CHAPTER THREE

ECONOMIC BACKGROUND OF MAHĀYĀNA BUDDHISM

The period from the post Maurya to Gupta ages, is known for round development of Indian economy. It could be seen in terms of cities teaming with industries, handcrafts, and commerces and numerous agricultural settlements in the countryside. Mahāyāna Buddhism emerged and grew in India in this economic background of the period. It was a favourable age for its propagation inland as well as outside India.

(1) Agriculture

Agriculture consisted of both cultivation of crops and breeding of animals.

Cultivation: The cultivations of wet paddy, wheat and barley were produced at mass a large scale in the plains such as the plains of Indus and its tributaries; the areas of Punjab, Uttar Pradesh and Rajasthan; the plains of Godavari river; and the plains of Krishna river in south India. Specially the Gangetic basin blessed with perennial flow of water in the river Ganges as well as abundant amount of rains.¹ This area was suitable for cultivation of wet paddy.

R.S. Sharma² holds that: the sandy and loamy soil of these plains helped peasants to produce sufficient surplus not only for their own needs but also to meet the needs of the people living in towns and engaged in trade and commerce. Although, the soil was fertile yet rice was just sufficient for the needs in the country. There was not surplus that served for trade and urbanization. As a result, there is not any impressive godowns or grain storehouse to be documented in the excavations or in the literature. It seems the urban centers depended on the seasonal supply of rice and in cases of scarcity, villages and the common masses had to bear the brunt.

The main products of agriculture, during the period of study, were rice, wheat, barley and some kinds of pulses that were planted across India; pepper, musk, and saffron were major items of export. Romila Thapar³ states that the exchange of pepper brought back many golden and silver coins from Roma. The cultivation of cotton in the

¹ KTHB, p. 3.
² RPSEH, p. 154.
³ RPHEI, p. 232.
neighbourhood of *Benares* served for the inland weaving industries and export. Sugarcane and coconut were also important products served for industries. Millet was planted popularly in the south plains where the climate is drier and soil is not fertile.

Equipped with the iron ploughshare and implements in large quantities, intensive cultivation of fields was done. R.S. Sharma⁴ maintains that fields were ploughed twice or thrice and the peasants divided their lands according to crops.

A significant development in cultivation was the beginning of transplantation of wet paddy. From the later *Vedic* time, paddy was only planted directly as a rainy season crop that ripened in 90 days. The peasants did not know the use of agricultural technique for their transplantation. Again, the periodical droughts and floods caused scarcity that not only ate away the surplus but also caused famine conditions, making the accumulation of surplus impossible. The producer, therefore, suffered more than the privileged consumers in the city who had enough money to buy food from producers from distant areas where conditions have not been adverse.

It is said that, after the time of *Mauryas*, agriculture became the main form of productive labour. The ancient Indians were skilled cultivators. They were well-versed assessing the nature and properties of the various soils. In areas with the more fertile soil, cultivators succeeded in reaping two or even three crops in one year. Paddy was perhaps, main product during the period of study.

G. Kotavsky⁵ shows that rice grains were found in the layers of earth related to the *Maurya* period when archeologist excavated the settlements in Northern and Central India. In *PÈli* Buddhist texts⁶, there are numerous references to good harvest of rice in *Magadha*. According to D.N. Jha⁷, the fertility of the soil in *GangÈ* valley and the large plains in the south led to the rise of a new class of rich peasant proprietors in the post *Mauryian* era. These rich peasants were in a position to pay taxes and thus contributed to the growth of the state revenue system.

---

⁴ RPSEH, p. 162.
⁵ KHI, p. 84.
⁶ Ibid.
⁷ DAI, p. 50.
Parallel with equipment of iron implements for agriculture, the system of irrigation was established by the state. D.N. Jha\(^8\) also states that Pushyagupta, one of the governors of Chandragupta had built a dam across a river near Girnar in Saurashtra. The most famous ruler Rudradēnam in the year 150 A.D. also constructed the Sudarsana lake in the Saurashtra.\(^9\) Khēravela also had an extension of irrigation canal in Kalinga that was originally dug by a Nanda king.\(^10\) Many tanks seem to have been constructed by Saka and Kusēna chiefs in North-western India, ring wells and lakes were also dug by individuals in Uttar Pradesh to ensure regular supply of water for cultivation.\(^11\) Besides, making use of advance knowledge of agriculture, the supervisor of water had often the sensible distribution and measurement of water for irrigation and inspected sluices by which water is distributed into the branch channels, so that everybody might enjoy his fair share of the benefit. Kautilya\(^12\) states that irrigation cess amounted to one fifth, one fourth or one third of the produce of irrigated soil, especially in western Uttar Pradesh and Punjab where a regular supply of water could ensure normal yield of crops. Perhaps canals were not much in use. For comparatively small holdings in the time of Guptas irrigation by wells or tanks was considered enough for cultivation.

Water was an important factor in the cultivation, soil was ploughed only when it had a sufficient quantity of humidity in it because without humidity seeds simply would not germinate. A peasant ploughed his land for rice cultivation only if a sufficient supply of water was available throughout the season and the soil was quite wet and soft at the time of the ploughing. Moreover, before rice saplings were planted, the land was thoroughly kneaded with a heavy wooden plank and this process was most important part of wet rice cultivation and other farm products. It is noticed that the peasants understood the vast potentiality of using manure. They used cow dung or other cattle dung for manuring their fields.

Instead of passively exploiting the existing land, the peasants extended their lands by clearing forests and bringing more area under cultivation, resulting in an increase in the number and size of agricultural holdings. Slaves and forced labour, probably, were

\(^{8}\) Ibid., p. 60.  
\(^{9}\) Ibid.  
\(^{10}\) Ibid., p. 76.  
\(^{11}\) Ibid.  
\(^{12}\) RPSEH, pp. 170-1.
used for this purpose. The extension of arable land by clearing wood land was permitted by *Manu*. He opined that the king could injure trees that bear fruits or flowers in order to extend cultivation and to perform sacrifices.\(^\text{13}\)

As above, the clearance of forests was first performed by the state or the communities of peasants and later on the state efforts had been replaced by individual efforts. Person, who brought land under use, was called the owner of land. The *Millindapanhan*\(^+\) refers to the individual who clears forest and take other steps for making the land fit for cultivation.

Most of the scholars highlight the clearance of forest for extensive cultivation. However, Prof. K.T.S. Sarao\(^\text{14}\) undervalues these efforts. According to him, all the lands surely could not have been covered by forests. He gives an instance that in *Kanpur* district not more than 3% of the cultivable land was actually needed for cultivation during the period of study and most of cultivable land available had soft alluvial soils along the rivers and lakes and other open areas in the forests. He also affirms that the population of the period largely depended on hunting and various types of wild growth. It is a moot point whether there was any serious need for clearing forest land on a large scale for the purpose of cultivation. By these evidences, he comes to conclusion that there was no need to have clearance of forests for extension of cultivated land in ancient India.\(^\text{15}\) Prof K.T.S. Sarao’s position could be appreciated only in case southern plains where rains are scant; climate drier; and big trees not noticeable, whereas the *Gange* plains where climate was wet, abundant amount of rains making jungles rapidly developed. Thus the spurt in agrarian expansion, the peasants of *Gange* plains must have the clearance of jungles.

Beside the clearance of forests, burning forests were also done for this purpose. This evidence is found in the comment by Abhayasêri to a passage of a *Jain* canonical text.\(^\text{16}\) Another book of *Brahmanism* also gives some clue to the material basis of this

---


\(^{14}\) KONB, p. 63.

\(^{15}\) *Ibid*.

\(^{16}\) RPSEH, p. 162.
expansion. The *Satapatha Brahmana*\(^\text{17}\) states that Videgha Mahêva went on burning the forests till he reached *SadênIra* in *North Bihar*.

Burning forests could not be done on a considerable scale if the use of iron axe had been not supplemented for cutting trees, large scale clearing of land by the state and by communities of peasant and the cultivation of the crown land under the direct supervision of its officers led to an unprecedented growth of settled agriculture, especially in the *Gangetic* valley and the plains of South India. These areas provided enough surplus to cater needs of the people.

When jungles were cleared, the state carried out its management over these areas and founded new settlements, simultaneously sought to rehabilitate the decaying ones by drafting surplus population from overpopulated regions. During the period of study, land was granted not only ordinary peasants but to the *sêdras* also. The *sêdras* were encouraged to settle in the settlements and they were granted lands. But the land thus granted could not be sold, mortgaged or inherited. If the cultivators failed to cultivate the plots allotted to them, the land was transferred to others for cultivation.

