



Prospects and challenges: A case of Aligarh lock industry

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ABSTRACT

Aligarh is an important business center of Uttar Pradesh and it is well known as the city of locks in India. The present paper is an attempt to find out the problem and prospects of lock industry in Aligarh city. The current paper talks about the prospects and challenges of Aligarh lock industry. The Tala Nagri of Uttar Pradesh, as Aligarh is popularly called, is struggling hard due to the combination of different factors like Chinese competition, low demand and change in government policies like demonetization, GST and Lockdown because of Covid 19.

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I. INTRODUCTION

Aligarh is an important business center of Uttar Pradesh and it is well known as the city of locks in India. Due to the easy availability of the raw materials and power supply, Aligarh has emerged as a good business centre. Aligarh locks are exported across the world. In 1890, local entrepreneurs initiated production of locks on a small scale here. Today, the city holds thousands of manufacturers, exporters and suppliers involved in the brass, bronze, iron and aluminum industries. The different processes of lock-making are carried out in different units. Aligarh has several popular landmarks. Few of them are Aligarh fort, Khereshwar Temple, Teerthdham Mangalayatan Mandir etc.

Locks of Aligarh are sold across India, as it has been a hub since the time of the Mughals. It had been decades and still Aligarh's lock making industry continues to make waves across Indian and global markets. The history of lock industry in India has its roots in Aligarh. When it began, there were handmade locks, there was no industry as such, but due to intricacies and the creativity that the manufacturers presented, this industry has developed over the years. There is no clarity how lock-making began in Aligarh. According to some, the city has been making locks since the Mughal period. But when the British came they streamlined it into a major economic activity. In 1870, a man from England established a firm, Johnson and Company, to import locks from England for sale in Aligarh. At the turn of the 20th century, Aligarh was already producing 500,000 locks per annum, valued at Rs2,76,000 (HR Nevill, District Gazetteers Of The United Prince of Agra And Oudh Aligarh, 1926). Buoyed by its success, the British government set up a metal workshop here in 1926 to train artisans in lock-making. In the coming few decades, every family in the district and lakhs in neighbouring ones had at least one member associated with the family.

The famous lock industry in Aligarh, which comprises over 6,400 registered and over 3,000 home units, employs nearly two lakh workers. According to industry members, nearly 80 per cent of the total production of locks takes place in Aligarh and its locks are also exported to Bangladesh and Sri Lanka.

In the old city of Aligarh in Uttar Pradesh, locks are not just key to safety, they open the door to a craft tradition. These brass locks are handmade with triple locking mechanism. History has references to locks made in Aligarh. There are puzzle locks, locks with different keys, handcuff (hathkadi) locks, intricately designed ones, or those with false holes. The base material of these handmade locks is brass (60 per cent copper and 40 per cent zinc). Moulds are in brass. This is used for shaping in the sandcasting process. The object is filed, buffing machines are used for polishing and the product is ready. It comes with a range of polish from antique, copper finish to normal brass. The production is more of an assembly line method where each craftsman works

on one process. He can easily make 30 to 40 locks in a day. The keys are also handmade, as are the sandcasted levers in the locks. These are durable and sturdy.

There are several branded and locally famous locks available in Aligarh, where manufacture and export of locks is a major commercial and industrial activity. The lock industry in Aligarh is traditional Indian industries initiated by craftsmen under royal sponsorship. One must look into the history of these industries to get a critical view on their present situation, especially the effects of major changes in industry structure. The locks manufactured in Aligarh are immensely popular all over the country. Padlocks, door locks, multi slot, bicycle locks, multipurpose locks, etc. are produced in the district.

