CHAPTER 5

Crafts and Urban Economy

The urban economy primarily depended on the increased agricultural productivity, the proliferation of the crafts and the development of trade. Childe while defining historic city, postulates a number of features which distinguish the new towns from the older settlements and foremost among these is the beginning of specialization in economic activity.

The increase in land grants in the Gupta and post-Gupta period in the form of agrahāras and brahmadēyas resulted in agrarian expansion and surplus production. This surplus was large enough to support a sizeable number of non-food producing class engaged in specialized occupations like crafts and trade. The epigraphic sources show that in most of the land grants aprahat-khila and khila land was granted, with vāprā or pond to be used for irrigation and koshtikas or store-rooms where surplus produce could be stored. These facilities provided to the cultivators not only led to the cultivation of barren land, but also increased production, which resulted in urban expansion.

The Gupta and post-Gupta kings and feudatories provided immunities like exemption of taxes while making grants of land to the merchants and śreṇis and provided protection to the cāravāns and rājmārga too. The merchants and śreṇis played important role in the city administration, nagara-śresṭhin, sārthavāha, prathama śilpi, uttara kulika and prathama kāyastha were on the board of advisers in the urban administration. These details suggest that both agriculture and manufacturing activities played important role in the
society and economy of this period. The two important aspects of urban economy were specialization of crafts and commodity production on the one hand and trade both internal and external on the other. The economic structure of this period depended primarily on various crafts and industries. Several crafts and industries existed in north India in the Gupta and post-Gupta period. In the *Panchatantra* there is a reference to a merchant, goldsmith, physicians, enchanters, dyer, professor, potter, weaver, barber and carpenter. The *Harṣacarita* refers to a vernacular poet, panegyrist, a snake doctor, a young physician, betel-bearer, a reader, a goldsmith, a supervisor, a scribe, a painter, a modeler, a drummer, singers, pipers, music teacher, a shampooer, a dancer, a dicer, a gamester, a young actor, a story teller, a magician, a treasure seeker, an assayer, a potter and a juggler as his friends. The text refers to summoning of skilled artisans to the royal palace for quality construction. The leather workers, carpenters, whitewashers, skilled painter, gold workers, modelers, cosmetic manufacturers, dyers, washermen, blacksmiths and hunters are also mentioned in the *Harṣacarita*, who practiced respective arts and crafts.

The *Mrichchhakāṭika* of Śūdraka refers to the painter, merchant (vanīja or sārthavaḥa), a group of gambler (dhruṭakāra maṇḍalī), shampooer (saṃwāha), shoe-maker (charmakāra), barber (nāpita), potter (kumbhakāra), carriage-driver (pravahaṇavāhaka), judge (adhiḥkaṇṭha), chief merchant (śreṣṭhin), chief scriber (kāyatha), city-police (nagararākṣin), and gold-smith (suvāṃkāra). Visākhadatta in *Mudrārakṣasa* mentions about vanīka (merchant), ṭuṇḍika (snake charmer), kavi (poet),
sutradhāra (carpenter),29 vaidh (physician),30 maṇikāra (jeweler),31 and a sanvatsarīke (?).32

The Abhijñānsākuntala also refers to the merchant and sea-traders.33 The text refers to the fisherman, who earned his living by a virtuous profession.34 Similarly in Mālvikāgnimitra, there is a reference to the jewelers,35 dancing-master,36 actors,37 physician (chikitsak)38 and scribe (līpīkār).39 The butchers are referred to in the Rājatarangini of Kalhana. He records that in the realm of Meghavāhana, the slaughter of animals was forbidden thus butchers were helped to earn their livelihood from the kings own coffers.40

The epigraphic sources confirm the existence of different professionals inhabiting different parts of city. The Palitana plate of Śimhaditya, the year 255 (AD 574) refers to the princes (rājaputra), palace-officers (rājasthāniya), ministers, city-officers (drāṅgika), headmen (mahattara), regular and irregular soldiers, spies, elephant riders and horses living in the city.41 The Palitana plates of Dharasena II, Gupta Samvat 252 (AD 571) confirms that ayukatakas, viniyuktakas, drāṅgikas, mahattaras, dhruvādhikaraṇikas, daṇḍapāsikas, chörōddharaṇikas, rājasthaniyās and kumārāmātyas performed different administrative duties and lived in important cities.42

The traders, merchants and other professionals inhabited the major cities. Hiuen Tsang refers to Po-Lo-Hih-Mo-Pu-Lo i.e. Brahmapura where most of the people were engaged in commerce.43 The Ratnāvali refers to the merchant (vaṇija) of Kausāmby returning from Simhala,44 and a magician who arrived from Ujjaini in Kausāmby to perform magic tricks.45 The merchants (vaisyavara),46 merchant-leader (sārthavāha) from Madhumati,47 magician (jālikavidya),48 gambler (dakshadhrut kalā)49 physician
(vaidh)\(^{50}\) and chief of sea-traders (nāvikapate) from Valabhi are referred to in the Dasākumārācarita of Daṇḍin.\(^{51}\) In the Mudrārākṣasa there is a reference to the head of the jeweler’s guild (maṇiārsethī), who was living in Puṣpapura.\(^{52}\) The Udayagiri cave inscription of Chandragupta II, refers to the poet Virasena who lived in the city of Pātaliputra.\(^{53}\) Aryabhaṭa is said to have composed his well-known work Āryabhaṭīya in the city of Pataliputra.\(^{54}\) The poets were patronized by the king and chiefs, thus they inhabited mainly the rājdhāni or capital cities.

