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MUGHAL PERIOD TRANSPORT SYSTEM

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Abstract

The Mughal empire's boundaries included sections of modern-day Afghanistan, Pakistan, northern India, and part of the Deccan, but by 1690, other once-independent Deccan republics had been absorbed into the empire. Aurangzeb (1658-1707) captured the majority of the Deccan before his death, although most of the kingdom was in a condition of chronic instability. The current work is limited in time to the period between 1556 and 1707, and it includes northern, central, and western India, the region known as Mughal India, when the Mughals' administration and power were more or less consolidated. Even at the time of the Mughals, the entire Deccan did not come fully into their administrative orbit.

Keywords: Roads, bridges, river systems, trade, horses, and highways

Introduction

A country's trade and industry are sustained and boosted by an effective transportation and communication system. Its significance in the state's commercial development is difficult to overstate. The state's trade, commerce, and industry are reflected in the degree of efficiency with which infrastructure and trade lines are maintained. The Mughal state had a reasonably good network of roadways connecting the various industrial centres, market areas, and harbours in the empire, according to contemporary accounts, considerably helping both internal and external trade in mediaeval India. Mughal India's internal trade is divided into three categories. Coastal commerce, riverine trade, and interior trade are three types of trade. When both coastal and inland trade facilities were available, merchants preferred the former for the simple reason that it was far easier, safer, and more profitable to trade by sea than by land, where there were no metalled roads, and those that did exist were not serviceable all year, the means of transportation and communication were almost primitive, and caravans were most of the time confronted with the Pirates posed a threat to the coastal trade as well, but merchant ships cruised under the protection of the coast guard.

During this time, the Portuguese fleets of Goa, which usually consisted of a few frigates, were used to safeguard the coastal trade against pirates. The trading ships travelled up and down from Cambay in the north to Cochin in the south under their protection. There are usually three convoy groups, two on the western coast and one on the eastern coast. supervised maritime traffic The first group, which consisted of roughly 300 people, ran between Cambay and Goa. a boat with a yearly traffic of around 30,000 tonnes The second caravan made its way between Goa and Mumbai. During this time, it was common for the Portuguese fleets of Goa, which consisted of a few frigates, to safeguard the coastal trade against pirates. The trading ships travelled up and down from Cambay in the north to Cochin in the south under their protection. In general, three convoys operated in the seas, two along the western coast and one along the eastern coast. The first group, which travelled between Cambay and Goa, consisted of around 300 vessels with a yearly trade of around 30,000 tonnes. The second caravan made its way between Goa and Mumbai.

System of Rivers

The Indus, Ganges, Tapi, and Bengal delta river systems were the main river systems in Mughal India. Sind, Multan, Lahore, and Kashmir were all affected by the Indus system. The items produced in these provinces were shipped down the Indus or its tributaries to Lahari Bandar, where exports were shipped out and imports were unloaded and sent back up these streams and rivers. Naturally, bustling trade centres arose along the banks of these rivers, such as Thatta and Bhakkar. Bhakkar sprang up at the confluence of the Indus and the Ravi, while Multan grew up at the confluence of the Jhelum and the Indus. This riverine trade benefited a variety of places that were changed by the Indus river system. Sind's boat-building industry got its wood from the northern forests via the Indus River's riverine pathways. The Ganges-Jumna river system, which included many tributaries such as the Chambal, Son, and Gogra, substantially aided Hindustan's trade. The Bengal delta system was connected to this river system. A number of thriving commercial centres, like as Delhi, Agra, Allahabad, Jaunpur, Dacca, and Sonargaon, were located on or on the banks of these significant rivers. These were connected to Hindustan's various industrial centres via tributaries and land routes.

