CHAPTER-2

KARKHANAS, THE ARTISAN AND THE TECHNIQUES OF PRODUCTION: CONTINUATION AND CHANGE
INTRODUCTION

For understanding the handicrafts technique and its manufactures during 18th century Northern India we must understand the prevailing factory system in European context also. We get to know from historical accounts and Delhi Sultanat period, there existed a large establishment is capital town, know as Karkhanas which cater household needs of the royalty as well as it was equally useful for providing the goods for war purposes public use. The glaring example of Karkhanas we find during the time of Firoz Shah Tughlaq in which according to one estimate twenty thousand slaves were working for the establishment and were involved in production and variety of articles for royal consumption and for public use, the same kind of establishment continued during the whole of Mughal period, though, with the certain improvements in the existing technology from time to time. Till the coming of 18th century we don’t find drastic changes in the technology but we find that the volume of production greatly increased and some were meant for export also.

Prior to industrial revolution to England European factory system find similarity with the Indian Karkhanas system in the greater sense of organization working condition as well as the tool and technique of artisan same are concerned. The European factory system master craftsmen in the factory help by some Journeymen and further assisted by some apprentice in which young boys employed for learning a particular trade till their maturity and perfection in that particular art.
The Karkhanas also functioned in under the supervision of the guilds which specialized with particular trade and similar was the case in the factory system. There we can draw some parallel with the Karkhanas of Mughal India and the factory system pre-industrial Europe in general and English factory system in particular.

The Karkhanas generally required catering to the rulers demand for its household need and army in the form of articles of luxury goods and warring auxiliaries, it emerged as an industry. (A special form of industry emerged under the Safavids of Persia in the 17th and seventeenth centuries which goes by the name of bouyutat or royal workshop and industries) although in rudimentary form it was in existence under the later Ghazanavids in the twelfth century. In the time of Bahram Shah (1118-52) there were also royal workshop Karkhana supervised by ‘Mihtar’ and a ‘Mushrif’ where the rich embroidery of ‘tiraz’ was sewn to the robes it is very probable that royal workshops existed under earlier sultan1. It was linked with the captive and enslaved worker’s who were captured in thousands in war waged by the Ilkhanas (thirteenth and fourteenth century) and the Safavid rulers, (16th-17th centuries) with such a vast labour force behind Persia witnessed considerable expansion of these Kharkhanas from the 14th century onwards. They were found in several cities in Persia which specialized in various types of industries such as tanning, pickling, preserving, soap manufacture, paper making and dyeing. The mints were also listed among these state Karkhanas. The income from mint flowed constantly into the royal treasury. The royal treasury too must be listed here. In fact all the departments which employed manual labour for the provision of the court households were Court workshops in the true sense. Thus the court controlled its own booms, its own tailoring, shoes making, leather industry. Besides many other departments there was a goldsmith’s
workshop and coppersmith which supplied the court with all kinds of tools and utensil. Lastly, there were the harness makers, workshop, the armoury, the ordinance foundry and the library in which manual scripts were not only collected but specially produced by staff of artists. The stable and many other offices were also part of the buyutat. In support of his charge that the policies of Shah Abbas (a Safavid ruler) were devoid of any entrepreneurial spirit Amin Banani cites the case of the royal workshops (Buyutat-i-Khasa-yi-Shirfa) of which there were 32 at the time of Jean Chardin and 33 at the time of compilation of Tuzkirat-i-Muluk, about 1726, it is true that many of the royal workshops such as the kitchen scullery, stables, kennels, etc. were simply what minor sky called ‘domestic departments’ some however were run like real state owned manufactures and in general these workshops gave employment to some 5000 artisan and craftsmen and contributed to over all prosperity of the economy.

The Delhi Sultanat period Sultan maintained very big household staff. Besides his harem, the slaves and other attendants and his courtiers, the sultan employed most of people to look after the protection his person his recreation and his domestic attendants is general. To cater to the needs of these vast household the Sultan maintained various ‘Karkhanas’ or Royal stores. These Karkhanas had multiple functions in the political and social life of the rulers of Medieval India. The Karkhanas looked after the provisioning of the royal stables and supervision of the royal buildings for which they maintained a whole army of masons and architects. Finally, they undertook to supply the menial attendance and the domestic service for the palaces and other royal buildings. The listing however, is by no means complete. The Karkhanas were under the charge of distinguished noble who was assisted by other subordinate superintendents (mustasrrifs) who were
themselves nobles of rank and were appointed directly by the Sultan, all of them were paid very high salaries, and the charge of a store was considered quite as remunerative as the governorship of a big town like Multan.

Although the literal meaning of *Karkhanas* is the place where a ‘workshop’ is generally located for public use, it had a very different connotation in medieval India. The medieval chroniclers used it to under workshops of manufacturers, the stores the royal household. The royal court and the animal stable etc. as most of the articles of luxury needed by rulers to maintain the splendor and pageantry of the royal court and household could not be manufactured in the ordinary market, the sultans were forced to states factories producing luxury articles for them. It become a major policy decision with the state of the Sultanate. It is generally believed that the system of Royal *Karkhanas* was probably borrowed from Persia though its much earlier existence in India could not be ruled out. A clear and detailed description of the royal Karkhanas of the sultans of Delhi before Firoz Shah Tugluq is not available in the contemporary Persian account, but there is no doubt that such existed prior to Firoz Shah’s region and were casually referred to by Barni.

Barni refers to these Karkhanas in his account of sultan Balban’s regime. In Delhi the Sultans had their own *Karkhanajats* in which thousands of weavers engaged for the manufacture of silk cloth and others textiles for the royal robe. In these *Karkhanajats* artistic work in gold and silver was also done. The private industries not within the purviews of the *Karkhanas* specialized in the manufacture of textiles, Calicoes Printing, Liquors, arms, brasswork, paper, clay work, bricks, enamel work, embroidery, leatherwork, and shoe making, etc. The accounts of the contemporary chroniclers as well as foreign travelers
show that private industries of considerable importance and magnitude were developed during this period. The biggest of them was the manufacture of textiles of all kinds, such as cotton cloth, woolen cloth and silks. The manufacture of textiles of all kinds such as cotton clothes attained classical perfection and became proverbial all over the world. Other important industries were wood work, stone work, metal work, leather work, embroidery, indigo and paper work. The factories were known as Karkhanas or workshops. The Karkhanas of the Sultans of Delhi or a later date of the rulers in various regional muslin kingdoms were best equipped and most efficiently organized. The Karkhanas similarly manufactured vast stores of the Muslims and goods for gifts and presents to other rulers in return for similar gift for them. Enumerating the presents sent by Muhammad Tughlaq to emperor of China, Ibn Batuta mention among other thing, 100 pieces of bairami cloth made of cotton in which beauty had no equal, 100 pieces of silk cloth called the silk of each of them being different from four to five colours.

