

INDIAN ECONOMIC HISTORY – Ancient Period

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PART I: PREHISTORY

Overview

The history of India's Stone Age is recoverable largely from the archaeological record of its three stages: Palaeolithic (c.1,000,000 - 40,000 BCE), Mesolithic (c. 40,000-7,000 BCE) and Neolithic (c. 7,000 - 3,000 BCE). It is important to state that these dates, especially the earliest ones, are not conclusive and undergo constant revision in light of new research. Recent excavations near Madras, for example, suggest a radical shift in the chronology of the earliest tool-making hominid communities in the subcontinent.

Production

Hunter-gatherer Instead of producing food, early stone-age people foraged by hunting and gathering. The hunting element of the 'hunter-gatherer' image is often exaggerated by both scholars and the general public, and most of their food was gathered. Based on gender divisions among tribals in modern India, it appears that men tended to hunt and women to gather. Again contrary to popular belief, hunting was not done with spears or arrows, but rather with clubs and large stones, and meat was often eaten from dead animals. Fruit, berries, nuts, small insects and possibly honey were gathered mostly by hand, although some crude tools were used to dig up tubers. Fishing was also common.

Tools The only objects made during the Palaeolithic period were stone tools, used primarily in hunting and gathering. Indeed, the transition from the Old- to the Middle-Stone Age in India is marked by the slow diminution in the size of stone tools. The unwieldy 'core-tools' (such as hand-axes and cleavers) of the Palaeolithic were gradually replaced by smaller 'flake-tools'. From the widespread presence of stone fragments (about 5 cm in width), scientists conclude that the larger stones were chipped and shaped by smaller stones. Most of these new, smaller tools were made of flint and quartzite, which were harder and more easily worked than other types of stone.

Crafts Pottery is found in only a few, late Mesolithic sites in India, in contrast to other Mesolithic cultures around the world. However, ornament-making was widespread. Animal bones with grooves found at Kurnool in Andhra Pradesh suggest that they may have been worn as ornaments. Similar suggestions have been made for round, disc-like stones and ostrich egg shells with holes in them, resembling ornaments found in prehistoric Siberia, China and Africa. Beads made from ostrich egg shells have been found in many sites across the subcontinent. In one Bhimbetka cave, for instance, a buried man wore a necklace, presumably of various types of beads, although only the egg shell ones remained. Later, the Neolithic people of Mehrgarh made reed baskets, wove cotton and wool, carved ornaments and manufactured pots. Indeed, by the end of this period, pottery had evolved from crude, handmade vessels to wheel-made pots with geometric designs, typically with black and red colours. One manufacturing area was found with three ovens and metres of pottery debris.

Trade

For most of the Stone Age, people used a barter economy based on the exchange of skins, tools, pots and ornaments. There is no evidence of currency or of trade between the numerous early stone-age communities in India. Most sites of human habitation were originally located in the terraces of the Soan River and Potwar plateau in present-day

Pakistan, but many more have found in central and south India. Contrary to the common assumption that stone-age sites must be distant and isolated, many of these sites are close to today's towns and cities, and near a water source. Most of them were rock shelters, although caves were also common, such as those at Sanghao in Pakistan and Kurnool in Andhra Pradesh. These stone shelters are those that have survived over time, while others, presumably made of foliage and branches, would also have been used.

Innovation

It appears that early stone-age people in India set up 'factories' for the production of tools. Researchers have identified quarries where stone tools were manufactured, especially in the Deccan during the Palaeolithic period (c.1,000,000-40,000 BCE) At Isampur (c. 500,000 BCE) in modern-day Karnataka, for example, archaeologists have identified four adjacent sites (each about 300-400 sq miles), where a large cache of these early stone tools were found. The tools were probably made from the large limestone slabs and blocks in the area.

Discussion/Questions

1. Compare the rock paintings in India with their more famous counterparts in Spain and France. What differences are apparent, and what might those differences suggest about the societies that painted them?
2. 'Religion is basically the worship of the dead.' Discuss this claim with reference to the burial practices in stone-age India.
3. Ideas, values and beliefs are not easily extrapolated from material remains. What suggestions of this conceptual world can you find in the evidence from stone-age India?
4. Although research on stone-age communities reveals new facts every year, many of our assumptions about these people and this period remain stubbornly static. A good project would be to study the popular perceptions of the 'stone-age' and then to compare them with the emerging picture from ancient India.

