



गुल्लक Gullak



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Mughal Empire of India (AD 1526-1540; 1555-1857) Part III



Agriculture

Indian agricultural production increased under the Mughal Empire. A variety of crops were grown, including food crops such as wheat, rice, and barley, and non-food cash crops such as cotton, indigo and opium. By the mid-17th century, Indian cultivators began to extensively grow two new crops from the Americas, maize and tobacco.



The Mughal administration emphasized agrarian reform, which began under the non-Mughal emperor Sher Shah Suri, the work of which Akbar adopted and furthered with more reforms. The civil administration was organized in a hierarchical manner on the basis of merit, with promotions based on performance. The Mughal government funded the building of irrigation systems across the empire, which produced much higher crop yields and increased the net revenue base, leading to increased agricultural production.



A major Mughal reform introduced by Akbar was a new land revenue system called *zabt*. He replaced the tribute system, previously common in India and used by Tokugawa Japan at the time, with a monetary tax system based on a uniform currency. The revenue system was biased in favour of higher value cash crops such as cotton, indigo, sugar cane, tree-crops, and opium, providing state incentives to grow cash crops, in addition to rising market demand. Under the *zabt* system, the Mughals also

conducted extensive cadastral surveying to assess the area of land under plow cultivation, with the Mughal state encouraging greater land cultivation by offering tax-free periods to those who brought new land under cultivation.



Mughal agriculture was advanced compared to Europe at the time, such as the common use of the seed drill among Indian peasants before its adoption in European agriculture. While the average peasant across the world was only skilled in growing very few crops, the average Indian peasant was skilled in growing a wide variety of food and non-food crops, increasing their productivity. Indian peasants were also quick to adapt to profitable new crops, such as maize and tobacco from the New World being rapidly adopted and widely cultivated across Mughal India between 1600 and 1650. Bengali peasants rapidly learned techniques of mulberry cultivation and sericulture, establishing Bengal Subah as a major silk-producing region of the world. Sugar mills appeared in India shortly before the Mughal era. Evidence for the use of a draw bar for sugar-milling appears at Delhi in 1540, but may also date back earlier, and was mainly used in the northern Indian subcontinent. Geared sugar rolling mills first appeared in Mughal India, using the principle of rollers as well as worm gearing, by the 17th century.



According to evidence cited by the economic historians Immanuel Wallerstein, Irfan Habib, Percival Spear, and Ashok Desai, per-capita agricultural output and standards of consumption in 17th-century Mughal India were higher than in 17th-century Europe and early 20th-century British India. The increased agricultural

productivity led to lower food prices. In turn, this benefited the Indian textile industry. Compared to Britain, the price of grain was about one-half in South India and one-third in Bengal, in terms of silver coinage. This resulted in lower silver coin prices for Indian textiles, giving them a price advantage in global markets.



Industrial Manufacturing

Up until the 18th century, Mughal India was the most important center of manufacturing in international trade. Up until 1750, India produced about 25% of the world's industrial output. Manufactured goods and cash crops from the Mughal Empire were sold throughout the world. Key industries included textiles, shipbuilding, and steel. Processed products included cotton textiles, yarns, thread, silk, jute products, metalware, and foods such as sugar, oils and butter. The growth of manufacturing industries in the Indian subcontinent during the Mughal era in the 17th-18th centuries has been referred to as a form of proto-industrialization, similar to 18th-century Western Europe prior to the Industrial Revolution.



In early modern Europe, there was significant demand for products from Mughal India, particularly cotton textiles, as well as goods such as spices, peppers, indigo, silks, and saltpeter (for use in munitions). European fashion, for example, became increasingly dependent on Mughal Indian textiles and silks. From the late 17th century to the early 18th century, Mughal India accounted for 95% of British imports from Asia, and the Bengal Subah province alone accounted for 40% of Dutch imports from Asia. In contrast, there was very little demand for European goods in Mughal India, which was largely self-sufficient, thus Europeans had very little to offer, except for some woolens, unprocessed metals and a few luxury items. The trade imbalance caused Europeans to export large quantities of gold and silver to Mughal India in order to pay for South Asian imports. Indian goods, especially those from Bengal, were also exported in large quantities to other Asian markets, such as Indonesia and Japan.