Under the Delhi Sultanate Firoz Shah alone had devoted his energies toward the state Karkhanas and he had a large establishment and separate department for them, but it is not clear from the account given Afif whether department only stored article or manufacture them as well. All references suggest that it only kept stores and its importance consisted in large stock, and regular supplies of fresh and update article of all kinds. The department of the royal Karkhanas does not represent anything new in the government of Firoz Shah Tughlaq.

The only remarkable feature noticeable in his region was its vast expansion of palace workshops. Afif writes that the Sultan attached great importance to his Karkhanas and treated them on a par with ‘Iqtas’ he used to say that the ownership of a Karkhanas is no less important
than the governorship (Muqti) of a region like Multan. The Sultan maintained 36 Karkhanas and tried his utmost to collect raw materials for them. Brocades and other goods required for the Karkhanas were purchased at the market price on cash basis. A complete list of these Karkhanas is not given at one place by Afif but the following are mentioned various parts of his text.

Afif classifies the royal Karkhanas into two categories namely Ratibi and Ghair Ratibi. Ratibi were those which land fixed annual grants, such as Peel khana, Paigah, Matbak, Sharab Khana, Sag Khana, Abdar Khana, itardarkhana. One lakh sixty thousand tankas per month was the fixed grants for such karkhanas as Peel Khana, Paigah, Matbakh, Sharab Khan, Sag khana, Abdar Khana and Itardarkhana.

One lakh sixty thousand tankas per month were the fixed grant of these Ratibi Karkhanas besides the plant furniture and the wages of their accountants and other officer which also amounted to one lakh and sixty thousand tankas. Among these Ratibi Karkhanas, Paigah was the most important, it was scattered in division and stationed at different places. The first and the biggest was at Saharwan Sultanpur, the second at Kibla, the third near the Court called Paigah Mahal Khas (palace stable), the forth shaker khana-i-khas and the fifth and last was that of selected slaves. The Karkhanas Nafar (Camel Stable) had numerous camels. Most of these were sent to shiqs of Doblahan, where the whole village were appropriated to them and their keepers. The number of camels increased every year because the muqti of various iqtas presented camels along with other presents, Ghair Ratibi Karkhanas were there which did not have a fixed grant, such as Jamdar Khana, Alam Khana, Farrash Khana, Rikab Khana, Zard Khana, Silah Khana and Tashtadar Khana (hamams and baths). Firoz Shah had thirty six Karkhanas divided into Ratibi which provided daily food for men and
animals and Ghairatibi which dealt with commodities produced by human labour. The expenditure upon these *Karkhanas* varied from year to year in accordance with the quality of new goods ordered to be made each year.

In the winter season six lakh were spent on *Jamdar Khana* in addition to the expenditure incurred in summer and spring. Eighty thousand tankas were spent on *Alam Khana* on the purchase articles besides the salaries of accountants and wages of artisan about 2 lakh tankas were spent in *Farrash Khana* and so on.¹⁵

The absence of any reference to *Karkhanas* during the reign of Sultan Firoz successors in the contemporary sources is rather surprising. This may be due to the almost non-existence of Sultanate as an effective instrument of political expansion. As these *Karkhanas* involved huge financial resources of the government which by accounts had become extinct, there was thus no need to maintain it. *Karkhanas* were no longer a necessary limb of the state both politically and economically.

In Mughal India Moreland has long ago pointed out there were two forms of industrial organizations during Mughal India. The artisan system in which the independent artisan supplied his own capital however small, his own material and his own labour in manufacture and the *Karkhana* system in which the artisan worked to order in state controlled *Karkhanas* (the word *Karkhanas* was used in a very wide sense in contemporary sources, both Persian and Maratha such as animal stables, stores of articles of food and drink besides true manufactories or workshop where raw materials were converted into consumable article) or workshop. While the former prevailed generally in the majority of town and the *Karkhanas* were established. e.g. Delhi, Agra about which description have been left by Afif in the Sultanate period and Abul Fazl and Bernier during the day of the Mughals.¹⁶ Moreland actually
summarized the existence of private workshop similar to imperial Karkhanas\textsuperscript{17}. If the artisan system represented in a way independent single artisan labour, followed by decentralized by compulsory labour, centralized control over numerous wage earning artisans of various crafts and controlled cooperation. The Karkhana system differed from the artisan system in several ways. It not only worked at different stages of production but also constituted an important and novel development and it exercise a significant influence on economic life in the first place, the Karkhanas were example of collective and large scale employment of artisan or craftsman in different industries in a big manufacturing organization. The biggest was the imperial Karkhanas. As regards to empirical karkhana the emperor issued instruction to governors, officers and Jagirdar (landlords) in the provinces to induce the best master artisans and workers in various arts and crafts from all over India for the Karkhanas.\textsuperscript{18} Even foreign workers were invited by Jahangir from Turkey, Persia, China and European countries to these,\textsuperscript{19} secondly there was a certain amount of forced calling of labourers. After recruitment, it was like conscript labour. The workers had to work under the direction of a malik (supervisor) on a wage basis.\textsuperscript{20} Thirdly, the raw materials for the workshop were not obtained through open purchases in the market by the artisans but these were supplied to them by means of monopoly purchase by the state. Fourthly though the workmanship belonged to the artisans, the initiative for design rested not with them but with the state officials guiding them according the imperial desires, under Akbar, who took special interest in these Karkhanas there were possibilities of improved design and workmanship.

Like the Safavids of Persia, the term buoyutat (it is a double plural of Arabic word bait a house) was also generally used by the Mughals for Karkhanas. The association of the buoyutat with the
household in the mind of Mughal administrators is thus quite obvious. The more indigenous and popular Karkhanas however persisted.

