous improvements having been documented. Through different eras, various newly designed styles of western-locks were barely recorded. The word lock was often seen in documentation in conjunction with military security, and historical records of Chinese locks were still scant and incomplete. In general, a lock consists of fastening device an opening device, and an obstacle component.9

Locks are of different types and designs. Many locks are flexible enough to adjust for both the types of door, i.e. left or right handed. But there are locks which solely depend on the direction of the lock.

i. Mortise Locks: They usually depend up on the thickness of the door’s stile. The stile should be at least 44mm and if possible, 50mm. The width of the stile should be approximately to the length of the lock, i.e. 63mm in general but many locks require 75mm to 85 mm width. The buyer can also purchase the locks for stiles narrower than 63mm. Mortise locks are usually protected by a shield or commonly known as escutcheons. These escutcheons contain flaps, which keep the lock free from grit and dirt.

ii. Rim Locks: Rim locks are used for the doors where mortise locks are not adjustable, usually with doors having stile less than 45mm. Rim locks are used with doors
having maximum of 60mm stile. Rim locks are usually operated by knobs or handles fixed on the inside. Mortise locks with a single bolt are operated with a turn of the key. Sash locks are integrated with spring bolt and also with a dead bolt. They contain holes, which can be used to fit handles. It is possible to buy those handles separately. Special mortise, sash locks are also available to use on the double doors, i.e. doors with the rebated vertical edges. Even conversion kits are also offered by some manufacturers, which enable to modify the locks. Unlike traditional doors, sliding doors require different kind of locks - Locks with a hook bolt or a claw. These locks are available in both mortise or rim design.

Lock maintenance is necessary for smooth functions. You need to lubricate the lock every six months. For cylinder or lever lock apply powdered or flaked graphite on the key and put the key into the lock and move it back and forth. Bolts or handles should be lubricated as well. Oil should also be applied to the window locks having a single universal key. Make sure that the oil will not penetrate into the mechanism.  

2.4. Dindigul Profile:

The Huge Hill at Dindigul resembles a pillow. Thus, the city is known as Dindigul, a portmanteau from the Indian 'Thindu' for pillow, and 'kal' for rock. Also commonly known as the "City of Locks ", it is a fast growing tier-4 city.

The History of Dindigul district reveals that it was formed on fifteenth of September 1985, when it was carved out of the composite Madurai District. Situated about half-way between Madurai and Thiruchirapalli in Madras State, Dindigul is a busy centre of small industries in which almost every cottage is a small workshop, buzzing with activity. As of 2011 India census, Dindigul Urban Agglomeration had a population of 2, 92,132. Males constitute 1, 45,438 & females 1, 46,694. Dindigul has an average literacy rate of 90.55%, higher than the national average of 78.8%: male literacy is 94.36% and, female literacy is 86.79%. In Dindigul, 10% of the population is under 6 years of age. This district is bound by Erode, Tirupur, Karur and Trichy districts on the North, by Sivaganga
and Trichy District on the East, by Madurai district on the South and by Theni and Coimbatore Districts and Kerala State on the West. It is spread over on area of 6266.64 km.

It comprises 3 Revenue Divisions, 8 Taluks and 14 Panchayat Unions. The city is home to a major IT and textile spinning industry, which ranks highest capacity next only to Coimbatore in Tamil Nadu. There are numerous Textile Mills in and around Dindigul City. A large number of Chamber Brick units are functioning in this District. Dindigul Lock and Iron Safes are very famous for its quality. Locks manufacturing is operated as a co-operative sector. Locks manufactured here are sold in national and international markets. Dindigul locks - are likely to get Geographical Indication for establishing their place of origin.¹⁴

2.5. Dindigul Lock Manufacturing Industries:

The lock industry in Dindigul is more than a 100 years old and is spread in more than 25 villages in the district. Hand-made locks have an international reputation and some of the products are valued at even Rs.1000 per lock. All the locks made in this cluster are hand-made and each lock is unique in its design and system. However, these locks do not conform to the ISI certification standards. There is no documentation of the method of manufacturing and even the drawings of the locks do not exist. The entire process is based on the craftsmen's memory, most of them have engaged in this business for many years.¹⁵