Reading

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Part II: INDUS VALLEY CIVILIZATION

Overview

As a generalisation we can say that the economy of the Indus Valley civilisation (c. 3000-1500 BCE) was the culmination of a slow evolution from semi-nomadic pastoralism to settled agriculture and then commerce in urban centres. Compared to earlier periods, objects in the Indus Valley civilisation (IVC) were standardised and mass-produced. Since coinage is not found in India until the subsequent Iron Age, we have to assume that the Indus economy operated by means of barter and trade. Although the level of political centralisation in the Indus Valley civilisation is still debated, it is clear that its economic system was complex. Sustaining a far-flung network of regional centres for more than ten centuries would have required considerable surplus food production, commercial activities, division of labour and trade networks.

Production

Food Although the people of the IVC continued to hunt, gather and fish, they now also began to produce food by cultivation and the domestication of animals. Farmers cultivated wheat, cotton, millet, rice, sesame, melons, peas, dates, garlic and several varieties of gram. The fertile river basin required (and still requires) little ploughing, irrigation or manuring. Terracotta models of ploughs have been found, but no actual plough has survived because they were made of wood. Bunds and canals were built to contain and divert surface water. The most important

domesticated animals were cattle and buffalo, used for meat, milk and labour. Sheep and goats were also raised for similar purposes, as well as for wool. Small figurines of dogs suggest that they too were domesticated. Animal bones that resemble those of a horse are extremely controversial since horses are associated with the Indo-Aryans, who are thought to have migrated to India only after (or at the same time as) the decline of the IVC.

Metallurgy Copper and bronze (copper alloyed with tin, arsenic or nickel) artefacts are plentiful in the IVC. Sixteen copper workshops existed in Harappa alone. Copper and bronze knives, spears, swords, needles, rings, bangles and mirrors are common. Bronze was also used to make statues, while copper plates were used for writing.

Brick-making IVC houses, warehouses, fortress walls and its few large buildings required a considerable quantity of unglazed mud-fired bricks. Even the drain pipes were made of terracotta. This, in turn, depended on an extensive timber industry to supply the wood for the many kilns where the bricks were fired. Finally, masons and other builders were required to construct houses.

Crafts IVC people made pots in a wide variety of standardised styles and shapes. Most are sturdy, wheel-turned and high quality, with geometric designs of either red or black. IVC people also wove cotton and woollen textiles, built houses and made ornaments of stone, terracotta, shell, semi-precious gems, gold and silver.

Trade

Internal Food, raw materials and manufactured goods were traded within the IVC between villages, regional markets and urban centres. Harappa had an open-plan market for stalls, surrounded by workshops where shell, copper and agate artefacts were produced. Fascinating new analyses of grain deposits (phytoliths) suggest that rural farmers shifted from growing a single crop for local consumption to a variety of crops that were processed for trade with the regional centres. It is thought that this shift occurred because of commercial demands from powerful merchants in the cities.

External External trade was crucial to the IVC economy. Lapis lazuli, tin, gold, silver and fine woollen textiles came from Central Asia, West Asia and Afghanistan. To these regions, the IVC exported mainly cereal grains, livestock and cotton textiles. Trade with Mesopotamia is demonstrated by the fact that shell bangles, carnelian beads and numerous Indus Valley seals have been found in ancient Near Eastern cities.

Innovation

Transport The economy of the IVC was driven by important innovations in transport, which facilitated trade. One such discovery was the use of the bullock cart, with large spoked wheels. Another was the use of small, flat-bottomed boats, perhaps driven by sail and similar to those one can see on the Indus River today. There is also second-hand evidence of sea-going craft. Another fascinating innovation was the building of a large dockyard at Lothal, on the west coast of India, which would have facilitated maritime trade to the Near East. Burnt bricks were used to construct a basin with walls over 200 meters long on the east and west side, and about 35 meters long on the north and south. A sluice-gate and a spill channel were used to regulate the water level.

Plough The earliest evidence of a ploughed field was discovered at Kalingban, an Indus Valley civilisation (c. 3000-1500 BCE) in modern-day Rajasthan. The field is dated to about 2800 BCE. The use of a wooden plough increased agricultural production, which enabled the larger populations and spread of urbanism that defined the IVC.

Weights Economic transactions in the Indus Valley civilisation were facilitated by the use of standardised system of weights. At Harappa, six differently sized cubes have been found that conform to the binary weight system used in all excavated settlements. The smallest weight is less than 1 gram and the most common weight is approximately 13.7 grams, which is in the 16th ratio. In the heavier weights, there is a decimal increase where the largest is 100 times the weight of the 16th ratio in the binary system. These weights may have been used for trade and taxation collection.

