

HUMANITIES INSTITUTE

INDIAN ECONOMIC HISTORY

Stuart Blackburn, Ph.D.

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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 been 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

Upinder Singh, *A History of Ancient and Early Medieval India: From the Stone Age to the 12th Century* (Longman, 2008)

Robin Dennell and Martin Porr (eds.), *Southern Asia, Australia, and the Search for Human Origins* (Cambridge, 2014)

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 Kalingan, 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

Burton Stein, *A History of India* (Blackwell, 1998)

Romila Thapar, *Early India. From the Origins to 1300 AD* (Penguin, 2002), pp. 1-97

Mark Kenoyer, *Ancient Cities of the Indus Valley* (OUP, Karachi, 2010, 2nd ed.)
Gregory Possehl, *The Indus Civilization: A Contemporary Perspective* (AltaMira, 2002)

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 enable 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 Mesopotamia 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.

Reading

Romila Thapar, *Early India: From the Origins to A.D. 1300* (California, 2004, various editions)

Ainslie T. Embree, *Sources of Indian Tradition, Vol I* (2nd ed.) (Columbia, 1988)

F.R. Allchin, *The Archaeology of Early Historic South Asia: The Emergence of Cities and States* (Cambridge, 1995)

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

Part V: EARLY POSTCLASSICAL PERIOD

Overview

The major economic development in the centuries between the demise of the Gupta Empire (c. 500 CE) and the rise of the Delhi Sultanates (c. 1000 CE) was the gradual replacement of pastoralism by settled agriculture. In addition, the widespread process of regionalism (in culture, religion and government) had economic effects, as temples became commercial centres. Increased maritime trade with Tang China, the Arabian peninsula and Hinduised Southeast Asia also enabled regions to grow wealthy without dependence on an imperial capital.

Production

Agriculture Cultivation displaced pastoralism and rivalled urban-based commerce for economic power. The spread of agriculture was made possible not only by forest clearance but also by improved irrigation, which, in turn, enabled a wider variety of crops. In South India, where intensive wet-rice agriculture dominated, rulers built large tanks (or reservoirs), dug deep wells and created a system of canals to bring water from the major rivers to fields.

Commerce Most histories of India's economy state that production of goods stagnated during this period, prior to the Delhi Sultanate. This does not mean, however, that the merchants and artisans of the early Gupta period disappeared. Indeed, there is ample evidence from research on trade routes that Indian textiles, in particular, were produced and sold in large amounts.

Trade

Currency Some scholars have argued, though others have disagreed, that there was a steep decline in the use of metallic coins in the post-Gupta era in north India. It does appear that there was a shift from gold to silver, and from these two metals to a debased coin using copper to add weight. We also have evidence of an increasing use of cowrie shells, especially in long-distance maritime trade. Overall, it seems that whatever the decrease in metal coinage, it occurred mainly in the interior areas of north India.

Temples A distinctive feature of the Indian economy that developed in this period was the temple as a trading centre. With kings, landowners and merchant as patrons, and artisans, ritual specialists and accountants as employees, temples became major centres of economic activity. Kings legitimised their authority by building and patronising temple complexes, such as the great structures at Kanchipuram and Tanjore in south India. Landowners and merchants asserted their status by making donations of land to the temple, the revenue from which was earmarked for the performance of a ritual or maintenance of a shrine. A copper-plate from about 850 CE records the gift of 90 sheep by a merchant to a temple. Another copper-plate mentions a donation of 30 copper coins by a merchant's wife for the maintenance of a temple lamp. Buddhist monasteries played a similar economic role, though less conspicuously.

