From *Zuid-Sumatra Staatsspoorwegen* (ZSS) to Babaranjang: Coal Transportation in South Sumatra, 1914–2006

Tomy Wijaya[1*], Syafruddin Yusuf[2]
[1]Master's Program in History Education, Faculty of Social Sciences and Law, State University of Jakarta, Jakarta, Indonesia
[2]History Education Study Program, Department of Social Studies Education, Faculty of Teacher Training and Education, Sriwijaya University, Palembang, Indonesia

*Corresponding author: tomywijaya808@gmail.com
DOI: https://10.14710/ihis.v10i1.30465

Abstract

Railway infrastructure played an important role in the development of coal mining and commodity distribution in South Sumatra. This research examines the historical transformation of coal transportation between 1914 and 2006, focusing on the transition from the colonial railway network to the establishment of the Tanjung Enim–Tarahan corridor and the Babaranjang system. Employing a historical method, the research applies heuristics, source criticism, interpretation, and historiography to examine colonial railway planning documents, legal regulations, government records, parliamentary proceedings, technical reports, and institutional publications, alongside relevant secondary literature. The findings demonstrate that during the colonial period, the *Zuid-Sumatra Staatsspoorwegen* (ZSS) network facilitated coal transportation from inland mining areas through regional railway connections, particularly towards Kertapati. Following independence, the nationalization of mining assets and successive institutional reorganizations transformed the management of railway infrastructure and coal distribution. A further logistical transformation occurred during the New Order through the development of the dedicated Tanjung Enim–Tarahan corridor and the introduction of the Babaranjang system around 1986, followed by the operation of the Tarahan coal terminal in 1988. This research argues that the Babaranjang corridor was not a direct continuation of a colonial railway line but a postcolonial infrastructural reorganization shaped by changing state institutions and economic priorities. It contributes to the historiography of Indonesian transportation by demonstrating the relationship between colonial infrastructural legacies, institutional transformation, and the reorganization of resource distribution in postcolonial Indonesia.

Received:
[December 13, 2025]

Revised:
[November 5, 2026]

Accepted:
[November 6, 2026]

Keywords: South Sumatra; *Zuid-Sumatra Staatsspoorwegen* (ZSS); Colonial Railway; Coal Transportation; Babaranjang; Railway Infrastructure; Economic Transformation.

Introduction

Coal has played an important role in the economic and infrastructural development of South Sumatra since the colonial period, particularly through the relationship between mineral extraction and the expansion of transportation networks (Dick et al., 2002; Lindblad, 2008). The discovery and exploitation of coal deposits in the Tanjung Enim area were closely connected to the development of railway infrastructure, which facilitated the movement of mineral resources from inland mining areas to commercial and industrial centres (Maysuri et al., 2021). During the early twentieth century, railway development in South Sumatra formed part of the colonial government's broader efforts to connect inland economic areas with commercial and distribution centres (Ariwibowo, 2018). However, the historical relationship between coal mining and railway development in the region should not be understood as the uninterrupted operation of a single railway corridor. Rather, it involved several phases of infrastructural development, institutional reorganization, and changes in the geographical orientation of coal transportation.

The development of railway infrastructure in South Sumatra was initially undertaken by the *Zuid-Sumatra Staatsspoorwegen* (ZSS) as part of the colonial government's efforts to connect inland production areas with commercial and distribution centres (Ariwibowo et al., 2023). Construction of the Palembang–Tanjungkarang railway began in 1911 under Staatsblad No. 121 of 30 December 1911, with construction progressing simultaneously from Palembang under A.J.E . Rövekamp and from Tanjungkarang under F. Combé. Altfhough initially planned to cover approximately 387 km, the network reached a reported total length of 529 km following the connection of the two sections in 1927 (Richter, 1910, p. 3). This expansion formed part of the broader colonial economic strategy to integrate the Outer Islands into regional and international markets through infrastructure development, resource exploitation, and commodity circulation (Davis et al., 1991). Thus, the railway should be understood not merely as a technological achievement but also as an instrument of colonial economic integration and resource extraction.

The history of railways in South Sumatra also needs to be examined in relation to the broader development of railway infrastructure in the Indonesian archipelago. Mrázek (2002) research provides a broader interpretation of the relationship between technology, infrastructure, nationalism, and colonial power in the Dutch East Indies. This perspective provides a conceptual basis for examining the establishment of the *Zuid-Sumatra Staatsspoorwegen* (ZSS) network and its role in connecting inland production areas with distribution centres, while maintaining a clear distinction between the colonial railway network and the dedicated Tanjung Enim–Tarahan coal transportation corridor, which emerged as a distinct postcolonial infrastructural development rather than an unchanged continuation of the colonial system. Alongside railway expansion, coal mining in Tanjung Enim developed from the early twentieth century, as discussed by Maysuri et al. (2021), reflecting the growing significance of the region's mineral resources. However, understanding this development requires attention not only to extraction and transportation but also to the institutional and social dimensions of the mining industry. Erman (1999) research of the Ombilin coal mines in West Sumatra offers a comparative historiographical framework for examining mining administration, labour relations, state control, and the social consequences of resource extraction. These perspectives enable the present study to analyse railway infrastructure as more than a means of commodity transportation, namely as part of a broader system connecting resource extraction, labour organization, and state institutions.