Today, Aligarh's lock industry consists of small-scale and cottage industries as well as large companies. According to the All India Lock Manufacturers Association, the annual turnover of the Aligarh lock industry decreased from Indian Rs 450 crores (US\$100 million at a conversion rate of \$1 to 45 Indian rupees) in 2003 to Rs 350 crores (US\$77.8 million) in 2007 (Modi, 2007). At the same time the number of small-scale lock manufacturers increased from about 1,000 in 2003 to 1,200 in 2007, according to the Aligarh District Industries Centre. The actual number of firms, formal and informal, is estimated to be double the registered number or even up to 5,000 (Jamwal, 2003). Some assume that almost every home in the old city of Aligarh produces locks or components of locks (Burra, 1987).

At one time, the lock industry here flourished and locks were exported on a major scale. Today, it is reduced to a decorative piece bought by connoisseurs or antique shops. The tradition of handmade locks is a dying art. It only has an ornamental value. Lack of demand is pushing the exquisite handlocks of Aligarh into oblivion.

II. FACTORS RESPONSIBLE FOR DEVELOPMENT OF LOCK INDUSTRY IN ALIGARH

Aligarh is famous as an industrial city. Housing authorities recognize it as the leading center of lock manufacturing and trade, and is well known across the country and abroad. It made sound business sense to establish factories in this city. Wide variety of locks for different purpose is made and products are used in several industries. Some of these are furniture manufacturers (steel and wooden), banks and other establishments with lockers, builders of residential and commercial complexes. Factors responsible for development of this industry are:

2.1 Factor endowments and Skilled Labor

One of the major factors for established lock industry in Aligarh is the availability of factor endowments. Aligarh lock manufacturers make steel furniture locks and other types of specialty locks for both the domestic and the international markets. The easy availability of raw material and skilled labour are both significant factors in this industry. Some large lock manufactures receive significant amount of good quality supplies, which is a crucial factor in maintenance of schedules and meeting commitments. The large enterprise have the capacity and the know-how to provide their clients with customized locks. Sound manufacturing infrastructure and engineering expertise enables them to produce locks in bulk. Trained and experienced quality control experts monitor each stage of production of lock industry. The dedication and skill, which is reinforced by the strict supervision of quality control experts ensure that every lock and accessory that leaves the factory conforms to international standards. All products are designed and developed keeping in mind the latest trends and requirements. At every stage of production process, high quality raw materials are used without compromise in the creation of these locks.

2.2 Quality

In Aligarh some big lock manufactures use pure and high quality raw materials such as stainless steel, iron, brass and nickel to manufacture locks. More emphasis is also paid on the designing of locks making them user friendly to provide the high level of security. All products conform to international standards and ensure complete safety. Most are ISO 9001 certified company.

2.3. Infrastructure

Some of the big factories in Aligarh is equipped with basic and advanced machinery needed to conduct lock manufacturing processes. The power supply is regular and satisfactory. Furthermore, these companies typically numerous experts to design and develop strong, safe locks. Considerable investments are regularly made into research and development in order to augment product portfolio with new and value added products. All these facilities are housed in strong, airy, well-ventilated buildings on a large plot of land. Adequate storage facilities for raw material and finished products are typically available.

2. Why Aligarh locks excel?

2.1. Economies of scale

Some of big lock players of Aligarh lock industry benefit from economies of scale. Economies of scale is achieved by following cost effective techniques of production and optimal utilization of resources. Greater care is taken to follow environment friendly manufacturing processes. Scrap is also recycled in some big industries. When industries get big export orders, they are highly committed for fulfillment of order and understands the value of time. Manufacturing procedures and processes have been geared to deliver the finished goods at given time. Production in bulk and optimal utilization of resources enable some industries to sell their lock products at premium prices.