Maritime Trade During this period, the Indian Ocean emerged as the centre of an international trade network. Indian merchants, on the west coast, were placed at the centre of this nexus, which linked the subcontinent with the Middle East, Africa and Asia. On the east coast, the Chola rulers of south India (c. 9-13th c. CE) also set up a string of fortified trading towns to facilitate growing maritime trade. Much of the Indian influence in Southeast Asia, evident in the Buddhist and Hindu temples in Thailand, Cambodia, Indonesia (especially Bali and Java), and in the names of kings, can be attributed to South India and largely to the Cholas. The Chola maritime campaigns to Sri Lanka and Indonesia were probably intended to control trade routes as much as to conquer territory. Maritime merchants became wealthy on the back of this trade and formed powerful associations that rivalled kings. One guild based in the Deccan (The Five Hundred Lords of Ayyavole) spread over the whole of South India and left inscriptions in their name in Southeast Asia

Innovation

New technologies improved production in various sectors. For example, the earlier hand mill for pressing oil from seeds was replaced by a bullock-driven mill, which was far more efficient. Larger and more easily worked looms were built, which produced goods for the increasing domestic and foreign markets in woven silk, linen, calico, wool

and cotton. The same is true for pearls, ivory, sandalwood gold and semi-precious stones. The Persian Wheel was also key to improved agricultural production, which depended on the construction of canals and reservoirs.

Reading

Noboru Karashima, *A Concise History of South India* (Oxford, 2014)

Burton Stein, *A History of India* (Blackwell, 1998)

Romila Thapar, *Early India. From the Origins to 1300 AD* (Penguin, 2002),

Questions/discussion

1. Muslim traders were present along the west coast from the early centuries of the Common Era and military incursions in the west began in the early 8th century. The economic changes brought by this early influx of Muslims have not been adequately studied.
2. Major Hindu temples operated as mini-states during this period. They owned large amounts of land, collected taxes, employed hundreds of people, fought legal battles and participated in trade networks. A special edition of the *Indian Economic and Social History Review* in 1977 contains several excellent essays on this topic, but a major book has yet to be written.

Part VI: LATE POSTCLASSICAL PERIOD

Overview

The economic changes brought by the Muslim conquest and rule of India during this period (c. 1000-1500 CE) were substantial. The new rulers centralised tax collection, revised the land-grant system by introducing a money-grant, encouraged new industries and established a fully monetised economy. While the Delhi Sultanate ruled most of India during this period, a major Hindu kingdom did appear in the south. The rulers of the Vijayanagar empire ((1336–1565 CE) played an important role in the expanding maritime trade of this period.

Production

Expansion Under the Delhi Sultanate, the centralisation and standardisation of government, especially in tax collection and land management, contributed to an expansion in the production of goods. Textile production was greatly increased by improvements to the cotton gin, spinning wheel and treadle loom (all probably from Persia). The discovery (or borrowing) of sericulture techniques led to a growth in luxury textiles, such as silk. Carpet weaving, again from Persia, also flourish and created new wealth for weavers and traders. Paper manufacturing was introduced, probably in the 13th c. CE, and became so popular that sweet-sellers in Delhi could wrap their goods in paper. Increased trade, especially in gems, horses and fine textiles, led to rising standards of living for artisans and merchants.

Slavery While it is difficult to say what contribution slave labour made to economic production, there is no doubt that slave labour was extensively used in the construction of major buildings (including the famous mosques and tombs), roads, wells and canals. Contemporary accounts claim that the sultans owned between 50,000 -180,000 slaves. Slave markets are described in Delhi, where a man could be bought for less than the cost of a horse. Everyone seems to have had at least one slave, and many of them worked in the textile and construction industries.

Trade

Internal The Delhi sultans built up an extensive road network, especially after Muhammad Tughlaq moved his capital to Daulatabad in the Deccan. This precipitous and foolhardy decision was somewhat ameliorated by a system of horses and runners. The horses were kept at key points along the routes, while the runners were housed in small towers, which were placed every few kilometres. Texts of the period claim that the Sultan received fruit from Delhi in 40 days.

External Merchants in this period were able to sell their goods to an international market. Ships took spices across the Indian Ocean to the Middle East, Africa and Europe, while other sea-faring craft sailed to the Malay peninsula, China and Japan.