Discussion/questions

1. The economy of the IVC operated by means of barter, rather than coinage or currency. Studies of archaic barter societies (see, for example, 'The Gift' by M. Mauss) emphasise the importance of rules and reciprocity. How, then, does barter differ from modern economic exchange?
2. The overwhelming majority of the IVC population lived in small towns and villages, yet most of the archaeological evidence comes from a handful of large urban centres. Does this discrepancy distort our understanding of the civilisation? Although our first answer might be 'yes,' consider that the villages were connected to the cities by trade networks and possibly social links as well. In addition, most artefacts are found in both urban and rural sites.

Reading

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Part III: INDO-ARYAN CIVILIZATION

Overview

The major economic development during this period of Indian history (c.1000-500 BCE) was the gradual integration of early Indo-Aryans with the indigenous populations and the resulting shift of the newcomers from pastoralism to settled agriculture. This all-important shift was made possible by the spread of sophisticated iron-making, which enabled extensive forest clearance and land cultivation.

Production

Food The subsistence pattern of the early Indo-Aryans was predominately semi-nomadic pastoralism, although they also cultivated crops on a limited scale. They kept horses, sheep and goats, but cattle were their preoccupation. Cattle raids were frequent and cattle were essential for ritual sacrifice. By about 900 BCE, however, Indo-Aryans began to assimilate with indigenous farming populations and their distinctive pastoralist economy gave way to settled agriculture. Most importantly, the new sedentary life entailed a transition from livestock to land as a measure of wealth.

Pottery Another development that resulted from this intermingling of Indo-Aryans with local populations was the emergence of sophisticated pottery. Pots during this period were wheel-thrown and dried in the sun. Interestingly, there are no animals or humans depicted on pots, only geometric patterns and simple lines painted in black.

Iron-making Early Indo-Aryans may have possessed iron objects, but they did not introduce this critical technology to India. Instead, as part of their assimilation, they learned to make iron from the indigenous populations. By 1000 BCE, and possibly much earlier, iron was used to make a variety of objects, including needles, nails, hooks, heavy axes, knives, arrow heads, tongs and clamps. The most sophisticated techniques were used in the south, although the discovery of clay furnaces at many sites in north India indicates the spread of this technology. Most furnaces, south and north, are of the open type that used bellows. Some of them are large-scale and capable of making heavy tools, such as axes. Very little research has been done to identify the source of the iron ore, but most scholars believe that it came from the Himalayan foothills.

Trade

For the early Indo-Aryans, cattle were a form of currency. Goods, especially cattle, were bartered, although ritual gift-giving also played a role in exchanges. Later, about 500 BCE, India's first minted coins (as opposed to shells or beads used as barter) were manufactured in the Gangetic plain. Made from silver bars, these early coins were punched and stamped with a symbol, such as an animal or the swastika. The coinage weight system in north India

was based on a red-and-black berry, while that in south India was based on a type of bean. By the end of the period, coinage and increased political centralisation enabled a more complex economy.

Innovation

Iron-making The discovery of iron-making is the most significant economic innovation in this period. Recent radiocarbon dating has placed iron slags in a period from about 1400-1000 BCE, while early tools (knives, spikes, bows, spoons, axes etc.) date from about 600 BCE onward. By the turn of the Common Era, high quality steel was produced in south India by what is called the crucible technique, which heats wrought iron, charcoal and glass.

Influence of iron The emergence of iron technology, especially heavy axes, literally changed the face of India by enabling large-scale forest clearance in the Gangetic plain. This clearance, in turn, facilitated the production of considerable food production, which sustained the large populations that led to a shift from tribe to chiefdom. For this reason, it is no exaggeration to say that iron-making was the most important development in ancient India.

Discussion/questions

1. The emergence of iron technology, especially heavy axes, literally changed the face of India by enabling large-scale forest clearance in the Gangetic plain. This clearance, in turn, facilitated the production of considerable food production, which sustained the large populations that led to a shift from tribe to chiefdom. For this reason, it is no exaggeration to say that iron-making was the most important economic invention in ancient India. An excellent research project would be to trace the development of iron-making from its crude beginnings to later stages.
2. Another significant development was the minting of coins in this period. Again, this is an offshoot of increasingly sophisticated metallurgy.