The Ganges, Jumna, and other major rivers Rice, salt, indigo, lead, and cotton were brought to Bengal via the Ganges-Jumna river system from the emporiums of Agra and Delhi, which got a regular supply of varied goods from their surroundings. They were then transported to inland emporiums like Sonargaon and Dacca, or exported to the eastern coast. Satgaon and Hugli, located at the end of the Bengal delta system, were used to connect eastern and western countries. Foreign products unloaded in these seaports were similarly transported up the rivers to market cities in Bengal and Bihar as well as Hindustan. Finally, the Cambay-Surat trade became inextricably linked to the Tapi-Narmada river system. On the western seaboard commodities from the inland markets of Malwa, Khandesh, and Deccan, such as Burhanpur, Elichpur, and Ujjain, were sent down these rivers to Broach, Surat, and Cambay, and foreign articles brought to these seaports were transported up the rivers to these provinces. The upkeep of highways posed a number of challenges. First and foremost, they were to be kept in good working order so that traders could use them. Where rivers intersected the roadways and were not fordable, bridges were to be built. In a tropical country like India, the caravans were to be supplied with cool drinking water at regular intervals, for which wells were to be built at various locations along the routes, or drinking water was to be provided in containers.

Wherever possible, shade-giving trees were to be planted on both sides of highways. Rest buildings were to be built to provide shelter for travelling merchants, particularly at night, and food supply were to be readily available. In these rest houses or serais, a small administrative staff had to be kept for this reason. Above all, highways and other roadways had to be kept as safe as possible against marauding actions on both sides of the road. Rest buildings were to be built to provide shelter for travelling merchants, particularly at night, and food supply were to be readily available.

The Most Important Highways Agra, not Delhi, occupied the central role in Mughal India's communications system. The first led to Kabul, the second to Qandahar, the third to Cambay, the fourth to Burhanpur, and the fifth to Sonargaon, with the first leading to Kabul, the second to Qandahar, the third to Cambay, the fourth to Burhanpur, and the fifth to Sonargaon. The first and second highways travelled together from Agra to Delhi, where they split into two, the third highway went to Cambay via Pattan-Nahrwala, the fourth to Burhanpur via Gwalior, and the fifth was a true double highway that ran separately from Agra to Sonargaon, only meeting once at Jaunpur. There was also a sixth highway that started in Dacca and ran nearly along the southern border of the country, not radiating from Agra. A few examples are the planting of shade-giving trees on both sides of roadways, the construction of caravansaries, and so on. Sher Shah is well renowned for building serais at various points along the highways, providing lodging and boarding to both Hindus and Muslims. He also made preparations for security. These are the serais. During his brief reign, he is reported to have erected or refurbished approximately 1700 serais. All of them, as well as numerous others were evidently kept up by the Mughals as well. The Kotwals were given orders by Akbar to construct serais.

2.OXEN

In Mughal India, the squished Indian ox (zebu to zoologists) was the primary mode of conveyance. The hump on the forepart of their backs - a physical characteristic unique to Indian oxen as mentioned by many European travellers - facilitated them to be harnessed, allowing them to be used not only as efficient drought animals capable of drawing ploughs and carts, but also as pack animals capable of carrying bulk commodities and even riding. The Mughal miniatures also attest to the usage of oxen as pack animals, whether by merchants or the imperial authority. There is little doubt that in short-distance agricultural commerce between neighbouring villages and towns and townships, peasants who typically handled this trade personally used pack oxen or ox-drawn carts. According to the news source, "the peasants of Petlad &c. came to Ahmadabad to sell wagon loads of grain production and were required to pay Rs.2 each cart as rahdari." The fact that peasants transported goods via oxen drawn carts or pack oxen is also apparent from a farman issued by Aurangzeb in his eighth regnal year, which prohibited the following cessions: "a payment of one tanka for feeding oxen, as to if drawing trolleys or carrying load, once brought from outside the city; one copper coin for carts bringing grass and straw; five ser of the same for carts bringing firewood; and four almonds for each These were levied at a variety of locations on route to the cities." However, estimating the number of oxen used in village to town commerce is impossible, but this trade was considerably more extensive than long distance trade, and towns and townships across the empire relied on this village-town trade for food and raw materials for one's crafts. Of obviously, the quantity of oxen utilised in local commerce must have been greater than in long distance commerce. In terms of long distance commerce, it is widely documented that the renowned Banjaras, who relied on pack oxen, were the primary carriers of the bulk. Peter Mundy best describes them. "Theis Banjaras Carry their whole howsehold with them, as wives and children, becoming one Tanda comprised of several households. Their lifestyle is similar to that of Carriers, since they are always on the go... There may be six or seven hundred people in such a Tanda, men, women, and children. There males are very lustful, and their women are tough, who, in the event of a conflict, lie around them like men. Theis people go dispersedly [i.e. far apart], driving their burdened Oxen ahead of them, their journey not exceeding six or seven miles a day at most, and as many as 10,000 utter bollocks in one troupe laden with grain, and on most days, others, but fewer Peter Mundy (1630-32) saw a great number of oxen being employed by Banjaras in transporting merchandise on his voyage from Bombay to Agra and then from Agra to Patna. On 23 December 1630, at Sironj, while seated atop a small hill on his way from Surat to Agra, he noticed thousands of oxen packed with food reaching at least a mile in length. During his 1632 voyage from Agra to Patna, he saw "a tanda of banjara of oxen of the amount of 14,000 all loaded with graine like wheat, rice, and etts." Two days later, he came across another "Tanda with oxen, numbering 20,000 (as they said), loaded with sugar." In 1630, during a Mughal campaign in the Deccan,