In order to bring virgin soil under cultivation, the cultivators were allowed remissions of taxes and other concessions in procuring cattle, seeds and loans and cultivators would repay debts when they had a life of plenty. D.N. Jha\(^\text{18}\) also affirms that during the *Maurya* period, a section of *sêdras*, who were hitherto agricultural labourers, were settled with land in the newly colonized areas. They also engaged as sharecroppers on crown lands. Forced labour was imposed on them on a much larger scale than in the earlier period.

The land grant in India did not start in the first century A.D. as some inscriptive evidences show, it rather, actually started during the reign of *Mauryas*, the third century B.C. And the land was also granted to *Brahmanas* and Buddhist monks in the reigns of SÊtavÊhanas, KusÊnas, and Guptas from the first century to the sixth century A.D.


\(^{18}\) DAI, p. 64.
According to D.N. Jha\textsuperscript{19}, in the first century A.D., the S[tavÈ]hana started the practice of donating land in the western Deccan with fiscal and administrative immunities to Brahmanas and Buddhist monks which eventually weakened their central authority. Initially such grants were accompanied by exemption from the payment of taxes, but gradually the S[tavÈ]hanas seem to have also surrendered administrative rights to the donees. In a record of second century A.D.\textsuperscript{20}, the S[tavÈ]hana ruler, Gautamiputra Shatakarni, is said to have instructed the royal officials not to interfere with the administration of the donated fields or villages. In such a situation, the beneficiaries were left free to manage all affairs related the donated lands. Thus gifted villages became semi-independent administrative pockets. It led to erosion of royal control over the countryside. Land grants were ostensibly made on religious grounds but the underlying idea of donating land was to extend the area of cultivation through private efforts.

The land grants to priests continued during the time of KusÈnas. An inscription of the second century A.D.\textsuperscript{21} says that a village was offered to Brahmanas. R.S. Sharma\textsuperscript{22} holds that there is no record of land grant to Buddhist monks under the reign of Kaniska and his several successors though they were enthusiastic champions of Buddhism. In the age of Guptas, the land was also granted to people in Northern and Eastern Bengal and in the Eastern part of modern Madhya Pradesh. The Bengal grants were results of sale transactions effected by individuals and involved the transfer of plots of land. But the central India grants were made by feudatories who gave away villages. Beside land grants to people, the Gupta rulers offered gifts of land to Brahmana and Buddhist monks. Gradually the cultivated lands in GangÈ basin, Gujarat and Maharashtra were the objects of gift.\textsuperscript{23} The lands granted to individuals could be purchased or mortgaged whereas there is no evidence of purchase of religious lands for secular purpose. Monks and lay worshippers could freely dispose of their lands only for

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{19} \textit{Ibid.}, p. 80.
\item \textsuperscript{20} RPSEH, p. 162.
\item \textsuperscript{21} \textit{Ibid.}
\item \textsuperscript{22} \textit{Ibid.}
\item \textsuperscript{23} \textit{Ibid.}, p. 188.
\end{itemize}
\end{footnotesize}
religious purpose. Fa Hien\textsuperscript{24} states that monasteries and temples were granted fields and gardens with husbandmen and cattle to cultivate them.

It could be inferred from above evidences that the life of mendicant monks during the periods from the first century to the sixth century A.D. was not exalted. It was only praised in the time of the Buddha up to the end of the third century B.C. The urban economy required a settled life of monks. Each monastery was granted lands with husbandmen and cattle to cultivate them. The Buddhist monks of those days were allowed to possess gold, silver, money; to do cooking in monastery; take three meals in a day, etc. Their keeping money and other properties was not for luxurious lives but for a vital needs of Buddhism in the age of a developed commodity economy. Such developments led to disappearance of Therav\text{"}da from India later on.

\textbf{Agricultural tax}

The agricultural tax was also an important feature of rural economy. The major portion of land continued to be in possession of free peasants who paid revenues directly to the state. According to \textit{Arthashastra}, agricultural tax seems to have been levied at the rate of 1/6\textsuperscript{th} of the produce. The Greek accounts suggest the rate as 1/4\textsuperscript{th}. In addition to the principal land taxes, water cess was also levied.\textsuperscript{25} Share-cropping also contributed substantial income to the state. The peasants had often to pay tax that was assessed on groups of villages.\textsuperscript{26} In the post Maurya period, the local officials gradually started assuming economic power through excessive exploitation of people. Besides having to pay a fixed portion of their produce as regular revenues to the state, the peasants were subjected to various impositions such as frontier tax, tribute to the divisional officers and cash payment. Moreover, the villagers had to make not only various kinds of contribution to royal troops and officials but also they had to offer the gifts of affection to Brahmanas in any religious ceremony. \textit{V\mathcal{E}tsy\mathcal{E}y\mathcal{Ena}}\textsuperscript{27} informs that, during that period, the peasant women were compelled to fill up the granaries of the village headman, taking things into or out of his house, cleansing or decorating his residence, working in his

\textsuperscript{24} \textit{Ibid.}
\textsuperscript{25} DAI, p. 62.
\textsuperscript{26} \textit{Ibid.}
\textsuperscript{27} RPSEH, p. 193.
fields and spinning yarn of cotton, wool, flax or hemp for his clothes, etc. Their measure of collecting tax is said to be extremely heartless. D.N. Jha\textsuperscript{28} states that the state treasury was replenished by some oppressive taxation measures. According to him, the collection of tax from people either by beating and binding or dispossessing them of their earnings. Although the details of tax collecting machinery are not known. Jha holds that the Nanda king of \textit{Magadha} who amassed wealth by raising taxes from people.\textsuperscript{29} Moreover, the feudal land-owners collected grain from peasants which enabled them to live comfortably.\textsuperscript{30}

Thus, the more agricultural economy developed, the more feudal mandarindomes and landowners exploited peasants, who lived a life of bitterness, poverty and hardship.

\textbf{Breeding animals}

Cattle breeding was one of the important agricultural activities in ancient India. It is said that cultivation and breeding always go together in leading to social surplus, a precondition for commerce and urbanization. When agriculture is always dependent natural, breeding remains a more assured means of peasant’s livelihood. Cattle formed their wealth as well as a basis for a developed socio-economic life.

All historians agree that when the early \textit{Aryans} settled down in India, they settled as agriculturists and they appreciated the importance of cattle. Their initial works were to domesticate animals and feed them for use in cultivation and as foodstuff. The domesticated birds and animals such as fowl, duck, goose, goat, pig, sheep, etc were maintained for meat and family sacrifices. Oxen and buffaloes were used for ploughing and transportation. Horses could be used for ploughing but they were not fit to draw ploughs in muddy soil, this probably rendered them unfit for Indian agriculture and oxen took their place.

\textsuperscript{28} DAI, p. 50.  
\textsuperscript{29} \textit{Ibid.}  
\textsuperscript{30} RPSEH, p. 166.
R.S. Sharma\textsuperscript{31} refers to the yoking of six, eight, twelve and even twenty four oxen for the ploughing, indicating deep ploughing.

This practice might have been there during the times of Mauryas, Kusâ€”na and Sâ€”tavâ€”hanas when many large state farms existed. The smaller plots in the time of Guptas certainly could not use the plough driven by many oxen like that. Elephants and horses were also used in wars. It is said that the chiefs of ancient Indian kingdoms often fought wars in order to annex more territories. Horses and elephants were used in wars. It is a well documented fact that in the Mauryas time, the victory in battles depended on strength of elephants. So several elephant forests were preserved and their killing was prohibited. Moreover, elephants were used to bring timbers from deep mountains that man could not do. In ancient India, elephants and other cattle used for barter. D.N. Jha\textsuperscript{32} states that Chandragupta, the founder of Maurya dynasty, made a gift of 500 elephants to the Greek general and attained the territory across the Indus. Oxen and mules were caravan animals, though in the desert camels were used. Transportation in rough hill terrains or in alleys, asses were the most serviceable animals.\textsuperscript{33}

The other purpose of breeding was for food and religious sacrifices. The horse sacrifice finds mention in the BrhadÊranyaka UpaniÊad.\textsuperscript{34} However, it happened rarely in comparison to the sacrifices of other cattle.\textsuperscript{35} It is interesting to say that in Vedic time people had not objection to eating beef\textsuperscript{36} and in the Epic literature time, beef and buffalo meats were freely used by people.\textsuperscript{37} The prohibition of beef eating might have happened in the time of Guptas in the sixth century A.D., after the composition of eighteen PurÊnas.\textsuperscript{38} D.N. Jha\textsuperscript{39} informs that after revival of Hinduism in the age of Guptas, the vegetarianism finds mention.