The epigraphic sources throw light on various guilds and communities living in different parts of the country. There is a reference to the community of merchants of Lōhāṭa in the charter of Vishnushena, Samvat 649 (AD 592). The record also mentions the guilds of weavers, shoemakers, dyers, blacksmiths, carpenters, barbers, potters and distillers.\(^{55}\) The Indor copper-plate inscription of Skandagupta of the year 146 (AD 465-66) mentions the guild of oilmen, whose head Jivanta, resided in the town of Indrapura.\(^{56}\) The donation of oil for burning lamps in temples by various oil guilds shows increase in the oil production. The Aihole inscription of Puliksen II, Śaka Samvat 556 (AD 634-35)\(^{57}\) refers to hundreds of bright rayed lamps. The sources refer to the migration of the guild of oilmen (tailikasṛēṇī) from the city of Lāṭa to Dasāpura because of better opportunities.\(^{58}\) The king of Dasāpura rendered them all possible help to settle down and continue with their trade freely. This shows that the traders and merchants were helped and encouraged to continue their trade by the ruling elite. It is further recorded that the guild lived in complete unity and had amassed enormous wealth. In the Mandasor stone inscription of Kumaragupta and Bandhuvarman, the Malava year 493 and 529 (AD 437-38 and 473-
there is a reference to the guild of silk-weavers who were renowned in the world for their skilled craft.\textsuperscript{59} They migrated to this town from Gujarat and constructed a sun temple at Dasāpura. The Vasanatgarh inscription of Vamalata, dated [Vikrama] Samvat 682 (AD 625), refers to the temple of the goddess Kshēmāryā built by the gōshṭhi whose head was Satyadeva, who was a merchant by profession.\textsuperscript{60} The traders and artisans actively took part in the construction of temples and other secular buildings in the cities where they lived and carried on their business.

As gleaned from the sources of the period following crafts and industries existed in the Gupta and post-Gupta period:

i. Textile industry
ii. Metal industry
iii. Stone industry
iv. Glass industry
v. Wood work industry
vi. Bone and ivory work industry
vii. Ceramic industry
viii. Oil, perfume, medicine, leather and other miscellaneous crafts

One of the most important industries of the Gupta and post-Gupta period was textile industry. This provided livelihood to many craftsmen and professionals for example, tailor, washer men and dyers. Vatsyayana in the Kāmasutra mentions dyeing, sewing, making parrots, flowers, tufts, tassels, bunches, bosses and knobs as important art. Valabhi was one of the important centre of spinning and weaving industries.\textsuperscript{61} The bandhani or tie and dye art of painting
and printing cloth was another important industry of Valabhi in past and even to this day.\textsuperscript{62} Banaras was famous for its textile industry.\textsuperscript{63} The textile industry depends on dyers who dye clothes. The Charter of Vishnushena, Samvat 649 (592 AD) refers to the \textit{nīla-ḍumphaka} possibly the person who manufactured blue dye from indigo plant in \textit{nīla-kuti} possibly a factory where manufacturing of dye was carried out.\textsuperscript{64} The clothes were dyed with saffron paste by washermen and dyers are referred to in the sources.\textsuperscript{65} The \textit{Harṣaracita} refers to the ancient city where matrons were busy in cutting and measuring clothes. The Ajanta painting also depicts elaborate garments produced by skilled tailors and embroiders.\textsuperscript{66} There is a reference to the lac or red dye in \textit{Nāradasmṛiti}.\textsuperscript{67} The sandal,\textsuperscript{68} saffron\textsuperscript{69} and jetty dye\textsuperscript{70} has been referred to in the \textit{Kumārasambhava} of Kālidasa which was used for dying dress material. Thus it can be concluded that dying was an important profession adopted by the people.

The silk, linen, muslin, cotton and jute were main items of trade. The \textit{Harṣaracita} mentions use of linen, cotton, silk, spider's thread and muslin by the people.\textsuperscript{71} The different types of silk was used by the people such as yellow silk,\textsuperscript{72} dark silk,\textsuperscript{73} shot silk, bark silk,\textsuperscript{74} china silk and white silk.\textsuperscript{75}

Though the silk was mainly imported from China, but the \textit{Arthaśāstra} mentions silk could be obtained from Magadha, Pundra and Suvarṇakudya also.\textsuperscript{76} Banaras was famous for its precious and beautiful silk cloth.\textsuperscript{77} The export of silk from Pundra is referred to in the \textit{Harṣaracita}\textsuperscript{78} this shows that fine silk was manufactured in India as well. The existence of guild of silk-weavers (\textit{udāram-sṛeni}) further show that excellent quality of silk was produced in India by the skilled weavers.\textsuperscript{79}
The silk was used by the king and the elite class as dress material. This was also used in the religious rituals. Fa-Hian refers to the procession of images which were adorned with the seven precious things. The silken streamers were one of them. Hiuen-Tsang mentions that the inhabitants of Ka-no-kū-she (Kanyākubja) were well off and there were families having great wealth and people used to be dressed up in the glossy silk attire. The Mālvikāgnimitra refers to the lady named Mālvika, who used a silken garment as a bathing cloth. The Daskumāraracita also refers to kshoma a silk garment used by a young damsel named Bālachandrika in the royal palace. Thus it can be assumed that silk was used by the elite class as dress material.

The cotton was an important fabric used by the people of middle class. The Amarakośa refers to several terms connected with cotton textiles like weaver (tantuvaι: kuvind syate), loom (velo ghaḷ), thread (sutrāṇi), coarse and fine fabric. The author of the Periplus Maris Erithrei (AD 60–100) mentioned that the best quality of cotton clothing was produced in the Gangetic country. The Arthasastra mentions that Mathura, Aparānta, Kalinga, Banaras, Vanga, Vatsa and Mahiśa were the centres of finest cotton cloth. Hiuen-Tsang recorded that Mathura produced fine striped cotton cloth. He also gives reference to pai-tieh a special cotton fabric, used by the people of Kashmir and Punch. Nārada mentions that the interest on thread and cotton was unlimited (akshayā). Thus it can be assumed that cotton was one of the important items of trade during this period.

The muslin, linen and wool were other important items of trade, Hiuen-Tsang mentions white clothing made of muslin. He
also refers to the people of Kashmir wearing dress made of white linen.\textsuperscript{93} However Nārada mentions that, a brāhmaṇa could not sell linen.\textsuperscript{94} The wool and fur were also used by the people for dress material. There is a reference to wool being used as dress material in the \textit{Harṣacarita}.\textsuperscript{95} Nārada refers to the blankets made of the hair of the mountain goat.\textsuperscript{96} On the basis of the above references we can say that textile industry was one of the most important and flourishing industry of this period.

