Chapter VI
THE MATERIAL BASE

The expression ‘material culture’ is generally taken as one that “summarizes and identifies all kinds of tangible things manufactured and modified by human beings, differentiated on their functions, uses, modes of production, materials, and consumption patterns.” However, the expression ‘material culture’ has been conceptualized in the ancient Indian context, among others, by authorities like Debiprasad Chattopadhyaya and Ram Sharan Sharma. Chattopadhyaya looked into issues of ancient Indian materialism from a philosophical standpoint based on data derived from his study of the belief systems and ritual practices as gleaned from the literary sources. Sharma drew his evidence from archaeological sources, besides literary and epigraphic sources ascribed to the early historical period, to formulate his assumptions on the modes of production underlying the material cultures of ancient India (from Vedic to Gupta times). He made an attempt to show how, in the day-to-day activities of human beings, the people of ancient India tried to maintain their livelihood by internalizing those activities into their way of life. Material culture developed out of the material conditions, which, among other things, included natural wealth, human resources, and technology. The social and political institutions and systems were reflective of their material basis.

As far as the Pundra region is concerned, the source material for reconstructing the material culture or economic conditions of the early period of its history is indeed very meagre. Even the little material that is available is extremely fragmentary in nature.

2 D.P. Chattopadhyaya, Lokayata – A Study in Ancient Indian Materialism, People’s Publishing House, New Delhi, 1959. As Chattopadhyaya says, “Marxism looks for the material roots of each phenomenon and views them in their historical connections and movement. It ascertains the laws of such movement and demonstrates their development from root to flower, and in so doing lifts every phenomenon out of a merely emotional, irrational, mystic fog and brings it to the bright light of understanding. Accordingly, as a Marxist student of the Lokayata I had also to survey the material conditions of ancient India of which it was the product.” (p.xvi)
3 R.S. Sharma, Material Culture and Social Formations in Ancient India, Macmillan India Limited, Delhi, 1983.
Greek accounts of about the fourth century BC are considered to be very important for the economic history of Bengal, as, in the opinion of F.J. Monahan, Ptolemy’s use of the term ‘royal’ for the chief town of the Gaṅgāridāes indicated the commercial importance of the region. The Periplus of the Erythrean Sea (dated about the first century) is said to have specifically informed that raw silk and silk-yarn and silk cloth were brought on foot from the land of ‘This’ through Bactria to Barygaza and were also exported to Damirica through the river Gaṅgā. Pliny is said to have distinguished the wool-bearing trees of a place called Seres from those of the Indians in the context of silk manufactured in the larger region of Kāmarūpa. Arrian recorded the multiplicity of cities in eastern India. He made special mention of houses built of wood, as well as of bricks and mortar, particularly in deltaic Bengal. In referring to the eastern region of India in general and deltaic Bengal in particular, Strabo is said to have spoken of the Puṇḍra region as an integral part of the latter area. However, it is difficult to discriminate between the specific references to the Puṇḍra region and what may have been said about the whole of Bengal or eastern India.

Perhaps Pāṇini’s celebrated work Aśṭadhyāyī (dated the fifth century BC) provides the first glimpse of the economic life in the Puṇḍra region. It mentioned Puṇḍra as one of the janapadas in the east. As stated earlier, while discussing the information about important towns in Pāṇini’s work, the historian V.S. Agrawala had observed that the two most important towns in eastern India during the time of Pāṇini were Mahānagara and Navanagara. Agrawala identified Mahānagara with Mahāsthān, the capital city of Puṇḍra (north Bengal) and Navanagara with Navadvīpa, the capital of Vaṅga (south Bengal). He

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7 J.W. McCrindle, Ancient India as described by Megasthenes and Arrian, London. 1877; reprint 1926, Bibliotheca Indica, Calcutta, pp.340-347.
also noted that the route along the north bank of the Gaṅgā (from Mithilā and Anga to Pundra) was once an important trade route. In between Mahānagara and Navanagara lay Gauḍapura (modern Gauḍ), an important town on the route from Mahāsthān and a trading centre for guḍa (molasses) manufactured in the Pundra country. Suśruta, a renowned medical scientist of early India and author of the Suśruta Śamhitā (dated the third century BC), mentioned that a distinct variety of sugarcane known as ‘paumdrak’ was grown in Pundravardhana, and this variety of sugarcane originated in the Pundra country.

He also mentioned that sugar was manufactured in Pauṇḍra on a large scale. A.K. Sur observed that this variety of sugarcane is grown to this day in different parts of the Indian subcontinent and it goes by the names of ‘pauria’, ‘pari’ and ‘paura’, perhaps as a tribute to its Pundra root. According to the Rāmacaritam of Sandhyākaranandin (eleventh-twelfth century), sugarcane continued to be an important product of the Pundra region for a long time. The Kavipraśasti of Rāmacaritam described Pundravardhana as the ‘foremost land’ in the east, and Varendra as a place where sugarcane was one of its main resources. The Rāmacaritam identified Pundra as the main centre of production of sugarcane in Varendra. The source mentioned that the region was known for this product since ancient times; the quality of sugarcane (ākh) grown in Pundra was so special that any good variety of sugarcane cultivated in other places also came to be known as ‘pura’. Interestingly, good quality sugarcane is known as ‘pura’ in some parts of India till this day.

In the fourth century BC, Pundra was clubbed together with Vaṅga and Gauḍa in the context of the textile industry. As regards Pauṇḍra, the Arthaśāstra gave a detailed

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13 Ibid., *Kavi Prasasti*, pp.98-104.
15 Ibid.
account of its sericulture, textile, fabrics and other products. Such references to the commercial products of this part of Bengal established the fact of its commercial importance at that point of time and confirmed the Greek notices of the area surrounding the Gaṅgā as a considerable place of trade. The directions given by the Arthaśāstra to the local administrators for controlling the river traffic, as observed by Monahan, “seem designed for a country in which water communications were of capital importance”.

According to A.K. Sur, the Arthaśāstra’s reference to the commodities of Puṇḍra and Vanga, “is indicative of their inclusion within the Mauryan Empire and also their commercial standpoint”. Some scholars consider Kauṭilya’s description of the textile industry of Puṇḍravardhana to be an elaborate account of the industrial situation in the region. The word ‘paundraka’, used in the sense of two types of garments, ksauṇa and paṭrorna, seems to have implied a kind of silky, fibrous garments that may have been manufactured in the Puṇḍra region.