\textsuperscript{31} Ibid., p. 155.
\textsuperscript{32} DAI, p. 28.
\textsuperscript{33} RPHEI, p. 235.
\textsuperscript{34} RPU, p. 149.
\textsuperscript{35} DCCAI, p. 102.
\textsuperscript{36} Ibid.
\textsuperscript{37} RPHEI, p. 235.
\textsuperscript{38} DAI, pp. 112-5.
\textsuperscript{39} Ibid.
In the post Mauryian era, cattle raising became the chief occupation of people and thus village economy was established. Apart from treatment of animals, some information on animal husbandry is also available. In *Agni Purâna*, an event is found where kings were envisaged to preserve the cattle of the country. The *Arthashastra* mentions a government officer called superintendent of cattle whose exclusive duties were to supervise livestock in the country. The superintendent was expected to maintain cattle census and classification of them was done according to their sex and abilities.

In ancient India, every village is said to have its own pasture land, common rights over pasture was recognized by the state. Uncultivated lands were developed into pastures or cultivated lands were available for grazing after crops had been harvested. The weeds, plants, stumps of crops and grass constituted fodder. The cultivation of fodder crops and their conversion into silage was known to the ancient Indians. In the *Arthasastra*, it is reported that yield of milk and butter depends on the nature of feed, soil and quality of fodder. The manner in which the stock was fed is very important. And this work also says of the professional herdsmen who took animals for grazing in the morning and brought them back in the evening. In the case of death of an animal, the herdsmen should surrender to the owner the skin, horns, bones, etc of the dead animal. According to *Manu*, for maintaining 100 cows, one heifer per year shall be given to herdsmen as wages and for maintaining 200 milch cows, he shall be allowed to milk all of them once every 8 days as wages.

As known, the introduction of iron into agriculture led to the development of more efficient plough cultivation that was mainly dependent on animal husbandry. The newly developed feature of the social and economic life of the people did not fit with the *Vedic* ritualism and animal sacrifices that killed a large portion of animals, the main driving force of the new plough agriculture. By this reason, two religions, *Jainism* and *Mahāyāna* opposed the *Vedic* sacrifices. Simultaneously, *Mahāyānists* not only preached the doctrine of *ahimsā* but also denied the role of God in the creation of the world. The concept of *ahimsā* popularized for the first time, helped the ancient agriculture to develop. But undue emphasis on *ahimsā* in the doctrine of *Jainism* made the agriculturists to lose their hearts because their profession necessarily kills insects and pests. Unlike the *Upaniṣad*, *Jainism* preached that the purification of soul can not be achieved through knowledge but only
through a long course of fasting, rigorous practice of *ahimsÈ*...\(^{40}\) D.N. Jha\(^ {41}\) states that the *Jainas* practised the doctrine of *ahimsÈ* absurdly. Even an unconscious killing of an ant at the time of walking was also considered sinful. They would not drink water without straining it for fear of killing an insect. They also wore a muslin mask covering the mouth not only for hygiene but also to save life floating in the air. So MahÈvira’s idea was hardly accepted by peasants, artisans and craftsmen whose occupations endangered the life of other creatures. In order to avoid killing, the *Jainas* specialized in the traffic of manufactured goods and confined themselves to financial transactions. This is the reason why *Jainism* came to be increasingly associated with the spread of urban culture and maritime trade. Their gathering in Indian western coast in view of foreign trade facilities supports the contention.

Unlike *Jainism*, *MahÈvÈnism* moderated in its emphasis on the doctrine of *ahimsÈ*. Though it advised its followers to practise non-killing but its stress on the non-killing of the cattle was deliberate. D.D. Kosambi\(^ {42}\) extracts a good passage from *Sutta NipÈta* that: “Cattle are our friends, just like parents and other relatives, for cultivation depends upon them...”

From the quoted passage above, Buddhism sees clearly the importance of cattle in ancient Indian agriculture and the fate of peasantry depended on them.

**(2) Industries**

Industry, during the period of study, consisted of both the heavy and light ones. The former included metallurgical industries and the latter belonged to the weaving, spinning, etc.

**Metallurgical industry**

Metallurgical industry played an important role in the national economy. Iron, copper, bronze, tin, lead, silver and gold, etc were the major raw materials of

\(^{40}\) Ibid., p. 34.

\(^{41}\) Ibid.

\(^{42}\) DCCAI, p. 103.
metallurgical industries producing tools and implements of agriculture; household appliances; weapons of war; ornaments; images of god; and coins. Literary sources suggest different craftsmen in each of these metals, as iron smith is mentioned in the Angavijja\textsuperscript{43}, copper and bronze-smiths in the Milindapanho\textsuperscript{44} and gold-smith in the Saundaranand.\textsuperscript{45} Although the archaeological evidence for metal work is not very encouraging, as most of the material remains have been corroded by devastation of time. Whatever metal objects which have survived and found, suggest undoubtedly a advanced metallurgical technology in the post Maurya period.

Among metals, iron was considered as the most important one and the widespread use of iron made a significant contribution in the Indian economy. The technical advance of iron led to the extensive cultivation in agriculture; the urbanization; the developments of trade and commerce. The enhanced knowledge in technology of iron smelting for manufacturing of agricultural and non-agricultural instruments and devices contributed a lot in the growth of Indian economy. Iron slags and lumps of KusÉna levels have been discovered from Hatt excavations.\textsuperscript{46} A furnace for smelting metal has been excavated in the Deccan at Kodumanal in the south was a centre for the production of iron artifacts.\textsuperscript{47} Moreover, a reference has already been made to the iron pillar of Chandragupta age (400 CAD) that is standing near Kutab Minar, South Delhi. That iron pillar is 7m high and weighing 6 tones that is a historical relic testifying to the metallurgical art of ancient India. The technical knowledge in iron working had reached its high watermark in the period. A factor that transformed the economic life around 100 B.C. onwards was the use of iron on a wide scale than in the preceding period. D.N. Jha\textsuperscript{48} states the diffusion of the new technology was facilitated by the use of bellows that made possible the production of iron tools and implements on a large scale. Iron ploughshare necessary for the deep ploughing might have come into wide use and the fields were ploughed twice or thrice thereby increasing the agriculture output manifold. The iron objects such as ploughshares, adzes, hooks, anvils, hammers, arrow heads, caltrops, spears, swords, daggers, knives, spades, etc during the times of KusÉnas and

\textsuperscript{43} AIA, p. 163. 
\textsuperscript{44} MLP, V, p. 210. 
\textsuperscript{45} JSA.XV, pp. 68-9. 
\textsuperscript{46} Housed in M.D.U., Rohtak (archaeological museum) 
\textsuperscript{47} RPHEI, p. 230. 
\textsuperscript{48} DAI, p. 28.
SÈtavÈhanas had been found at Kosambi, Prahladpur, Banares, Khairadih, and Mason (all in eastern Uttar Pradesh)\(^{49}\) and in Chirand, Vaisali, Patna, Sonpur and CampÈ (all in Bihar)\(^{50}\) NÈsika, Taxila, Sirkap, Maski (North India)\(^{51}\), AmaravatÌ, Mysore (South India)\(^{52}\), etc. Even in urban settlements, a good number of such tools have been discovered. Many iron tools consisting of axes, adzes, knives, sickles, etc belonged to the early layers of the NBPW phase (North black painted ware) have been found at Kosambi and contemporaneous to the phase axes have been found at Sonpur in Gaya district. A ploughshare belonged to the second period of the PGW phase (painted Gray ware) has been reported from Jakhera in Eta district in western U.P., it may well have belonged to the middle of the first millennium B.C., etc. R.S. Sharma\(^{53}\) holds that the use of iron tools and implements in large quantities hastened the process of clearance of jungles in Eastern Uttar Pradesh and in Bihar. And, according to him, the advance of iron technology was the contribution of the builders who carved images of lions on the stone pillars or designs in royal palaces and inscriptions.\(^{54}\) Besides iron objects, copper, steel, lead, braze, etc were also used for manufacturing of tools used in agriculture, households, worshipping, etc. Ores of these metals were excavated at many places in India. Copper was found in Taxila, Mathura, Dhalbhum, Singbhuni (Magadha), SÈvatthi, AmaravatÌ, Mysore. Lead has been found at Manbhum, Singbhumi, Patna, etc.