![Fig.2.2. Dindigul lock Manufacturing Industry](image)
Next to Aligarh, Dindigul is perhaps the most important small-scale lock manufacturing centre in India. The industry has been in existence here for over a century. The lock makers of Dindigul will tell us that San-karalinga Achari, who married the daughter of a locksmith of Tuticorin, brought the lock industry to this little town, and it is indeed an irony of fate that Tuticorin which was once reputed for its locks has no locksmiths any more. During the thirties there were about fifty lock making units in Dindigul area. The good name enjoyed by Dindigul locks, however, encouraged the establishment of many more units. Lock making in Dindigul is an unorganized industry. There is no minimum or optimum size of business, and some of the units are obviously feeble or too small. Being unorganized, the industry is also unregulated. If small industries do not use power, they do not come under the Factory Act, and as long as they do not use any harmful or dangerous raw materials such as explosives they do not have to comply even with health regulations. In the absence of all regulations, working conditions and wages are pretty awful. The units are small, few of them employ more than ten workers; and none use power. The predominance of small units is due to the fact that most of them are run on proprietary basis and age old traditions, without adequate Financial resources for undertaking expansion or improvement It is generally the proprietor himself and in some cases, one or two members of his family who run the business.\textsuperscript{16}

Dindigul, a small town in Tamilnadu has been known for its locks for nearly a century. Many agricultural workers turned to lock making as an alternative source of income. The processes are based on the recycling of industrial scrap. The lock industry is predominantly an informal activity at the cottage industry level, with each lock assembly unit employing 10-15 workers many of whom commute from surrounding villages. However, the market for those lock is shrinking, due to competition from other parts of India. The international lock industry is also changing to lighter, more durable materials with advanced technology. The national small industries corporations have outlined a plan
to improve the technology and reorganize the lock industry in Dindigul, but very comprehensive assistance programmes will have to be adopted to suit the capacity of the industry.

Lock manufacturing industry is a traditional industry functioning in Dindigul district. The Dindigul locks have high degree of brand image and it leads to market potential of the locks. Dindigul lock manufacturing units are more than 100 years old and are spread over many villages in the district such as Paaraipatti, Mattupatti, Nallampatti, Nagalnagar, Perumalkovilpatti, Balamarathupatti, Kammalapatti and so on. Hand-made locks have an international reputation. Lock manufacturing units, one of the traditional and prestigious industries of the district, have been providing jobs to over 3,000 families in Dindigul and several villages around it. In olden days, more than 5000 units were spread over the District. But now only 978 units (in 2012) are functioning in the District.

2.5.1 Dindigul Lock Details

Lock making is a flourishing industry that has provided employment to many youth in the region. Dindigul locks are unique. Duplicating the key is not possible and anybody who loses a key has to come back to the place of origin to get a duplicate to be made. They produce locks based on customer specification. Dindigul lock manufacturers produce some peculiar type of locks such as Kolaikaran pootu (Killers lock), Savipudi pootu etc.
The kolaikaran pootu is one in which, if the wrong key was inserted, a sharp knife would shoot out and cut the robber’s hand. Savipudi pootu is the key catching lock if the wrong key was inserted it got jammed and the lock cannot be used again. The major customers of Dindigul locks are temples, hospitals and jails. Reprocessing facility is available in the locks. Lever mechanism is unpredictable and different from Aligarh locks. The different types of locks and keys are produced based on the customer requirements.