Apart from the textile industry, the Vanga-Puṇḍra region is said to have drawn its wealth from the mines of gold and the mineral resources such as diamond and pearls. Its fame on this account persisted to the sixteenth century. The Āin-i-Ākbari (a supplement to the Ākbar Nāmāh) spoke of the diamond mines of Gārh Mandaran. Amitabha Bhattacharyya suggested that the diamond mines in Bengal retained their importance down to the time of the Mughals. He further added that these mines extended up to Kokhra on the borders of Bihar: a record dating to the time of Emperor Jahangir mentioned more than one diamond mines in Kokhra. Most likely the products of the Puṇḍra region attracted traders from beyond its borders. The Kathāsāritaśāgara (dated the eleventh century) mentioned that Puṇḍravardhana had a great market place with its

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17 F.J. Monahan, op cit., p.207
18 A.K. Sur, op.cit., p.34.
21 Kautilyam Arthaśāstra, II, 127-28, Subhash Mukhopadhyaya, op cit., p 42
22 Amitabha Bhattacharyya, op cit., p 8
streets lined with shops and that the merchants who thronged the market regularly travelled between Puṇḍravardhana and Pāṭaliputra. 23

The flourishing material culture of the Puṇḍra region may also be discerned from the evidence of Chinese sources. Hiuen Tsang noticed as many as twenty vihāras in Puṇḍravardhana, where more than three thousand bhikṣus of both Mahāyāna and Hināyāna sects resided. 24 The pilgrim himself stayed in one of the monasteries of Puṇḍravardhana. The monasteries’ reputation attracted many distinguished students and pilgrims from other parts of India. The resourcefulness and prosperity of the region in the seventh century is borne out by the description of Puṇḍravardhana with its hundred temples, twenty vihāras, bourgeoning population, and tanks, hospices and flowery groves in the account of Hiuen Tsang. 25

From the corpus of epigraphic records dated to the period ranging from about the fourth century BC to the thirteenth century it is possible to comment on the economic conditions of the Puṇḍra-Varendra region. Mostly related to land-grants, these inscriptions throw much light on the system of landholding, land measurement, value of land, revenue and revenue administration, methods of agriculture and agricultural products, besides many other related subjects. Barrie M. Morrison opined in his study of the political centres and culture zones in early Bengal on the basis of seventy-two published and nine unpublished inscriptions that the historical information provided by these inscriptions suggests that there were four major phases in the political and cultural life of the Delta for the eight centuries following AD 433. According to him, the earliest phase lasted through the fifth and sixth centuries, when the Delta was administered by the officials of the Gupta Empire and is said to have attained a high-water mark of Indian culture. The second phase began from the end of the sixth to the beginning of the ninth century. This period witnessed the political and cultural unity of the Gangetic valley under a succession of regional rulers.

23 Kathāsaritasāgara, II, p.86; R.C. Majumdar, History of Ancient Bengal, loc cit., pp.344-347.
who exercised suzerainty over their own domains and vigorously competed for the patrimony of the Guptas. The third phase was ascribed to the period between the ninth and twelfth centuries, when the major dynasties (Pāla, Candra, Sena) were founded and soon took control of large portions of the Delta. The dynasties commanded sufficient resources to commission massive architectural and sculptural works and encourage scholarly pursuits in the court. The fourth and final phase began by the end of the twelfth century, when Muslim armies from the mainland of India gained a foot-hold in the Delta and subsequently expanded their sphere of hegemony in the wake of the conversion of many of the local inhabitants to Islam.²⁶

It bears noting however that the earliest inscription found in the region is dated much earlier than AD 433. It is the Mahāsthāṅgarh Inscription of Aśoka (dated the third century BC), which was written in the early Brāhmī script.²⁷ Commenting on the evidence of this stone inscription located within the Puṇḍra region, Morrison pointed out that during the third century BC, the political hegemony of the Mauryan Empire extended to the Delta. As per the record, Aśoka ordered the local governor of Puṇḍranagara to distribute funds from the imperial treasury during times of scarcity on account of flood, fire or pests. The archaeological excavations at Mahāsthāṅ (or Puṇḍranagara as it was called under the Mauryas and the Guptas) have revealed many coins and other artifacts datable to the fourth and third centuries BC. Traceable remains of the outline of the ancient city of Puṇḍranagara reveal enormous brick rampart walls rising to about twenty feet above the level of the ground, and forming a great fortified square nearly a mile on each side. Excavations at the site also show that outside the fortified area, there were numerous mounds, probably of bricks, shrines and temples.²⁸ Morrison then commented that the existence of Puṇḍranagara as a large well fortified city implies (i) a supplying hinterland, (ii) the existence of a set of economic institutions involving a large-scale market, (iii) some form of currency or credit, (iv) a specialization in trades and manufacture, and (v) a strong political organization capable of planning and building the defensive works and

²⁸ Supra, 26n.
diverting sufficient resources of labour and materials to maintain and rebuild the walls a number of times during the centuries in which the city was inhabited. No wonder, he finally observed that the evidence of the inscriptions indicate that the Delta, or at least the area known as Varendra, was under the rule of the Mauryas and that an important urban centre had developed at Pundranagara in the centre of the Varendra region. The epigraphic evidence complemented by the archaeological evidence can thus be taken as proof of the sound economic conditions of the Puṇḍra-Varendra region in the ancient and the early medieval periods.

Landholding Pattern

As in the context of early India in general, land was the most important source of wealth and the foremost source of productivity in Puṇḍravarshana. An integral extension of the great Indian plains, and appended with sub-Himalayan mountain terrains, this part of ancient Bengal presented a pleasing panorama of hills, dales and valleys. The region was continually washed by the major rivers (viz., the Gaṅgā, Brahmaputra, Karatoya, etc.) and their tributaries (viz., the Padmā, Meghnā, Tīstā-Ārāi, etc.), which had their origins in the Himalayas, and periodically inundated the land on either side of the river thereby reinforcing the vitality of the soil by depositing the silt they carried. The soil was therefore exceedingly fertile, suited to agriculture. The epigraphic records referred to forests and roaming wild elephants, tigers, deer, etc., domestic elephants, cattle and pasture grounds, besides “rivers, sandal groves, and slopes of the Himalayas all the

29 Ibid., pp.14-16. Almost in the same vein, D.K. Chakrabarti also observed: “The fact that Mahasthangarh was a Mauryan administrative centre with a provincial governor called Sumatra and also a prosperous city raises questions about its background. A prosperous city could not have come into existence on the bank of the Karatoya without an antecedent cultural development.” See D.K. Chakrabarti, Ancient Bangladesh - A Study of the Archaeological Sources, OUP, Delhi, 1997, p.63.
30 Ibid.
31 R.R. Mukherji & S.K. Maity (eds.), op.cit., p.207 (Bangad Copper-plate Inscription, e.g.).
32 Ibid., p.311; (Anuliā Copper-plate Inscription).
33 Ibid., p.343; (Edilpur Copper-plate Inscription).
34 Ibid., p.251; (Belāva Copper-plate Inscription).
35 Supra, 32n.
time benumbing the trees with thick water sprays", luxuriant *ketaki, tamāla* and *puti* plants, and banyan, betel-nut and coconut trees.38

The landgrants particularly made mention of the growth of population by internal migrations within the region and by the entry of immigrants into the region from other parts of Bengal as well as from distant lands in northern India throughout the period under study. As discussed earlier, these records show that there were royal lands, lands held by the local authorities, privately owned lands, and forested or marshy-swampy fallow lands. The lands were classified as homestead land (*vāstu bhūmi*), cultivable land (*kedār sthala*), uncultivated or waste land (*khila*), etc. The Dhānāidaha Copper-plate grant of Kumāragupta I (dated the fifth century)39, for example, specifically spoke about the donation of ‘cultivable land’ (or *kedār sthala*), thereby distinguishing it from the uncultivated or waste lands (*khila*) and the homestead land (*vāstu bhūmi*). The fact that land in this case was purchased by the village authority indicated that the land in the village was owned or held collectively or communally, with the village authority functioning in the capacity of the custodian of the land. This also suggests that individual ownership of land was also in practice and there were instances of sale and purchase of land by such individuals. The Dāmodarpur Copper-plate grant of Buddhagupta (dated the sixth century)40, the Bāngad Copper-plate grant of Mahipāla I (dated the tenth century)41, the Belāva Copper-plate grant of Bhojavarman (dated the twelfth century)42, amongst many others, are examples of the grant of land under royal ownership in cultivable, waste and forested areas. The popular terms for land measurements were the *kulyavāpa*43, *dronavāpa*44, *pātaka*45, *ādhavāpa, unmāna, kākinikā*, etc., while the terms denoting the principles which governed the landholdings in the Pundra region — as in other parts of

