



Exploitation And Economy: The Coal Industry Of Colonial Assam

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ABSTRACT

Assam's nineteenth-century industrial development was primarily associated with the British colonial strategies, which were mainly identified by strategies involving resource extraction for British economic interests. The discovery of coal in Assam by Lieutenant Wilcox in 1825 attracted significant interest because of its utility in steam navigation. David Scott tried to use the local coal for steam vessels but large-scale development was not taken up until the Assam Company started extracting coal for the burgeoning tea industry in the 1830s. Transport drawbacks, political strife, and workforce shortages all upset these proceedings. In 1882, the Assam Railways and Trading Company began major coal mining activities with railway links connecting the coalfields. Labor and logistical issues notwithstanding, Assam's coal mining industry started contributing large and significant margins to regional economics. So, this paper primarily explored the discovery of Coal, its development along with the British exploitation policies in Colonial Assam. This paper also looked at the ecological and demographical impact of the Coal industry in Colonial Assam.

Keywords: Coal, Imperialism, steam-powered transportation, Railways.

1. Introduction:

The industrial development of Assam in the nineteenth century is very much interwoven with the overall economic policies undertaken by the British in India. Until 1832 the East India Company's Government was undecided about its Assam policy, and this indecision led to further ruination of the moribund local economy (Guha, p.159). Although the British Raj focused on using the resources of the region through innovative techniques and methods. During this period, the East India Company remained a profitable venture, with a steady organisational structure often described as the "steel frame." The paradigm of governance at any time was always maximizing revenue since it determined the scope and character of everything that happened. The economic policy was, however, quite vicious; they relied completely on private enterprise to 'mine' resources and focused efforts on sectors directly benefitting British interests.

Thus, the emerging industries did not receive due attention, which paved the way for the rising businesses that were largely European in nature both in terms of investment as well as administrative management. This shift naturally led to a disruption of the long-established economic lifelines in Assam. While the new economy setup ensured huge growth in certain sectors, it instead led to underprivileged communities depending on the colonial business instead of gaining major benefits from industrialization (Goswami, 1993).

2. Objective of the Study:

The article investigates the early coal discovery and mining operations in Assam through analysing the role of British economic policies in shaping the industrial development of Assam during the nineteenth century. The study also throws lights on the ecological and demographic changes caused by the Coal industry in Colonial Assam.

3. Methodology:

The work will follow the descriptive analytical method of Historical enquiry. Primary and secondary sources would be subjected to both external and internal criticism. The primary source has been obtained through official reports, unpublished Ph.D. theses, and other sources. While the secondary sources included books, journals, etc.

4. Discussions:

4.1. The Discovery of Coal:

Lieutenant Wilcox who was the revenue surveyor at Sadiya, first spoke of coal in Upper Assam in April 1825. He commanded a company of the 46th Regiment in an expedition up the Disang River to Borhat. He observed that it also held coal and that the ridges around were grey and yellow sandstone (Mallet, 1876, p.2). However, he did not describe how or where the actual coaly beds occurred. Again, on another expedition up the Dihing River, Wilcox discovered a coal seam in the bed of the Burhidihing near Supkong.

In the meantime, David Scott, who was the Governor General's Agent for the North East Frontier, drew inspiration from this revelation. He had framed several initiatives before the legal annexation of the Ahom polity by the British to promote socioeconomic development in Assam (Barooah, 1970, p.103-106). Scott was very optimistic about the viability of tapping into available local coal resources. He felt that, with such supplies accessible, steam navigation would become feasible on the Brahmaputra River. So, he initiated concurrent studies on both coal and steam navigation; and in July 1825, he presented his plan to the government to establish a steamboat on the Brahmaputra.

Lieutenant Jones wrote on behalf of Wilcox a letter dated February 1826, with the report stating that there are coal deposits in a stream known as Suffrie, near the Naga region and the village of Teerpong. Jones further stated that Wilcox and he had been listed among nearly thirty individuals working in employment at an iron mine on Teerogong, and if Scott so wished, would be willing to assist him to work as a coal miner (Goswami, 1993).