Currency Although bills of exchange were used to transfer debt and make land sales in the countryside, the main currency was coinage. The amount of coins minted during the Sultanate was considerably greater than during any previous period. Metal coins (mostly silver and silver-alloyed, and some gold) were issued by the various rulers of the Sultanate. The most common coin was the silver-based *tanka*, which had 14 different denominations, determined by the weight of silver. Over the course of the Sultanate, the amount of silver decreased from about 30% in the beginning to only 5% by the end. In effect, the economy became demonetised. Once again, Sultan Muhammad Tughluq's radical reforms contributed to the problem. In order to facilitate remittances from across his newly-enlarged empire, he set up mints in seven different locations. Then he changed the medium of tax collection from grain to coins. However, when he discovered that the available gold and silver was inadequate, he issued coins in copper and brass. These debased coins, with an inscription but no royal seal, were easily copied and the market was flooded with fakes. Soon the revenue system collapsed, and with it the Sultan's rule.

Innovation

Land-grant system Like virtually all previous rulers of India, the Delhi Sultanate used the land-grant system as a means to create allies in the provinces. However, they also revised this system in an effort to prevent local elites from becoming too powerful. The revision was to introduce a money-grant. In this revised system, a Muslim official in the province was permitted to collect and keep a portion of the land tax due from Hindu landowners to the state. Over time, however, these money-grants evolved into hereditary emoluments, providing the officers with considerable land and power in the countryside. The result was that the office-holders became financially independent from Delhi, reproducing the very problem the system was intended to solve.

Cotton gin The cotton gin was improved during the Delhi Sultanate by inventing the 'worm gear' roller, in which two gears turned in opposite directions, and by introducing a hand crank. It is also thought that the spinning wheel for cotton first appeared in this period and spread quickly across the country.

Discussion/questions

1. To what extent do the economic innovations introduced by the new Muslim rulers explain their military success?
2. The Hindu kingdom of Vijayanagar, which had extensive economic ties with Muslim states in the Deccan, used a different and very complex system of coins. How were transactions conducted between the two economic systems?

Reading

Barbara Metcalf, *Islam in South Asia in Practice* (Princeton, 2009)
Burton Stein, *Vijayanagara* (Cambridge, 2005)
Peter Jackson, *The Delhi Sultanate* (Cambridge, 2003)

Part VII: EARLY MODERN PERIOD

Overview

The economy of early modern India (1500-1800 CE) resembled a modern cash-based economy, with the major qualification that it was still largely agrarian. The arrival of Europeans as traders on the coasts at the beginning of the period increased the reach of India's global trade network. The Europeans' (mostly British commercial successes as traders and landowners by the end of the period ensured that India would be part of the international capitalism system.

Production

Capitalism A nascent form of capitalism under the Mughal Empire was stimulated by the cash economy favoured by the Mughals, the modern banking practices of the Mahrattas and the commercial practices of European traders. Near-constant warfare also required all three groups to raise and sustain large armies, which put pressure on the merchants, farmers and officials from whom revenue was squeezed.

Wealth All the many foreign observers of the Mughal Empire remark on wealth, not only at the court but also among traders and merchants outside Delhi. The ruling class apparently enjoyed a higher standard of living than that of their counterparts in Europe. A centralised, cash-based revenue system brought considerable revenue to Delhi, which was then distributed to the artisans who constructed the impressive buildings, to the artists (poets, musicians, painters) who created aesthetic forms, to the craftsmen who manufactured ornaments and tools of warfare, and to the weavers who wove the expensive clothes worn by the ruling class. Money exchange was also facilitated by a modernised banking system of credit and investment.

Agriculture A centralised state, an efficient revenue system and a large army did not improve the living conditions of the rural peasantry, however. Predatory and sometimes discriminatory tax regulations on Hindus meant that in some places cultivators paid out more than half of the harvest. Although wet-rice agriculture flourished in Bengal, there was low productivity elsewhere, due to poor quality grains, limited irrigation and lack of metal implements. On the other hand, high-value crops such as indigo, opium and sugar showed growth. In the 17th century, some rural communities were quick to take up the cultivation of newly introduced crops, such as tobacco and maize.