36 Ibid., p.206; (Bāngad Copper-plate Inscription
37 Supra, 33n.
38 Ibid., 32n.
39 Ibid., pp.41-44; B.M. Morrison, *op cit*, pp 84-85
41 Ibid., pp.197-206.
42 Ibid., pp.234-243.
43 Ibid., p.43; (Dhānāidaha Copper-plate Inscription).
44 Ibid., p.52; (Bāigrām Copper-plate Inscription)
45 Ibid., p.63; (Gūnjīgarh Copper-plate Inscription)
46 Ibid., p.310; (Ānuliā Copper-plate Inscription)
India in ancient times — were nīvīdharmā⁴⁷, apradāksayanīva⁴⁸, bhūmicchidranyāya⁴⁹, etc.

The epigraphic records reveal the practice of large-scale donations of land throughout the period under study. The endowments were in favour of scholars and Brāhmaṇas, deities and temples. The grants were perpetual endowments and in settled villages as well as forested regions. The practice of land grants accelerated the process of privatization. The land in many cases was transferred along with the homesteads and the dwellers, and the dwellers were henceforth required to pay taxes to the donees, which they had earlier paid to the king. The Dhānāidāha Copper-plate grant mentioned the custom of “donation and confiscation of land” and “the sale of lands at reduced rate to the Brāhmaṇas, purchasing them with religious motives”.⁵⁰ The Khālimpur Copper-plate grant of Dharmapāla, which recorded the rent-free donation of four villages, pronounced that the tillers of soil should make over to the donee the customary taxes, means of subsistence and all other kinds of revenue.⁵¹ By the Rāmapāla Copper-plate grant⁵², Śrīcandra declared that he made over to a Brāhmaṇa, named Pītavāsaguptaśarman, one pātaka of land along with grass, pastures, mango and jackfruit trees, betel-nut and cocoanut trees, inclusive of the taxes levied for prevention of ten crimes and theft, immune from all kinds of forced labour, free from all dues, with all income, such as taxes and gold enjoyed by the king, and not to be entered by cattas and bhātīs. Similarly, the Tarpāṇḍīghī Copper-plate grant of Lakṣmaṇasena pronounced that a Brāhmaṇa was being granted land measuring one hundred and twenty ādhamās and five unmānas, excluding such useless land as the road leading to a temple and cart-track, and yielding an annual income of one hundred and fifty kapardakapurānas, along with forest and branches, pits and barren tracts, land and water, betel-nut and cocoanut trees with revenue yielded from fines imposed on perpetrators of the crimes, exempt from all oppression, not to be entered by cattas and

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⁴⁷ Supra, 43n.
⁴⁸ Ibid., p.48; (Dāmodarpur Copper-plate Inscription).
⁴⁹ Ibid., p.287; (Mādhāinagar Copper-plate Inscription).
⁵⁰ Ibid., pp.43-44.
⁵¹ Ibid., p.109.
⁵² Ibid., pp.228-229.
bhattas, free from all dues, along with grass, puti plant and pastures. Another important document is the Ānuliā Copper-plate of Laksñanäsena which recorded the grant to a scholar of a plot of land, measuring one pāṭaka, nine dronas, one ādhavāpa, thirty-seven unmaṇas and one kākinikā and yielding an annual income of one hundred kapardakapurāṇas, along with forests and branches, pits and barren tracts, land and water, betel-nut and cocoanut trees, with revenue yielded from fines imposed on perpetrators of ten crimes, exempt from all oppression, along with grass and puti plant and pasture grounds, free from all sorts of dues, and not to be entered by cattas and bhattas.

The epigraphic records cited above are only examples. There were many more such grants. It should be interesting to note that the charters issued on different dates and by different rulers contained not only similar terms and conditions but the language used was also almost the same. This perhaps suggests the existence of a common format for the purpose of granting land to the Brāhmaṇas and scholars, particularly in the Pāla-Sena age. By gifting the land the king gave away his own right to collect taxes, revenues, fines and income from other sources accruing from the donated land. This implied that outside the donated land the king collected such taxes and revenues and other forms of income from the ordinary landholders, dwellers and cultivators through various functionaries.

Agriculture

Puṇḍravardhana was endowed with vast tracts of fertile land and favourable climatic conditions for boosting large-scale agricultural production. The numerous river systems seasonally washed the land to reinforce its fertility. The Gaṅgā ran through the northern part of Rajmahal crossing Malda, Rajshahi, Dinajpur and Rangpur, passed the Brahmaputra, spreading its two tributaries, the Bhāgirathī and Padmā, and touching the hill range of Meghalaya. The Dāmodar and Meghnā in the south, the Kośī and the Mahānandā in the west, the Tistā-Ātrāi and the Karatoya in the east also washed the

53 Ibid., p.300.
54 Ibid., pp.310-311.
Pundra land. Varendra, the centrally located segment of Pundravardhana, was the most fertile portion in the entire region. It extended over a large area to cover present Rangpur in Bangladesh and lower Assam and its boundary touched Bagura, the northern part of Rajshahi and eastern Dinajpur and western Rangpur. Thus, Varendra covered the major part of Pundravardhana. The Taṅgān-Ātrāi, Mahānāndā-Kośi and the Padmā-Karatoya flowed through Varendra and their waters and fertile soil formed its plains.

Pundravardhana was known in early times for its various agricultural and horticultural products. The products of Pundravardhana found regular mention in the copper-plates and other inscriptions issued by the kings belonging to the different dynasties that exercised political authority in the region or some parts of the region during one period or the other. As early as the third century BC, the region was known for the cultivation of paddy, sesamum and mustard. The evidence of the Mahāsthān inscription of Aśoka is proof of this statement. The climate of the region was favourable for the growth of a variety of trees and plants as well. The Bāṅgād inscription of Mahipāla I (dated the tenth century) spoke of extensive sandal groves scattered over different parts of Pundravardhana. Among the epigraphic records of the Candra dynasty, the Rāmapāla charter of Śrīcandradeva (dated to the eleventh century) provided an elaborate list of fruit-trees grown in Pundravardhana. These included mango, jack fruit, betel-nut and coconut. The Tarpaṇḍīghī grant of Lakṣmaṇasena (dated the twelfth century) also mentioned betel-nut and coconut among the products of Pundravardhana.