Reading

A.L. Basham, *The Wonder that was India (Sidgwick and Jackson, 1963)*

B. B. Lal, *The Homeland of the Aryans. Evidence of Rigvedic Flora and Fauna & Archaeology (Aryan Books International, 2005)*

David W. Anthony, *The Horse the Wheel and Language. How Bronze-Age Riders from the Eurasian Steppes Shaped the Modern World (Princeton, 2007)*

Part IV: CLASSICAL PERIOD

Overview

During this long period (c.500 BCE-500 CE), and especially under the patronage of the Gupta Empire, the elements of a pre-modern economy were established. The prevalence of iron tools continued to the face of India by enabling forest clearance, large-scale cultivation, food surplus, concentrated urban populations and enlarged states. Expanding urbanism led in turn to a wealthy mercantile class, improved transport, increasing trade, large amounts of minted coins and new banking methods. Underlying many of these economic developments was the appearance of writing sometime between 350-250 BCE.

Production

Food India became a predominately agricultural economy in this period. Although significant numbers of people (and castes) continued to follow pastoralism, and tribal populations hunted and gathered, the great majority of India's population cultivated the land. The primary crops were, as now, wheat, rice, lentils and spices. This spread of agriculture was made possible only by massive forest clearance, itself enabled by the production of iron tools.

Commerce Urbanisation during the Mauryan Empire (321- 185 BCE) permitted the growth of commerce, not only in the capital Pataliputra, but also in other cities in the Gangetic plain. A similar development occurred in south India, again in the riverine capitals of kingdoms, such as Madurai, capital of the Pandyas. These cities created the conditions for a growing merchant class, skilled craftsmen and entrepreneurial traders. Woollen carpets, silk garments, furs and ivory ornaments were produced and sold in large amounts.

Trade

Transport The modernising urban economy that flourished under the Mauryas (c. 321-185 BCE) developed even further under the Guptas (320-c. 550 CE). The Mauryan state began to build a system of roads, which the Gupta rulers improved and extended so that trade routes connected farmers and merchants in the interior with commercial centres and seaports. This sophisticated transport system enabled the Gupta rulers to collect land tax and import duties.

Coinage The first inscribed coins were issued in this period, with portraits of Indo-Greek (Gandhara) rulers in the northwest, dated to about 100 BCE-100 CE. Mostly round and mostly silver, these coins show the king Menander aging from decade to decade. By the time of the Gupta empire (4-6th c. CE), coins depict rulers in various scenes, such as playing an instrument or receiving a supplicant. In south India, coins tended to bear also the official emblem of a king, such as two fish, a bow and arrow or a tiger.

Innovation

Guilds A key factor that stimulated the economy in this period was the establishment of mercantile guilds. Texts mention 75 different occupations that could form guilds, including potters, metal-workers, goldsmiths, weavers and carpenters. Guilds were a political and a military force, maintaining militias in support of their enterprise. The power of these guilds extended overseas, especially in southeast Asia, where they set up storage facilities for their imports and exports. Operating as early banks, these associations of merchants pioneered the use of money (silver and copper coins), some of which they issued themselves. They also initiated early banking methods, such as investments and endowments.

Writing The key factors contributing to economic growth—expanding urbanism, rise of mercantile classes, guilds, improved trade networks and improved banking methods—were themselves largely due to the appearance of writing. The earlier Indus script disappeared about 1500 BCE, and more than a millennium passed before writing once again appeared in India. Archaeologists working in Sri Lanka have found Brahmi inscriptions (in the Prakrit language) on pottery dated to 450-350 BCE. However, these are single letters only. A more extensive use of the Brahmi script was to write the edicts of King Ashoka, inscribed on rocks and stone pillars between 250-232 BCE. A few of these imperial proclamations were written in another script (Kharosthi), but it was used only in northwest India and died out about 200 CE. Brahmi, however, went on to become the parent of all other Indian scripts (except the Persian-Arabic script used to write Urdu). Brahmi itself is probably derived from a Semitic or Mesopotamian script, although that history is still debated.

Questions/discussion

1. The earliest Indian coins with inscriptions were struck around 100 BCE by smiths working in areas controlled by Greek-Indo kings in the northwest. Some of the coins were bilingual (Prakrit and Greek) and biscriptual (Greek and Kharosthi). What can explain the emergence of inscribed coins at this time and in this place?
2. It is important, however, to emphasise that increased circulation of coins did not entirely replace a barter economy. Traditional exchange methods continued to operate very widely alongside monetised exchange.
3. Maritime trade is an under-studied topic in the economic history of this period. Because peninsular India (or south India) had seaports on both coasts, sea trade was a powerful force in shaping its history. Archaeologists have excavated a large trading centre at Arikamedu near modern Pondicherry, south of Madras. Along with a hoard of Roman coins, they found residential quarters, warehouses, docks and fortifications. Other sites have been found along the east coast and west coast, suggesting a network of linked trading outposts.

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