2.2. Learning by doing

Another important factor why some lock industries excel is because of a concept known as leaning by doing. Learning curve is defined as curve relating unit costs to accumulated volume, which affect future costs and market position. The traditional method of estimating the learning curve is to estimate the relationship between input use and cumulative output, whereby input units decline with accumulated output. Spence (1981) models the implications of learning curve on the entry, market shares and profitability of firms. Analogous to economies of scale where the average costs fall slowly relative to output, creating entry barriers; in a similar way, it is in the case of intermediate learning curves where the entry barriers are the greatest. Industries with very slow or very fast learning have low entry barriers with more competition. From the regulation perspective, enforcing competition in industries with moderate learning might reduce technical efficiency. United Nations Industrial Development Organization (UNIDO) along with the ministry of small scale industries, Government of India, had agreed to implement the National Programme for the Development of the Indian Lock Industry in 2001, with a budget of Rs 5.52 crore spread over two years. The programme had adopted a two pronged approach of technological upgradation and market development for the development of the lock industry.

III. CHALLENGES OF LOCK INDUSTRY IN ALIGARH

The TalaNagri of Uttar Pradesh, as Aligarh is popularly called, is struggling due to the combination of different factors outdated technology, low demand because of change in style and design, change in government policies like demonetization, GST and now because of the lockdown because of Covid 19. Most important is invasion from China. Following are challenges of Aligarh lock industry is about to hit the backbone of the lock manufacturing industry

3.1 Poor working conditions

The lock industry in Aligarh city mainly comes under small scale and cottage sectors. A large part of it comprises household units and workshops. They are largely unorganized and unregistered. There are some relatively big and semi unorganized units too but their number is very small. The location pattern of this industry is such that while the big units are located in the industrial Estate and on the outskirts of the city the smaller units are scattered all over the city. In these units, the various processes of lock making are carried out mostly by manual method. They also employ bulk of the child labour force. In this industry majority of child labourers comes from the poorer sections of society especially Muslim community. Higher levels of poverty among socially excluded groups translate, as might be expected, into poorer levels of human development in terms of both health and education.

Most of the production units in the lock cluster are foundries in residential houses. These houses consist of two rooms: a front room, which is the foundry where family members and daily wage workers cast the molds for locks and brass products, and a second room which is the bedroom with kitchen. These units are mostly family run; fathers, sons and daughters work here together (Jamwal, 2003).

3.2 Technological backwardness

Other reasons for Aligarh's declining competitiveness are its technological backwardness, lengthy power cuts and the irregular supply of water. Also the high fluctuation in prices for raw materials such as brass, zinc and iron puts pressure on the industry and especially makes it difficult for small-scale firms to survive.

Mostly Aligarh workers who are skilled in this craft. Since the automatic lock and key system are preferred today, the handmade locks have no demand. The shift from handmade to machine-made locks is linked to a growing market, where the price realization is faster and the industry, more organized. Handmade locks are expensive and the volume of production cannot match up to the machines. Earlier, the handmade locks had a market share of 50 to 60 per cent, but today it is down to just 5 per cent.

3.3 Changes in government policies: combination of Demonetization and GST, lockdown due to Covid 19

Aligarh lock industry is suffering due to the combination of demonetization and GST, lockdown due to Covid 19. The centuries-old lock industry stares at an uncertain future; thousands of jobless lock makers have been struggling to find alternative remunerative livelihood source. The fabled lock industry today stares at an uncertain future. While many units have shut down, others are struggling for survival. Those units which got

closed down during demonetisation, have not revived so far. With 80% production hit since demonetisation, Aligarh's centuries-old lock industry, which comprises 5,000 organised and as many unorganised units and employs over 2 lakh workers is staring at what looks like a temporary shutdown.

Owners have no money to pay wages of workers or buy raw materials as stock of manufactured goods is piling up in their storehouses. According to government officials, the over Rs 4,000 crore industry which paid Rs 216 crore in taxes to the government until last year is going through rough patch. Most lock-making units have been forced to retrench their workforce as employers were not able to pay them. "Most of them who come from villages in adjoining districts have gone back home.

The bigger factories that can afford to hire sizeable chunk of laborers are, although struggling, but still in the business. They carry out every step of the manufacturing of the lock under one roof, like cutting, polishing, brightening and so on and so forth.