In June 1827, on the request of the Government of Bengal, Scott transported samples of coal from Assam to Calcutta. The initial response from the government remained ambiguous. However, in October 1827, Scott communicated to George Swinton, who served as Secretary to the Government of Bengal that an expedition led by Wilcox had discovered a coal mine located in Upper Assam, approximately twenty miles east of Rangpur. Meanwhile, Scott heard about coal deposits along the Someswar River in the villages of Sljuk and Ruok in the Garo Hills. In February 1828, updating the Government, he mentioned that it would be much cheaper to obtain coal for the steam vessels on the lower Brahmaputra, but not essential at the then current exaction compared to the price prevailing from the Upper Assam mines. Scott went on to focus on Upper Assam. He asked Swinton for all available information about the proposed vessel's consumption of coal day after day, its carrying capacity, its travelling speed in smooth waters, and the possibility of using wood instead of coal down the lower river, where coal was expensive (Mallet, 1876).

In response to Swinton's request, Captain Johnstone of the "Enterprise Steam Vessel" appraised the steam vessel "Berhampooter", which was earmarked for the Assam trip. He informed them that the vessel will consume 6 to 7 maunds of Burdwan coal an hour, the vessel is fitted for store of 70 to 80 hours, and the vessel can be sent up speed of 11 miles per hour. He also commented that at an interval of 150 miles, coal depots should be placed along the route (Goswami, 1993).

One of the early instances of coal mining took place in the Valley of the Saffrai, which is a tributary of the Disang River. In 1828, C.A. Bruce, who was commissioned by David Scott for this particular exercise, mined a substantial amount of coal. During the wet season, Bruce led a party of 100 men up-river in canoes. He started working on a seam which he said was 36 feet thick with only a little shale on top. They quarried 5,000 maunds of coal and filled great part in canoes (Mallet, 1876). The river was a very difficult one to navigate with much rapids, sharp turns, and currents that made it lose four canoes. Despite these challenges, the remaining coal was brought to the Brahmaputra River, and a consignment was sent to Calcutta for assay, which was found equal in quality to the best of the English coal discovered thus far in India. Bruce also identified eight more outcrops further downstream (Goswami, 1993).

At this stage, the authorities had fully decided on the substantial coal deposits that existed in Assam. This impression made Scott negotiate the whole question of introducing steam navigation, an idea that nearly came into fruition when the government decided to send a steamer to Assam for a trial run in May 1831. Unfortunately, Scott's dream was not to see fruition as he died in August 1831. His successors concentrated on reforming the revenue machinery and the aggressive frontier tribes. Secondly, steam navigation was not the urgent need in the short term since commercial enterprise in the area was in its early stage of development (Barooah, 1970). The scenario changed only when tea factories were produced hence a necessity to transport the staple export. In 1841 the Assam Company inaugurated steam navigation on the Brahmaputra River, primarily in aid of its exportation of tea. Coal exploration continued and sought deposits of proved quality.

At first, the Calcutta government did not bother to take much interest in exploiting North-Eastern Frontier's coal resources. Several factors, including limited demand, a lack of labour, due to transportation difficulties,

and problems with the political stability in the region, discouraged private efforts as well as government initiatives for coal mining. With the establishment of the Assam Company in 1838 and the growth in the tea industry that followed, the demand for coal increased considerably. Therefore, this created an immediate need to have a secure supply of locally mined coal at an affordable price (Goswami, 1993).

Though there were difficulties, Captain Henry tried to find some solutions. But his coal ventures stumbled upon a roadblock with his transfer to Sadiya. After his departure, Sanders, who was a Special Sub-Assistant Commissioner, took the reins of the coal ventures. However, being endowed with neither the energy nor technical expertise needed for coal operations, Sanders was not strong enough to carry it forward and he eventually let it meet its sad end (Barpujari, 1977, p.69-70). The failures experienced by Sanders made Jenkins conclude that it was necessary for the company to hire an expert professional with adequate knowledge of coal mining. Jenkins concluded that the entire operation should be carried out by a professional in order for them to be achieved more efficiently and effectively.

4.2 Early Stage of the Coal industry:

A committee of coal was formed in 1838 for a survey of the Assam coal reserves. The committee noted the favourable locations of the Borhat and Jaipur coal seams, particularly in regard to inland water transport. However, they came to a conclusion that, given the conditions of communication between Upper Assam and the rest of India in existence then, Assam coal could not be supplied to Calcutta cheap enough to compete with that of Bengal coal. Yet the committee thought that Assam coal may be well used to power the steamers on the Ganges, and they furnished estimates showing that it could be brought at a lower cost than Burdwan coal to upstream stations on the Ganges (Mallet, 1876, p.7).