The metal industry was the other important industry. Kauṭilya mentions that \textit{kālāyasa} (iron), \textit{tāmra} (copper), \textit{vṛtta} (?), \textit{kamsya} (bronze), \textit{sīsa} (lead), \textit{trapu} (tin), \textit{vaikṛntaka} (mercury) and \textit{ārakūṭa} (brass) metals were used for different purpose.\textsuperscript{97} The \textit{Amarkośa} gives a list of metals, including gold, silver, copper, iron, brass, lead and tin.\textsuperscript{98} Brīhaspati refers to the workers in gold, silver and base metal.\textsuperscript{99} Vatsyayana mentions the combination and purification of metals (\textit{dhāturvāda}) as one of the important art practiced by the people.\textsuperscript{100} The superintendent of mines (\textit{ākarādhyakṣa}) was appointed to supervise the mine work. He was supposed to have knowledge of the technical aspects of mining, including metallurgy.\textsuperscript{101} The gold, silver and copper mines existed in India. Hiuen-Tsang refers to gold, silver and native copper found from Kiu-Lu-To or Kulu valley\textsuperscript{102} and gold and silver from She-To-Tu-Lu or Ṣatadru.\textsuperscript{103} The metallic ores were also found from Chotanagpur area.\textsuperscript{104} The other area that provided most of gold, copper, iron and mica included the Singhbhum copper belt.\textsuperscript{105}

The items of gold and silver were one of the important items of import and export trade.\textsuperscript{106} The most important source of gold was possibly in the area, close to the Mayurbhanj border.\textsuperscript{107} The existence of gold mines is referred to in the \textit{Amarkośa}\textsuperscript{108} and in the
Raghuvança of Kālidāsa. Hiuen-Tsang also refers to yellow gold found from Mo-Tu-Lo or Mathura. Bāṇa mentions that gold came from all directions through trade and commerce to Ujjaini. This shows that gold was possibly the major item of trade both in local and international market.

The Amarkosā refers to the goldsmiths who catered to the demand of the rich section of the society. Unlike blacksmith, they settled in the rich localities of towns, where their goods were appreciated and bought by the urban residents. Daṇḍin refers to a gem factory in Ujjaini, where gold ornaments embedded with gems were manufactured by the goldsmiths. Valabhi was famous for its special gold jewellery and exquisite brass wares. The yellow metal was used not only for ornaments but also for making vessels and statues too. Bāṇa refers to outstanding gold and silver vessels of fine workmanship produced in Valabhi during this period. From the excavation at Bhitā a gold ring was recovered along with one hollow gold bead, two miniature gold beads joined together and a flat wheel of gold with axle and spokes and a disc of gold embossed with a human face. Possibly the workshop of the goldsmith was located at Bhitā where professionals were engaged in the manufacturing of exquisite gold ornaments.

Hiuen-Tsang refers to silver obtained from Kiu-Lu-To or Kulu valley and She-To-Tu-Lu or Šatadru. S.K.Maity opines that no silver was mined in India and it was imported from Ceylon and Afghanistan. He further adds that difference of prices between gold and silver, may have facilitated the export of gold and import of silver. The import of silver, in the Gupta and post-Gupta period, is clear from the circulation of silver coins in that period. The silver coins of Gupta rulers have been unearthed from excavation and
exploration carried out in different parts of India. These coins exhibit development in numismatic art and aesthetic standard of both gold and silver. A beautiful silver coin of Harṣavardhana of c. seventh century AD represents the excellence in the art of silversmith in the post Gupta period as well. A silver spoon, cup and measuring ladle of the Gupta period found from Ropar show the excellence in the work of silversmith. The material evidence from different sites suggests that gold and silver working had reached a high water-mark of excellence in execution and design during this period.

Among other metals iron was most commonly used in day to day activities. The blacksmiths not only supplied tools to cultivators, gardeners, carpenters, wood-cutters, grass-mowers, and house holders, but also armed the military. In the Raghuvança there is a reference to piece of iron being heated and beaten with steel hammer (ayoghana) for making tools. Valabhi was famous for its iron smelting industry during the Gupta and post-Gupta period. The excavation at Maya-no-Khado in Valabhi, district Bhavnagar, Gujarat, revealed traces of furnaces of the fourth-fifth century AD, probably these were meant for smelting iron. The excavation at Ropar revealed anthropomorphic vessels made of iron.

The battle swords made of iron are referred to in the Aihole inscription of Puliksen II, Śaka Samvat 556 (AD 634-35). The spear-heads, arrow-heads and other iron implements of early Gupta age were unearthed from the excavation carried out at Vaisali in district Muzzaffarpur, Bihar. The arrow-heads and daggers of iron, of eighth century AD were also recovered from Indragarh in district Mandasor, Madhya Pradesh. The decorated metal objects of first to sixth-seventh century AD have been unearthed from western India.
suggest that this art flourished in this part of India. The excavation carried out at Kausam and Paithan in district Aurangabad, Maharashtra revealed a number of iron objects and a large lump of iron slag from the temple foundation. The excavation at Gilaulikher, district Morena, Madhya Pradesh, revealed fragments of iron knife, axe and sickle of the Gupta and the post-Gupta period. Similarly the excavation at Taradih in Gaya district of Bihar revealed nails, arrowheads, spearheads and rings made of iron. Among other iron objects of the Gupta period the archaeologists have also discovered traces of hammers, different type of chisels, a padlock, a plate of iron with holes, a door ring, a spoon, a dagger and a hatchet. The Mehrauli iron pillar of king Chandra reflects the high water-mark of craftsmanship in iron working. Thus it can be said that iron was used for making tools and weapons.