Various copper objects of the time of SÈtavÈhanas and KuśÈnas have been found at many sites. These objects include household objects, weapon, statues, ornaments, tools and coins. Copper bowls, dishes, one-handled jugs, etc have been found at NevÈsa and Kolhapur. All these objects belonged to the SÈtavÈhana period.\(^{55}\) Besides, bowls, cups and handled jugs have been found at SirkÈp in Taxila show the use of copper vessels during KuśÈna period. Two hanging lamps belonged to the time of SÈtavÈhanas found at Brahmampuri and AmarÈvati.\(^{56}\)

\(^{49}\) RPSEH, pp. 160-1.  
\(^{50}\) Ibid.  
\(^{51}\) Ibid.  
\(^{52}\) DCCAI, pp. 98-9.  
\(^{53}\) RPSEH, pp. 160-2.  
\(^{54}\) Ibid.  
\(^{55}\) MT, pp. 590-1.  
\(^{56}\) SAS, p. 142.
Steel was also an important metal in India; it is generally accepted that steel exploitations in India commenced around 300 B.C. The steel products were swords that were used in wars. It is claimed the famous ‘wootz’ steel from which Demascus swords were made, was originally from south India.

The manufacture of bronze articles that became more abundant from the time of Kusânas onwards. Bronze vessels found at Bhirmound in Taxila, Nevasa, Kolhâpur and Sirkap show the use of bronze vessels in Sêtavêhanas and Kusanas periods. Bronze bangles were found in Nêgdê and Taxila. A fish hook belonged to the time of Sêtavêhana found in Maheswar. That shows fishery to develop in the time of Sêtavêhana period. Besides, a variety of brass, zinc, antimony and red arsenic belonged to the times from the first to the fourth century A.D. were mentioned. These all betokens considerable advance and specialization in the working of metal.

Gold was not popular before the time of Vima Kadphises. He, first time in Indian history, issued gold coins. After Vima, Kusânas minted coins basically in gold and copper. Archaeological evidence testifies that the gold mines in Dhalbhum, Chotanagpur and Mysore were worked from the time of Maurya and they were exploited in large quantity during the time of Kusânas onwards. The literary sources in the time of study were full of references to golden ornaments, miscellaneous and proficient gold-smiths but they seldom mention silver. The Saundarananda refers to the working in gold by gold-smiths in fire and manufacturing different types of ornaments. An evidence comes from Pênim that the work of gold-smiths who had to perform the threefold work, i.e. making ornaments from gold and silver, melting old ornaments to make new ones and the work of polishing. The Kusâna inscription refers to both gold and diamond.
The gold objects were found at many places in ancient India. Necklaces of gold of Kusânas period have been discovered at Sirkap and Bhirmound (Taxila). The art of making gold subjects in the time of Kusâna reached a high standard. Apart necklaces, many finger rings, ear rings at Kusâna period were found in Taxila and Peddâmudiyam.\textsuperscript{66}

The excavations at Sirkâp in Taxila found silver bowls dishes of Kusâna period and wine pots of the Sâtavâhana age. Apart from that, many ear rings, bangles, anklets made by silver belonged to the time of Kusâna were found at Taxila.\textsuperscript{67} The silver mines in Punjab, Haryâna, and Rajasthan in Kusâna territory in North West India were able to produce ample silver.\textsuperscript{68} Hence silver was used in large scale in the Kusâna period. Tin was obtained from alluvial deposits in Punjab and Aravalli regions.\textsuperscript{69} The tin objects belonged Kusâna – Sâtavâhana ages were not found at any place. Perhaps the use of tin at the time was not in large scale.

Light Industry

The light industry consisted of weaving industry and others were popular during the period of study.

The Weaving Industry

The spinning and weaving of cotton and silk involved various regional techniques. Romila Thapar\textsuperscript{70} states that the technique of weaving, dying, and stitching reached high levels during the times of Kusâna and Sâtavâhana. The cotton cloth has been as fine as the slough of a snake. Besides the use of the cotton carder’s sow, an implement, which was still in use in many places, improved to quality of cotton. Along with typical mode of Indian weaving, the new modes of weaving that came from central Asia, Iran and China were also introduced and that impacted ancient Indian weaving industry significantly.\textsuperscript{71}

\textsuperscript{66} MT, p. 634.
\textsuperscript{67} Ibid.
\textsuperscript{68} SEG, p. 53.
\textsuperscript{69} RPSEH, p. 176.
\textsuperscript{70} RPHEI, p. 235.
\textsuperscript{71} Ibid.
Archaeological evidences prove the advance of weaving industry of the period. Marshall J.\textsuperscript{72} holds that besides a number of spindle whorls from the times of Kusàna – Sàtavàhana were found at Saikan Dheri, Taxila and Hastinàpur which throw light on the tools used for spinning and some reels that probably been used for reeling yarn. On the other hand, inscriptions and literary records also mention weavers, dyers and special techniques applied. An inscription from Mathura records that Mathura had acquired special celebrity for its manufacture of Sataka, a special kind of cloth and the weavers probably owed their affluence to trade in textiles produced in Mathura.\textsuperscript{73} Patanjali also testifies to the special celebrity attained by Mathura in the manufacture of textiles, especially Sataka, a kind of cloth.\textsuperscript{74}

Dyeing was a thriving craft in some towns in south India. A brick built dyeing vast had been discovered at Uraiyur, a suburb of Tiruchirapalli town in Tamil Nandu.\textsuperscript{75} Similar dyeing vasts were excavated at Arikamedu.\textsuperscript{76} These structures belonged to 1\textsuperscript{st}-3\textsuperscript{rd} centuries A.D., during which handlum textile industry flourished in these towns. Besides, a large number of available terra-cottas, sculptures described the complicated clothes and their modes that show the highly developed textile activities.

Similarly some shreds of pottery of Kusàna period with internal textile designs were found at Rajasthan during excavations. They symbolized to various textile types that were in fashion in Rajasthan during the time of Kusànas. The inscriptions found at central and western India show that in central and western India the crafts of silk weavers flourished well for they were organized in guilds.\textsuperscript{77} The guild of weavers was also recorded in a NÊsik inscription.\textsuperscript{78}

The materials used for the weaving industry were perhaps cotton, linen, jute, wool, and hemp.\textsuperscript{79} The weaving industries worked in urban centres such as Benares, Kutumbara, AprÊnta, Ariaka, Kalinga, Masuliputtam (Andhra Pradesh), Ujjain, TÊgrÊê,

\textsuperscript{72} MT, Vol. II, p. 502.
\textsuperscript{73} RPSEH, p. 183.
\textsuperscript{74} DAI, p. 83.
\textsuperscript{75} RPSEH, p. 183.
\textsuperscript{76} Ibid.
\textsuperscript{77} Ibid., p. 196.
\textsuperscript{78} Ibid., p. 183.
\textsuperscript{79} ASE, p. 75.
Dêcca, Gujarat. Among these cities, Benares, where Kasi cloth was manufactured, was well known. Muslins that attracted Roma traders, and the clothes of various kinds and texture are also mentioned in the Milindapanh.  

R.S. Sharma states that there were nine kinds of clothes used during the periods of Kusânas and SêtavÉhanas. These cloth were Kalingam, Gangetic, Monachi, Sagmatogene, Molochini, ArgÈritic, MÈsuliputtam, Masalia and Sataka. Kalingam was the cloth that was woven by NÈga tribes of Kalinga country. Gangetic, the finest muslin manufactured in Dacca district. Manachi, the best sort of cotton cloth, produced in Gujarat. Sagmatogene, coarse cotton used for stuffing and padding and produced in GujarÈt. Molochini, coarse mellow coloured dyed cloth produced in Gujarat, Ujjain, and TÈgrÈ. ArgÈritic, muslin, produced in Tiruchirapalli and Janjor. MÈsuliputtam, muslin, produced in large quantity in Andhra Pradesh. MasÈlia, coarse raw cotton cloth, produced in large quantity in AriacÈ. And Sataka, a special kind of cotton cloth, made in Mathura.

On the other hand, the cultivation of mulberry and feeding silkworm in the period were also mentioned in literary sources. The various kinds of silk found in the literature are PattÈmsÈuka, Kauseya, and Dhauta patta, etc. Pattamsuka means plain white silk; Kauseya means the silk that obtained from cocoons that were spun by the silk-worms. Dhautapatta seemly was a washed silk. Apart from these kinds of silk, the variegated silk that was still retained in saris of GujarÈt.