In 1839, Lieutenant Brodie reported a new coal discovery in the Disang River Valley, and the specimens that were sent were proved to be of excellent quality. The Assam Company, which was already running a quarry at Jaipur, decided to start a quarry here as well. In 1842, A.H. Landers identified another seam near the village of Namsang, and the company began further exploration. When it had run tests on one of their steamers, the commander asserted that it was "the best he ever had on board," emphasizing that it could generate steam more rapidly without yielding clinker, and that its performance marked a definite superiority over any coal accessible in Calcutta (Report of the Coal Committee, May 1845, p.112).

In late 1847, Major Hannay opened two quarries at Jaipur and expressed confidence that these quarries could provide enough coal to meet the government's needs, provided that boats were available for transportation. With the introduction of the government steamer service on the Brahmaputra that same year, the demand for coal grew significantly. Since many coal fields were located near the upper terminal point of steam navigation at Dibrugarh on the Brahmaputra, it was recognized that the successful development of these coal beds could bring about a transformative shift in the river's carrying trade (Goswami, 1993).

Initiating this, Jenkins continued to evince interest in the affairs over the coal. He directed Thornton, who was the Sub-Assistant Commissioner of Sibsagar, to join himself with Mornay, the Superintendent of the Assam Company for inspecting those coal beds along the River Dikhow partly worked by the late Sanders. He asked them to determine if he could supply coal from that place to the government steamers. Thornton and his surveyor party encountered an operating coal seam operated by contractors on the flank of the Namsesu Valley. The general thickness of the coal was about 10 feet, and a pure coal seam could be as much as 3 or 4 feet (Medlicott, 1868). Mornay, being an experienced man who had worked in the Bengal collieries, believed that the Namsang coal was of very high quality. However, he knew the transportation problem was great but not insurmountable. He was optimistic that the coal could be transported by water to Gauhati. Indeed, the local gentleman, who visited the quarry along with him, offered to contract for supply of coal at Gauhati on the terms of 8 annas a maund (Goswami, 1993).

Though the Coal Committee had thought of exploiting the coal fields in Upper Assam, no coherent geological or economic investigations were done. All progress in this area was strictly the result of private efforts. To cater to the requirements of its tea factories, the Assam Company had been working vigorously on coal mining near Jaipur since 1840. In 1850, a company M/s William Malcolm and Browne Wood was raised to venture into coal mining. The Company through its attorney, Browne Wood signed an agreement for lease with the chiefs of the Namsang and Kongan Duars to collect billets and coal there in consideration of the company's offering an annual payment of Rs. 60 to each clan (Goswami, 1993).

In 1854, Assam Company purchases these rights from M/s Malcolm and Browne Wood. In the same year the company also stakes its claim to mine in the gorge of the Dikhow River. But Holroyd, Brodie's immediate successor, disallowed these claims in the grounds that the government possessed the rights to these coal beds. He insisted that "no tenure can be held valid except that emanating from the government of the country." The government commissioner noted that the genuine query was how convenient it would be for the government to allow any natives or Europeans to enter into such contracts with the Naga tribes.

Assam's coal fields were surveyed in 1865 by Medlicott of the Geological Survey of India. He studied and deliberated profoundly and agreed that Jaipur had its locus bonum but here strongly believed that the advantages were seconded by the superior quality of coal mined from the Makum field, which he considered "the coal field of Assam." On the Namchik River, he took three beds of coal existing in a 200-ft section where he concluded that coal in the Makum field and that existing in the Namchik River belonged to one formation. He estimated that the coal supply from this field would practically never run out. He however pointed out the

difficulties involved in coal extraction due to the steep gradients of the hill. Medlicott also commented on the neglect of upper Assam coal that was proved in quality and proposed changes in the system of leasing for coal fields. As he visited, the authorities in Sibsagar mentioned that they could not promise to safeguard his camps in the interior region which restricted actual examination of the Nazira coal field (Medlicott, 1868).

Mallet of the Geological Survey of India conducted another geological survey from 1874 to 1876. In the report, he spelt out five coalfields-Makum, Jaipur, Nazira, Jhazil, and Desoi. He also followed the extensions of the Naga Hills up the Dihing Valley and termed the Makum field as the most important. Although these were repeated findings, no significant development was done for the exploitation of coal resources until the formation of Assam Railways and Trading Company in the year 1881 (Mallet, 1876).

4.3 Challenges:

In the case of coal, transportation was the greatest hurdle towards its development. Due to population scarcity, uneven terrain, and the relatively low economy, well-developed overland communication was considered unfeasible. Thus, the only viable transport system for a long time was through country boats, which navigated the Brahmaputra up to Sadiya (Goswami, 1993).