The copper was the most useful metal at that time. The Amarkośa refers to the copper-smith, black-smith and gold-smith carrying on their trade in different parts of the city. The use of copper for currency, seals and sealings, charters and utensils for daily use show the importance of copper during this period. Hiuen-Tsang mentions native copper (teou) could be produced from Kiu-Lu-To or Kulu valley and Po-Lo-Hih-Mo-Pu-Lo or Brahmapura. The excavation at Rajghat in Varanasi revealed round copper coins and small lid earthen jars made of copper assigned to the fifth-sixth century AD. The excavation at Chandraketugarh in district 24 Pargana, West Bengal, yielded a few cast copper coins of the early Gupta age. An excellent copper mirror having a handle and a hook of the Gupta period was found from Masaon, district Ghazipur. The earrings, finger rings, seals and bangles made of copper have been found from different places. From excavation at
Mumma Khan, near the Central Jail in Srinagar (Kashmir), fifty copper coins of sixth century were found. The iron and copper objects from Ajanta district Aurangabad, Maharashtra, include nails used in the roof, arrow-heads, lances, blade fragments, knives, rings and collyrium stick. The excavation at Ajanta brought to light copper alloy cat bell, and rings. Fa-Hian refers to a copper vessels used for storing cream. The colossal copper statue of Buddha, measuring 7 ½ feet high found from Sultanganj, attests to the wide use of copper for fashioning sculptures in the Gupta and post-Gupta period. The images of Adināth having a fair amount of copper content in them found from district Hansi are the best examples of beauty and execution in this metal. These sculptures are in a very good state of preservation. The sculpture of tirthankara Parśavanātha is shown seated on an embroidered cushion in Padmāsana under the canopy of seven hooded snake dated to seventh-eighth centuries has been executed very skillfully in copper. However the sculpture has turned bluish green due to alloying.

The brass was also used for making pots and other utensils. The discovery of brass vessel from Kalighat hoard shows the skill of brass workers. Valabhi was famous for its brass wares under Maitraka rulers. One of the spear-heads of the Gupta period is found from Tripuri in district Jabalpur, Madhya Pradesh that show the use of denticulate brass ribs on its socket. The use of brass at such an early period (circa AD 400) and the denticulation are indeed rare features. This shows the advancement of the brass industry in the Gupta period.
The stone industry also flourished during this period. Kālidāsa in the *Meghaduta* recorded that gems, conchs, pearl-shells, emerald gems and pieces of corals were arranged for sale in the market-places in the city of Visāla, in the country of Avanti. The precious and semi-precious gem industries flourished in the Gupta and post-Gupta period. The *Amarakośa* lists many types of precious and semi-precious stones. Varāhamihira mentions use of diamond, sapphire, emerald, agate, ruby, blood-stone, beryl, amethyst, vimalaka, quartz, crystal, moon-gem, saugandhika, opal, conch, azure stone, topaz, brahma-gem, jyotiras, sasyaka, pearl and coral. In *Mrichchhakatika* of Śadraka there is a reference to the gem factory in Ujjaini. There is mention of various gems such as *neelrattan* (sapphires), *vaidurya* (lapis lazuli), *maukti* (pearls), *pravālak* (corals), *pushparagendra* (topazes) and rubies. These stones were set in gold and pearl ornaments and were gently polished. The polished ornaments were then sold in the market at high price.

The stone industry provided livelihood to the stone cutters and stone polishers. The polishing of carnelian beads was rated number one industry in Valabhi in the Gupta and post-Gupta period. According to Daṇḍin Pushpapuri was an important centre of trade where gems of different varieties were sold. Varāhamihira refers to Śimhaḷaka (Ceylon), Paraloka (Travancore coast), Surāṣṭra (Kathiawad peninsula), area around river Tāmraparṇi, Pārsāva (Persia), Pāṇḍya-Vāṭaka and the Himalaya as centres of pearl trade.

The stone-cutting industry had also attained high standard in the Gupta age. The archaeological and literary sources refer to beautifully carved stone mansions and sculptures. The construction
of stone mansion of Jinendra in the Aihole inscription of Pulikisen-II, Śaka Samvat 556 (AD 634-35) testifies to the skill of the stone cutters. The Bhitari stone pillar inscription of Skandagupta (undated) records the installation of stone image of the god Vishṇu, under the name Śāṅgīn beautifully executed and the allotment, of the same idol to the village, in which the column stands even now. The great panel of the boar incarnation of Vishṇu in stone is one of the best specimens widely known in Udaygiri sculptures. No other relief panel in India is as large as this incarnation of Vishṇu. Other impressive sculptures include sculpture of Krishna Govardhana of fifth century found from Varanasi. It is extraordinarily imposing image and the largest free-standing figure of the Gupta period.

The sculptures of Buddha housed in Mathura museum are the finest examples of Indian art. The two big stone heads found from Chamunda mound and other one from Govindnagar, district Mathura attract attention of each and every one because of their notable features. These are one of the rare specimens of the Gupta art.

The excavation at Kausambi in district Allahabad, Uttar Pradesh revealed an excellent life-size seated image of the Jaina Tirthankara Padmaprabhu, of the fourth-fifth century AD. The Jaina images from Mathura also exhibit great amount of self-confidence, vigour and sophistication. The excavation at Broach in Gujarat revealed stone images of the sixth-seventh century. The excavation at Indragarh revealed stone images and parts of the structure like dressed blocks of stone, carved lintels, pillars, plinths, jambs and spires of different dimensions. In the course of the diggings of the Gupta structures at Khana-Mihirer-Dhipi Chandraketugarh in district 24-Parganas, West Bengal, several Gupta and post-Gupta antiquities in the form of stone sculptures,
stone querns and pottery were found,\textsuperscript{173} that suggests that stone cutting was an important industry of this period. The sculptures of this period have no match in their size and technique, at least in India and which add a whole new dimension to Gupta sculpture.\textsuperscript{174}

A small damaged \textit{mukha-linga} of Mathura sandstone of the Gupta period was found from Purana Quila (New Delhi).\textsuperscript{175} Some other images, found in caves like Virasena and the Śankānika, belonging to the reign of Chandragupta II, suggest that the art of stone-cutting had reached the zenith of excellence in this period.\textsuperscript{176} The work in stone offered a good vocation to architects, stone-cutters, sculptors and their assistants. Some of them were certainly very highly paid craftsmen because of unmatched skill in transforming stone into figures of permanent beauty and grace.\textsuperscript{177}