Land clearance The agrarian base of the Mughal economy was enlarged by pushing imperial control eastward into Bengal. Here, in the fertile delta of the Ganges and the Brahmaputra rivers, massive land clearance took place, just as it had centuries earlier in the Gangetic plain. After the felling of virgin forests and clearing of land, the state supported the development of wet-rice agriculture as well as Islamic institutions, such as mosques and rural schools, achieving agricultural expansion and conversion of the peasantry in the same plan.

Trade

Trade during the Mughal Empire became primarily external; even locally produced goods could end up on a ship going abroad. Foreign trade stimulated by the arrival of European ships contributed significantly to the wealth of the Mughals and their allies. Spices, indigo, sugar, salt, turmeric, textiles and opium were exported, in return for guns, horses, amber, precious stones, drugs, perfume and certain types of luxury fabric, such as velvet. But the main import was gold and silver, primarily from the Spanish colonies in the New World. Trade increased considerably in the 17th century. For example, in the 1620s, the English East Indian Company was selling a quarter of a million pieces of cotton cloth at auction in London. By the end of the 17th century, the number of pieces has soared to nearly two million. Indian traders, merchants and artisans, especially silk and cotton weavers, benefitted from this lucrative trade. Once again, Akbar made a vital contribution to this sector of the economy by opening silk weaving workshops in several cities. Most of the profit, however, remained in the hands of foreigners (Portuguese, Dutch and British).

Innovation

The seeds of modern banking were planted during the Mughal Empire. While 'loan-deeds' and bills of exchange appear to have been in use since ancient times, their actual use can only be traced during the Mughal Empire when they became commonplace. Mughal Empire also favoured another instrument called a *hundi*, which was used in order to transfer money from place to place, even to foreign countries. Modern banking begins in Calcutta in the late 18th century, when the British set up institutions to service their extensive trade. Although these early attempts failed, in 1806, the Bank of Calcutta appeared and later became the State Bank of India, which remains the largest bank in the country today.

Discussion/questions

1. The British and the Mughals were both newcomers to India, although one arrived by sea and the other by land. How did this difference in geography influence the type of economic changes they introduced?

2. The Mughal rulers continued the historical trend toward a cash-based economy, which permitted local officials to hoard money in large quantities, something very difficult to do with grain or other crops used for tax payments. This ability to store money, however, meant that local officials fought hard to retain their local bases of power and ultimately led to the fragmentation of the Mughal Empire.

Reading

John F. Richards, *The Mughal Empire* (Cambridge, 1993)
Stewart Gordon, *The Marathas 1600–1818* (Cambridge, 1993)
P. J. Marshall, *Bengal: The British Bridgehead* (Cambridge, 1988)
David Ludden, *An Agrarian History of South Asia* (Cambridge, 1999)

Part VIII: 19th CENTURY

Overview

Control of the Indian economy passed from the Mughals to the British during this century. In most cases, however, the new rulers simply continued the monetary and revenue systems of their predecessors. An exception was the introduction of the ryotwari system in south India, which attempted to create ‘yeoman’ farmers in the European model. Backed by the riches of a truly global empire, the British were able to complete the transformation of the Indian economy, begun by the Mughals, to a fully monetised capitalist system.

Production

Agriculture Although India was on the road to foreign-controlled industrialisation, the economy remained fundamentally agrarian. The domestic and foreign demand for rice, indigo, cotton and sugar raised prices in the first half of the century, and yields were boosted by a substantial increase in the acreage under irrigation. Demand for exports also increased cultivation of rubber, sugarcane, coffee and tea. However, price fluctuations on the world market and avaricious money lenders badly affected Indian farmers, prompting peasant riots in many regions. Famines were common.

Deindustrialisation One of the major effects of British colonialism on the Indian economy was a steady decline in its industrial base. Up until the 1840s, India produced a range of high-quality goods, from textiles to metal-ware. Backed up with modern technology, these and other sectors were exporting goods to Europe via Britain. By the turn of the century, however, the balance of trade shifted from India exporting finished goods to supplying raw materials, mainly raw cotton and jute, to be finished by the steam-driven mills in the north of England. The production of artillery and other tools of war, which had been based in India, was similarly lost to British-based manufacturers. Indian investors opened up coal mines and iron fields, but these minerals were sent to Britain for processing. In effect, India became a ‘colony’ supplying the imperial power with raw materials, which were then sold back at high prices.