According to R.S. Sharma, the art of spinning of silk consisted of many stages. Firstly, the sericin could be softened by boiling in water and the filaments got loosened and was pulled from the cocoons, then the worker whipped the water with a bamboo stick to which the filaments got adhered. The ends of several cocoons run through the eye in small porcelain discs and were joined to make yarn and this process was best done by hand. After each cocoon was exhausted the new one needs to be joined carefully. Thus, an individual filament can be thousand yarns long and the filaments were twisted. Then a process of weaving was performed.

---

80 DVD, p. 296.
81 MLP, p. 3.
82 RPSEH, p. 182.
83 Ibid.
Woolen clothes were important objects in the ancient India. Woolen clothes could be made by yarns from the bark, sometimes it was woven by the hair of animal or the hair of man. The *Divyêvadana*\(^84\) holds that in *Uttarkuru*, there were Kalpadusya trees by which the variety of woolen clothes were made. Besides, there was a fine woolen cloth called *Urnadukalamayas Obhanavastrêni*, which was woven from the admixture of wool and fibers of *dukula* (a sort of bark from *Bengal*).\(^85\) Various kinds of woolen cloth were manufactured. The coarse kind was used for herdsmen and farmers who worked hard on the fields or in the aristocratic families. The fine kind was used to stitch overcoat, shawl, and blanket for the upper class in society.

**The Industries of Wood and Leather**

Industries of wood and leather were developed most prosperously in the period of study. Wood has been used in large scale for the manufacture of various household objects, sculpture, construction, etc. The household things such as chairs, beds, tables, boxes, cup, bowl, etc were made of wood. Wood also played an important role in construction of palaces, temples and houses. Wood was also a main material for sculptures of *Bhêrhut, Sanchi, AmaravatI, Nêgarjunakonda, Gandhara, Mathura, Ajanta*, etc.

Besides, the remains of wooden structure belonging to the time of Maurya were unearthed. This construction shows a standard architecture and decorative art in ancient India. Various kinds of wood such as rosewood, ironwood, ebony, sindora wood, sandal wood were used for the wooden industry or used to manufacture ships, coats, chariots or carts.

The wooden industry seemingly reached a stage of specialization during the times of Kusêna – Sêtavahêna and gave birth to three specialized kinds of artisans, namely the boat manufacturers, chariot makers, and carpenters, who produced material properties for the social life and made economy to become more multiform.

The leather industry played an important part in the national economy. According to information gathered from the literature and epigraphs, the leather industry reached its summit during the time Kusênas. But the leather objects in ancient India could not be

\(^84\) DVD, p. 221.  
recovered at any excavation site, as leather is a perishable material, the hot and wet climate of India does not allow preservation for a long time. And it has only been found in the literary source. *Milindapanh*\(^{86}\) mentions the leather workers, leather objects, and raw material used for manufacture of leather articles.

All skins derived from various animals such as alligator, varn, leopard, lion, tiger, elephant, buffalo, cow, etc were the main source to leather industry. These skins were perhaps sought from hunters or traders. The leather articles, mentioned in the period were garments, bags, bellows, shoes, drums, arrow bags, etc. The art of tanning consisted of many stages. Firstly hide was stretched for the purpose of tanning, then the process of cutting, shaping and sewing were practised by the artisans. As a result, shoes, bags, drums, arrow bags, etc. were made from these tanned skins. These products were of high quality and were produced at a large scale. This progress also showed the important role of the leather workers, who became an important section of trading class of society. They became rich thereby they could pay taxes to the state and contributed to the rise of economy of the country. Apart from these industries, there were many other handicrafts in the period.

According to R.S. Sharma\(^{87}\) the craftsmen were divided into two groups. The first group consisted of metal workers including the gold-smiths; black-smiths; jewelers; molders; solderers; turners; etc. The second group included the garland-makers, washermen, potters, bricklayers, tailors, painters, leather workers, shell-cutters, carpenters.

The existence of so many crafts implied increasing specialization in the field of commodity production. The Buddhist texts refer to *Rajag,ha* and *Sêkala* as centres of art and craft. Most artisans known from inscriptions were found at *Mathura* region, the *Sanchi, Bharhut* area and the western *Deccan* where the handicrafts reached their respective summits during the times of Kusênas-Guptas, their prosperity was stimulated by the growing trade with Roma and many countries in the Asia.\(^{88}\)

---

\(^{86}\) MLP, pp. 100-2.
\(^{87}\) RPSEH, p. 196.
Increased commercial activities and the consequent growth of money economy led to proliferation of arts and crafts. According to *Mahavastu*\(^9\), a Buddhist text of about the second century A.D., more than 36 kinds of workers lived in the town of *Rajgir*. The *Milindapa*\(^9\) provides a list of 75 occupations in which eight were connected to mineral products as gold, silver, lead, copper, brass, iron, and jewels. The guilds evidently utilized the capital deposited with them to augment productions and paid interest on it out of the proceed from the sale of their commodities. The possibility of increasing output may have prompted the guilds to employ hired labour, in addition to artisans, consisting of both free labour and slaves.

Artisans and craftsmen were often organized into guilds. According to D.N. Jha\(^9\), there were at least eighteen guilds in *Rajagrha*. Each guild inhabited a particular section of the town. The existence of guilds led not only to the localization of crafts and industries but also to their hereditary transmission from father to son.

In the towns, there were different divisions of specialized zones, for example, the ivory workers street, the street of traders, the street of washermen, the street of goldsmiths, the street of blacksmiths, the street of perfume makers, etc.\(^9\) Perhaps because of the same industrial pursuits, the town people flocked themselves in a specified street. R.S. Sharma informs that many of these artisans functioned as both producers and small traders. They could also purchase raw materials and implements with money deposited with them and could pay interest on it out of the proceeds from the sale of their commodities.\(^9\)

In the countryside, they also tended to congregate in the same village and formed specialized organizations. Prof. Anita Sharma\(^9\) enumerates the specialized villages during the time of Kusênas-Sêtavêhanas. According to her, a village of carpenters could be seen on the border of *Kêsi* state or on the outskirts of *Varanasi*; a village of reed makers near *Sêvasthî*, a village of salt makers near *Kosambi*, etc. An inscription\(^9\) found

\(^9\) MS, Vol. 3, p. 442.
\(^9\) DAI, p. 83.
\(^9\) KTHB, p. 7.
\(^9\) RPSEH, p. 183.
\(^9\) KTHB, p. 8.
\(^9\) RPSEH, p. 196.
in central India holds that, in central and western India, the crafts of silk weavers and oil men flourished well, for they were organized in guilds. R.S. Sharma states that it is the isolation of crafts and professions and their concentration in fixed areas gave birth to the medley of castes and sub-castes, which formerly was common products of the upper classes, and they really contributed into the national economy through their specialized professions. Moreover, the localization of crafts was also due to the progressive demand of contemporary economy which led to the prosperity of the country.

**Pottery**

One of traditional and oldest handicrafts in India is pottery that began from pre-historical age. This craft, through a process of continuous development of techniques and arts, reached its perfection during the times of Kusêna and Gupta. Across the ages, it brought about some artistic improvements and creative qualities of fine objects that developed from outputs of the previous periods. Either it added some new features to the existing forms and design or it perfected itself in order to manufacture the more sparkling, suitable, and serviceable products.

The period from the first century B.C. to the sixth century A.D., marked a historical turning-point of development of Indian ceramic industry. Various references to the potteries, potters, wheels, and ceramic kilns, etc. are often found in the ancient Indian literature.

Besides, the archaeological sources also supply various evidences of potteries, the potter’s guilds are found in the Nêśik inscription of Madhariputra. 