The Karkhanas played an important role not only in the sphere of the imperial household but also in military and fiscal set up of the empire. Besides they had considerable impact upon the industrial progress of the territories for this region the entire organization was diwan.\textsuperscript{21} Thus the Karkhanas or buytut as the department was called included factories and store maintained by the central government for purposes of the state. The Mughal emperors took special interest in the Karkhanas and saw to it that state maintained Karkhanas were set up not only in the capital but also in the provincial headquarters as well as in other important industrial towns. They wanted that the Karkhanas should not only produce article of choice and quality. The word Karkhana however, has been used in the sources in a very wide sense and includes animals in the state stables, article of food and drink stored for the royal use, finished goods kept in government stores and workshops where raw material was used and worked upon to produce finished commodities by employed labour either on daily wage basis or on monthly salary.

Further, in order to get clear idea of the economic activities of the state, it is necessary to distinguish between the two classes of things which our Persian authorities designated by the name of Karkhanas and include in the same list viz (a) stores of animals, articles of food and drink and things in finished or usable condition, acquired by the government and kept the place which required no further working up and (b) factories proper where raw materials were worked up by salaried servants of the state into fully manufactured good fit for use.\textsuperscript{22} In Mughal India the state was the largest manufacturer or rather the only manufacturer on large scale in respect of several commodities. The
modern practice of government being readymade goods in the market of giving orders for large quantities to contractor would not have answered in those days of cottage industries when production on large scale by private businessmen with a view to sale was unknown. The state was therefore forced to manufactures the commodities the needed. Its need was very large, twice every year in the rainy season and the winter a robe (*khilat*) suitable for the season was presented by the emperor to every 7500 and who were paid in cash, besides there were 7000 mansabdars who held *Jagir*. It is thus seen that the imperial government had to keep a vast stock of cloth and ready made robes for the need during the year. Their supply was assured by the state maintaining many *Karkhanas* of its own in the principal cities of the empire, where skilled workmen were brought together, sometimes from distant provinces, and placed under the *darogha* (government superintendent) paid daily wages, and made to produce the handicrafts which were duly stocked in the stores. The Mughal government was forced to supply its own wants by becoming a producer of nearly everything the required for in the sixteenth and seventeenth centuries.

The modern private organization of production and transport were found wanting and the government itself took a some what patronizing attitude in dealing with the servants and subjects. In these workshops there were produced arms and ammunitions. Carriages and portable litters for the emperor, carpet, mattresses, harness for the houses in the imperial stable, beds, tents, clothes, jewellery, gold and silver wares, perfumes, medicines, shawls, turbans and other metals. The articles were supplied to the various government departments as per market rates. The profits were shown as the income from *Karkhana*.

The main function of the *Karkhanas* was to keep the palace and some branches of government supplied with the commodities which
they needed. These varied from the food served on the monarch's stable to the pieces of artillery required by the imperial forces. The emperor gave away thousand of robes of honour to officers and others, and then it was considered economical to get the cloth manufactured and the robes tailored directly in the imperial workshops. Precious stones were cut, pearls pierced, ornaments made in the Karkhanas not only for the use of the monarch but also for presents. Horses, elephants, camels and mules were bred and trained for various duties. Animals and birds were tamed and taught to help the monarch in the hunt. In short all the needs of the monarch and court were met through these institutions. About the numbers of Karkhana also the sources vary. In popular parlance there were 12 treasuries and 36 Karkhanas. The Marathi histories namely the Sabhasad Bakhar (written in 1694) and the Chitni's Bakhar of Shivaji (written in 1810), mention only Karkhanas though these two works do not agree with each other as to their names. The Zawabit-i-Alamgiri gives a list of 69 Karkhanas. The Ain separately describes 26 of the Karkhanas and indirectly or briefly refers to 10 other making of total of 36. Further in the contemporary literature 36 buyutat or the Karkhanas are mentioned. Abul Fazl mention following in the Ain; "The treasuries, the mint the Farrash Khana, illumination and lights, the gurkhana, (the workshop for making the royal seals), the abdar khana, the kitchen the fritery, the perfuming, the wardrobe and the bedding and mattresses. The pilkhana, the stable for horses, the camel stables, the mule stables, buildings, the library the arsenal, the workshop for the manufacture of shawls and textiles".

Under the Mughals the number of various factories, workshops and stables grew in view of new needs. Some of the older ones had to be split in independent organizations. It was not considered necessary to confine the number to the traditional thirty six or to make out lists of strictly logical nature. Every need which was felt had to be fulfilled and a store or a workshop was added to the existing establishment. The staff
of every Karkhana varied in accordance with the needs: for instance the matbak or kitchen would have chefs and cook where as the library would employ calligraphtists and painters.27

Classified list of Karkhana: The Mughal Karkhanas as enumerated in the Zawabit can be classified into following five groups:

A. Animals: Horse stables (Paga or astabal khana) elephant stables (peel-khana) cow pens (gao-khana) camel stables (Shutr-khana) Mule stables ashtar khana) deer park (Ahu khana) menageries of tame hunting animals (Shikar khana) hunting Leopards (Chita khana), aviary for falcons (qush khana)

B. Stores: They were more collection of things manufactured elsewhere. Royal insignia (qur khana), arsenal (silah khana) Palki khana, chandal khana or sedan chairs rath khana or carriages, portable throve or litter (takhi-i-rawan) candlesticks and lamps (shama and chirag) torches (Mashal) library (kitab khana).

C. Factories and Stores: Carpets (Farash khana) wardrobe or mattresses, harness, saddles and bridles (zin khana) bedding and advance tents for the emperor’s journey (bistar khana and peshkhana)

D. Offices or Departments of Administration and Court Life:
Band room (Naqqar khana), artillery (Top khana) including all classes of fire arms and ammunitions. The Marathas had separate store for gun powder, called Daru khana, building department (Imarat khana) records (Daftar khana) Emperor’ Chapel (Jana maj khana or tasbih khana) store room for heirless property (Kotha-i-baitul m’al) purchase department (Ibtia khana). The Maratha had a Saundagarikosh to designate this free food kitchen (bulgur khana or usually langer khana) school (talim khana). Which during Firoz Tughlaq’s time called ilm khana. A Marathi
historian Ram Chandra pant translates *talim khana* as the wrestling school.