2.5.1.1. The Product Types

Each and every lock is unique. Some of them are very peculiar. Normally they produce mango lock, Trick lock, Excise lock, Export lock, Almirah lock, Drawer lock and Padlock.

i. Mango Lock:

These types of locks are available in various sizes ranging from 10mm to 25 mm and in various materials like brass, steel, chromium plated, galvanised etc. The different types of locking systems made are; Double L Triple Locking, Master locking, Lock and Trick locking with interchangeable keys etc. These locks have a vertically sliding shackle with chromium plating to avoid rusting. They usually have 7 lever systems with flat keys.

ii. Trick Lock:

Trick locks are usually available in 50mm to 70mm sizes, and have levers made of pure brass and iron shackles. They are called trick locks because they have a special type of pad lock with moveable hold plate and tricky arrangements that can be operated only by a known person.

iii. Excise Lock:
It is a marvelous high security lock with triple arrangements to avoid outer sealing. The inbuilt arrangement provides high security and can be made only by experienced craftsmen. These locks have a double locking mechanism with caution and warning seal-breaking mechanism.

iv. Export Lock

Export Locks are wonderfully designed for ease and comfort coupled with high security mechanism. They are available in antique style and finish and attractive designs. Door locks in pure brass and in mild steel are available with ordinary models contrary to high tech, trick and bell security systems.

v. Almirah Lock

Almirah locks are available in pure brass from 50mm to 75mm.

vi. Drawer Lock

Drawer locks are available in pure brass in 50mm to 75mm sizes with duplicate key-sets.¹⁷

All kinds of genuine Dindigul locks are available: all are very strong with old method of lock preparation. Handmade locks are with traditional and precious work, lot of secret functionality for opening and closing them. Now-a-days the following types of locks are available in the market.

1. Main door lock

2. Main door lock with bell

3. Locker box lock available

4. Padlock

5. Cash box lock

1. Main door lock
Main door lock is manufactured based on the customer specification. They manufactured many locks and the single key to open it. They use different types of lever mechanism. Sometimes they produce lock, key and additional key. The additional key is one in which, if the key is used in the lock, the right key was unable to open it. They manufacture temple door locks with 5 kg weight for safety purpose.

2. Main door lock with bell

Main door lock with bell is one in which, if the wrong key was inserted, a bell would ring. This type of locks helps to avoid theft and malpractices.

3. Locker box lock available

The Dindigul locker box lock is available for banker’s use. Locker box lock is manufactured with high quality of brass.

4. Pad Lock

These Brass Padlocks are in good demand in the market due to high quality and durability. These products are available in market at competitive rates.

5. Cash box lock

Dindigul cash box has good name and fame. Strong brass and iron are used for manufacturing the cash box. Cash lock box has many customers in southern districts.

2.5.1.2. Importance of the Dindigul locks

Dindigul locks are famous for their traditional design, safety and quality with good raw materials. Twin keys or three keys for single lock and locks with multi-locking system are some specialties. Even government departments, temples and godowns have been using Dindigul locks. Some of the special features in the Dindigul Locks are as follows,

1. The craftsmen claim that the precision lever mechanism of their locks is unpicked.
2. The shackles are meticulous in design and offer greater resistance to anyone who tries to break in.

3. The levers are so designed that they have a greater degree of non-interchange ability of keys. There’s a combination of proper key-holes to suit male, female, round or flat type of keys.

4. A few locks are designed with unique and remarkable synthesis of traditional design and compatibility with foreign keys.

5. The motto of the lock manufacturing units in the cluster is, “Our customers are trustful and thieves are fearful”.

6. Complete manual assembling with each lock having its own unique key code. 

2.5.1.3. Production Details

Small scale units have several distinct advantages. They may be household based, are often more efficient in their use of a wide variety of materials, produce less wastage and distribute benefits to a deeper labour pool. Lock manufacturers have got the production orders from individual customers and traders. They produce the locks under the hut without proper working environment. Many of them have formed the units near their house. In the lock manufacturing units, brass and iron are used as the important raw materials. Some other spare parts such as nuts, bolts etc., are used to make the locks. In the lock manufacturing units, they focus only on first quality raw materials. It is necessary to melt it in the needed shape. Major expenditure of the lock units is spent on purchasing the raw materials with good quality. All other needed raw materials, spare parts have either become rare or expensive during the past fifty years, resulting in growing shortages of these materials for the small and non-mechanized lock manufacturing units.
Lock manufacturing units have carried their production either manually or mechanically or both. In the lock industry in Dindigul, technology has entered slowly and that too on by introducing mechanized production. The mechanization of locks is expected to enhance the productivity of the small lock manufactures enabling them to face competition from Aligarh and other regions. Because of this substantially the lock units had big scope in manufacturing locks for special purpose with the help of technology. They did not possess the manual techniques in production. They have passed their traditional techniques to the next generation. As a consequence of the absence of technical information, one cannot use the skill successfully when the traditional manufacturer retires, his skill also becomes of no use at all.