Railways The economy of 19th-century India relied heavily on an extensive rail network, which by the end of the century was the fourth largest in the world. Intending the railways to facilitate troop movements (in the wake of the 1857-59 revolt) and to stimulate the economy, the government in London invested heavily in this project, although the railways were at first owned by private individuals. Several lines were up and running by the 1860s, and by 1900 the total network covered more than 18,000 miles. By then, Indian industrialists and princely states had also invested in rail lines, although on terms less favourable than to British investors. Although Indians gained employment on this massive infrastructure, they benefitted little overall. The locomotives and rolling stock were manufactured in England, and Indians rarely held senior posts in the railway system. In 1900, the railways were nationalised and run by the British government in India.

Trade

From the beginning of its rule in Bengal in the mid-18th century until its abolition in the mid-19th century, the economic policies of the East India Company were a continuation of its rivals in India. The 'Company' (as it was known) furthered the mercantilist and proto-capitalist institutions and practices of the Mughals and Mahrattas. However, with its increasing penetration of the countryside, it enjoyed an even greater degree of control and command of resources. Even more important, as an international trading power, the Company itself had resources and expertise beyond those of its predecessors. The lucrative and notorious opium-for-tea trade illustrates the global reach of British India's commerce. The British authorities in India encouraged the cultivation of opium, which they then sold to China (fighting two wars in the process) and used the enormous profits to purchase Chinese tea, porcelain and silk that they then sold back home and in other European countries.

Innovation

In South India, the British introduced a new system of tax collection known as *ryotwari*. In contrast to the old *zamindari* system (in which an official collected tax from a number of villages or landowners), in this new system, thousands of small cultivators (*ryots*) were issued with a title to the land and expected to remit tax on their own. The idea was to create a modern peasantry, modelled on the free yeoman of England, without middlemen and moneylenders. In practice, it led to the impoverishment of many cultivators. First, the tax was not levied on actual crops but on an estimate of the potential yield. Second, it had to be paid in cash. But estimates were often too high, due to unpredictable weather, and the need for ready-cash threw the peasants back into the hands of the moneylenders. As an illustration of the capricious nature of global markets, the demand for Indian cotton shot up suddenly in the 1860s during the American Civil War. When the north blockaded the south's ports and prevented the south's raw cotton from reaching England, the gap was filled by expanding cotton production in South India. Suddenly, by the 1870s, farmers from low-status castes had become middle-class in terms of income.

Discussion/questions

1. The British control of the Indian economy began with the military conquest of Bengal in the mid-18th century. This is when the East Indian Company shifted from maritime trader to landowner. Although they largely retained the old system, they instituted new administrative processes, including a Board of Revenue, annual land surveys and fixed tax levels. How was it possible to run such a complex system with only a few British officers, who spoke little if any of the local language, remains a mystery.
2. However, the British conquest of India was in part due to the economic power of the outsiders. How much of that power is attributed to the fact that it was sea-based rather than land-based? In other words, is it crucial that the British controlled resources beyond the reach of local complications that beset every other ruler of India?

Reading

Burton Stein, *A History of India* (Blackwell, 1998)

Andrew Porter, *The Oxford History of the British Empire, Vol.3, The Nineteenth Century* (Oxford, 1998)

David Arnold, *Science, Technology and Medicine in Colonial India* (Cambridge, 2000)

C. A. Bayly, *Indian Society and the Making of the British Empire* (Cambridge, 1990)

Part IX: EARLY 20th CENTURY

Overview

The Indian economy was deeply affected by political and world events during this period. The nationalist movement called for a boycott of British-made goods, which stimulated local production. The increasing industrial base, however, was stalled during the worldwide depression in the 1930s, but textile production in India increased as a result of the slowdown in Europe. The economy was also stimulated by the requirements of two world wars. The Indian economy grew at a rate of about 1% each year during the period, but so did the population, with the result that per capita income remained static. In some regions, famines hit and rural poverty remained stubbornly static.