Department of hire and wages (*Kiraya wa ajura*) games (Chaugan, Chaubar) in the 17th and 18th centuries there was a department called *bewa khana* (widows dominatory) for the maintenance of widows of the emperors, who lived in Sohagpura suburb of Delhi during Auranzeb's period.28

E. The Emperor's Personal Service

Kitchen (*matbakh or bawarchi khana*) drink or butlery (*abdar khana*) some Persian works read *sharbat khana*, some *sharabi khana* but the latter term here mans wine seller. The Marathi histories name *sharbat khana* and also *Sharabi khana*, fruits (*mewa khana*) *bhandar khana* (large earthen pots) *Sahat khana* (conservancy or latrine) store of *Kauris* (small shells) to serve as the lowest small change, *Khar muhra khana*, *Charkhi khana*, store of fire wheels, *majuma khana* (miscellaneous). The five (*maga khan*, *bhandar khana*, *sahat khana*, *karmuhra khana* and *Charkhi khana*) are given in the zawabit which contains, in addition, nine illegible names of *Karkhanas*. The Marathi histories add the following three:

*Ambar khana* or granary, *Zaryat or Jins khana* (this *jins khana* would correspondent to the *ajnas* (grains) department in the Mughal empire, that is the store of things from which the mansabdars were supplied as part payment in kind) theatre or *natak khana*, besides the *sahat khana* and *sharbat khana* already noticed under other heads.29

In the middle of the seventeenth century the French doctor Bernier saw these factories at work during his visit to the Mughal capital. Bernier has left an eye witness elaborating account of these *Karkhanas* which he saw them growing considerably during his stay in
India. There is also available the list of Karkhanas in the official manuals called dastur-ul-amals and certain other historical works composed at the end of the seventeenth century and later, state factories were also maintained in provinces at Burhanpur, Aurangabad and Kashmir. The state Karkhanajats manufactured goods to meet the royal demands. The Mughal emperors monopolized the best skilled workers for manufacture.

The Muslims chronicles do not write much about industries and trade but lot of information is found in the pages of Ain-i-Akbari and the writings of European travelers though they cannot always be relied upon. Moreland made a special study of the economic condition which prevailed under the Mughals. He writes that India was more advanced in matters of industry than Eastern Europe. The state had Karkhanas or royal workshops where silk was manufactured and other kinds of costly goods for the king and nobles. Abul Fazl writes that some times as many as 4000 weavers of silk alone worked in those karkhanas.

The state supplied the own needs and became the principal producer and manufacture the chief patron and manufacturer of luxury goods. The principal banker and chief trader in the empire from the account given by Bernier the appears that these Karkhanas were large halls in which the artisan worked. The character of these Karkhanas and the attitude of nobles towards the artisans employed in them is brought out by Bernier in a well know passage. He says: workshops occupied by skillful artisans would be vainly sought for in Delhi, which has very little to boast of in that respect. This is not owing to any inability in the people cultivate the arts for there are ingenious men in every part of India. Numerous are the instances of piece of workmanship made by person destitute of tools and who can scarcely be said to have received instruction from a master. The rich will have every article at cheap rate. Sometimes they imitate so perfectly articles of European manufacturer that the difference between the original and the copy can hardly be imagined. The artists therefore, who arrive
at any eminence in their art are those only who are in the service of the king of some powerful umrah (noble) and who work exclusively for their patron.\textsuperscript{33}

The royal Karkhanas were found all over the country. Big centres were found in Kashmir, Lahore, Agra, Ahmadabad, Fatehpur and Burhanpur. The workmanship of Kashmir was renewed. Its Palkis bedsheets, trunk, ink stand, boxes and spoons were used all over India. But its shawls were superb, great pains have been taken to manufacture similar shawls in Patna, Agra and Lahore but not withstanding every possible care they never have the delicate texture and softness of the Kashmir shawls.

The Subedars of various subahs could not have maintained state factories of their own (except on a very small scale) as they were liable to frequent transfer. But they patronized the local products as they had to supply the emperor all the same with choice specimens of these.\textsuperscript{34}

In the \textit{Ain-i-Akbari} Abul Fazl speaks of various state workshop in Akbar's palace at Agra at the end of sixteenth century. The city of Agra was renowned for its wide range of economic activities which included commerce, in land and foreign made industries and handicrafts. Agra remains one of the biggest commercial centers under the Mughals. According to Sujan Rai author of the \textit{Khulasat-ut-Twarikh} articles of seven divisions of the globe are brought and sold here.\textsuperscript{35} Monserrate mention that every necessity of human life could be obtained in the market of Agra including articles which have to be imported from distant corners of Europe.\textsuperscript{36}

Masulipatam, belonging to Golconda Kingdom, was the house of many artisans skilled in Calicoes printing and there are letters in which Aurangzeb, then viceroy of the Deccan, requests that some of these artisans might be sent to work in the state factory at Delhi or Agra.
The establishment of Kasim Bazar unit might be regarded as a development of some importance in the emergence of the large scale production in Mughal Bengal. This was not simply because of the size of the unit. Though that certainly was an important element manufacturing production on this scale under one roof on a regular wage employment basis was rare in Mughal India. The imperial and other Karkhanas were not fully comparable to the Dutch unit for two reasons. First the goods manufactured in the Karkhana were intended, almost exclusively for use by the royalty, the nobility, rich merchants and others and for the army rather than for sale in the market second at least some of the big Karkhanas appear to have been operated on the basis of under paid drafted labour rather than with free contact labour. Both these factors make the Karkhanas quite different from the Dutch silk factories which make the Karkhanas quite different from the Dutch silk manufacturing. Bernier also gives the reference of that at Kasim Bazar. The Dutch had employed seven or eight hundred workman in their Karkhanas as was also done by the Englishmen and other merchants. Many of the Karkhana or departments were government factories which meet the demand for arms, weapons, jewellery cloths etc. of the palace, others were stables for elephants, camels, horses cow etc. Some of the Kharkhanas were meant for the supply of the daily essential needs like food. Pan etc. or the daily supply of the medicines, perfumes etc. Amber was another important centre where its rulers in the eighteenth century had made elaborate arrangement of Kharkhanas organized largely on the Mughal pattern during the 18th century many of the Kharkhanas of Maratha government seem to have been worked by means of forced labour (Veth Begar) of the artisan of different kinds. For the construction of government building a certain number of carpenters, brick makers, masons and brick layers where requisitioned from in
districts and sub districts for the period of eight to fifteen days per annum. Similar government stables acquired necessary labour though forced of leather workers rope makers, saddle makers and so on from various regions for fifteen days to two months a year. These forced workers were sometimes paid a small amount of cash or grain.40

**Administration of Kharkhanas:**

The Mughal emperor maintained *Kharkhanas* of factories of their own for manufacture of article of different kinds including cotton and silk. The interest of the Mughal emperors in the workshop can be assessed from the following observation of Abul Fazl.