Textile industry

The largest manufacturing industry in the Mughal Empire was textile manufacturing, particularly cotton

textile manufacturing, which included the production of piece goods, calicos, and muslins, available unbleached and in a variety of colours. The cotton textile industry was responsible for a large part of the empire's international trade. India had a 25% share of the global textile trade in the early 18th century. Indian cotton textiles were the most important manufactured goods in world trade in the 18th century, consumed across the world from the Americas to Japan. By the early 18th century, Mughal Indian textiles were clothing people across the Indian subcontinent, Southeast Asia, Europe, the Americas, Africa, and the Middle East. The most important center of cotton production was the Bengal province, particularly around its capital city of Dhaka.



Bengal accounted for more than 50% of textiles and around 80% of silks imported by the Dutch from Asia, Bengali silk and cotton textiles were exported in large quantities to Europe, Indonesia, and Japan, and Bengali muslin textiles from Dhaka were sold in Central Asia, where they were known as "Daka" textiles. Indian textiles dominated the Indian Ocean trade for centuries, were sold in the Atlantic Ocean trade, and had a 38% share of the West African trade in the early 18th century, while Indian calicos were major force in Europe, and Indian textiles accounted for 20% of total English trade with Southern Europe in the early 18th century.



The worm gear roller cotton gin, which was invented in India during the early Delhi Sultanate era of the 13th-14th centuries, came into use in the Mughal Empire some time around the 16th century, and is still used in India through to the present day. Another innovation, the incorporation of the crank handle in the cotton gin, first appeared in India some time during the late Delhi Sultanate or the early Mughal Empire. The production of cotton, which may have largely been spun in the villages and then taken to towns in the form of yarn to be woven into cloth textiles, was advanced by the diffusion of the spinning wheel across India shortly before the Mughal era, lowering the costs of yarn and helping to increase demand for cotton. The diffusion of the spinning wheel, and the incorporation of the worm gear and crank handle into the roller cotton gin, led to greatly expanded Indian cotton textile production during the Mughal era.



It was reported that, with an Indian cotton gin, which is half machine and half tool, one man and one woman could clean 28 pounds of cotton per day. With a modified Forbes version, one man and a boy could produce 250 pounds per day. If oxen were used to power 16 of these machines, and a few people's labour was used to feed them, they could produce as much work as 750 people did formerly.



Ship-Building Industry

Mughal India had a large shipbuilding industry, which was also largely centered in the Bengal province. In terms of shipbuilding tonnage during the 16th-18th centuries, the annual output of Bengal alone totaled around 22,32,500 tons, larger than the combined output of the Dutch (4,50,000-5,50,000 tons), the British (3,40,000 tons), and North America (23,061 tons).



The Mughals maintained a small fleet for carrying pilgrims to Mecca, and imported Arabian horses in Surat. Debal in Sindh was mostly autonomous. The Mughals also maintained various river fleets of Dhows, which transported soldiers over rivers and fought rebels. Among its admirals were Yahya Saleh, Munnawar Khan, and Muhammad Saleh Kamboh. The Mughals also protected the Siddis of Janjira. Its sailors were renowned and often voyaged to China and the East African Swahili Coast, together with some Mughal subjects carrying out private-sector trade.



Indian ship-building, particularly in Bengal, was advanced compared to European shipbuilding at the time, with Indians selling ships to European firms. Ship-repairing, for example, was very advanced in Bengal, where European shippers visited to repair vessels. An important innovation in shipbuilding was the introduction of a flushed deck design in Bengal rice ships, resulting in hulls that were stronger and less prone to leak than the

structurally weak hulls of traditional European ships built with a stepped deck design. The British East India Company later duplicated the flushed deck and hull designs of Bengal rice ships in the 1760s, leading to significant improvements in seaworthiness and navigation for European ships during the Industrial Revolution.