Production

Gandhi As a response to the Amritsar massacre in 1919, Gandhi launched his non-cooperation movement in 1920, which created a disciplined and non-violent army of protestors. Non-cooperation meant picketing liquor shops, boycotting British goods and shops, and wearing handspun cotton (*khadi*) instead of cloth manufactured in Britain and sent back to India for sale. The idea was to liberate India by refusing to participate in an unjust and immoral economic system, without raising a hand in anger. As a result, the production of Indian-made goods, especially textiles, increased greatly.

War War brought windfall profits to India's emerging capitalist class both in 1914-1918 and 1939-1945. Textile factories supplied uniforms, jute mills provided tents and sandbags, while mechanised workshops won handsome contracts for rifles and field artillery. Many of these companies were British-owned, but Parsi, Gujarati and Marwari, businessmen, such as the Tata Iron and Steel Company, also took a hefty slice of the economic pie. Indian capitalists reaped further profits from the increased demand for locally-produced goods as part of the boycott of foreign goods. This trend was enhanced by the Great Depression, during which Indian-based textile production overtook imports from England, and the same was true for sugar, cement and paper.

Famine In the countryside, agricultural prices slid sharply during this period, and poverty, exacerbated by the depression, led to famines. The worst famine struck in 1943 in Bengal, when war-time hoarding and an influx of refugees from Japan-occupied Burma led to food shortages, while cyclones and tidal waves destroyed crops. In the end, it is estimated that three million people perished.

Trade

The global, capitalist trade that controlled India's economy meant that there were winners and losers. Employment rose steadily in the emerging heavy industrial sector, creating new wealth for skilled workers and managers. Among the losers were the artisans, from weavers to carpenters, whose handicrafts could not compete with factory-produced items. The wages of factory workers remained stagnant, and the feeble unions had little success with strikes and boycotts.

Innovation

There was no significant economic innovation during this period, as most practices and technologies were borrowed from abroad.

Discussion/questions

1. The contribution of Gandhi's policies to India's economy is still debated. Some deride his vision of a self-reliant, village-based, manual-labour society as a fantasy at best and a serious distraction at worst. Is there any place for such a non-industrial economy in today's world?
2. The Bengal Famine of 1943 has been studied in some detail, although no consensus exists concerning its causes. Certainly the British prioritised its war effort above local needs, but other factors were probably beyond their control. The latest book on the topic (*Churchill's Secret War*, by M. Mukherjee) lays the blame squarely with a British Prime Minister who allegedly despised Indians and India.

Reading

Sugata Bose and Ayesha Jaylal (eds.), *Modern South Asia: History, Culture, Political Economy* (Routledge, 2011)
B. R. Tomlinson, *The Economy of Modern India* 2nd ed. (Cambridge, 2013)
M.K. Gandhi, *Autobiography: The Story of My Experiments with Truth* (ed. by Mahadev Desai) (Dover, 1990)
Judith M. Brown, *Gandhi: Prisoner of Hope* (Yale, 1991)

Part X: LATE 20th CENTURY

Overview

Once plagued by rural poverty and dependent on foreign aid, India is now an economic powerhouse and a leader in high-tech industrial innovation. Gandhi's vision of a rural republic was bulldozed by Nehru's policy of state-planned industrialisation, the 'green revolution' redressed an imbalance in grain trade, and recent economic reforms have stimulated free-market capitalism. Despite these and other achievements in literacy and health, India's enormous population outstrips its ability to provide basic services. Every year programmes, policies and political parties arise to combat social deprivation, yet poverty remains a dispiriting reality.

Production

Industrialisation The economic boost supplied by the Second World War helped Nehru's post-Independence strategy of industrialisation to be a moderate success. With the Gandhian legacy of excluding foreign-made goods, the imposition of high import duties and licensing intended to restrict foreign-owned companies, plus a little aid from the Soviet Union, India's industrial output in iron and steel, mining, chemicals and electricity were impressive. By the 1960s, industrial output was growing by 7% a year and per capita income by 4%, although a population growth of 2% cut into those gains. These trends have continued up until 2016.