"His majesty pays much attention to various staff, skilful masters and workmen have settled in the country to teach people an improved system of manufacture. The imperial workshops in the towns of Lahore, Agra, Fatehpur, Ahmedabad turnout many master piece of workmanship and the figures and pattern's knots and variety of fashions which now prevail astonish experienced travelers."41

Akbar patronized the public works department and personally inspected the *Karkhanas* at time.42 in the seventeenth century Bernier observed many *Kharkhanas* in which several skilled workers were employed by the state.43 During the region of Aurangzeb the number of these *Karkhanas* decreased. It is suggested that he hated luxuries although it can not be proved conclusively later on during the period of the later Mughals the position of the *Karkhanas* did not improve. The Mughal emperor took interest in the proper maintenance of these *karkhanas*. The Department of *Khan-i-Samans* was managed with the greatest care regularity. He submitted the statement twice a year giving full description of the article produced and the materials used and required the production.44

*Mir-i-Saman* as a regard the administration of the karkhanas, the whole of the house hold department was under the supervision of *Khan-*
The term Mir-i-Saman was not in use under the Akbar. In the Ain his duties are not mentioned nor his power defined. In the Akbarnama Abul Fazl however made a reference to Mir-i-Saman but had not mentioned either his powers or duties. But so far as Dastur-ul-Amals are concerned, which were mostly drafted or copied in the region of Auranzeb, the term Khan-i-Saman predominates. But gradually he came to be in charge and commonly know as Mir-i-Saman under Jahangir and Shahjahan and as Khan-i-Saman under Auranzeb and afterwards, as the chief executive officer of the supply department. The Mir-i-Saman was placed in charge of the internal working of the Karkhanas or buyutat, including factories and stores owned and managed by the state for its own purposes, not only in the capital but in every provincial capital as well as in different parts of the empire.

Being the second highest officer in the realm the Khan-i-Saman stood immediately below the diwan. He has been well described as really the diwan of expenditure. He is thus instructed about his work to take over the cash balance and collected articles in the household department, which are kept under the seals of the mushrif and tahvildar satisfy yourself that the stock agree with the records or else call upon them to make the deficit good.

The staff of every Karkhana varied in accordance with the needs, for instance the matbak or the kitchen would have chefs and cooks, where as the library would employ calligraphists and painters. At the head of every karkhana, however there was a darogha or a superintendent assisted by clerks and accountants.

Diwan-i-Buyutat: He was another officer of high rank. He was chiefly responsible for the financial side of the department of karkhanas and working of the department but not subordinate to the Mir-i-Saman.
**Duties of Buyutat:** Buyutat popularly shortened into buyutat, was the title of an officer who registered the property of diseased person in order to secure the payment of the due of the state as well as to safeguard the property for the heirs of the deceased.⁵⁰

**Darogha:** (Superintendent) Each branch or karkhana had a darogha who dealt directly with the artisan of his branch, distributed to them their daily work and took charge of the material left in their possessions every day and handed over to tahvildar. Thus the darogha of every karkhana took the raw materials and the unfinished article from the tahvildar and distributed them to the artisan. At the close of the day the darogha was to take back the articles in wherever stage they might be on that day and after nothing the amount of work done deposit them with the tahvilder. The unfinished would be reissued the next day by the darogha again handed over the artisan.

**Tahvildar (Cashier and Store keeper):** Like the darogha each Karkhanas had a tahvildar who had charge of cash and material required for his branch. He kept the cash and stored the necessary stock of materials for use. Thus darogha took money and material from the tahvildar and distributed them to workmen under him.

**Mustakfi (Auditor):** He audited the accounts of the karkhanas, verified the expenditure with vouchers, prepared a statement signed it himself put it before the diwan of the department and finally had the seal of the Mir-i-Saman put to it.

**Darogha-i-Kachheri (Establishment officer or officer Superintendent):** He was in charge of the general supervision of the establishment of the officer. It was his duty to see that all papers and register were taken from one officer to another, properly. He was also to see that no one behaved rudely towards the clerks and the servant of the office. He locked the door of the office with seal of the officer
concerned and put his own seal, on each. Thus he appears to have been the head of the clerical establishment of the entire department.

**Nazir:** The nazir does not seem to have and duties, he assisted the diwan of the department and helped him to revise and check the account before submitting them to the central audit office.

Apart from the nobles, the princes and princes also maintained Karkhanas for providing their own needs. For instance we read in a letter from Aurangzeb to Shah Jahan that owing to the scarcity of skilled hands the output of the imperial Karkhanas of princes Jahanara had been meager. The work of the artisan employee in Aurangzeb's own Karkhanas was not admired by the emperor. During the Farrukhsyar's reign, Mir Jumla, the Amirul Umra had full control over the exchequer and without his permission not even a single claim could be had. He was busy arranging for the marriage of the emperor with Ajit Singh's daughter, Abdullah Khan controlled the affair of diwani, Bakshigiri and karkhana etc. But due to the presence of Mir Jumla he did not attend and the nobility.

In the 17th century there existed also some private karkhanas. According to F. Manrique the nobility appointed the labour of skilled, craftsman in their private workshops for the production of luxury article for themselves and to be given to the shah and other lords which was a vital part of the feudal hierarchical ceremonial of interest is also the information of private workshop given in the chronicle of Ali Mohammad Khan, the Mirat-i-Ahmadi describing the organization of the Kharkhanas founded by Raja Jai Singh in the village of Jai Nagar.

In the 18th century special establishment were organized on the Nawabs orders for the manufacture of Shargaon Juglebaree and Basetpoore, the largest centres of cotton cloth production in Bengal they were included in the nuzzur, the yearly offering of the Nawab of Bengal
to the ruler of the Mughal Empire. The cloth was *Mulboos khas* and the building housing the workshops was known as *mulboos khas kottee*.