Through above evidences, pottery has a ceaseless advancement in ancient India. Its result is recognized as follows:

**The Black and Red Ware Potteries:** This kinds of pottery was the prominent output of the Gangê basin. It was in vogue at many places such as in the region of central Gangê valley at Patna during 150 B.C., in Rëjputêna at Ahar and in western central India in Saurazaar 100 B.C., at Mahesvara in 100 B.C. And these wares were found at Bêhal during the time of Sêtavêhanas.\(^{96}\) There were local differences of forms and designs of

\(^{96}\) SEHS, p. 147.
these wares. For example, at Patna the main design of it was made with thick rim while at Udaipur and Ahar the main type of it was made with incurved or straight sides. Differences in decoration, painting, and surface treatment are found on these wares. Though there were above difference of forms and designs, all of black and red wares were made by clay that was generally mixed with materials as fine sand, hay and possibly ash too. And they were also the same in the firing techniques and were shaped by the combination of hands and wheel technique. It is interesting to say that the potters of the period were experienced in decoration and firing technique. They used either double firing technique that could make the pots to become red or black and then making them red or black at the edges by the application of charcoal or inverted firing technique. The symbolical specimens of this ware pottery are the rimless bowls, globular pots with sloping shoulders, basins and dishes on stands.

The Megalithic Black and Red Ware Potteries: This kind of pottery had a hey-day in south India during the times of Sakas – Kusānas – Śētavahānas. The places that are known as home of this ware are Brahmagiri (200 B.C. – 50 A.D.), Arikēmedu, Chandravalli and Sisupēlarh (200 B.C. – 300 A.D.).

The Megalic black and red ware pottery is known as the contemporary type with the black and red ware of Gangē basin. The common feature of south black and red ware pottery is its crackled surface unlike the North one. This ware was fine for it had an uniform thin side and was polished with a slip. Though it has a thin and beautiful side, it is easy broken because it has not fired with a high temperature. This ware is said to be made by the levigated clay and was salt glazed and the process of inverted firing technique.

The Red Ware Potteries: The ware existed during the times of Sakas and Śētavahānas. The archaeological evidences affirm its places such as at Rupar (c. 200 B.C. – 600 A.D.), Nastīnēpur (c. 200 B.C. – 400 A.D.) and Patna (c. 200 B.C. – 400 A.D.). Apart from these, the ware is also found at other places such as Taxila, Puskalavatī,
Kurukshetra, Purana, Hastinapur, Mathura, SrEvasti, Vaisali, etc.\(^{102}\) The red wares were also discovered in South India, at Arikamedu (c. 200 – 100 B.C.) and SisupElgarh (c. 100 – 200 A.D.).\(^{103}\)

The south wares were not made by the fully levigated clay and were fired at a medium temperature. Their structural sphere was from coarse to fine. Whereas, the North wares have a very thick texture, and were fired in a high temperature for they give ringing sounds when knocked on surface. The ware belonging to this kind are dishes, lids, basins, large water pots, strap-handles vases, narrow necked flasks, etc.

**The Black Ware Potteries:** This kind has fine surface and polished with black colour and it can be compared with the Northern black polished wares. It belonged to the times of Saka and Kusêna (200 B.C. – 300 A.D.). It was in vogue in South India and other places. The ware appeared at Brahamêpuri along with other prominent red wares (c. 200 B.C. – 300 A.D.) and red polished wares (c. 100 B.C. – 300 A.D.).\(^{104}\) Though the clay used for this ware was not levigated, the firing was made in high temperature for it gives ringing sounds when knocked on its surface. Main shapes of this ware are square rims, cooking pots with narrow neck, ledged shoulders and lids with knobs.\(^{105}\) These wares were decorated with incised or impressed designs such as oblique lines between group of double lines and wavy lines, a row of pricked depressions and circles above the narrow portions.

**The Painted Gray Ware Potteries:** This kind was in vogue during the time of pre-Kusêna and was discovered from the sites in Yamuna basin and Rêjputêna.\(^{106}\) The ware was not made by good clay and was ill fired. Depending on the findings of this type, people can guess that the ware could not be made in the time of Kusêna and was not popular in the time of post Kusêna periods.

**The Gray Ware Potteries:** Seemingly, it appeared from the second century B.C. to the third century A.D. It was found at Ahichchhatra (c. 200 B.C. – c. 300 A.D.), Kosambi (c. 200 B.C. – c. 100 A.D.), Bairat (c. 100 – 300 A.D.) and Arikêmedu


\(^{103}\) *Ibid.*

\(^{104}\) AED, p. 67.

\(^{105}\) *Ibid.*

\(^{106}\) SEHS, p. 67.
This ware was seemingly not made by good clay and was fired well. There was the difference of fabric according to local products. For example, at Achichchhatra it is thin to medium while at other places, it is generally coarse; the duration is similar to the red ware of GangÈ valley.

The Northern Black Polished Ware Potteries (NBPW): According to Prof. K.T.S. Sarao, the NBPW appeared between c. 500 - 200 B.C. at GangÈ basin.108 Besides, there were other centres of this kind found at Taxila (c. 200 B.C. – c. 300 A.D.), Rajghat, Pupar, SÈrnÈth, BasrÈha, KosambÈ and KÈsÈ (c. 200 – 100 B.C.).109 Though NBPW appeared at GangÈ basin, its shreds have been found in North-western Punjab and southern sites of India. It means that NBPW was an item of goods and was imported to these sites from GangÈ basin. NBPW was made by the levigated clay and was fired with the high temperature. The fabric varies from thin to thick and the main types consisted of small vessels, bowls, dishes, and jugs. NBPW was unique ware for it has the special polish and was called ‘Delux ware’ and it also had the highest position comparing to other wares in the society. Its use was fit for the aristocrats and members of rich and royal families.

Andhra Ware Potteries: This kind seemly appeared at Andhra Pradesh in the first century A.D. during the rule of SÈtavÈhana.110 Its shreds have been found at several sites in Andhra Pradesh including BrahmÈgirÈ and ChandrÈvalli.111 It was made by good clay and was fired with a high temperature; especially it was painted by kaolin on surface. The main type of this ware is bowls with various rims such as the beaked bowls, the rounded bowls, the leveled bowls or the featureless ones. Apart from that, there are high necked convex bowls with narrow mouth, globular pots, flat and shallow dishes with slightly incurved or vertical sides. The Andhra ware has high technique of firing that has shining and glazing surface like glass and has been painted by kaolin.

Amphorae and Other Imported Wares: The excavation at ArikÈmedu and other places in India demonstrated that ancient Indian trade development, which extensively contacted with the countries in the West during the beginning of the Christian era, had

107 Ibid., p. 163.
108 KONB, p. 60.
110 KTHB, p. 87.
111 SEHS, p. 166.
been really appeared. The foreign wares were brought into India including arretine ware, reuletted ware, red polished ware, and amphorae; among these wares, amphorae was considered as the most symbolical product. Amphorae came from Roma and other countries of Mediterranean; it was a high two handled pot with a narrow neck, a jar standard for transport of oil and wine. The shreds of amphorae have been found at *ArikÉmedu, NevÉsa, Ujjian, Ter, Junnar, DwÉrika, Devnimore*, and *Taxila*. The *Taxila* amphorae had certainly traveled by the land route, while south amphorae came from sea route with Roma traders. Through the shreds of amphorae found at various places, people can believe that ancient India imported wine from Roma or other countries of Mediterranean.

Generally, the Indian pottery in the period was seemingly influenced by foreign pottery that manifested itself on progressive technique and decoration thereby some significant changes in technology, in fabrics, in shapes, and in decorative designs could be noticed.

The potters of *GangÈ* valley were influenced by the Scytho-PÉrthian pottery that presented the fine products with the red and grey slip, fine fabrics and high firing technique. Moreover, the Greeks also introduced their art of impressing designs on the wet clay with the help of moulds and stamps on subsequently that was adopted by the Indian potters. The methods of rouleting, stamping, moulding and decorating were introduced by Indo-Roma potters.

It is interesting to say that the Indian potters in the period had a spirit of self mastery in their occupation without the complete dependence on foreigners or foreign wares. They continued to develop their ceramic wares that present certain evolutions in techniques and decorations. Most of the historians such as M.N. Pandy, S.P. Gupta, S.R. Rao, etc. had discussions on the pottery of the period and decidedly accepted that the pottery of the period as an indigenous ware that was made under the influence of foreign wares.  

---

112  DAI, p. 82.
113  SPAI, pp. 283-4.
(3) Trade and Commerce

During the times of Sakas and Kusênas, Indian economy developed significantly with agricultural profuse products and the greater specialization of industries that contributed to the advancement of trade and commerce. The trade routes were established, some market towns grew up along the trade routes and ports, they served as linking points between cities and countrysides. Trade and commerce in the period consisted of the internal and foreign trades.

Internal Trade

The internal trade was not new during the periods of Kusêna and Sêtavêhana; it could be traced back to third millennium B.C., starting from Indus valley, as provided by archaeological and literary sources.114 The Greek source speaks of considerable improvement in communications brought about by the Mauryas.115 The rivers and sports also formed the nucleus of the trade.