2.5.1.4. Finance Details

Finance is the key input for sustained growth of small scale sector and its accessibility continues to be a matter of concern. The small scale industries need both long run as well as short run credit. The financial management plays a vital role in the survival, growth and development of these industries. In India, Small scale industries account for 95 per cent of the industrial units existing in the country. On an average, a village artisan can produce 3 to 4 locks per day and receive a salary of about Rs.35 to 60, which varies according to the size of the lock that is manufactured. But, they get low level of wages when they are compared to textile workers. Though the price of lock is high, the artisans get only limited wages. The main reason is the agent of lock distributors has fixed the
wages of employees. So, they have to leave the lock manufacturing work and choose construction work or textile work for their survival.

Profit margin for small lock manufacturers had also dropped sharply owing to poor procurement price for finished products and the increase in the cost of raw-materials. Moreover, agents did not settle bills regularly for locks purchased. With no funds for working capital, several units were affected badly. Improper functioning of units threatened the survival of workers. They needed a working capital to survive in the industry. Working capital is necessary for procuring raw material, purchasing machinery and providing wages to employees. For these purposes they borrowed the loan from private banks, public banks and money lenders. Some of them got the financial assistance from DIC. Many of the manufacturers were uneducated, so they had the problem to maintain the documents and had the fear to face the bankers.

The impact of problems responsible for poor financial performance on account of financing are deliberate diversion of funds, poor collections, unplanned payments to creditors, high inventory, un productive expenditure, delay in sanction of loans, delay in sanction of working capital limits by banks, delay in implementation of project on amount, decrease in the level of stock, under utilization of capacity, default in payment of interest and instalment, frequent interruption in production, non submission of data to bank, irregular bank accounts, high turnover of personnel and decline in technical efficiency. Even though the above factors affect many of the lock manufacturing units they are highly productive and profitable also.

2.5.1.5. Human Resource Details

Manual lock manufacturing units are located in south India in only one geographical region. There exists now an acute shortage of manpower in the traditional lock making industries. Because of the labour shortage, many units in these areas are unable to utilize their installed capacities fully. In some cases, production levels are very low to their capacity.
In every unit 5 to 50 workers are engaged in the lock manufacturing units. Some units have only one employee working in their unit. The artisans are engaged in different processes such as moulding, welding, assembling etc. Many of the units have not been registered under the Factories Act, 1948. So, there are no employee provisions and welfare facilities carried out. In olden days, these skills were transferred to the new generation, as the artisans’ children too would involve themselves in the lock-making occupation. But now due to less remuneration in smith-work, an increasing number of youngsters are opting for the textile industries and are leaving their traditional business. The lock factory workers need very complicated skill to complete their work. So, they leave the job.

Normally the employees live in the same region. They did not have any trade unions. The manufacturers are mostly more than 60 years and they were involved in the job since they were 6 or 7 years. But now child labours are not permitted in the job. Hence work cannot be done continuously. They have not proper working conditions like proper lighting, ventilation and safe infrastructure. The wages are fixed based on the number of locks manufactured. Now-a-days the workers have good opportunity to engage themselves in variety of jobs. So, they easily opt for some other jobs for better remuneration and working place facilities.

2.5.1.6. Marketing Details

Marketing determines a firm’s commercial ability to prosper in a competitive environment, contributes to the development of a flourishing industrial society and revolutionizes the life of people both as human beings and as consumers and converts the limited human needs into unlimited wants and further the actual demand. The globalization has persuaded the advancement of marketing tools and techniques. The pace of the development of small scale industries also hinges on the soundness of marketing practices and policies. The tools and techniques of marketing help in widening and diversifying the
market by creating awareness, providing information, generating conviction and impelling to action.