Additionally, imperial enterprises utilised oxen for a variety of functions, including transporting construction supplies, fuel, water, and freight, as well as cheetah on carts in hunting and dak chaukis (see Plate-VIII, for transporting construction materials for imperial buildings. Plates XI & X11, for hunting with oxen). According to Abul Fazl, 600 carts were used to transport fuel to the imperial kitchen and 200 carts were used to transport construction enterprises. Mughal rulers took a keen interest in this animal's breeding. Akbar classified the numerous oxen breeds according to their fitness for labour and assigned specialists to each category. At the time of Akbar's death, the imperial stable included 7000 oxen. Shireen Moosvi determined that Pelsaert's number of 7000 was not unreasonable, since at least 3200 oxen were necessary to power the 800 carts used to transport fuel and construction supplies, as each cart required four oxen, and oxen were also required to meet other needs. At least 10,000 oxen were kept in Jahangir's imperial stable. Again, there were around 6,300 Gujarat oxen in addition to others in Shahjahan's royal stable. Apart from the emperors, the high officials of the empire who held mansab were required to maintain a certain fixed number of carts; for example, according to A'in, a mansabdar with a population of 10,000 was required to maintain 320 carts, while one with a population of 20 was required to maintain 20 carts. Due to the nature of sand, dust, and dunes, the camel was really the only animal naturally suitable for transport. The well-known

characteristics that make camels appropriate for desert travel include that the soles of their feet are covered with callous horny integuments that link the animal's two toes and that their noses can be closed at whim, providing excellent protection from dust storms. Additionally, this animal can live for days without water or food and can consume plants and grass that are toxic to other animals. Camel is oblivious to the water's condition - brackish, sluggish, or filthy. A unique characteristic of the camel is its ability to toil under the weight for an extended period of time without respite. There are two species of camels: the Bactrian (two-humped) and the Dromedary (one-humped). However, the Bactrian is inappropriate for usage in hotter areas, although it seems to have been the sole species known in ancient India. People eat animals in the imperial establishments, too.

In the imperial palace, camels were mostly used for riding, in a carriage called Mihaffa, which was a wooden turret that was very comfortable. It was suspended between two camels for people to be carried, and had two poles that held it in place. People who could train camels to go a long way quickly were kept in the imperial stable. This isn't to say that horses and quick runners were used more often for dak-chaukis. At the palace, a few of these quicker camels were always ready to go in any direction. In the imperial establishment, camels bred in Thatta were known for being good at carrying a lot of weight. There were special stables set up for this animal because Akbar thought it was so important that he had them. Different types of camels were mixed together to get mixed breeds. A group of people called Raibari were chosen by Akbar for this job. They were very knowledgeable about camels from the country, so Akbar gave them 50 stud arwanas (female camels) and two loks to look after. Raibari also had to look after a bughur (a camel from Bactria) and two other loks. Quality of camels raised in the country has gone up a lot. The A'in says that Indian camels are better than those from Iran and Turan. At the end of Akbar's life, there have been 6,223 camels in the stable of the imperial palace. Jahangir's imperial stable had only 2,000 camels in it, though. Manrique said that the number of caravans and mules kept at the royal cost totaled 5,223 together. In A'in, a mansabdar of 10,000 camels had to keep 800 camels, and one of 20 camels had to keep 6. People who work for the government in the 40th year of Akbar had to keep 35,348 mansabdars in that time. In number three, we have MULES and ASSE.