The English commercial resident in Dacca (such residual appeared there in 1787) wrote 'The Incessant Inspector of the daroghas and their people and the fear of incurring punishments for the any deviation of the duty expected of them must have effectively differed the weavers, while manufacturing the cloth from attempting any improper practices.'

In the first half of the 17th century, Patna was famous not only for the production of raw cotton and manufacture and supply of cotton clothes of various kinds but also for being an important centre of silk trade.

Further more during the second of the 17th century the English Company sent a few English dyers, weavers, throwsters etc. to Kasim Bazar in Bengal, who are reported to have trained craftsmen in the European technique of dyeing some special colours (black blue) which the latter were unfamiliar with.

The imperial *Karkhanas* numbered 69 in the *Zawabit-i-Almgiri* (f1326) towards the end of the 17th century, indicating the decline in production under the latter Mughals. These lasted till the eighties of the 18th century. However, the imperial tradition survived in the 18th century among some local rulers. Jai Singh II of Jaipur not only settled weavers there who were expected to out do the Ahmadnagar textiles but also provided tools of special varieties of wood in Workshop. Again the Nawabs of Bengal and special establishments (*Mulboos Khas Kootee*) in Dacca, sonargaon Jaugalbaree and Basetpoore for production of first grade Muslins (*Mulbooskhas*) as yearly Peskash to the Mughal emperor. The workshops were supervised by the darogha having uncontrolled authority over all employees the most expert weavers in the
province selected. They were registered and had to attend daily for schedule hours till the completion of the tasks. They thread used was carefully examined by inspectors and had to conform to the standard master approved. In the time Siraj-ud-daula half of the wages of the weavers was deducted as perquisites of the officers and servants. The Nawab of Oudh and Nizam of Hyderabad also had similar \textit{Karkhanas} for supplying their own needs.\textsuperscript{59} The 18\textsuperscript{th} century witnessed certain interesting trends in industrial organization thanks to the expansion of the market by the middle of the century while the artisan system continued as before, the practice of paying wages to artisan became widely prevalent, if the 16\textsuperscript{th} and 17\textsuperscript{th} centuries were marked by absence of private workshop century was characterized by the advent of artisan as capitalist entrepreneur. Traders, including Armenians in Bengal employed winders (nakads) as wage earners in silk reeleries. Rich weavers began to emerge in Bengal with their own capital sold their goods freely. A few carpenters in Bengal and Bihar hired others for working in their workshop.\textsuperscript{60} The supply of the court and the feudal elite with luxury articles, etc. This form was most pronounced in state workshop (those of the Shah or his courtiers) know as "\textit{Karkhanas}" in the Mughal empire and also in the workshop belonging to big feudal lord.

Fr. Antony Monserrate, a missionary inform us that the ruler "\textit{keeps many workmen always engaged in the manufacture of muskets and swords for the army}".\textsuperscript{61} The \textit{karkhana} system also included the mint where craftsmen of more than ten difficult trades minted coins.\textsuperscript{62} The chronicle of Mirza Nathan. The \textit{Bahristan-i-Ghaybi}, says that after the ruler of Bengal, the Mughal Nawab Islam Khan had in 1608 transferred his capital from Rajmahal to Decca, he organized state ware and
warehouses and *karkhana* enlisting carpenters, black smiths, armors and other artisans.

According to Shah Nawaz Khan's chronicle the *Maathir-ul-Umra* Aurangzeb organized *Karkhanas* also in Aurangabad. Here is how Bernier describes these state workshop at the Delhi palace of Shah Aurangzeb: "Large halls are seen in many palaces, called Kai-Kanays or workshop for the artisan. In one hall embroiders are busily employed superintended by a master." Skilled artisans were enlisted for work at these shops by methods of non-economic feudal coercion. There labour was strictly regimented. They could not leave the *karkhana* on their own, were obliged to do the work they were given while the payment for their work was determined by feudal lord.

J.N. Sarkar, the well known Indian historian wrote that the main portion of the articles turned out in the *Karkhanas* was "periodically presented to the noble as a matter of administrative practices and the surplus satisfying the wants of the imperial house hold and official exigencies was old to private persons," The state workshops (armories, mints, warehouse, etc.) in which a division of labour developed, turned into peculiar feudal manufactories.

Various sources indicate that there was a *karkhana* also at the court of the Shah of Golconda in the 17th century. In the 17th Century there existed also private feudal *karkhanas*. According to Father Manrique, the nobility use the labour of skilled craftsmen in their private workshops for the production of luxury articles for themselves and to be given to the Shah and feudal lords, which was a vital part of the feudal hierarchical ceremonial.

Of interest is also the information on private feudal workshops given in the chronicle of Ali Muhammad Khan the *Mirat-i-Ahmadi*, describing the organization of a *karkhana* founded by Rajah Amber Jai
Singh in the village of Jai Nagar. He settled artisans in the village that produced cloth, which he wanted to be superior to the famed Ahmad Nagar textiles. To achieve this he ordered that the tools for his *Karkhanas* be made of special kinds of wood. According to John Taylor these workshops were superintended by a feudal official, the *darogha* who “exercised uncontrolled authority over all persons employed in them the most expert weavers in the provinces were selected to work here.” The names of these artisan were registered and “they compelled to attend daily at the appointed hours, until the different task assigned to them were finished.

Inspectors carefully examined the thread that was brought to the looms and none was permitted to be used until it was compared with the standard masters and approved of the English commercial resident in Dacca (such resident appeared there 1787)”. The incessant inspection of the *Daroghas* and their people and the fear of incurring punishments for any deviation of the duty expected of them must have effectually deterred the weavers. While manufacturing the cloths from attempting any improper practices. The *Darogha* defrauded the weavers “of a considerable portion of the wages allowed them by the government.” Thus in the time of *Siraj-ud-Daula* pay and retained as a perquisite by the officer and servants of the *Mulbooskhas* Kootees.