Many of the traditional industries have not been able to compete in the market place because of lack of technology inputs for modernization and the absence of skill development efforts. Dindigul lock manufacturing industry has the high level of brand image. Dindigul lock has the name and fame. There is no need for advertisement and exhibitions. Without promotional activities, they market their products efficiently. They are involved in direct marketing. The workers produced customer based products. Sometimes they have to sell their products to the agents who bulky orders. When plenty of locks are available in the market, people give first preference to quality and select the Dindigul locks. It shows its prestigious image. Unlike other products, the prices of the locks are fixed by the traders and not by the manufacturers. The manufacturers often lose out in these negotiations making them reluctant to encourage their children enter the industry.

The infrastructural problems, marketing problem, lack of storage facility, delayed payments, financial constraints, inadequate market intelligence, slow performance of market operations and costly and inefficient labor are the major problems in marketing performance. Government of India provides many more schemes for purchasing raw materials and selling finished products.

2.6 Aligarh Lock Manufacturing Units

Aligarh is famous as an industrial city. It is also known as Taala Nagari. The Aligarh lock unit is mainly a small scale industry, where manual labour and hand work is predominant. It is one of the biggest industries of the country employing 70,000 -80,000 workers and earning crores of foreign exchange. The lock industry began in Aligarh in the 19th century catering to the demand of the postal department. Aligarh postal workshop was set up in Aligarh town in 1842. It was meant to supply the postal department all over the country numerous articles like scales, locks, letterboxes, badges, belts, seals, knives,
scissors, lamps, lanterns, mail carts, mail bags, etc. The workers after knowing the techniques left the workshop and established their own firms. Many of the artisans who were highly skilled sword-makers constituted the workers for the lock industry. The artisans possessed the casting skill, they easily took to lock making when the patronage to the art of sword-making declined.

In the early years, the making of locks or components of locks were made by the artisans in his home, with the help of his family labour. Many families, who found it difficult to support themselves only by agriculture, started making locks. As demand increased, new factories and firms were established during the 1940s. The control of production of locks has been traditionally with the Muslims, but currently, the Hindus are also involved both as workers and manufacturers. At the time of partition the industry suffered a great setback. All credit facilities were abandoned, and there was great exodus of skilled Muslim workers to Pakistan which could not be replaced. 19

Aligarh is amongst the largest manufacturers and suppliers of locks and hardware goods in India and is also one of the largest manufacturers of brass fittings. It is also a manufacturer of plastic and iron toy pistols, handcuffs belts, badges for schools and government supply.

In Aligarh lock cluster different types of locks are manufactured, mainly padlocks, mortise locks, cycle locks etc. Different mechanisms are used for locks like lever type, pin cylinder type etc. However, several Aligarh based lock manufacturers supply their locks to merchant exporters in Delhi, Mumbai & Chennai as indirect exports. Some lock manufacturers supply their locks to hardware exporters who use the locks as part of their larger hardware shipments. In Aligarh there are around 5,000 units employing approximately two lakh workers. Out of this 989 units were registered with the General Manager, District Industry Center, Aligarh in 2000. 20 Even after the entry of the Chinese locks into India, they are more or less in demand in different parts of the country.
2.7 The District Industries Centre in Dindigul District:

The DIC is an institution at the District level, and it renders all services and facilities to the entrepreneurs in the district under one roof, so that, they may set up small-scale and village industries. The services and facilities include economic investigation of the potential for development, identification of suitable schemes, the preparation of a feasibility report arrangement for the supply of machinery, the provision of raw materials, quality control, research and entrepreneurial training. The main purpose of this programme has been to minimize the number of contact points that the entrepreneurs have to deal with for getting all facilities. Suitable powers have now been delegated by several departments of the state government of DIC, so that an entrepreneur may get all the assistance he needs, from a single agency. Efforts have been made to cover each district in the country, with a DIC. 21

DIC provided 3% back ended interest subsidy for technology upgradation and modernization, 50% subsidy on the cost of filling a patent application and for trade mark registration. DIC established industrial clusters and mini tool rooms under public private partnership mode. DIC is involved in creating technology development fund for evolving cleaner, energy efficient and IT enabled technologies. DIC gives the assistance for creation of centres of Excellence and technology business incubators for introduction of new production techniques and design development.