The literary sources and foreign accounts bear testimony to the information contained in the epigraphic documents about the agricultural activities and products of Pundravardhana. Already in the fifth century BC, Pāṇini had mentioned that gūda (molasses) was an important product of Pundravardhana and it was manufactured in

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56 Supra., 27n.
57 Supra., 36n.
58 Ibid., p. 228.
59 Supra., 53n.
abundance and sold in the important trading centres of Gaudapura (modern Gauḍa). The Arthaśāstra mentioned ‘paundraka iksu’ as a variety of ākh (ikṣu) or sugarcane cultivated in Bengal. The cultivation of high quality sugarcane in the region is amply brought out in other sources of the period under study. Suśruta (dated the third century) spoke about the cultivation of a distinct variety of sugarcane known as ‘paundraka’ in Puṇḍravardhana, and about the manufacture of molasses and sugar in large quantity. It is of interest to note that even as late as the thirteenth century. Marco Polo (who visited Bengal during that period) noticed the large-scale cultivation of sugarcane in the northern division of the Bengal province and the export of sugar and molasses in large quantity from the region.

The climatic conditions and the nature of the soil facilitated the growth of a variety of trees and plants. The Arthaśāstra mentioned nāgakesara (mesua ferrea), likucha (artocarpus lakoocha), vakula (minusops elengi) and vata (icterus bengalensis) among the valuable trees that grew in Paundra. It also referred to the availability of aguru and tailaparnikā (aloe and sandal wood) at the Paundra-Suvarṇakuṇḍya-Lauhitya region.

The fertile soil and the hardy population involved in agricultural pursuits are said to have contributed to the region’s high productivity. Hiuen Tsang noticed that various crops (i.e., paddy, sesamum, mustard, cotton, and sugarcane) were cultivated extensively in and around Puṇḍravadhana, the fruits were plentiful in Puṇḍravadhana, Tāmralipti,
Karnasuvarna, Kāshgarh and Kāmarūpa, and the jackfruits and coconuts were particularly abundant in Pūndravardhana. The pilgrim further mentioned that the land was covered by exuberant flowery groves. Sandhyākaranandin's Rāmacaritam referred to sugarcane as one of the principal crops of Varendra. As to the climate of Varendra, the source specifically mentioned it as congenial for the growth of coconut trees. The source further described the beauty of the coconut trees which were plentiful in the region. The epigraphic records corroborated the fact of abundance of various crops, fruit-trees and other types of vegetation in the region. As a matter of fact, the Rāmacaritam is an important source on the natural vegetations and the commercial and medicinal plants of Varendra. It mentioned about kuśa grass, tila (sesamum) seeds, tāla tree, kalpa tree, Aśoka grove, edible kanda roots, large lakuca and śrīphala trees, delicious zavalis, grandeur of foliage, many nāgarangā trees, āmalaki trees, karuna and priyāḷa plants, paddy plants of various kinds, fine bamboo clumps, sugarcane plants, granaries of corn, abundant priyāngu creepers, vast fields of fine etā (cardamom) plants, sudhā or the milk-hedge plants, āśana trees, areca-nut trees, coconut trees, flower plants and creepers like mālatī, nāgakesara, kesara, vakula, madhu, aśoka, pārijāta and lavanga, reddish-white lotus-like palms of kesara, madhuka, kanaka, ketaka, padma, golden pitchers, etc.

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66 Thomas Watters, op.cit., p.184.
71 Ibid., Canto II, v.25, p.48.
72 Ibid., Canto III, v.11, p.64.
73 Ibid., Canto III, v.12, p.64.
74 Ibid., Canto III, v.13, p.65.
75 Ibid., Canto III, v.16, p.66.
76 Ibid., Canto III, v.17, p.66.
77 Ibid., Canto III, v.18, p.67.
78 Ibid., Canto III, v.19, p.67.
79 Ibid., Canto III, v.20, pp.67-68.
80 Ibid., Canto III, v.21, p.68.
81 Ibid., Canto III, v.22, p.68.
82 Ibid., Canto III, v.23, p.69.
The contemporary records mentioned a variety of crops grown in different parts of Bengal since early times, some of which may have been in the northern division of the Delta. The *Periplus of the Erythraean Sea* listed melacanthrum and spikenard among the exports of Bengal. The *Arthaśāstra* referred to the *karposika* (cotton fabrics) of Vanga. The Deopāra Inscription of Vijayaśena claimed that the ordinary rural folk were familiar with the seeds of cotton. The Vappaghoshavāpe grant of Jayanāga (dated the seventh century) mentioned the existence of a *sarsaparayēnaka* (mustard-channel) in Karnasuvāra. The epigraphic records tell us that betel-nut palm (gūvāka) and coconut (nārikēla) were extensively grown. The Ashrafpur grant of Devakhaḍga specifically recorded that the donee should enjoy the donated land by growing betel-nut palms and coconuts. Records spoke of plantations of betel-vines that formed an important source of revenue to the Sena kings. Huen Tsang described the abundant growth of bread-fruit (*panasa*) in Pundravardhana on account of this fruit’s popularity among the masses. The *Govindapur* plate referred to an orchard of pomegranates (*dālimva-kṣetra*). The Pāhārpur terra-cotta plaques frequently depicted the *śālaka* tree as the source of nutrition. The importance of the banana plant is evident in the sculptures of Candī, preserved and displayed in the Rajshahi Museum. Other fruit trees mentioned in the sources of the period under study included the citron (*vīśī* and *dālalīka*), the fig (*kharjura*), the fig (*pakati*), and the madhūka (*bassā kirtīlīla*).
Industry

The agrarian economy of the Puṇḍra region is said to have been richly supplemented by the industrial products in early times. The Arthaśāstra (dated the fourth century BC) throws considerable light on the economic conditions in the Puṇḍra region. It described varieties of the textile products of Puṇḍravardhana, which included the dukīla (or vangaka), a white and soft fabric; the paunjdrakā or paundarikā, black in colour and as soft as the surface of a gem; the ksauama, probably a coarse variety of linen; the patrorna silk and the karpasika or cotton fabric. The patrorna was described as a type of cloth made of fibre produced from the saliva of a worm on the leaves of nāgakesara (mesua ferrea), likucha (artocarpus lakoocha), vakula (minusops elengi) and vata (ficus bengalensis) trees.

Scholars have interpreted the information recorded in Arthaśāstra as indicating the progress of the textile industry in the Puṇḍra region. According to R.C. Majumdar, "Bengal achieved great fame for her textile industry in remote antiquity" and "this is testified by the Arthaśāstra of Kautilya". The products of Bengal were "among the best varieties available in India". He enumerated the following textile products of Bengal based on the evidence of the Arthaśāstra:

1. White and soft fabric (dukīla) manufactured in the country of Vaṅga (vangaka);
2. Black and as soft as the surface of a gem the fabric from Paundra (paunjdraka);
3. Kṣauma manufactured in Paundra (north Bengal);
4. Patrorna of Paundra;

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95 Supra, 34n.
96 Kautalyam Arthaśāstrom, 2.11.11-12, 2.11.17-18.
97 Ibid., 2.11.17.
99 Arthaśāstra, 2.11.17.
100 R.C. Majumdar, History of Ancient Bengal, loc. cit., p.341.
Majumdar then observed that *ksauma* probably denoted linen of coarse variety, the finer form being known as *dukula* manufactured in east and north Bengal (Pundra), both of which distinguished centres of textile industry from very early times, before, and probably long before, the beginning of the Christian Era. Although the nature of *patrorna* is not known, it is generally taken to be a type of ‘wild silk’. He found that the *Amarakosa* (II, VI, 3. 14) defines *patrorna* as ‘a bleached or white *kanshifa’* (the commentator says that it was a fibre produced by the saliva of a worm on the leaves of certain trees), while according to Kautilya, *nagakesara* tree (*mesua ferrea*), *likucha* (*artocarpus lakoocha*), *vakula* (*nimulans elengi*) and *vata* (*ficus bengalensis*) were the sources of these fibres and that *patrorna* was produced in three regions, viz., Magadha, Pundra and Suvarnakundya. Majumdar considered it significant that wild silk of the best quality is still produced in those three regions.