The records of the English commercial residents Indicate that the state workshop (*karkhana*) based on the feudal organization of the labour of weavers continued to function in the 1780’s i.e. after the seizure of Bengal by the English India company. An important features promoting the development and the changes in economic structure of the crafts in a number of areas in India in the 18th century. One directly connected with the development of handicraft production and commodity money relations, was a certain weakening of feudal
coercions and correspondingly the wider recourse to the free hire of the labor forces. Thus according to the *Mirat-i-Ahmadi* by Muhammad Khan, in the 1660’s the administration (*Mustassadi*) of state construction project, garden and other *Karkhanas* reported to Padishah Aurangzeb that until recently the wages (Ujural) of hired workmen [*Mazdurani*] were paid in Phalsa (a small copper coin-Ach). However since beginning with that year (1667/68. A.Ch) new *phalsa* were minted. The workmen refused to accept the new coins because they said their value was far below that of the former phalsa. The *Padishah* then ordered the Diwan of Subah to raise daily wages (*Youmie*) of the workmen and to pay them 1.5 *tanka* for every *tanka* they had received before.

When construction was carried on at the order of private persons, the cooperation of the labourers work created a basis for the emergence of an economic organization of labour of a qualitatively new form. This applied particularly at the end of the 18\(^\text{th}\) and the beginning of the 19\(^\text{th}\) centuries in Bengal (Dinajpur) to the labour of some rural carpenters, living in the vicinity of town and producing simple furniture agriculture implements. The richest of them having a capital of Rs. 40-50 employed some workmen, similar condition could be observed during that period in Bihar in the towns of Bhagalpur and Monger, were there were about 70 workshops (*karkhana*) of carpenter, producing all sorts of furniture, palanquins, etc. some time the owner of the workshop hired several workers, supplied them with materials and instruments and himself worked together with them. In some cases, when the numbers of wage workers reached a certain figure some time 100. The proprietor not only gave up manual labour but practically ceased to supervise his worker’s, he thus became small capitalist enterprise based on simple capitalist cooperation. The iron work generally produced forging of different sizes.
where sold to the state for the manufacture, of arms, to owners of private workshops for the production of steel, the manufacture of sugar boilers, agriculture implements and artisan’s tools and also to peasants and rural blacksmiths, who manufactured all sorts of arm implements and various household goods. Some workshops for example, those in Chica-Baylicaray, produced not forgings but ploughshares. The iron was smelted from sand and ore. In the first case for several months during the monsoon period, when the torrents carried down sands from the rocks special labour collected it along the river banks, washing it the separated the ore from the sand. In the second case, the ore was mined on mountain slopes. Crushing the rocks with a pickaxe and grinding it with their hands, the miners picked from it small bits of ore which they collected and carried to the foot of the mountain and from there to workshops.

The duration of the production cycle differed from workshop to workshop. Here the raw materials were sand which was collected for three to four months during the rainy season. The smelting lasted generally eight to nine months, sometimes less, because it stopped when there was from work to be done where ore was smelted. Work lasted nine to ten months, sometimes all the year around and was stopped only in holidays, because of heavy rains, the illness of workers or for similar reasons. The latter name was probably derived from the group of community artisan into which blacksmiths were incorporated. He generally own the instruments of labour in the large– the hammers tongs and anvil. He took charge of the forging of the metal and in the fire in furnace. One of the workers held the metal being forged with the tongs, another in addition to working the bellows, removed the ashes and dress. There still were patriarchal, primitive features in the division of labour; the artisans for example carried out several different operations (the
collection of sand and work in the forge (The making of charcoal and work in the smeltery etc.). The emergence of professional workshop (karkhana) labourers from the peasants and artisans, the separation of the crafts from agriculture attained a considerable level development. The hiring of the workmen was generally free and there was no coercion by other than economic means. They were tied to their employer only by the money advances they had received from him and were not allowed to engage in other work until they had repaid their debts.

The remuneration of the wage workers differed from workshop to workshop. In some workshop wages were paid in cash the sand collectors received 10 faunas a month the char charcoal burners 8-10 the smelters, 10-13. The head men of the smelting furnace” 15: workers in the forge 6-3 (hammers 9, bellows workers 8). The head workmen of the forge” 12-20 faunas.75

An organization of labour in many respects resembling that in the iron-making capitalist manufactures of Mysore can be encountered at the end of the 18th beginning of 19th centuries also in Bihar (district Shahabad) where iron making was carried on. The proprietors of the furnaces received advances from urban merchants hired people to deliver ore and fuel and carry out the smelting. As many a 50 person serviced a single furnace76, simple cooperation growing into capitalist manufacturers was typical not only of the various branches of construction extraction and processing of minerals wealth (iron diamonds etc.) in which cooperation of labour is a natural features of production but also of many other branches of the handicrafts in India in the 16th-18th centuries. There is evidence to show that such enterprises existed at the beginning of the 18th century in Gujrat. In the Mirat-i-Ahmadi Ali Muhammad Khan mention the existence in the first decades of the 18th century in Gujrat of a “multitude of Karkhanas where wage
worker were employed. These manufactures, which exhibited many capitalist, features were owned by silk merchants. Not only winders (*charkha*, literary “wheel turners”) but also dyers (Sibagan) and even weavers (misajan) where employed in the manufacturers, which leads us to assume that there existed a complex organization of labour not only in the production of silk, but also in the production of finished and even dyed fabrics. However as a result of the brutality of the feudal authorities towards the proprietors of manufacturers and raid by Marathas the establishment were often destroyed and part of their proprietors of manufactures moved in the second half of the 18th century to Banaras, where they resumed the activity. A similar state of affairs could be observed during that period also in Bengal. In Malda for example “if a man is rich and keeps several looms” he and his life warp and dye and others are hired to weave. In Bihar at the end of the 18th and the beginning of the 19th centuries we encounter a growing division of labour within the workshop (*Karkhana*). Three artisans simultaneously operated a single loom: one pulled the thread for the pattern, another twisted the thread and third wove it. The hiring weavers was wide spread at that time also in Maharasta. The highest form of labour organization could be observed in the shawl making trade in Kashmir at the end of the 18th and beginning of 19th centuries. Rafai Damnibegov a Georgian noble man who visited Srinagar at the end of the 18th century, tell of the considerable development there of shawl manufacturer. In the vicinity of the town and in the itself there are up to 24000 looms many of which specialize in the weaving of Shawls. Large workshop were the property of masters (ustad) or manufacture, who had form it three to 300 looms in their establishment, which were “generally crowed together in long low apartment. This system exhibits certain features of cartel relations, even though there
was a striking inequality in engaged in the workshop. Finally, the fourth system differed from the preceding in that the proceeds were divided equally, the ustad feeding the workmen. This system is close to the traditional “cartel” form of labour organization to relations of master craftsmen and apprentice, typical of feudal workshop of medieval times.