The use of stones for making kitchen utensils was also popular during this period. The excavation at Rajghat in district Varanasi, Uttar Pradesh, recorded a few pots made of steatite stone of milky colour.\textsuperscript{178} The excavation at Gilaulikhera, district Morena, Madhya Pradesh revealed grinding stone.\textsuperscript{179} Similarly Ardhanarishvara head housed in the Mathura museum displays high workmanship of plastic art of the Gupta age. It is believed that only a master artist could have brought this perfect synthesis in the stone.\textsuperscript{180}

The wood industry also provided livelihood to the carpenters, rope makers, bamboo workers, basket makers and toy makers. The carpentry was one of the important industries in Valabhi.\textsuperscript{181} The importance of wood industry is also clear from the \textit{Kāmasutra} of Vatsyayana. The text informs about the detection of diseases of trees and plants, the treatment of diseases, nourishment, and determining their age, as one of the important art practiced during this period. The gardens, fields and forests supplied varieties of
wood which was used for timber work by the people. Kaṭṭilya refers to number of trees such as sāka (teak), tiniśa, dhanvana, arjuna, madhūka, tilaka, tāla, sīṃśūpa, arimeda, rājādana, sīrīsha, khadira, sarala, tālasarja, asvakaṇṭa, somavalka, kaśāmra, priyaka and dhava. The wood obtained from these trees could be used for construction by wood workers.\(^ {182}\) It was a well-developed art in the Gupta and post-Gupta period. The takshaṇam or wood carving is mentioned as one of the sixty four arts in the Kāmasutra.\(^ {183}\) The exploration in the district of Lahul and Spiti in Himachal Pradesh, reported wooden image of Mahishasuramardini measuring 30 x 40 centimeter in bold relief. On the stylistic traits the image could be dated to early seventh century AD.\(^ {184}\) This image shows the perfection attained in the art of wood carving. The wooden temples like Lakshana Devi temple of seventh-eighth century at Bharmaur in Chamba district and Dakshineshwar Mahadeva at Nirmanda in Himachal Pradesh are the replicas of Indian classical stone temple in wood.\(^ {185}\)

The sandal wood was most commonly used for religious purposes and also as a cosmetic product during this period. Fa-Hian mentions the construction of vihāra, where the king of Pāṭaliputra installed sandal-wood staff of 19-20 feet.\(^ {186}\) The bamboo and cane were also used as building materials but also for making household furniture. Kaṭṭilya mentions different varieties of bamboo i.e. utaja, chimiya, chava, vēṇu, vamsa, sātina, kaṇaka and bhāllumā\(^ {187}\) used by bamboo workers for making various household items. In the Nāradasmṛti there is a reference to the baskets made of bamboos which could be sold by the brāhamaṇā.\(^ {188}\) The use of cotton thread for making bamboo baskets, is referred to in the literary sources.\(^ {189}\) Kaṭṭilya refers to creepers, used for cane industry, i.e. vetra (cane),
sokavalli, vāsi, sỹāmalata and nāgalata. The cane furniture was used by the people. The cane stools made from the yellow bark is referred to in the Harṣacarita. The muña and balbaja was used for making ropes. The sale of ropes has been referred to in the Nāradadharmaśāstra.

Kauṭilya mentions the use of leaves of trees such as tāli, tāla and bhurja which yielded leaves for making various household items. There is a reference to fans made of palmleaf in the Mandasor stone pillar inscription of Kumaragupta and Bandhuvarman. The making of such fans helped people to earn their livelihood. The garland making is another important art mentioned in the Kāmasutra. Kauṭilya mentions flowers such as kimśuka, kusumbha and kuṅkum used for making garland and other decorations. There is a reference to the garland of white flowers (aprājita) in the Harṣacarita. A reference to the colony of florists and gardeners (mālakāra) in Bhavnagar plates of Dhruvasena I [Valabhi] Samvat 210 (AD 529) confirm that they were urban residents and carried on their trade in the cities.

The glass industry was also flourishing during this period. The fixing of stained glass in floor was one of the important arts practiced during the Gupta period. The glass was also used for making bangles and beads. The painted glass bangles and beads have been unearthed from different places such as Prakash in district west Khandesh, Indragarh in district Mandasor, Madhya Pradesh, Gilaulikhera district Morena, Madhya Pradesh. The glass objects have also been excavated from Masaon in district Ghazipur, Uttar Pradesh and Ajanta in district Aurangabad, Maharashtra, which confirm that glass industry was flourishing in different parts of north India.
The ivory industry also flourished. The ivory items were used mainly by the elite section of the society as these were expensive. Ivory was collected from living or dead elephants and hippopotamus. It was mainly used for making ornaments. However its use in furniture, as building material and seals and sealings cannot be denied. There is a reference to the ivory trade (danta-vyāpāra) in the Kādambari. The ivory gate (danttorana) in Harṣa Ratnāvali and ivory tower in Harṣa’s Priyadarsīka suggest that such gates and towers added beauty to palace. The recovery of four ivory seals from Bhita testifies to the use of ivory for making seals and sealings and also the expertise of the ivory workers. The beautifully inscribed surface of the seal, surrounded by a headline and the device of a crawling tortoise show the fineness achieved by the ivory workers in this art. The fragments of ivory bangles have been unearthed from Indragarh in district Mandasor, Madhya Pradesh. The ivory game pieces and dice have also been unearthed from Masaon in district Ghazipur, Uttar Pradesh, Maner in district Patna, Bihar and Gilaulikhera in district Morena, Madhya Pradesh.