On Government's instructions Export Guidance Cells have been formed in this District Industries Centre. This cell provide information on the existing export activities, the potential for further exports and provide necessary assistance on procedural matters for export. The Export Guidance Cell under the Chairmanship of the District Collector suggests and initiates measures for the development of exports in the district. A State Level Export Promotion Cell has been formed to initiate measures for development of export in
the State. An Export Promotion Cell at the State Level under the Chairmanship of Industries Commissioner and Director of Industries has been constituted to initiate measures for development of export in the State. Special training on export orientation has been given to the officers of this department to enable them to effectively guide the entrepreneurs on matters relating to exports.22

The DIC is responsible for the following functions:

a) Issuance of permanent SSI certificate to the industries in the cluster SME’s.

b) Implementation of the Government sponsored schemes like subsidies of Khadi and Village Industries Commission (KVIC), Margin Money Assistance Scheme and Prime Minister's Rojgar Yojana Scheme (PMRY) etc.

c) It acts as a nodal agency for the Development of the Dindigul Lock Cluster.23

DIC in Dindigul gives priority for the units to survive in the lock manufacturing field. They provide loan, concession and guidance to the registered lock manufacturers. They are ready to create awareness about the marketing situation and product development. In 2009, they conducted a training programme, and created an acute consciousness about the technology development. The lock manufacturers registered their units for getting security and the numbers of units are increased when compared to 1990’s. The 471 units (in 2012) got registered under the DIC in Dindigul.

2.7.1 Dindigul locks co-operative society:

The Dindigul Lock Workers Industrial Co-operative Society established in the year 1957 is working profitably as a pioneer lock producing unit in the co-operative sector. This Industrial Co-operative Society with a strong infrastructural base with full support of the Government of Tamil Nadu has proved itself successful for the last four decades of challenge posed by lower-end Aligarh Locks and higher end Godrej Locks. The society is a composite lock manufacturing unit and is the only one of its kind in Dindigul. It
manufactures the unique Dindigul type of locks such as Pad locks, Door locks, Furniture locks, Railway locks, Temple locks, Excise locks and Special Purpose locks. Dindigul Locks are an initiative that is run on a cooperative model. It formerly had 25 employees but currently there are only ten.

The society has accounted 90% of the security needs of Government Departments, Public sector undertaking, Railways etc in Tamil Nadu worth around Rs.20 lakhs per year. It has instilled confidence among all sectors of the customers both public and private with regard to quality. The Society is marching towards modernity while keeping the artisan skill and enviable craftsmanship to produce the unique style of Dindigul locks, competitive and offering new vistas for profitable employment and fillip to the rural artisans. It is proceeding cautiously to implement the modernisation scheme at a total outlay of Rs.28.50 lakhs, sanctioned under part II scheme 98-99 in a phased manner.

Investment by Government through state participation in the share capital structure has provided much that the society is reflecting positive performance indicators and declares dividend of 14% continuously for the past 10 years.

The present output of all locks produced by the society annually is 18 lakhs and the target is to double the number and sales to about 30 lakhs in the year 2001 and 36 lakhs in the year 2002 respectively, on implementation of the modernisation scheme. Renovation of artisan skill by training and modernisation of the production process through installation of machineries are the basic needs for survival and growth strategy adopted by the society to face the challenge in the new millennium. 24

The five year balance sheet of Dindigul lock workers industrial co-operative society limited showed ups and downs in the financial situation. March 2012 balance sheet described the Net profit, as Rs.1, 18,665. The balance sheet of March 2011 described net loss as on 31-3-2011 is Rs.92, 077 but 2010 showed the profit. The analysis of financial
statement explains the Dindigul lock workers industrial co-operative society which has the paramount scope in future.