Thus at the end of the 18th and the beginning of the 19th centuries the economics organization of labour in shawl manufacturing workshop in Kashmir contained forms traditional for feudal society and also others testifying to the emergence of capitalist relations between the proprietors and their workers (the weavers embroiderers and soon). This information gives grounds for the conclusion that at the end of the 18th and beginning of 19th centuries in the shawl weaving industry in Kashmir there emerged enterprises which possessed a number of important features typical of capitalist manufactures.84

Similar enterprises belonging to local capitalist existed during the same period in Bengal, Bihar and Hindustan. In Bengal and Bihar the indigo was generally delivered by peasants whose forms were 5 to 6 kilometers from the enterprise. The enterprises had from 6 to 12 big vats for the boiling of Indigo, a building for drying the dye stuff and a ware house.

Near Banaras Indigo production was organized in a different way. The enterprise consisted of several small workshops with two vats drying promises and ware house. These workshop received indigo from peasants whose fields were within 1000 meters from the manufactures. The owner had several workshop which together often produced more indigo than the large enterprises in Bengal.

Yet another system in Indigo manufactures was wide spread in Oudh. The small workshop having up to three comparatively small vats did not only the primary processing of indigo. On a stretch of 20-25
kilometers there were 100 to 150 small workshops. The product yielded by them was delivered to central workshop (karkhana), pressing and drying. The productivity of such a manufacturer was many times higher than that of the enterprises in Bihar and Bengal.\textsuperscript{85}

REFERENCES

3. Ibid. p.30.
4. Ibid. p.29.
8. The iron pillar of Mehraulli is a case in point which seems to have been made in the royal foundry which however was mainly concerned with the manufacture of arms and armours, see S.K. Maity, Economic life in Northern India pp.135, 36.


15. Ibid., p.34.


17. Ibid., pp.186-187.


26. For the traditional number of 36, Shakir Khan, Tarikh-i-Khani MS (British Museum now British Library London) Add 6585, f. 136. Farrash Khana the store for carpets etc., abdar khana (water and drinks), Pilkhana (elephant stables) for further details see I.H. Qureshi. The administration of Mughal Empire, p.59.


32. Ibid., p.12.


34. Ibid., pp.128, 292.


36. Ibid., p.35.

37. Moreland, W.H.; India at the Death of Akbar, London, 1920, pp.173-74. It is trace that a large number of workers had to be assembled for constructing forts and other big building, as well as ocean going vessels. But in these cases as W.H. Moreland has pointed out, the organization brought into being did not survive
the completion of the particular projects for which it had been assembled. The royal mints in the various parts of the empire were undoubtedly fairly big units also. But it should be obvious that the implication of the production of coins by individuals employed on a salary basis by the government were some what different from those of the production of goods in manufactory of the type of the Dutch silk reeling unit at Kasim Bazar.


46. Mir-i-Saman together with the diwan-i-buyutat is placed under the diwan of the empire and the term Mir-i-Saman is used for the
office instead of Khan-i-Saman, Ain (text, p.4 Blochman has pointed out one example of its use in a biographical note on Khwaja Jalal-uddin Mahmud of Khursan, but there is used as a title conferred upon his by humayun which under the circumstances was an empty distinction Ain (tr.) Vol. 1, p.417.

47. Manual of Officer Duties a Persian MSS, 17-21, for Details see Jadu Nath Sarkar Mughal Administration, Calcutta, 1952, p.32.


49. Dastur-ul-Amal-i-Agahi, Br. Mu. Add. 6599, f. 36a etc.


52. 1707-1715 as seen from the reports of Amber PIHC 1986.

53. Taylor, J.A.; A Descriptive and Historical Account of the Cotton manufacture of Dacca in Bengal, London, 1851, pp.82-84.

54. Ibid., p.82.

55. Sarkar, Jagdish Narayan; Cotton trade of Patna in Early seventeenth century IHQ. No.4, 1936, Chapter I Sec A Peter Mundy, The Travel Vol.1, pp.142, 145, 150-151, 36.


57. Sarkar, Jadunath; Mughal Administration, p.125, till the eighties of the eighteenth century.

59. Taylor J.A.; A Descriptive and Historical Account of the Cotton Manufactures of Dacca in Bengal, London, 1851, pp. 82-84. According to Chicherove certain features of the Mughal workshop were similar to those of the state manufacture in France at the close of the 17th C. p.11. According to Chicherove certain features of the Mughal workshops were similar to those of the state manufactories in France at the close of the seventeenth century and beginning of eighteenth century as well as with the imperial manufactories in Czarist Russia in the seventeenth century, employing mainly serfs as handicraftsmen.


61. Monserrate, Antony Father; Commentary on his Journey to the Court of Akbar, Account of Akbar (26 Nov, 1582), JPASB, Vol.8, 1912, pp-115-116.


65. Sarkar, Jadunath; Mughal India: 17th Century” Industries in Modern Review June 1922, p.675.

68. Taylor, J.A.; A Descriptive and Historical Account of the Cotton Manufactures of Dacca in Bengal, London, 1851, p.82.
69. Ibid., p.83.
74. Ibid., Vol.2, pp.256.
79. Montgomery, Martin R; The History, Antiquities Topography and Statistics of Bihar, Shahabad Bhagalpur, Gorakhpur, Dinajpur,

80. Ibid. vol.1 p.354

81. Marshal, T.; Statistical Reports On The Pergunnas Of Pedshapoor, Belgam, Kalaniddee And Chandigarh, Khanpur, Begullkol And Badamy In The Sourthern Maharashtra Contry Bombey, 1822, p.51-52

82. Damibegov R. Puteshestiveyev; Indiya Gruzinskogo Dvorimina rafaila damibegova mascow 1938, p.41


84. Such conclusion of the organization of labor in the Kashmir shawl weaving trade in the early 19th c. where originally draw in soviet histography by y.v. gankovsky see.401, p65 and N I Semoyonava see 453 p.65-67

85. Montgomery Martin R.; Vol.2 p.986; a statistical account of Bengal, ed. by W W Hunter, vol. 8, p95 Calcutta, 1875-1878