The Assam Railways and Trading Company was formed in 1881 and the building of the Dibru-Sadiya Railway was also started. In 1882, the first railway line was opened from Dibrugarh steamer ghat to Jaipur Road, and two years later, the coalfields of Upper Assam were connected by the railway lines. Because of these developments some speculators explored the hills for commercial exploitation of coal. But it soon became amply clear that the terms and conditions were not alluring, and without proper communication facilities, not many private entrepreneurs could be expected to invest in such ventures. Seven grants were issued under the new terms, but all lapsed within a few years (Goswami, 1993). This also brought outside elements into the interior hills, leading to friction with the Nagas. In his report to the government, Commissioner of Assam, Colonel Hopkinson mentioned that "if our relations with the hill tribes have not deteriorated, any improvement has not been significant" (Barpujari, 1977). The trespass on tribal land for mining and exploitation of resources in the forest, such as elephants and rubber, led to serious complications ranging from issues of rent and tribute to boundaries.

The Government of India then brought forth the Inner Line Regulations of 1873 to solve these problems. These regulations enabled the local authority to prohibit British subjects, or any particular class of persons, from crossing that line without a pass issued by the Deputy Commissioner. This made it nearly impossible for outsiders to accept any grants beyond that line or to gain tenure from any Chief or tribe for the commercial exploitation of their economic resources (Barpujari, 1977). The new problems presented by the Inner Line Regulations was patent. Col. Keating, the recently appointed Chief Commissioner of Assam, realized that private investment had to be attracted, and he could well look further than the prospect of developing the Dikhow coalfields, as also those beyond the Inner Line, which should be treated as a matter of paramount importance. He presented a proposal to the Governor-General in council with the object of making possible the exploitation of the coal reserves in the latter region. But this recommendation was rejected because it directly contravened the Inner Line Regulations passed just two years prior (Goswami, 1993). Keating was convinced that these very valuable coal deposits needed to be opened up for private enterprise and believed more favourable terms had to be offered to possible investors. This led him to form new rules of mining lease in 1875 through which coal mining sites that covered up to 50 acres could be leased for three years, and no holding of multiple sites under the same grant was allowed. However, all these efforts failed to make terms attractive enough, and his successor, Stuart Bayley, called for revising the rules.

It eventually became the view of the Government of India, and a lease was granted in 1881 to Messrs Shaw Finlayson and Company for as much ground as they might require within an area of up to 30 square miles in the Makum coalfields. The length of the lease granted was for 20 years with a rent of Rs. 50 per square mile that later became increased to a royalty of 3 annas per ton of coal mined.

Realizing that the Assam Company had, on overall counts, performed well over these thirty years of mining activities, the government officially recognized the Company's claim to expand its activities in the Dikhow coalfields. Following instructions from the Government of India, an arrangement was made in 1881 between the Assam Company and the Nagas, brokered by the Deputy Commissioner. This agreement would see the Company agree to pay a royalty to the government at 4 annas per ton while obligating itself to accept the arbitration of Deputy Commissioner in any disputes that may arise with the Nagas. However, the treaty further contained a provision by which the government was not denied any option to extend its Inner Line Regulation over the Company anytime later and made it clear that no protection more than what the Deputy Commissioner could reasonably give would be expected from the government.

The first definite turning point of the industry was the establishment in 1882 of a metre gauge railway line that linked the coalfields along the Dihing River to the Brahmaputra. It was also in the same year that the Assam Railways and Trading Company leased the Makum (Ledo) field. This work was started by the Company's engineer, George Turner, who originated in South Staffordshire. A mining engineer, this man, a pioneer of his kind, entered the Patkai Hills and found that the ground around was occupied by "jungles and outcrop but left the country in a few years with "working and prosperous collieries" (Goswami, 1993). Finally, large-scale mining operations begin in 1882 in Tikak mines in Upper Ledo and Ledo Valley mines, and the Namdang and Tirap grants started development in 1897-98.

Labour was among the other major challenges facing the coal industry; transportation was another major challenge. The coal reserves were very remote: vast areas of forests, diverse insects and wild animals; building housing, medical services and sanitation, food and other necessities, and training most people for their new jobs were some of the things needed to attract labour. Local populations generally showed little inclination to be wage labourers, as discussed earlier. Accordingly, it was just like the tea industry; even the coal industry has had to recruit its workers from other parts of the Indian sub-continent. Management and capitals for these enterprises remained mainly European.