R.N. Saletore felt that Kautilya had used the word ‘*paundraka*’ while referring to two types of garments, viz., *ksauma* and *patrorna*, which were some kind of silk and fibrous garments manufactured in Pundra. He further opined that the *ksauma* or linen, *patrorna* or fibrous garments, *dukula* or white silk garments, and *paundraka* or silk-garments were popular products of Pundra and the neighboring areas. While *ksauma* came from Kasi and Pundra; *patrorna* was from Magadha, Pundra and Suvarnakundya; and the *dukula* and *paundraka* were from Vanga, Pundra and Suvarnakundya. R.K. Mookerji found that the textile products of Pundra, like the *patrorna*, enjoyed a ready market outside India, particularly in China. P.V. Kane’s commentary to Bana’s *Harshacarita* referred to the textile products of only one region of India, viz., Pundra. He referred to a pair of *paundra* (i.e., manufactured in Pundra) silk fabrics.
garments (dukāla-patta-prabhāve ... paundra vasāśi) to drive home the point that the textile products of Pundravardhana were popular throughout the subcontinent in the seventh century.\textsuperscript{108} In the thirteenth century Marco Polo mentioned that the region still plied a lucrative trade in cotton goods.\textsuperscript{109}

The epigraphic records are also important for information on the industrial products of the Pundra region. Amongst the manufactured items mentioned in the epigraphs were the commodities used in worshipping, for example, prudip (lamp).\textsuperscript{110} The Bāigrām Copper-plate grant (Gupta Era 128 = AD 448) mentioned products like perfumery, incense and lamps.\textsuperscript{111} The sandal products, incense and lamps are mentioned in the Pāhrāpur Copper-plate grant (Gupta Era 159 = AD 479) as accessories required for worshipping.\textsuperscript{112} The Gunnāigarh Copper-plate grant of Vainyagupta (Gupta Era 188 = AD 507) spoke about various kinds of perfumes, lamps and incense.\textsuperscript{113}

Salt manufacture was another important industry. The Rānapāla Copper-Plate grant of Śricandra and the Belāva Copper-plate grant of Bhojavarmen referred to salt manufacture in the Pundra region.\textsuperscript{114}

There are also references to jewellery. The Deopāra Stone Inscription of Vijayasena mentioned that “flowers made of precious stones, necklaces, ear-rings, anklets, garlands and golden bracelets were worn by the wives of the king’s servants (dāśis) and the temple girls (deva dāśis), while necklaces of pearls were worn by the women of royal blood”.\textsuperscript{115} The same inscription described Rānaka Sulāpani, who engraved the Deopāra inscription, as the Varendra-Silpigosthi-Cudamanī, thus giving a high status and dignity to the organizations of the artisans.\textsuperscript{116} The popularity of jewellery is testified by the literary

\textsuperscript{108} P.V. Kane, Bāra’s Harsacarita, Text 1, p.39, Commentary 1, p.168; Irfan Habib & Faiz Habib, “Economic Map of India, A D. 500-800”, in PIHC, 62\textsuperscript{nd} Session, Bhopal, 2001, pp.110-111.
\textsuperscript{109} R.C. Majumdar, History of Ancient Bengal, loc. cit., p.242
\textsuperscript{110} Supra, 27n.
\textsuperscript{111} Supra, 44n.
\textsuperscript{112} R.R. Mukherji & S.K. Maity (eds.), ibid., p.56
\textsuperscript{113} Ibid., p.68.
\textsuperscript{114} Ibid., pp.228, 239; R.C. Majumdar. History of Ancient Bengal, loc. cit., p.340.
\textsuperscript{115} Ibid., p.249.
\textsuperscript{116} Ibid., pp.248-251.
sources as well. The *Rāmācaritam* of Sandhyākaraṇāndin mentioned that jewelled anklet-bells, charming ornament sets with diamonds, pearls, emeralds, rubies and sapphires, and necklaces with central gems and pure pearls of big and round shape were popular among the women in noble families.\(^{117}\) The *Tabaqāt-i-Nāṣirī* informed that gold and silver dishes were used in the palace of Lākṣmaṇasena.\(^{118}\)

Some sources also provide evidence on the manufacture of war-weapons. The *Agni Purāṇa* mentioned that Vanga was an important centre of sword manufacture and that the swords (*kharga*) manufactured in the region were characterized by both keenness of edge and the power of standing blows.\(^{119}\) This information is corroborated by the discovery of arrow-heads and spear-heads by archaeological excavations in Pāhārpur (northern Bengal or the ancient Puṇḍra region).\(^{120}\) The *Rāmācaritam* mentioned about the war-weapons made of iron like the swords, spears, arrows, javelins, and also about the lancers and the swordsmen.\(^{121}\) However, the information available from the sources, mentioned above, do not offer any clue as to the material used or whether these were replication of earlier forms.

**Mineral Resources**

Puṇḍravardhana is said to have been well known for its mineral deposits in the early periods, and these concentrated mineral deposits formed an important wealth for the economic growth of the region.\(^{122}\) The *Arthaśāstra* and a few other Sanskrit works mentioned that there were rich deposits of precious minerals like gold, diamond and pearls spread around the region.\(^{123}\) The items made of gold, diamond and pearls were exchanged for various imports from the neighbouring countries like China and those in Southeast Asia. Gold was used for minting coins and in making of ornaments and other

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\(^{117}\) Haraprasad Sāstri (tr. and ed.), *op. cit.*, Canto III, vv. 33-34, p.214

\(^{118}\) *Tabaqāt-i-Nāṣirī*, cited in R.C. Majumdar, *History of Ancient Bengal*, loc. cit., p.34.