In the beginning the major part of the internal trade seemingly was carried out by land routes and they also used sea routes. The trade through land routes was important in itself and also served as a feeder to the sea trade. The well known sea ports like Bharukaccha and Sovîra on the west, KÊvîrapattana, Karambiya, Gambhîra and Serivan on the south and east served external trade very well.116 All agricultural and industrial products were circulated from one place to another. There are archaeological evidences supporting internal trade in the country. For example, a couple of shreds of the red polished ware, typical of western India and also of Kusênas, had been found in the layers belonging to the 1st-3rd centuries A.D. at Satanikot in Kurnool district, which might indicate trade between Andhra and north India. Red polished wares found at several Sêtavêhana sites suggest local trade but it may have been sent to north India.117 There are several evidences of long distance trade in glass objects and semi-precious stone heads from south to north India. There are also clear evidences of trade contact between Mathurê

114 MAIU, p. 611.
115 DAI, p. 60.
116 KTHB, p. 5.
117 RPSEH, p. 183.
and Gandhara. The Mathurâ image of a goddess was made of blue schist of Gandhara and shows the style of the Graeco Buddhist shawl. The Jatakas\textsuperscript{118}, Buddhist birth stories, make numerous references to caravans with 500 or 100 carts going from place to other places. Merchants such as horse-dealers from Uttarapatha are described as moving from one place to other places to sell their goods.\textsuperscript{119}

The special feature of the period was a barter system that prevailed in internal trade through land and sea routes, goods were circulated from one place to another without dependence on the political system.

**Foreign Trade**

It is said that, during the time of Mauryas, commercial activities were mainly confined to internal and external trade with some neighbourly countries like Srilanka, Burma, Myanma, etc. The commercial and trading relations between India and the foreign countries were made during the times of Sakas-Sêtavêhanas. V.S. Mohan\textsuperscript{120} affirms that the trade between India and western world particularly flourished during the period of the later Sakas and Kusênas. It is said that an important factor that helped growth of international trade was the movement of Alexander’s army from mainland Greece to India. It opened up a number of trade routes and revealed the possibilities of mercantile relations between north west India and western Asia.\textsuperscript{121} Moreover, the thriving trade between India and Roma empire was carried out during the reign of Kusênas.\textsuperscript{122} To stimulate foreign trade Kusênas accepted the Roma gold coins as their currency. At that time the Roma coinage served as an international currency. According to D.N. Jha\textsuperscript{123}, there are at least sixty eight hoards of Roma coins discovered in India, no less than fifty seven hoards come from south of the Vindhya. On the other hand, Roma ships as well as the ships of Asian countries could enter the famous ports such as Bharuch, Kalya, Sopal, etc to sell their goods.

\textsuperscript{118} DAI, p. 29.
\textsuperscript{119} Ibid., p. 30.
\textsuperscript{120} MILC, p. 144.
\textsuperscript{121} DAI, p. 29.
\textsuperscript{122} Ibid., p. 82.
\textsuperscript{123} Ibid.
The Sêtavêhana rulers developed both landed and maritime trades. The figure of a ship found on Sêtavêhana coins clearly testify to the fact of their maritime activities.\(^{124}\) Further the discovery of a large number of Roma coins in the Krishna river valley strengthens the above fact. Procopious\(^{125}\) explains that silk and spices were chief Indian export articles of Indo-Roma trade. But by the middle of the sixth century A.D., Chinese silk worms were secretly brought over and introduced into the Byzantine empire. This produced an adverse effect on Indian trade with the West. Later, the expansion of the Arabs under the banner of Islam might have further disrupted India’s trade. Commercial decline is indicated by paucity of coins of common use. Though the Guptas issued large number of gold coins but these hardly flowed into day to day private economic relation. Copper and silver coins in the period were scant. The gold coins issued by Guptas could be useful for big transactions like the sale and purchase of land or house or cattle.

Apart from that, cowries became the common medium of exchange.\(^{126}\) The weakening of the commercial links with the Western world perhaps stopped the movement of artisans and traders from one part of the country to an other.

In short, the internal and foreign trade was prosperous during the period of later Sakas, Kusênas and Sêtavêhanas and declined during the post Gupta period.

**Export and Import**

D.N. Jha\(^{127}\) states that emergence of the Roma empire as the paramount power in the Western world gave a fillip to Indian trade from the first century A.D. onwards. According to him, the eastern part of the Roma empire became the chief customer of Indian luxury goods.

The Periplus of the Erythraean sea written by an anonymous Greek navigator gives details of Indian exports to Roma empire.\(^{128}\) The main Indian exports were pepper, pearl, ivory, silk, spike-nard, diamond, sapphire, lapis lazuli, iron, steel, copper,
turquoise, saffron, cotton cloth, perfume, medicinal herbs, pigment, silk-yarn, muslin, indigo, porcelain, tortoise-shell and animal skin.

D.N. Jha states that, Roma women not only wore Indian pearls on their fingers and ears but also put them on the shoes.\textsuperscript{129} Muslin from India was highly valued in Roma empire, East Africa, Arabia and Egypt.\textsuperscript{130}

Apart from that, the leaf of *Tamala* tree from *MathurÈ* was one of the best spices.\textsuperscript{131} Rough kind of animal skin and heavy woolen coats from north-west India were also the expensive objects in demand in East Africa.\textsuperscript{132}

Indian principal imports from Roma were linen, glass vessel, tin, lead, coral, topaz, gauze, storax, sweet clover, antimony, medicinal ointment, etc. and, especially, golden and silver coins.\textsuperscript{133} India also imported from Roma wine amphorae, the samian ware, the roulette ware and red glazed argentine ware, which have been discovered at *Arikamedu* in south India and some other places.\textsuperscript{134} The technique of these foreign potteries influenced the local potteries of India.

The commercial relation between Roma and India were close. Pliny\textsuperscript{135} tells that Roma trade with India involved colossal sums. He laments that: “India, China and Arabia absorbed between them 550 million sesterces (Roma money) per year, nearly half of this amount came to India”.

The complaint may be an exaggeration but it can not be dismissed, for Roma had to ban trade in silk, cutlery and other luxury goods which were imported by Roma from the East.

Indian goods were exported to the south areas of Arabia where boasted of agricultural wealth due to careful irrigation as well as gaining an income from trade. The

\textsuperscript{129} DAI, p. 81.
\textsuperscript{130} PES, pp. 72-3.
\textsuperscript{131} Ibid.
\textsuperscript{132} Ibid., p. 47.
\textsuperscript{133} RPHEI, p. 47.
\textsuperscript{134} DAI, p. 82.
\textsuperscript{135} RPHEI, pp. 242-3.
main merchandises, which were exported to Arabia, were copper, sandal wood, teak and ebony, frankincense, muslin, silk-yarn and indigo, etc. And India imported from these areas including pearl, dye, wine, glass, gold plate, date, gold, etc.\textsuperscript{136}

India also imported from Eastern Mediterranean wine, antimony, amphorae, etc. Through shreds of wine amphorae found at various places in south India shows a large scale of trade. Eastern Mediterranean imported from India the black pepper, silk-yarns, woolen coats, etc.\textsuperscript{137}

India also contacted with South east Asia like China, Indonexia, Vietnam, Java, etc and traded at ports such as \textit{Ban Chiang}, \textit{Tonkin}, \textit{Canton} (south China), Oc eo (modern south of Vietnam) and areas between India and China near Gulf of Sian, Suvarnadvipa (Golden isles), Java, Sumatra and Bali, etc. Chinese traders brought into India the fur and horses. The horse trade was also of interests to Indian traders. The discovery of Indian relics such as an ivory comb, carnelian stone rings and a seal with \textit{Brahmin} letter at \textit{Tonkin} and \textit{Ban Chiang} (China)\textsuperscript{138} further strengthens the view that trade relations existed between India & China during the period under study. Especially a wooden statue of male \textit{Avalokitesvara Bodhisattva} found at Oc eo, which is preserved at the museum of \textit{Kien Giang} province (south Vietnam), all suggest that the presence of Indian merchants in South eastern Asia from the beginning of Christian era onwards. And India also exported to South eastern Asia the wooden statues of the Buddha and \textit{Bodhisattvas}, sandal wood, teak and ebony, ivory, etc.\textsuperscript{139}

The Indian internal and foreign trades had been most prosperous during the times from Sakas to S\texteth{a}tav\texteth{E}hanas. And especially during the time of Gupta, Indian trade reached its peak. The Indian commodities such as spices, sandal wood, precious stones and luxury goods were exported to Western world, Western Asia, Central Asia and South east Asia. And brought back a large number of important goods; especially the potteries that influenced local potteries generation after generation. On the other hand, Indian

\begin{itemize}
\item\textsuperscript{136} \textit{Ibid.}, p. 239.
\item\textsuperscript{137} \textit{Ibid.}
\item\textsuperscript{138} \textit{Ibid.}, p. 235.
\item\textsuperscript{139} \textit{Ibid.}
\end{itemize}
traders, during the period of study, brought back the colossal sums of gold and silver coins from Roma.