There are no asses, mules, or horses used in caravans or journeys in India. Everything is carried by oxen or waggon because the country is flat enough. During the mid-17th century, Tavemier said that this might be true, but not all of it "the "finest animal for carrying and travelling" is the mule, which is a cross here between horse and the ass. The horse has the strength and patience of the mule, but it doesn't have the cupidity and intelligence of the ass, which is why the mule is the best critter for carrying and travelling heavy things. It doesn't forget how it used to go. Mules don't breed with each other very often, but there have been a few exceptions. When a mare is paired with the a male ass, for example, the opposite is also known to happen. The male looks like its mother. During Akbar's time, the area around Pakhli and its surroundings was known as a good place to breed mules. People in India didn't like it when people raised and bred mule because they thought they were just asses. Akbar's interest in mule breeding and rearing made people change their minds. Later, in the west of Punjab, mules were bred, with those to the west of the Indus being the best. As one moved west, the quality of the mules got better. Hazara was known for breeding mule. There, mule were big and strong. Jahangir says the Kashmiri mules are small and can't carry a lot of weight. However, I. Desederi says that in the 18th century, mules have been able to carry a lot of weight on long journeys that lasted for months and didn't have a lot of food. " Mughal emperors were very interested in this animal. It was at the death of Akbar that there were 260 Mules in the Imperial secure. If you go to Jahangir's royal stable with Withington, he says there are 1000 mules. According to A'in, a mansabdar of 10,000 had to keep 200 mules, and one of 500 had to keep 10 mules. Other high-ranking officials in the empire who had mansab had to keep a certain number of mules as well. People who were rich, the venot said, also had mules and other animals. Most of the time, mules came from Iraq-i Arab and Iraq-i Ajam. The Iranian breed was thought to be so good that the King of Iran sent mules to Jahangir as a

gift. The price of mules isn't very well known, but Abul Fazl says that very good mules were often sold for Rs.1000 per head

Ways to move water

In Mughal India, there was a lot of coastline and a lot of water that could be navigated. This meant that both bulk goods and high-quality products could be moved by sea and river. 1: Boating on the River In Mughal India, which was a big country, there were a lot of rivers because it was so big. However, not all of the rivers were navigable for commercial purposes. However, the rivers that were navigable helped a lot with land transportation in their respective areas, especially when it came to bulk goods. In Mughal India, the Ganga, Jumna, and other rivers were the biggest way to get about. This river carried very brisk commerce between both the capital city of Delhi and Bengal. It was in 1583 that Ralph Fitch went down the Jumna River from Agra to Satgaon in Bengal. He was joined by 180 boats that were full of salt, lead, carpets, and other goods. William Finch noticed that the Jumna river in Agra was bigger than the Thames in London. He also saw many boats, some had 100 "tunns." * During John Jourdian's trip to Agra in 1612, he found that salt was transported from Agra to Bengal in huge barges of multiple and five hundred tonnes each, made in the same way that merchants set up their tents in a field. Every year, more than 10,000 tonnes of salt was transported from Agra to Bengal. He also found "Great Lighters" at Etawah during his trip from Agra to Patna in 1632. In addition, he said, "And in the river there are many great lighters [barges], like the ones in Agra, from where they go to the River Jamna, into the Ganges, and so on to Puttana and farther into Bengala, as well as from Agra." Their most important cargo is salt, which is dug out of the mountains in this area. a piece: 3 or 400 Tonns Even so, from Agra to Patna, as we saw in Chapter II, trade was mostly done by roads leading. From Patna to Bengal, the commerce was mostly done by river routes, though. In 1620, English people in Patna noticed that the Portuguese came from their two ports in the bottom of Bengal, Hugli and Pipily, to bring tin, spices, and China wares. They also came back with red-colored calicoes, carpets, and all kinds of thin cloth, which they dyed red for sale in the south. Thomas Bowrey was in Patna in the eighth decade of the 17th century, and he saw that all the saltpetre is being sent to Patna to Hugh in great flat-bottomed vessels called "Patellas." Each of them could hold 4, 5, or 6,000 "Bengala maunds." There are many "Patellas" that come down with wheat and other grains every year. They also come back up with a lot of salt and beeswax. It's also said that there are ships that bring saltpetre from Patana, which are more than 50 yards long and 5 wide and 2 and a half deep. They can hold more than 200 tuns. They come down in October, before the River, but they have to go back up with a lot of strength, about 1000 Miles. Another important river was the Indus river scheme, which also had five important rivers, including the Indus, Ravi (also known as Bihat), the Jhelum (Bihat), the Sutlej, and the Chenab. These rivers were important ways of getting around in their area. There were 40000 big and small boats for navigation in the sarkar of Thatta in the late 16th century. Many boats of up to sixtie tunnes went down the Ravi River from Lahore to Sind after the rains. This was a journey of about 40 days, Pelsaert wrote in 1626. After that, he said that from Tattah, where all the big ships anchored, the goods have been brought up in boats. They said that from r Sehwan by land, 60 "courses" of land goods like indigo, opium, butter and oil, and other things were brought to Thatta by boats. This was in 1635. "From Lahore to Tutta, goods are usually transported down the river in the flat-bottomed boats of a 1000 and 2000 maens." This is what Henry Bomford wrote in March 1639. He also said that "From Multan, the river is passable at all points of time; but from Lahoare, the river is only navigable from March 1 until the cool weather comes in October." This river system was the main way to get around in this area during our time there. In the late 17th century, Sujan Rai may have been copying from A 'in of Abul. There have been 40,000 big and small ships in that suba. Merchants from Multan and Bhakkar used it to brought their goods to Thatta in boats because it took less time than walking through the forest and not having enough water to drink. The River Indus is navigable for boats up to Casmire. Hamilton also said that "one Branch runs up to Cabul to the West, both to Penjeb, Lahore, Multan, Buckor, as well as other large regions and Cities to the East; and all share the wealth of inland Navigation."" A boat was also used to move goods in Kashmir. People also carried loads in the hard to reach places. There