\(^{122}\) Subhash Mukhopadhyaya, *op. cit.*, pp 39-41.

luxurious items. Diamond and pearls also met the demands of the palace and the wealthier sections of the society for articles of luxury.\(^{124}\) The existence of important metals in the region sometimes underlay the naming of some urban centres of early Bengal, which were brought within the territory of Puṇḍravardhana at different points of time. Tamralipti (‘tāmra’ or copper, present Tamulk in West Bengal), Suvarṇagrāma (‘suvarṇa’ or gold, present Subarnagrām, a village near Munshigunj in the district of Dhaka, Bangladesh) and Karnasuvāra (‘suvarṇa’ or gold, ancient name of Rāṅgāmāti in the district of Murshidabad, West Bengal) were some of the cases in point. This conclusion is reached on the basis of the ethno-historical approach in interpreting the place-names occurring in the inscriptions of ancient and early medieval Bengal. Early literary and epigraphic sources that mention metal workers such as blacksmiths, goldsmiths and miners also testify to the fact of the existence of those metals and minerals.\(^{125}\)

**Trade and Commerce**

The products of Puṇḍravardhana — agricultural products, textile, ornaments, precious stones, etc., — commanded markets beyond the region as well as throughout and beyond the sub-continent. The land, rivers and seas provided the passage for the use of merchants and traders engaged in export and import of goods.\(^{126}\) Apparently the emerging socio-economic conditions facilitated the rise of new social elements that drew their wealth from non-agricultural economic activities, thereby challenging the efficacy of the Brahmanical social order based on the ideals of varṇa. Not surprisingly, the Brahmanical law-books ascribed to the period accorded a less exalted — even lowly — place for those whose source of wealth was trade and the attendant economic institutions it entailed. The Baudhāyana Dharmasūtra (dated the fifth century) declared that Aṅga, Magadha, Dakṣinapatha, Vāṅga, Puṇḍra, Kalinga, etc., were ‘impure’ since they were inhabited by people of mixed descent and impure birth. Manu (dated to the second century) classified

\(^{124}\) A.K. Sur, op.cit., p.80.
the Pundraka Kṣatriyas as Śūdras because the Brāhmaṇas were not seen in Puṇḍravardhana and sacrifices prescribed by the Vedic sages were not performed there. Manu regarded the people of Magadha as degraded, for they resorted to trade and commerce.¹²⁷

The strategic location of the Puṇḍra region extending to the Bay of Bengal and with big rivers passing through the region to join the confluence at the Bay of Bengal made water communication easily accessible for continuous trade activities. Kautilya spoke about the control of river traffic in Bengal, including Puṇḍravardhana.¹²⁸ The ancient literature of Bengal is said to testify to this point. There are frequent references to dockyards, streams and rivers, and boats and vessels as the vehicles of water transport. The roads were also used by travellers and traders. The channels of communication as well as commercial relations of Puṇḍravardhana with Gujarat and Varanasi through land routes are mentioned in various sources. The land routes between Kāmarūpa and northern Rāṣṭra-Puṇḍra and between Kāmarūpa and Samaṭa-Tāmralipta were used by travellers and traders.¹²⁹ In fact, both indigenous and foreign literary sources provide substantial information on the land routes. Pāṇini’s Astudhyāyī (dated the fifth century BC) highlighted the importance of the route along the north bank of the Gaṅgā from Mithilā and Anga to Puṇḍravardhana. Since Puṇḍravardhana formed a part of the Magadhan Empire during the rule of the Mauryas and the Guptas, the connectivity had to be maintained between the two regions for administrative purposes. This route therefore seems to have been unavoidable for those commuting over land until the southern route from Rājagrha to the sea grew into prominence, thereby reducing the northern route’s importance.¹³⁰ The Guptas ruled over not only Puṇḍra and Vaṅga-Rāṣṭra but also over Samaṭa, which extended to the port of Caṭṭagrāma (Chittagong).¹³¹ The Kathāsaritasāgara also referred to merchants travelling from Puṇḍravardhana to

¹²⁸ Supra, 17n.
¹³⁰ Supra, 9n.
Pātaliputra; the evidence of this source therefore established the fact of regular commercial contact between the two centres.\textsuperscript{122}

The location of Puṇḍravardhana was not far from the border of China. It connected the Himalayan region with the rest of the Indian sub-continent. Hence, since early times Puṇḍravardhana enjoyed close geographical proximity to the regions corresponding to present-day Nepal, Sikkim and Tibet in the north; Assam and East Bengal in the east; and East and West Bengal and Bihar in the south and west. Standing at the centre of the network of highways connecting different civilizations through the inland mountain passes and river routes, Puṇḍravardhana was indeed the eastern gateway for the passage of peoples, goods and ideas between the Indian mainland in the west, and Assam, Burma, China and other parts of Southeast Asia in the east.\textsuperscript{131} The old route connecting India and China passed through the northern wing of Bengal that formed part of Puṇḍravardhana. It was perhaps through this route that the art of preparing silk entered India from China and led to the blooming of textile industry in the region. This northern route also connected Japan and Burma with Bengal and through Bengal with the rest of India in the early centuries of the Christian Era.\textsuperscript{134}

The importance of land routes as the means of communication and commercial activities in Puṇḍravardhana in ancient times is borne out by the accounts of foreign travellers and Indian writers. The Chinese records, in particular, are very important in this context. I-tsing, who reached Tāmrālipa in A.D 673, referred to a land route running eastward from the sea-port. This route was used by the Chinese priests who came to India from Szechwan via Upper Burma during the third-fourth centuries. Some Buddhist texts spoke of its use by pilgrims and merchants of Puṇḍravardhana and China.\textsuperscript{135} The itinerary of Kia-tan (AD 785-805) referred to a land route from Tonkin to Kāmarūpa, which crossed the river Karatoya, passed by Puṇḍravardhana, then ran across the Gaṅgā to Kajaṅgala,  

\textsuperscript{122} Kathāsaritsāgara, C.H. Tawney (tr.), Vol II, Bibliotheca Indica, Calcutta, 1880, p.386; Amitabha Bhattacharyya, \textit{op.cit.}, p.106; R.C. Majumdar, \textit{History of Ancient Bengal, loc.cit.}, p.347.\textsuperscript{131} N.N. Acharya, "New Light on North Bengal from the records of Assam History", in B.N. Mukherjee & P.K. Bhattacharya (eds.), \textit{op.cit.}, p.72.\textsuperscript{134} Ibid., pp.76-77.\textsuperscript{135} Amitabha Bhattacharyya, \textit{op.cit.}, p.106.
before finally reaching Magadha. It served as a vital route for the merchants and travellers of the two countries and also provided a useful passage for further communication to different regions of India. Most likely Pundravardhana provided the passage from the Indian mainland to Kāmarūpa, which lay to the immediate east of Pundravardhana, and, beyond it, to China. It was on this account that Sudhakar Chattopadhyaya suggested that, besides the silk imported from China, Assam was the home of the two best qualities of silk referred to by Kauṭilya. Chattopadhyaya’s assumption rested on his interpretation of Kauṭilya’s references to the Cīnabṛhatra of the Cīna country (Cīnabhūmijāh) and also to the three varieties of cloth (dukūla of the Vaṅgas, Paunḍras and the Suvaṅnakundya, the last identified in western Assam; kṣauma from Kāśi and the Paunḍras; and patronna silk from the Magadhas and the Paunḍras and Suvaṅnakundya). The different varieties of aguru or aloe wood like jogaka, taurupa, grāmaruka found mention in the Arthasāstra as products of Kāmarūpa. Kauṭilya’s acquaintance with the various aguru products of Kāmarūpa is also indicative of a regular commercial transaction between Kāmarūpa and Magadha. The simple logic of geography made it imperative for trade between Kāmarūpa and Magadha to pass through the Paunḍra region.