(4) The Trade Routes and Introduction of Buddhism into Asiatic Countries

The ancient network of trade routes consisted of both internal and international routes. The internal routes are said to be firstly established by Mauryas. They had an improved internal communications. This improvement was attributed to the construction of royal highway from Pataliputra to Taxila.\textsuperscript{140} Pataliputra was connected by road to Tamralipti (Tamalux) in the GangÈ delta, the chief port for ships sailing to Ceylon and Burma. The TheravÈda Buddhism was introduced in Ceylon in the time of Asoka by Mahinda and SaŠghamittÈ through this route\textsuperscript{141} and from Ceylon the religion reached Burma, Thailand and Indonesia during the later centuries.\textsuperscript{142}

Romila Thapar\textsuperscript{143} states that routes to the south developed rapidly in post Maurya times due to intensified trade demands. Land routes followed river valleys where possible, the elevations in the Deccan plateau discouraging direct north-south communication, but there were some East-west routes along valleys such as those of the Godavari and Krishna rivers passed through these routes were more safer.\textsuperscript{144} However, the Deccan was a hive of market centres, production centres and Buddhist monasteries at places such as Ter, Bhokardan, Karad, Kondapur, Dharanikota and Amaravati. Ujjain was linked via Bhokardan, Kotalingala, Dhilikatta and Peddabunkur to Amaravati.

Another route linked Bhrigukachchha, Nasik, Kondapur, NÈgarjunakonda and AmaravatÈ.\textsuperscript{145} There were many Buddhist monasteries, stÈpas along this route.

Kautilya says that, in the south, routes running through the mining areas were necessary as these traversed the heavily populated regions and were therefore safer than

\begin{flushright}
\textsuperscript{140} RPHEI, p. 237. \\
\textsuperscript{141} KBC, p. 17. \\
\textsuperscript{142} Ibid. \\
\textsuperscript{143} RPHEI, p. 236. \\
\textsuperscript{144} Ibid. \\
\textsuperscript{145} Ibid. 
\end{flushright}
the more isolated routes. Mining activities at that place might have expanded, especially the mining of gold and semi precious stones.\textsuperscript{146}

Apart from these, coastal routes developed faster and became the basis of North-south links along each coast, sometimes preferred over land routes. It is said that the cargo from Roma ships was offloaded at the western ports to be transported overland to the east coast, where places such as \textit{Arikamedu} became trading station. Incoming cargo was received for further distribution and exports were specially packed for transmission to Red sea ports.

The international routes served as links to the ports and trading centres. The Northern routes went to \textit{Gandhara} and \textit{Kasmir} in North West India.\textsuperscript{147} \textit{Gandhara} and \textit{Kasmir} are said to be the cradles of the S\textdegree{}r\textdegree{}vastiv\textdegree{}da Buddhism that was introduced there from the time of Asoka.\textsuperscript{148} Crossing the border of \textit{Gandhara} in North west India was the Greek state of \textit{Bactria}, founded by Ionian Greeks, who had settled there after Alexander’s campaign. Kenneth K.S. Chen\textsuperscript{149} holds that Buddhism had already been introduced into \textit{Bactria} in the second century B.C. and had gained a foothold there. From \textit{Bactria} the route continued via the \textit{Oxus} region, the \textit{Caspian} sea and the \textit{Caucasus} to the Black sea.

Routes within India were actively used and this activity increased through contacts with more distant places in west and central Asia that were linked to the Hellenistic world.\textsuperscript{150} Buddhism might have followed these routes to enter West and Central Asia.\textsuperscript{151} Prof. Anita Sharma\textsuperscript{152} states that the route was via \textit{Varanasi} well-known for cotton and silk drapery, which was also a meeting point of trade routes including land route and sea route. In the north-westwards, from \textit{Taxila} to \textit{Begram}, where roads branched off in various directions. A route went from \textit{Kandahar} and \textit{Herat} to \textit{Ecbatana}, after which it was linked to the ports on the Eastern Mediterranean. Another highway also ran from \textit{Kandahar} to \textit{Persepolis} and \textit{Susa} in Persia. Ships traveling from the western ports followed the coastal route to \textit{Aden} or \textit{Socatra}, from where the ships could

\begin{footnotes}
\item[146]\textit{Ibid.}, p. 235.
\item[147]KBC, p. 17.
\item[148]SST, p. 4.
\item[149]KBC, p. 17.
\item[150]RPHEI, p. 237.
\item[151]KBC, p. 17.
\item[152]KONB, p. 6.
\end{footnotes}
be undertaken to the Red sea.\textsuperscript{153} From somewhere near the modern Suez, goods could be sent overland to Alexandria, an important trading centre of the Mediterranean world.\textsuperscript{154} A landmark in the development of communication was the discovery of the monsoon winds by the Greek sailor Hippalus in around A.D. 46-47.\textsuperscript{155} But it is now being suggested that Hippalus was actually the name given to the wind. The discovery of monsoon wind made the mid ocean navigation via the Arabian sea possible, reducing the distance between India and the west Asia ports.

Besides, there was another route that linked India with China called silk route. The route started from Taxila to Bamiyan in Afghanistan then crossed Hindu Kush mountain to Balkh. From Balkh crossed the Parmir to Kashgar. This stopping place with its numerous Buddhist monasteries provided a welcome stoppage for tired travelers. After leaving Kashgar, travelers either followed the north route which followed the northern fringe of the Taklamakan desert or followed the south route which skirted the southern fringe. If they followed the southern route, they must pass through a series of oasis centres and came to Khotan.\textsuperscript{156} If they followed the northern route, they were via Kucha, Karashar and Tunfan. These two routes then converged in Tun Huang on the Chinese north-west frontier. Tun Huang was an important Buddhist centre in China. Through the silk route, Buddhism was introduced to China in the first century A.D. under the reign of Ming Ti of Han dynasty.\textsuperscript{157} The first Buddhist missionary, under the leadership of Ven Matanga and Chu Fa lan, brought the \textit{S Ėtra in Forty Two Sections} to China in the year A.D. 65 and the \textit{s Ėtra} was translated into Chinese at the white Horse temple in Loyang.\textsuperscript{158}

Besides the silk route, there were two other land routes but these were not used by monks. One was by way of Assam through upper Burma to Yunnan in south west China. The other passed through Nepal and Tibet. For a brief period during the T’ang dynasty, this route was used by Chinese monks journeying to India.\textsuperscript{159} It was also possible to go from India to China by the sea route. The main ports of \textit{Debarkation on

\textsuperscript{153} RPHEI, p. 238.
\textsuperscript{154} Ibid.
\textsuperscript{155} RPSEH, p. 184.
\textsuperscript{156} RPHEI, p. 240.
\textsuperscript{157} DCCAI, p. 97.
\textsuperscript{158} KBC, pp. 34-5.
\textsuperscript{159} Ibid., p. 19.
the Bay of Bengal were Kaveripattanam at the mouth of the Cauvery river and Tamralipti at the mouth of Ganges. At times ships sailed for China from Bharukaccha (modern Broach) on the west coast of India. After leaving these ports, the ships could sail directly to Java or follow the coast line around the Malay Peninsula until they reached Ton Kin or Canton in south China. 160 The commercial travelers exchanged goods from India to China by this route and through this route Bodhidharma, the twenty-eighth patriarch of Indian Meditation school, came to China in the year A.D. 520. 161 I-Tsing, the Chinese pilgrim, who came to India in the year A.D. 671-695 by the sea route. 162

Through the trade routes, Mahāyāna Buddhism was propagated in Western Asia, Central and South East Asia and making its active contribution to religious, cultural and artistic life of the people in these countries through the ages.

* * *

160 Ibid., p. 20.
161 Ibid., p. 351.
162 Ibid., p. 20.