The ceramic industry also flourished in this period. There is a reference to the potter’s pit (kumbhkāra-garttas) in Nidhanpur copper-plates of Bhaskarvarman (AD 643). The terracotta was used for making seals and sealings, kitchen utensils, sculptures, toys and ornaments in the Gupta and the post-Gupta period. The Harsacarita refers to the artisans busy in making leaf and plant paintings on unbaked clay-ware. The two types of ceramic wares of red and black colour have been unearthed from different sites. The excavations from Taradih Bodh-Gaya in district Gaya, Bihar, Devnimori in district Sabar-Kantha, Mangalkot in district Burdwan,
Orissa\textsuperscript{217} Vadnagar district Mehsana, Maharashtra,\textsuperscript{218} Agroha in district Hissar, Haryana\textsuperscript{219} and Jhusi in district Allahabad\textsuperscript{220} revealed red wares with black designs, in large quantity. The excavation at Harsh-Ka-Tila, in district Kurukshetra, Haryana, revealed red polished, bright red-slipped, plain red and moulded wares of the Gupta period.\textsuperscript{221} The excavation at Rajghat in Varanasi revealed pottery noteworthy for its different texture and design.\textsuperscript{222} The excavation at Chandraketugarh, West Bengal, revealed grey and black pottery, sometimes with stamped designs of the Gupta period.\textsuperscript{223} The excavation at Prakash, district West Khandesh yielded a pottery both in black and in red-slipped ware, showing a predilection for grooved shoulders and carinated forms assigned to the post fifth-sixth century.\textsuperscript{224} The lesser finds of black ware shows that red ware both slipped and unslipped was the dominant ceramic industry of the Gupta and post-Gupta period.\textsuperscript{225} There was an increased use of red ware in which black colour was applied on red slip before firing the pots.

The important pottery mainly red ware included vases, carinated \textit{handis}, bowls with flat base, storage jars, spouted vessels, basins, miniature pots, handles, lids and lamps.\textsuperscript{226} The shapes in the red ware also included bowls with tapering sides, flat and occasionally disc-base, rounded, featureless, pointed or externally bevelled-rims, shallow dish with internally thickened rim, with flat base, basins with nail-headed or externally thickened rims, pans (\textit{karahis}) with insignificant lugs attached horizontally to the belly on both sides, pans with lugs attached vertically at the top of the rim, convex or straight-sided basins, out-turned or splayed-out, multi-grooved rim, \textit{surahis}, medium-sized vases having multi-grooved
undercut rim, concave neck, square or convex shoulders, rounded body and footed ring-base. The noteworthy types in black ware included bowls and basins.\(^{227}\) In case of moulded pots \textit{viz}., the \textit{surahis} and medium-sized spouted vases have been found. The external surface of these \textit{surahis} with a restricted bright red slip or polish was treated with mica-dust or sand particles to add beauty to the pottery. The excavation at Sravasti revealed well fired ceramics, the fabric of those range from medium to fine, from the Gupta and late Gupta deposits.\(^{228}\) The fabric of these ceramics can be classified in two groups, namely: (i) slipped and (ii) dull red ware.\(^{229}\) The decorated pottery was however rare.\(^{230}\)

The terracotta seals and sealings found from the major cities of the period show that ceramic industry was one of the important urban craft. The seals, sealings and coins of the Gupta period constitute the main body of finds from Kumrahar in district Patna, Bihar,\(^{231}\) Nagara in district Kaira, Madhya Pradesh,\(^{232}\) Sanghol in district Ludhiana, Punjab\(^{233}\) and Harsh-Ka-Tila in district Kurukshetra, Haryana.\(^{234}\) The excavation at Rajghat in Varanasi revealed a sealing inscribed in Gupta characters with \textit{Baranasy-adhishthan-adhikaranaysa}, the seal of the city-administration of Banaras.\(^{235}\) It suggests that Banaras was an important urban centre during the Gupta and post-Gupta period

The terracotta figurines of both human and animal have been found from different area. These mainly include the bulls, rhinoceros, elephants, elephant riders, horses and horse riders. The excavations from Rajghat (Varanasi),\(^{236}\) Nagara in district Kaira, Madhya Pradesh,\(^{237}\) Patna\(^{238}\) Purana-Quila in New Delhi \(^{239}\) revealed terracotta figurines. The excavation at Mathura\(^{240}\) and Masaon in Uttar Pradesh revealed terracotta sealings and coins of the early
and late Gupta period.\textsuperscript{241} The excavations at Sanghol in district Ludhiana, Punjab,\textsuperscript{242} Agroha\textsuperscript{243} and Harsh-Ka-Tila in Haryana also revealed terracotta animal figurines bearing red polish, foot portion of terracotta human figure bearing red slip and rectangular colouring discs show that terracotta was an important urban craft.\textsuperscript{244} The excavation at Chandraketugarh in district, revealed terracotta plaques containing couples or mithunas,\textsuperscript{245} animals and erotic human figures of the early G.\textsuperscript{246} The excavation at Besnagar in district Vidisha, Madhya Pradesh, revealed a terracotta bottle-stopper, a silver coin, terracotta human and animal figurines, terracotta stamping pieces with multiple designs, terracotta and incised shell bangles, of the Gupta period.\textsuperscript{247}

Other important pottery products include earthen beads, ear studs and bangles used as ornaments by the poor section of the society. The excavations from Chandraketugarh,\textsuperscript{248} Besnagar in district Vidisha, Madhya Pradesh,\textsuperscript{249} Taradih in district Bodh-Gaya, Bihar\textsuperscript{250} and Gilaulikhera in district Morena, Madhya Pradesh revealed terracotta products used as ornaments.\textsuperscript{251} This shows that ceramic industry was one of the prominent industries of the Gupta and post-Gupta period. The ceramic industry provided livelihood to large number of population like potters, statue makers, bangle makers and sellers of these items. This industry served the interest of the poorer section of society, who could not afford precious ornaments, metallic statues and expensive pottery.

The epigraphic and literary sources also throw light on the production of oil, perfume and other cosmetic products in society. The existence of the guild of oil-men is referred to in Indor copper-plate inscription of Skandagupta, the year 146 (AD 465-66) shows the importance of oil industry.\textsuperscript{252} The literary sources refer to oil
made from different seeds. Amarismha in the *Amarakośa* refers to oil made from mustard seeds, both black and white sesame, linseed and ingudi.²⁵³ Bāṇa in the *Harṣacarita* mentions black aloes oil²⁵⁴ and *saralatailena* (pine-oil).²⁵⁵ There is a reference to the oil of Ingudi (*inguditaileya*) in Kālidāsa’s *Abhijñānasākuntala*²⁵⁶ and in *Dasākumārācarita* of Daṇḍin also.²⁵⁷ The cosmetics and perfumes were used both by men and women. The *Kāmasutra* refers to the art of preparing perfumes and odours.²⁵⁸ There are numerous references to the use of cosmetics by both sexes in the sources. The profession of perfumers is praised because it yielded handsome profit.²⁵⁹ Varāhamihira in *BṛhatSāmhitā* mentions perfumed hair-oils²⁶⁰ and mouth freshner.²⁶¹ He further refers to various kinds of perfumed hair-oil such as oil made from *campaka* flower, *smarodippana*, *gandhārṣa* and many delightful perfumes which were made from *harītaki*, *shaṅkha*, *ghana*, *bola* and *vālaka*.²⁶² He further refers to the mixture of sixteen ingredients which could make seventeen thousand four hundred and seventy two types of perfumes.²⁶³ There is a reference to the sandal-wood perfume in Mandasor stone inscription.²⁶⁴ In the *Priyadarsīka* of Harṣavardhan also there is a reference to the perfumes made from the lotus and *saptacchadas* flower.²⁶⁵