The river systems and the land routes were undoubtedly the most commonly used routes for travelling and trading in and around Pundravardhana. But Pundravardhana’s southern and eastern borders comprised a continuous coastline which made the sea-routes convenient for long-distance transportation of goods and travelling. Hiuen Tsang, who had travelled in the region during the seventh century, highlighted the importance of sea-routes in the development of trade and foreign markets in Pundravardhana. The local versions of the Padma Purāṇa and some local traditions are said to have mentioned the names of famous merchants who earned fortunes and glories by their involvement in seaborne long-distance trade. These latter sources included the folk ballads like 'Dhanapatī
Sadāgar’, ‘Cāṇḍ Sadāgar’, and ‘Śrīmaṇṭa Sadāgar’: they referred to the numerous huge boats of these traders, who used to sail from the famous port of Pātalcaṇḍi (in the modern district of Malda) on business towards Malacca, Sumatra and Java. These sources described the various sizes and shapes of the merchant-boats. The country boats were commonly known as ‘madhukan’. and the large boats generally used in the seas were called ‘burhit’. The ‘burhit’ required more than one sailor to sail it. The sailors were known by different names, including ‘diśāru’, ‘tārabid’, ‘bāhak’, etc. Incidentally, Dhanapati Sadāgar and Cāṇḍ Sadāgar were the main characters in the original versions of the Padma Purāṇa. Moreover, the traditions in northern and north-eastern Bengal districts claim a local character for the central theme of the Padma Purāṇa. The frequent mention of wealthy merchants, vast ports and numerous mercantile boats in the local traditions not only indicated the flourishing trade and commerce in the region of Puṇḍravardhana but also the vast knowledge of sea-routes for commercial purposes.

Means of Transportation

Puṇḍravardhana and the adjoining areas were characterized by different topographical features. Consequently, various routes — over land, river and sea — had to be used for the movement of people and commodities. The means of transportation also had to be devised according to the requirement of the routes. The transportation through land was mainly based on the use of animal power. Elephants and bullocks were commonly used for this purpose as beasts of burden. Bullock-cart was an important means of transport both in the urban and in the rural areas. Bullock-carts were used for transportation of goods and people. Hiuen Tsang found that there were large numbers of elephants in the

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southern part of Kajangaia and to the south-east of Kāmarūpa, where land was full of dense forests and swamps. Elephants were used for transportation of goods and for travelling by land. They were mainly used for transporting heavy loads and for long-distance journey. The Belāva Copper-plate grant talked about domesticated elephants and the Edilpur Copper-plate grant referred to the bells of elephants. Elephants and buffaloes moved across the mountain passes of the Himalayan ranges, carrying goods to Tibet, Nepal, Sikkim, Bhutan, China and Burma. Apart from the elephants, horses were also used as a common means of conveyance particularly among the aristocratic class. The evidence of the available sources indicate the presence of camels too which were possibly also used as a mode of conveyance. The Bengali Cāryāpadas refer to the capture of camels by means of snares. A sculpture found at Pāhārāpur represented a camel, and an image of a goddess riding a camel has also been discovered in northern Bengal.

By far the most important route of communication in Pundravardhana and the adjoining areas was the waterways. Numerous river systems served as the network of communication and transportation. On the other hand, the Bay of Bengal provided the route for long-distance trade with Java, Sumatra, Indonesia, Malaysia, Thailand-China and Japan. It is obvious that a section of the population of Bengal in general and of the Pundra region in particular specialized in the art of navigation since early times. Kālidāsa’s Raghuvamśa, the verses of the Cāryāpadas, Sandhyākaranandin’s Rāmacaritam and the records of Hussain Shah (AD 1498-1520) are among the important sources which refer to the fleets of the rulers who controlled the seat of authority in Pundravardhana and other parts of Bengal at various points of time. The epigraphic records that refer to the navigational art of Bengal are the Guṇāigarth

146 Thomas Watters, op cit, pp 182-186
147 R.R. Mukherji & S.K. Maiti (eds), op cit, pp 251
148 Supra, 145n.
149 Dāyabhāga of Jīmutavāhana, p 148, cited in R.C. Majumdar, History of Ancient Bengal, loc cit., p 463
150 M.M. Haraprasad Sāstrī (comp & ed.), Bāndhā Gāṇa O Dohā 35, Vangīya Sahitya Parishat (VSP), Kalikata, 1323 BS; R.C. Majumdar, History of Ancient Bengal, loc cit., p.463
152 Haraprasad Sāstrī (tr. and ed.), op cit, Canto I, v.4, p.3; Canto II, v.7, p.38.
Inscription of Vainyagupta (dated about AD 507), the Khālimpur Copper-plate grant of Dharmapāla and the Deopārā Stone Inscription of Vijayasena. The Tarapanda Copper-plate grant of Laksmaṇasena also spoke about the roads and cart-tracks. The local versions of the Padma Purāṇa, local ballads and oral traditions referred to the powerful fleets of the different rulers and throw considerable light on the sizes and shapes and purposes of the boats. These sources indicated that different types of boats were manufactured for different purposes and were equipped accordingly. These included the war-boats, mercantile-boats, pleasure-boats, and country-boats for local transport. The boats were also named according to size, shape and function. For example, the mercantile boats were known as ‘madhukar’, and the large boats generally used on the sea were called ‘burhit’. As mentioned above, the sailors were also known by different names. The well-known terms for sailors were the ‘dishāru’, ‘tārabid’, ‘karnadhār’, ‘bāhak’, ‘pavanbetta’, etc. The early Cāryāpadas frequently refer to boats, including sea-going vessels. These evidences mention their component parts, viz., helms and oars, instrument for bailing out water, ropes for towing and fixing the boat to a wooden post on the land, sails, masts and wheels. According to these traditions, rafts made of logs and bamboos and ferry boats were used for traversing short distances. The local traditions also mentioned a number of ancient ports. Among them, the port of Pāṭālcaṇḍī (in modern Malda district) was of great significance. The site still stands about eight kilometers away in the northern direction of modern Gaṇḍ and about half a kilometer in the southern direction of Grāmatala in Malda district. Pāṭālcaṇḍī derived its name from a deep and wide ‘beel’ (fan), though silted over the years, and continues to be called so even till today. A tradition suggests that the Gaṅgā flowed through the ‘beel’ in olden times and Pāṭālcaṇḍī served as a naval base for the rulers of Pūndravardhana besides being an important business centre. Traditions further informed that Pāṭālcaṇḍī was a very famous port and the legendary merchants like Dhanapati Sadāgar, Cāṇḍ Sadāgar,

155 Supra, 53n.
Srîmaṇṭa Sadâgar used to set sail their enormous vessels from this port towards Malacca, Sumatra and Java and other Southeast Asian countries. The remains of a broken iron chain by which big boats were possibly anchored and of a dilapidated high pulpit made of antiquated bricks and stones where anchors might have been cast can still be seen at the site. It is also said that prior to the advent of the Muslims in Bengal, the eastern bank of the river Gaṅgâ from 'Pāṭālaṁḍī' to 'Āṁṛti' (identified with the site of one of the early capitals of Punḍravardhana, 'Rāmaṇaḷ'ī' as mentioned in the Râmacaritam) was metalled by bricks and stones and the entire area was used as a big port as indicated by the popular ballads.\(^{158}\)