Agriculture Agricultural production grew by 25% under the first five - year plan of 1951– 6, and by 20% under second (1956– 61). But in the 1960s, after failed monsoons, droughts and flooding, India turned hat in hand to the United States for grain imports. At the same time, new high-yield varieties of wheat were planted in north India, followed by similar experiments with rice in south India. The results of this 'Green Revolution' were remarkable, and grain production doubled in two decades. But the gains were unevenly distributed regionally, with the Punjab and Tamil Nadu the big winners, and socially, with landlords benefitting more than cultivators. In the 21st century, grain production has continued to rise, and most economists are now confident that India will remain self-sufficient.

Prosperity and poverty The creation of wealth in late 20th-century and early 21st-century India has been truly remarkable. Billionaires are a dime a dozen, and the urban professional class enjoys a standard of living comparable to that in other major world capitals. As ever, though, wealth distribution remains uneven, and today one in six Indians lives in poverty (less than \$2 a day). More than 100 million Indians own a television, but nearly a third of the adult population remain illiterate. Poverty eradication has been a government objective ever since the 1970s, when Indira Gandhi limited the amount of land a person could own and attempted to halt population growth. More recently, various governments have implemented programmes targeting primary education, health, food supply and rural electrification. Whether these measures will overcome endemic patterns of uneven income distribution is not a question anyone can yet answer. Certainly the 'black' economy, payments in cash to avoid taxes, is rampant, and in late 2016 the government withdrew high-denomination notes in order to curb it.

Trade

Although protectionist policies and the lack of foreign competition had a beneficial effect on trade in the first decades after Independence, by the 1980s, the lack of innovation and creeping stagnation were all too evident. In the early 1990s, after 50 years of isolation, India accepted an IMF loan of \$1.4 billion, which required it to embrace global capitalism. In return, India enacted a slew of radical reforms, selling off nationalised industries and utilities, removing currency and banking regulations, abolishing import tariffs, encouraging foreign investment and launching an Indian stock market. Almost immediately the annual growth rate rose from around 2% to 7%, a level it has maintained ever since. A redistribution of economic growth also occurred, shifting away from the old centres in north India, such as Calcutta, Bombay and Ahmedabad, to southern cities, such as Bangalore, Hyderabad and Madras, especially in software and other high-tech industries.

Innovation

India entered the digital age in 1955, when an early computer (designed in the UK with Indian input) arrived in Calcutta. India-based computer science took off in the 1960s, when Tata partnered with Burroughs. Since then, Indian computer experts have made significant innovations in computer programming and communication protocols. These discoveries can be attributed, at least in part, to the science of language description, a field of linguistics in which Indians have excelled, starting with Panini and his grammar in about 500 BCE. In 1999, scientists at the Indian Institute of Science, in Bangalore, designed an open hardware and handheld computer. Since then Indian specialists abroad have led the way in many IT fields, such as Krishna Bharat at Google.

Discussion/questions

1. Nehru's policies set the economy on the fast track to industrialisation and state-control. Dams, roads and highways were built. Iron and steel production increased rapidly. But did this result in an increase in rural poverty and did it discourage individual entrepreneurs? Like Gandhi's economic vision, Nehru's, while once lauded, are now often criticised in light of the neo-liberal thinking since the 1990s.
2. Since the 1990s, India has rejected the socialism and state planning of Nehru. A series of regulations and legislation has opened up the economy to foreign investment, eliminated state monopolies and reduced bureaucratic red-tape. Assess the impact of this liberalisation on the lives of ordinary Indians. Be sure to consider urban and rural populations in your assessment, and to place your analysis in the context of global economic developments.

Reading

Barbara Metcalf and Thomas Metcalf, *A Concise History of Modern India* (Cambridge, 2012)

Sugata Bose and Ayesha Jaylal (eds.), *Modern South Asia: History, Culture, Political Economy* (Routledge, 2011)

B. R. Tomlinson, *The Economy of Modern India* (Cambridge, 2013)