Fa-Hian mentions that, before opening the gate of the *vihāra* men used to wash their hands with perfumed water.²⁶⁶ Similarly there is a reference to the use of perfumes (*gandha*) of different kinds in the *Dasākumārācarita* of Daṇḍin.²⁶⁷ The *Harṣacarita* also refers to *ichor* which was a rich mixture of perfumes.²⁶⁸ Vatsyayana refers to the art of applying perfumed ointments to the body and of dressing the hair with unguents and perfumes. This shows that perfume was one of the important items of trade. There is mention of
sandal dye in Kālidasa’s *Kumārasambhavam*²⁶⁹ and sandal-juice in the *Mrichchhakaṇṭha* of Śudraka.²⁷⁰ The sandal was one of the most important beauty products in the Gupta and post-Gupta period.

The medicinal herbs were used in day to day life to cure diseases. Kauṭilya while referring to the forest products gives the list of bulbous roots and fruits used as medicines. The medicinal importance of sandal is clear from literary sources. According to Hiuen Tsang Kia-Shi-Mi-Lo or Kashmir produced fragrant turmeric and medicinal herbs.²⁷¹ Kiu-Lu-To or Kuluta, modern Kulu valley which was contiguous to the snowy mountains also produced medicinal roots.²⁷² Possibly these products were in demand both in India and other foreign countries.

The *Harṣacarita* refers to the ailing king who was provided pharmacopoeia of drugs.²⁷³ The text also mentions freezed butter-milk, a collyrium stick, camphor powder, lotus leaves, blue lotus stalks, red sugar, oats and barley-meal, paste of flour and curds, cooling herbs, myrobalans, citrons, grapes and pomegranates²⁷⁴ used for the treatment of the king.

The leather industry was another flourishing industry of the Gupta and post-Gupta period. Nārada referred to the unlimited interest on leather and leather products.²⁷⁵ Kauṭilya mentions the use of the skin of wild animals i.e. *gōḍha* (alligator), *sēraka, dvīpi* (leopard), *sīṃśumāra, simha* (lion), *vyāghra* (tiger), *hasti* (elephant), *mahisha* (buffalo), *chamara* (bos grunniens), *gōmrga* (bos gavaeus) and *gavaya* (the gayal) for producing different kind of leather goods.²⁷⁶

The leather industry provided employment not only to butchers, but also to leather workers and sellers. The *Amarakośa* mentions shoe-maker with his tools and leather products.²⁷⁷ The
leather workers are frequently referred to in the sources such as the *Harṣacarita*\(^{278}\) and the *Rājatarāṅgiṇī*.\(^{279}\) The *Mrichchhakaṭika* of Śūdraka refers to a *charmakāra* (shoe-maker).\(^{280}\) The *Dasakumāraka*\(^{281}\) refers to the leather sellers, who used to sell tiger-skins (*vyāghratvachā*) and leather bags (*hatikshacha*) in the markets.\(^{282}\) The skin of the bear and spotted leopards was mainly used for making leather quiver.\(^{283}\) The special kind of leather called *kārdaranga* and *samāraka* obtained from skin of the deer is mentioned in the *Harṣacarita* of Bāṇa.\(^{283}\) The people of Kia-Shi-Mi-Lo or Kashmir wore leather doublets they kept them warm in harsh cold weather.\(^{284}\) The Chammaka and Siwani copper plate inscriptions of Pravarasena II\(^{285}\) and the Poona and Riddapur copper-plates of Prabhāvatīgupta\(^{286}\) refer to the state’s right to reserve hides so that these were not misused. Thus the leather industry was the monopoly of state.

The shell work industry was another flourishing industry of this period. The shells were used as currency.\(^{287}\) The shell bangles and shell toys were commonly used by people in those times. The shell bangles have been found during excavations and explorations from number of sites. The excavation at Nagara in district Kaira, Madhya Pradesh,\(^{288}\) Broach\(^{289}\) and Purana Quila in New Delhi\(^{290}\) revealed a variety of decorated conch bangles. Recent excavations at Purana Quila in April 2014, revealed terracotta seals and stamped pottery of Gupta period.\(^{291}\)

The sugar making industry also flourished during this period. The cultivation of sugar-cane was encouraged which resulted in sugar making industry in the north India.\(^{292}\) There is a reference to the fields of sugarcane in the *Ritusamāḥāra*.\(^{293}\) The *Harṣacarita* mentions unbroken lines of the Puṇḍra sugarcane.\(^{294}\) According to
Hiuen-Tsang in Kiau-Shang-Mi or Kaushambi sugarcane was grown in plenty which resulted in increased sugar production.295

The wine industry was another important industry which flourished during the period. Liquor was produced and sold throughout the country. Kālidasa mentions sale and purchase of wine.296 The sources refer to variety of wine produced during the period. This included ratiphala, sidhusurasavmata298 and tāḍi (fermented juice) extracted from coconut.299 The wine made from coconut is also referred to in the Rājatarangini.300

The guilds were actively participating in the manufacturing and trading activities and catering to the needs of urban and rural residents. The skilled artisans were respected in society.301 The expert artisans and craftsmen were invited from far and wide. They were paid handsome amounts for the art activities undertaken by them. They are referred to as donors and bankers in the literary and archaeological sources of the period. The term like sreshthin as banker, sarthvāha as trader and kulīka as merchant shows organized business transactions.302 The references to the guilds of silk-weavers, oil men, florist, potters, leather workers, kanskāra and suvarnakāra further throw light on the corporate organisations of that period. The texts also refer to the partnerships in craft production and trade.303 The rules governing these nigams, sreshthins and śrenis have been laid down by Nārada and Brīhaspati.304 These texts do not give any indication of any crisis in them.305
Notes and References

1 Philip, M. Hauser and Leo, F. Schnore, eds., *The Study of Urbanization*, p. 3.


12 *Ibid.*, p. 188.