2.8. Dindigul Lock Manufacturers Association

Dindigul lock manufacturing units come under small and medium enterprises and most of them function in village. The lock manufacturers association was started for the welfare of small and tiny units in the Dindigul district. Many of the lock manufacturers sold their locks through the agents. The Government of India provides tax reduction to the Dinidgul locks. But the tax reduction is enjoyed by the agents not by the manufacturers. The manufacturers did not get any privilege. The lock manufacturers used only high quality brass and iron for their production. They did not compromise the quality of raw material. Many of the Lock manufacturers have the low level of work capital. So they could not store the needed spare parts which are of low price, purchasing in bulk. For the above purpose, Dindigul lock manufacturers formed the association to negotiate with the agents, raw material suppliers and spare part producers. In 1990, the Dindigul lock manufacturers formed an association in Nallampatti. But they had some misunderstandings and conflicts. So, it came to an abrupt end.

In 2009, Dindigul lock manufacturers formed another association with 978 members. Most of them are uneducated. So they need to negotiate with the suppliers and producers. Members are in Nagalnagar, Mattupatti, Adiyanothu, Reddiyappatti, Renganapuram, Veerasavurioir, Bharathipuram, Balamararthupatti, Vadkku savariour, Vadapatti, Baluchami Iyer chanthu, Thomaiyarpuram and so on. In Nagalnagar most of the lock manufacturers are involved in the association. In October 2009, the Dindigul lock manufacturer association is formed and run successfully.

2.9. Prospects of Lock manufacturing units
The Government of India takes steps to reconstruct the lock manufacturing industries. Incentives, subsidies are given to the industry. In order to overcome the problems of lock manufacturing industries in Dindigul, government provided some new development strategies such as cluster development approach, national development programme and conducting workshop. In addition, new industries are promoted by offering prospective entrepreneurs project through DIC.

For developing the Indian lock Industry, a national level programme is to be organized. UNIDO, SIDBI, National Small Industries Corporation, All India lock manufactures Association in Aligarh, Dindigul lock workers Industrial co-operative society in Dindigul are the key players of the programme. Financial Budget for this is Rs. 52, 00,000. A National level programme is organized for developing the Indian lock manufacturing Industry. The main objectives of this programme are as follows,

1. Technological up gradation of Indian Lock Industry.

2. Up gradation of NSIC Technical Services Extension Centre, Aligarh to the level of the advanced tool Room & Training & Testing Centre, wherein the current processes and technology used by the Lock industry will be upgraded to that of international levels.

3. (a) Setting up of SPM at the Aligarh center as per Indian requirements for development of Pin Cylinder Mechanism.
   
   (b) Creation of common facility Center for the Lock artisan at Dindigul, Tamil Nadu.

4. Establishing a marketing network by participating in International and National Fairs and conducting vendor development programmes. Sourcing of lock components by leading Lock manufactures.
The cluster development of lock manufacturing industry would encourage the development of the lock manufacturing industry. The DIC conducted the workshop for modernization of lock industry. They provided training to technology, design, and skill development for improving the quality and quantity of production. They motivated the young entrepreneurs to set up modern lock units. They encouraged the lock manufacturers that they should produce locks on par with international standards to face competition from China. The workshop helped to revive the lock industry. These policies may provide a better scope for the lock manufacturing industries.

2.10. Conclusion

Lock manufacturing industry is one of the most important, ancient, national traditional industries of India. The importance of lock manufacturing industries can be summarized as follows,

1. Lock industries employ labour intensive techniques and employ relatively unskilled people.

2. They maximize utilization of local raw materials as well as local workers.

3. They are often a vehicle for developing entrepreneurship and skills and

4. They provide the basic requirements of the rural population.

Village and traditional industries are to be developed by old development approaches for relying on subsidies and cash incentives. They should be supplemented or even replaced. Such measures should cover productivity, improvement of quality, better organization and innovation. However, lock manufacturing industry is still facing the problems of production, finance, human resource and marketing. Public outlets are losing their capabilities of providing opportunities due to globalization policies. A proper approach is needed to find out the root cause of the problem and solve it to improve the industry as a flourishing one.
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