Most of small factories shut their lock factory a few months after demonetization. Most of the transactions happened in cash. Banks are in no position to provide cash for keeping this industry on its feet and the transition of a cash driven economy into a plastic money economy cannot be done in such a short time. Aligarh's **lock industry** is still facing shortage of demand even after one year of demonatisation. The manufacturers claim they faced heavy unemployment post the ban on old currency notes.

The **lock** manufacturers also said that GST brought another wave of shock in the already trembling **industry**. The rest folded after GST since many of them were unregistered. Earlier, we had to pay sales tax of 2 percent, 5 percent VAT and 2 percent of the tax on the raw material. With GST, it has increased to a total of 18 percent. We do get the tax rebate, but micro industries cannot afford to wait for it. They sell their product to mediators. They do not have the infrastructure or network of distributors."

3.4 Competition from China

The lock makers in Aligarh say they have found it hard to remain in the competition once China entered the market. The finishing of china product is better, the quality is good, and they sell at half the price. China has better facilities than Aligarh lock industry as they are encouraged by their government as well. Technology, on the other hand, is outdated in Aligarh. And let alone encouragement from the government, our policies further drive us into trouble. Earning more than Rs 210 crore each year from export of locks and other brass hardware, the lock industry forms the economic foundation of this city through the operation of over 6,000 cottage and mid-scale lock units. But lately, with the entry of cheap locks manufactured in east Asian countries like China, Taiwan and Korea and more than a two-fold increase in metal prices, the industry has been facing a slump. When the Chinese locks started flooding the market decades ago, traditional lock manufacturers in Aligarh were hit hard. Unable to face competition, smaller lock manufactures were forced to shut shop, while locksmiths with bigger scale of operation started using latest technology to come out of the crisis.

Today Aligarh's lock industry is struggling with diminishing returns. The export volume has declined to a minimum due to strong foreign competitors such as China, which offers locks that are up to 40 per cent cheaper than Indian locks. China can produce such cheap locks because the Chinese government offers high incentives and export subsidies to the Chinese lock industry (Modi, 2007).

IV. CONCLUSION

One way to bring about a boom in the industry, is to design locks highlighting its security value. This will also save it from closure. When there is development and profit in the industry, there are still some points that need to be paid heed to, especially when it comes to the aid of the government's end. For the last few years there has been a crisis in the hardware industry and this is due to the illegal copying of designs and selling things without bills. The right and smooth implementation of the schemes and policies of the government alone can bring about lot of reform in the industry. though time-taking, this is the best solution for the industry to prosper.

The lock manufacturers of Aligarh have also been demanding development of a Special Economic Zone (SEZ) for them in the town but despite the project being theoretically approved by the Union Commerce Ministry, it has hardly made any headway. The ministry has blamed the Uttar Pradesh government for delaying land marking and acquisition process.

The famous lock industry of Aligarh, encompassing nearly one and half century of long history, is struggling hard to compete with international players in the era of today's globalization. As a result, its exports are almost nil. The small industrialists associated with lock industry in Aligarh are finding it hard to make a living. The industry, which has always provided secure guarantee, now finds itself on the edifice of insecurity. Small scale sector of India contributes 33% of India's export, but Aligarh lock industry cuts a sorry figure in exporting their products range. Even in local market also, 6 to 7% of locks are coming from China, which is a serious concern for Aligarh Lock Industries (Jain 2003).

In 2001 the UN Industrial Development Organization (UNIDO) and the Indian Ministry of Micro, Small and Medium Enterprises agreed to implement a national program for development of the Indian lock

industry. Its objectives were technological upgrading to international levels, establishing distribution channels and market intelligence for product design, including introduction of electronics and information technology in design, training the workforce and mechanization of processes (see <http://dcmsme.gov.in/emerge/npdli.htm>). Another objective was development of a marketing network by participating in international and national fairs and conducting vendor development programs. However, the program has not yet been implemented.

Lock industry needs support from the government for survival .

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