No doubt the preparation and maintenance of such large boats as owned by the rulers and wealthy merchants in Punḍravardhana demanded the presence of specialized boatmen and workshops. In fact, the folk accounts indicated the existence of several workshops in different parts of Punḍravardhana, some of which were famous not only among the merchants of the Indian sub-continent but also among the mercantile communities from abroad. Hiuen Tsang recorded the presence of a number of workshops in Punḍravardhana, which were surrounded by fine gardens. Sonâtalâ and Kâṅchansahar near Āṁṛti were two places that were well known for the big workshops engaged in making boats. These two places are still very important business centres. In the medieval period, a place named 'Chîrâibârī' in the north-easern corner of Gaûḍa was also famous for its big workshops where different types of boats — large and small — were made. Apart from the large number of big workshops managed by private carpenters, there was a royal workshop for making and repairing boats. Chîrâibârī was so famous for its boats that the native and foreign merchants visited it as their first choice for the purchase of any kind of boat. There was also a famous workshop in Bêniâpārā, presently located near Pâṅḍuā which was once the capital of Bengai. The place is still called Lâ-ghâṭâ. A survey of the local traditions and of the numerous finds of workshops, ports, boats, boat-bridges, iron chains, anchorage, etc., confirm the navigational attainment of the region.\(^{159}\)

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\(^{158}\) K.K Basak, \textit{op cit.}, pp 80-84; Rajanikanta Chakrabarti, \textit{op cit.}, pp 141-146.

\(^{159}\) \textit{Ibid.}, p.62; Rajanikanta Chakrabarti, \textit{op cit.}, pp 136-141.
Monetization

The barter system seems to have dominated the economic transactions. However, the discovery of coins at various archaeological sites and the mention in stone and copper-plate inscriptions of the prices of lands sold, purchased and donated, point to the use of money and suggest the process of monetization of economy (however limited in nature) during the period under study. The use of the terms ‘treasury’ (kośā) or ‘royal treasury’ (rājakośā) in the inscription also hints at the possibility of the prevailing money economy. Hoards of copper and silver punch-marked coins have been unearthed in Mahāsthānagāra and other sites like Pāhārpur, Bāigram and Bāngarh, in northern Bengal. The coins named in various inscriptions include ‘ganḍaka’, ‘dināra’, ‘kādi’, ‘drāmma’, ‘kapardakapurāṇa’, ‘karśapana’, ‘purāṇa’, ‘kapardaka’, etc.

The available source-materials suggest that the presence of wealthy sections in the society augmented the process of state and social formation, and that society was divided into various orders on the basis of wealth and profession. Land in Pundravardhana was fertile for agriculture, the crafts and industries were well developed, and trade and commerce were flourishing. The Rāmacaritam listed various kinds of paddy plant. The Edilpur Copper-plate grant of Keśavasena mentioned “smooth fields growing excellent paddy”. The Ānulīa Copper-plate grant of l-kṣmaṇasena spoke of “myriads of villages, consisting of land growing paddy in excessive quantities.” The Rāmacaritam also described Rāmāvatī (the capital built by Rāmapāla) as “a city of rows of palaces” and possessing “an immense mass of gems”, while the Rājatarangini eulogized the

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160 Dilip K. Chakrabarti, op cit., p 89-110
162 Ibid.
163 Supra, 34n.
164 Supra, 51n.
165 Supra, 53n.
166 Ibid., p.286; (Mādhānagar Copper-plate Inscription).
168 R.R Mukherji & S.K Maity (eds.), op cit., p 301
169 Ibid., p.338.
170 Haraprasad Sāstri (tr and ed.), op cit., Canto III, vv 31-32, p 72
“wealth of the citizens of Pundravardhana”. The Rāmācaritam further mentioned the use of cowries on a massive scale for various transactions. The Deopāra Inscription of Vijayasena took pride in pronouncing that the Brāhmaṇas versed in Vedas had become the possessors of so much wealth that their wives had to be trained by the wives of the townsfolk to recognize pearls and pieces of emerald, silver coins, jewels and gold from their similarity with seeds of cotton, leaves of sākā, bottle-gourd flowers, the developed seeds of pomegranates and the blooming flowers of the creepers of the pumpkin-gourd respectively.

The evidence in favour of wealthy character of the Pundra region apart, the instances of the sale and purchase of land on cash payment recorded in the inscriptions are certainly very good reasons to believe that the monetization of economy was in the process and there were some people with purchasing capacity. Thus, the Bāigrām Copper-plate grant (AD 448) mentioned the sale of three kulyavāpas of land to two Brāhmaṇas, Bhyoya and Bhāskara, who were bothers and residents of the same village, for six gold dināras and eight silver coins. The grant mentioned that they wanted the income from this land to be assigned to a Viṣṇu temple that was established by their father. The other inscriptions pertaining to the Gupta period, which recorded the sale and purchase of land, mentioned the price of land at the rate of two to four gold dināras per kulyavāpa. Two Dāmodarpur Copper-plate Inscriptions of Kumārgupta I (dated AD 444 and AD 448), two Dāmodarpur Copper-plate Inscriptions of Buddhagupta (dated AD 482 and AD 476-495), Pāhārpur Copper-plate Inscription of the Gupta Year 128 (AD 479) and the Dāmodarpur Copper-plate Inscription of an unnamed Gupta king (dated AD 543) are among those copper-plates which recorded the sale of land priced at two to four gold dināras for one kulyavāpa. This shows that price of land went up from two to four dināras between AD 444 and AD 495. This also shows that the Brāhmaṇas not only received land as gift or donation but they were also capable of purchasing land by making cash payment for religious purposes.

Rājatarangini, p.422.
Rājatarangini, op. cit., p.23

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D.K. Chakrabarti strongly argued in the favour of the prevalence of money economy in the Pundra region during our period of study on the ground that the archaeological excavations have unearthed hoards of copper and silver punch-marked coins belonging to early periods in Mahāsthāngarh and other sites, like Paharpur, Bāigram and Bāngarh, in northern Bengal.  

He particularly insisted that the circulation of minted coins in the Pāla period cannot be in doubt, because (a) at least three Pāla inscriptions refer to drāmma, purāṇa and karsapana, (b) three copper coins from Paharpur show a clumsily depicted bull on the obverse and three fishes on the reverse, (c) some scholars have attributed the Pāhārpur coins to be Pāṇḍyas (which might also suggest the possibility of commercial connections between two distant regions), (d) a few silver and copper coins from Bihar and north Bengal with Śrī-vigra legend have been ascribed to the Pāla dynasty, and (e) a Gupta archer-type gold coin carries the legend Devapāla (although this may be a commemorative medallion issued on a particular occasion and the issue of identification of Devapāla with the king of the same name of the Pāla dynasty is still not satisfactorily settled).  

Chakrabarti also observed that there is no justification to the argument that minted coins were not in circulation during the Pāla period, since the inscriptions which constitute the most important source of the Pāla period are so clear on this point.

Finally, the use of money or other objects as medium of exchange in early times is undoubtedly a reflection of a higher level of economy than the primitive barter system. It may therefore be contended that the Pundra region had experienced significant material changes during the Pāla-Sena age of the history of Bengal that extended to the beginning of the thirteenth century.

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177 Ibid, p.79.  
178 Supra, 173n.