The early labour force of this industry was mainly from the United Provinces, Bihar, and the Central Provinces and some other groups consisted of Makranis, Peshwaris, and even Chinese workers. The Ledo and Tikak estates were largely contract-imported under the Labour and Emigration Act. Usually recruited from distant districts, such persons had never known the working conditions. They were bound to the estate for four or five-year contracts and could not leave the estates throughout the entire sentence as the criminal law inflicted upon them jail time. If they attempted to leave without permission, the employers could arrest them arbitrarily. The only justification of this penal contract system was that there existed corresponding obligations upon the employer under law, one of which was the obligation to maintain the health of the labourers. But the Deputy Commissioner of Lakhimpur has pointed out, "the Assam Railways and Trading Company have failed to discharge this obligation regarding their labor force under Act Contracts" (Goswami, 1993).

As the miners had faced detritus conditions, so the authorities stressed the urgent need to reduce their working hours. Mining in Assam often made the miners work for at least 9.5 hours without breaks, so they are not able to go home for a hot meal, properly cooked. Working hours usually started at 7 A.M. to 4:30 P.M., which was high even by Indian standards, especially considering the fact that shifts in other collieries rarely exceeded eight hours.

Notwithstanding the recommendations made to improve these conditions, very little was done to alleviate the hardships of the miners in this period. Though the Assam Railways and Trading Company boasts of having offered training programs on first aid and Medicare to the labourers, in practice, many were still relying on divine intervention and incantations to cure their ailments rather than receiving proper treatment for them.

4.4 Impacts on Society and Ecology:

The development of the colonial industries brought various changes to the demographic composition of the state. The local populations were generally showed little inclination to be wage labourers. The coal industry also recruited its workers from other parts of the Indian sub-continent. The early labour force of this industry was made up of men from the United Provinces, Bihar, and the Central Provinces, other groups consisted of Makranis, Peshwaris, and even Chinese workers. The Ledo and Tikak estates were largely contract-imported under the Labour and Emigration Act. The influx of Bengali employees of the mining companies led to the Bengali dominance in some part of the region particularly Tinsukia district area. The development of the coal mining industry had created a new class in the society who made contracts with the companies for the transportation of the coal (Sen, 2013).

The immigration led to the cultural exchange, introduction of new traditions, languages, festivals and art forms etc. The immigration can also lead to xenophobia and stereotypes which may create challenges to the existing societal dimensions. These tensions may lead to the issue of identity among the local populations. These tensions have a great influence in the manifestation of the policy and law enforcement practices also.

The growth of the industry plays an important role in the urbanization of the particular locality. It pushes the rise of urban population in a great extent. The nearby villages also affected by the process. This industrialization and the urbanization process also brought changes to the family structure and norms. With the growth of the industries women were became conscious about their rights, privileges and nuances of equality. It brought a great shift in the rise of the divorce rate and sexual relations. In religion, it is seen that the urban people are mainly guided by the rationalism not by the traditions which lead to the rise of atheism (Sen, 2013).

The Coal mining had caused threatens to the sustainability of local livelihood systems (Mishra, 2020). The British were more inclined to the resource extraction and economic development which led to the environmental degradation and long-term sufferings for the local communities. The primitive mining techniques and the absence of requisite regulations led to the deforestation, soil erosion and soil depletion, pollution of air, water bodies etc. The coal mining also has a great influence in the decline of flora-fauna of the region.

5. Conclusion:

By the beginning of the twentieth century, Assam was able to achieve a level of self-sufficiency with its coal production, and for the year 1903, the overall output was 293,000 tons. It was possible by a manpower that comprised 1,200 miners and nine European supervisors. Even then, it was very much accepted that for some time, coal production would remain within certain confines. The development of the coal industry had strong connections with the growth of transportation infrastructure. Until the Assam Bengal Railway time, the sale

of coal was still to local tea gardens and Brahmaputra steamers. Large amounts of coal were transported to Calcutta during this period.

The discovery of coal in Assam represented a significant opportunity that could have facilitated local technological modernization. With abundant local coal and iron resources, the British Government could have prioritized large-scale industrialization in Assam, akin to the industrial growth witnessed in England driven by these minerals. However, the colonial administration's policies led to deindustrialization across India, including Assam, as the region was relegated to being a market for British industrial products. Instead of fostering local industry, the coal sector, similar to the tea industry, primarily served colonial interests. The growing demand for coal was largely met by enterprises owned and operated by foreign capitalists, who repatriated profits to their home countries, imported manufactured goods, and often disregarded local needs and interests. Consequently, the coal industry had a minimal positive impact on the local economy, perpetuating a cycle of dependency rather than promoting sustainable economic development along with ecological and social impact.

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