Bengal Subah

The Bengal Subah province was especially prosperous from the time of its takeover by the Mughals in 1590 until the British East India Company seized control in 1757. It was the Mughal Empire's wealthiest province, and the economic powerhouse of the Mughal Empire, generating 50% of the empire's GDP. Domestically, much of India depended on Bengali products such as rice, silks and cotton textiles. Overseas, Europeans depended on Bengali products such as cotton textiles, silks and opium; Bengal accounted for 40% of Dutch imports from Asia, for example, including more than 50% of textiles and around 80% of silks. From Bengal, saltpeter was also shipped to Europe, opium was sold in Indonesia, raw silk was exported to Japan and the Netherlands, and cotton and silk textiles were exported to Europe, Indonesia and Japan.



Bengal was described as the *Paradise of Nations* by Mughal emperors. The Mughals introduced agrarian reforms, including the modern Bengali calendar. The calendar played a vital role in developing and organising harvests, tax collection and Bengali culture in general, including the New Year and Autumn festivals. The province was a leading producer of grains, salt, pearls, fruits, liquors and wines, precious metals and ornaments. Its handloom industry flourished under royal warrants, making the region a hub of the worldwide muslin trade, which peaked in the 17th and 18th centuries. The provincial capital Dhaka became the commercial capital of the empire. The Mughals expanded cultivated land in the Bengal delta under the leadership of Sufis, which consolidated the foundation of Bengali Muslim society.

After 150 years of rule by Mughal viceroys, Bengal gained semi-independence as a dominion under the Nawab of Bengal in 1717. The Nawabs permitted European companies to set up trading posts across the region, including firms from Britain, France, the Netherlands, Denmark, Portugal and Austria-Hungary. An Armenian community dominated banking and shipping in major cities and towns. The Europeans regarded Bengal as the richest place for trade. By the late 18th century, the British displaced the Mughal ruling class in Bengal.

Calendar of Events 2017-18

Month	Date	Place	Event	Venue
November	3-5	Mumbai	5th Coinex Mumbai	Shree Sunderbai Hall, Behind Income Tax, Churchgate, Mumbai
November	7-9	Gwalior	Virasat Coin Fair	Kaka Vithika, Padav, Nagar Railway Station, Gwalior, MP
November	17-19	Tamil Nadu	24th National Level Coins & Stamp Expo 2017	SRT Hall, 2nd Cross, Thillai Nagar, Main Road, Trichy - 18
November	17-23	Delhi	Royal Numismatic Expo 2017	All India Fine Arts & Crafts Society, 1 Rafi Marg, New Delhi
November	25-27	Goa	The Centenary Conference of NSI	Institute Menezes Branganza Hall, Near Police Head Quarters, Panjim, Goa
December	9-11	Jamshedpur	Jamcoin 2017	Red Cross Bhawan (Near Institute of Engineers, Sakchi, Jamshedpur- 831001)
December	15-17	Pune	Coinex Pune 2017	Sonal Hall, Karve Road, Pune.
December	22-24	Kolkata	Mudra Utsav (Kolkata)	Haldiram Banquet Hall, 24 Ballygunge park, Kolkata - 700019
January	5-7	Nashik	Rare Fair 2018	Indraprastha Hall, Near Old Gangapur Naka, Gangapur Road, Nashik
January	5-7	Coimbatore	Sonica coin & Currency Fair	Kamalam Doraisamy Hall, 225, Sastri Road, Ramnagar, Near - Central Bus Stand Coimbatore, Tamil Nadu.
January	5-7	Nashik	Rare Fair 2018	Indraprastha Hall, Old Gangapur Naka, Gangapur Road, Nashik
January	12-14	Raipur	CG NPEX 2018	Raipur
February	9-11	Ahmedabad	Coinex 2018	Shree Sardar Patel Seva Samaj, Nr. Mithakhali Six road, Ahmedabad
March	2-4	Hyderabad	Hyderabad Expo-2017	Federation House, 11-6-841, (Near Lakdi Ka Pul), Red Hills, Hyderabad - 4.



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