were boatmen and carpenters who made a lot of money. During Jahangir's trip to Kashmir, there were 5700 boats and 7400 boatmen. In Kashmir, there was a river called Behat that made it possible to get around by boat. Bihat came from Vemag and went through Wular Lake before coming back to the mountains at Barahmula. When I lived in Kashmir, the Bihat river could be crossed from Kahnabal to Barahmula.

A vessel is a piece of equipment that is used to help people find their way around. As far as types of vessels go, we can group them into three broad groups based on the water where they were used. They were the first boats that were only used in the ocean, like the junk and other ships. There are two types of boats: one that can be used both on the ocean and near land, but mostly near land, like ghurabs, tawries, sambuks, manchuas and balloons. The third type is used for internal navigation, like paraos and jalias. If the empire was large, it was possible that the same name could identify a various vessel and at the same time different names could identify the same type of vessels. This makes it hard to identify the vessels by their names because of this. Abul Fazl has said that in the suba of Bengal, different kinds of boats were made for different things, like war, transportation, or quick-sailing. This is true for the vessels used on the river. William Finch found a few of the vessels from 100 "tonns" in the early 1600s. At the same time, John Jourdain found very big barges with 400 or 500 "tonns" on them. People used it to set up their tents in the field because they were so big. When Peter Mundy was in the fourth decade of the 17th century, he found "great lighters," or barges with both ends that were very high. They had 3 or 400 "tonns." However, Jourdain and Peter Mundy did not name these boats. As far back as the eighth century of the 17th century, Bowrey found "great flatt petered Vessels, of an Exceeding Strength," which are called Patellas. Each of them can hold 4, 5, or 6,000 Bengala maunds. Some places have the most powerful eddies, which force them to hit one shoale or another a lot, so they are built very strong and flat. If they were not strong and flat, they would be in more danger of being wrunged apart or turning their bottoms up. Bowrey may have talked about the same things that Jourdain and Mundy talked about earlier. and there are ships that bring saltpetre from Patana, which are more than 50 yards long and 5 wide and 2 and a half deep. They can hold more than 200 tuns. They come down in October, before the Stream of the River, but they have to go back up with a strong hand about 1000 Miles.

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