38 Ivan ibid., p. 48-49.

39 Ibid., pp. 134-35.

40 R.S.Pandit, Rājatarāṅgiṇī, The Saga of the Kings of Kāśmīr, Chap.IV, p. 133, Vatsyayana in Kāmasutra mentions that there are sixty-four arts to be studied such as singing, playing on musical instruments, dancing, writing and drawing, fixing stained glass into floor, the art of making beds etc.

42 Ibid., No. 5, pp. 80-85.

43 Samuel Beal, *Si-Yu-Ki Buddhist Records of the Western World*  
*Translated from the Chinese of Hiuen Tsang (A.D.629)*, Book IV, p. 198.


48 Ibid., p. 37.

49 Ibid., p. 65.

50 Ibid., p. 101.

51 Ibid., p. 116.


the guild of oilmen (tailikasārṇi) referred to in the Indor copper-plate inscription of Skandagupta the year 146 (AD 465-66) in J.F.Fleet, CII, No. 16, pp. 71.


Nita Verma, Society and Economy in Ancient India an Epigraphic study of the Maitrakas (c. A.D. 475-775), pp. 84-85.

P.C.Prasad, Foreign Trade and Commerce in Ancient India, p. 74.


69 Ibid.

70 Ibid., p. 91.


73 E.B.Cowell and F.W.Thomas, *op. cit.*, p. 44.

74 Ibid., pp. 59 and 125.


76 J.Brijbhusan, *Costumes and Textiles*, p. 77.


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Thomas Watters, *op. cit.*, Chap.IX, p. 301.


_Ibid._, p. 283.
91 J.Jolly, *op. cit.*, Chap. III, p.27.


94 J.Jolly, *op. cit.*, p. 27.


99 M.Ramakrishna Bhat, *Varāhamihira’s Brhat Saṃhitā with English Translation, Notes and Literary Comments*, Notes, XIII 33; Notes, XV, p. 7.


102 Samuel Beal, *op. cit.*, Book IV, p. 177.


105 Ibid.

106 Ibid.

107 Ibid., p. 100.


117 *ASI. AR*, 1911-12, p. 92.
Samuel Beal, *op. cit.*, Book IV, p. 177.


The excavation at Besnagar district, Vidisha, Madhya Pradesh, revealed a silver coin of high intrinsic value and aesthetic quality, *IAR*, 1963-64, pp. 16-17.

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136 *ASI. AR*, 1911-12, pp. 91-92.


139 Samuel Beal, *op. cit.*, Book IV, p. 177.


141 *IAR*, 1957-58, p. 51.


Samuel Beal, *op. cit.*, Chap.XVII, p. 68.


Images of Achchhugupta belonging to the first half of the seventh century AD are quite rare both in metal and stone. These metal images are important example of the depiction of the Maha vidya in the early medieval Jaina art of India, *Ibid.*, pp. 29-30.


M.Ramakrishna Bhat, *op. cit.*, Part II, LXXX, p. 738.


*Ibid*.

Bombay Gazetteer I, Part I, p. 78.


Gupta period have been found from Chandraketugarh in West Bengal, *Ibid.*, 1959-60, p. 51.


184 *IAR*, 1990-91, p. 23.


186 Samuel Beal, *op cit*, Book XIII, p. 44: Fa-Hian further gives reference to the staff made of sandal-wood of the kind called gōsīrchandaṇa.


193 J.Jolly, *op. cit.*, p. 27.


198 V.S.Agrawal, *op. cit.*, p. 36.


208 G.K.Nariman, A.V.Williams Jackson and Charles J.Ogden, eds.,

*Priyadarśika A Sanskrit Drama by Harṣa*, Chap. IV, p. 77.

209 *IAR*, 1911-12, p. 48.

210 *Ibid*.


216 *IAR*, 1960-61, p. 10.


219 Ibid., 1979-80, p. 31.
220 Ibid., 1994-95, p. 70.
221 Ibid., 1988-89, p. 22.
222 Ibid., 1957-58, p. 51.
223 Ibid., 1959-60, p. 51.
225 Ibid., 1964-65, p. 43.
227 Ibid., 1988-89, p. 91.
228 Ibid., 1986-87, p. 76.
230 Ibid., 1988-89, p. 22.
231 Ibid., 1953-54, p. 10.
232 Ibid., 1964-65, p. 11.
233 Ibid., 1969-70, pp. 31-32.
234 Ibid., 1988-89, p. 22.
235 Ibid., 1957-58, p. 50.
Recent excavations at Purana Quila also revealed terracotta seals, stamped pottery and brick structures of the Gupta period.


256 C.R.Devadhar, *op. cit.*, pp. 54-55.


259 Motichnadra, *Trade and Trade Routes in Ancient India*, p. 175.


266 Samuel Beal, *op. cit.*, Chap.XIII, p. 41.


269 S.R.Sehgal, *op. cit.*, Chap.VIII, p. 82.


275 J.Jolly, *op. cit.*, p. 27.


279 R.S.Pandit, *op. cit.*, Chap. IV, 55, p. 121.


288 *IAR*, 1964-65, p. 11.


P.De Lacy Johnstone, *op. cit.*, Chap. IV, 42.

R.S.Pandit, *op. cit.*, Chap.IV, 55, p. 121; Interest on the

substances from which wine was extracted was unlimited (*akshaya*)

as referred to by Nārada in J.Jolly, *op. cit.*, p. 27.


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S.K.Maity, *op. cit.*, p. 158

Upinder Singh, *op.cit.*, p. 501