The political transformation following Indonesian independence in 1945 introduced a

new institutional context for railway and mining management. The Japanese occupation and the Indonesian Revolution disrupted existing colonial economic and administrative arrangements, while the transition to independence gradually changed the ownership and administration of strategic economic institutions (Lindblad, 2008; Wijaya & Yusuf, 2025). The railway administration subsequently underwent several institutional changes, from Djawatan Kereta Api (DKA) to PNKA, PJKA in 1971, Perumka in 1991, and later PT Kereta Api (Afandy et al., 2019). Meanwhile, the nationalization of the PT. Bukit Asam mining enterprise in 1950 marked an important stage in the transfer of control over mineral resources to the Indonesian state (Prijono, 1988). These transformations should be understood as part of the broader process of economic decolonization, through which the Indonesian state reorganized the ownership and management of strategic economic sectors. The post-independence period therefore involved not only changes in institutional ownership but also the reorganization of infrastructure and the transformation of national economic priorities.

The relationship between coal mining and railway transportation underwent a substantial reconfiguration during the New Order period, as state-led industrialization and growing energy demand encouraged the integration of coal production, transportation, and distribution systems (Utama et al., 2019). This transformation was institutionalized through the establishment of the Coal Railway Transportation Development Project (*Kelompok Proyek Pengembangan Pengangkutan Batubara dengan Kereta Api*—KP3BAKA) in 1981, which was responsible for upgrading railway infrastructure, constructing new track sections, strengthening bridges, and developing specialized coal-loading and unloading facilities. These improvements included the construction of a new 9.5-kilometre railway section between Panjang and Tarahan, a 15-kilometre shortcut at Prabumulih, and a 5-kilometre connection between Muara Enim and Tanjung Enim Baru, alongside improvements to the Panjang–Negeriagung railway line (Roda Sayap, 2022a). Following initial operational trials in January 1986, PJKA officially commenced the operation of the *Kereta Api Batubara Rangkaian Panjang* (Babaranjang) on 1 October 1986, transporting coal from PT. Bukit Asam's Tanjung Enim mines to Tarahan (Kusumo, 2021). Supported by specialized locomotives, freight wagons, a train-loading system at Tanjung Enim Baru, and a rotary car dumper at Tarahan, Babaranjang marked a significant shift towards an integrated coal transportation corridor connecting South Sumatra's mining region with port infrastructure in Lampung. This development represented a distinct postcolonial infrastructural reorganization rather than a direct continuation of colonial railway policy, while also reflecting the persistence of resource-extraction priorities within the New Order's state-led development strategy.

The historical development of the South Sumatran railway network and its subsequent transformation can be examined through studies of infrastructure, imperialism, and economic decolonization. Davis et al. (1991) provide a comparative framework for understanding how railway infrastructure was connected to imperial expansion, economic interests, and political power in different colonial and semi-colonial contexts. Complementing this perspective, Wardojo (2018) demonstrates how colonial railway development in the Vorstenlanden region of Java facilitated commodity transportation and contributed to broader socio-economic transformations. While these studies offer insights into the colonial dimensions of railway infrastructure, Lindblad (2008) provides a framework for examining the transformation of economic institutions and the transfer of control from colonial to national authorities. This perspective is further complemented by Waskito et al. (2020), who examine the socio-cultural responses to the nationalization of Dutch railway companies in Indonesia between 1945 and 1958. Taken together, these studies provide a historiographical foundation for investigating

the relationship between colonial railway development, postcolonial institutional transformation, and the changing role of transportation infrastructure in resource-based economies.

Despite previous scholarship on colonial economic development, railway infrastructure, mining activities, and resource extraction, the historical relationship between railway development, coal exploitation, and institutional transformation in South Sumatra remains insufficiently examined as an interconnected process. In particular, the transition from the colonial *Zuid-Sumatra Staatsspoorwegen* (ZSS) network to the postcolonial reorganization of coal transportation, culminating in the establishment of the Tanjung Enim–Tarahan corridor and the Babaranjang system, requires further historical investigation. Addressing this gap, this study adopts a long-term historical perspective covering 1914–2006 and examines three main issues: (1) the role of the colonial ZSS network in supporting coal mining and transportation between 1914 and 1942; (2) the influence of political and institutional transformations between 1942 and 1986 on the management of coal mining and railway transportation; and (3) the impact of the Tanjung Enim–Tarahan corridor and Babaranjang system between 1986 and 2006 on coal distribution and the relationship between the mining area and Tarahan Port.

Method

This research employs a historical research method with a qualitative-descriptive approach to examine the development of coal transportation and the institutional transformation of railway infrastructure in South Sumatra between 1914 and 2006 (Irwanto & Sair, 2014). Rather than presenting a merely chronological account, the research investigates the relationship between railway infrastructure, coal-mining activities, state institutions, and changing transportation policies through four interconnected stages of historical inquiry: heuristics, source criticism, interpretation, and historiography. These stages provide a systematic framework for reconstructing the continuity and transformation of coal transportation from the colonial period to the postcolonial era.

The first stage, heuristics, involved identifying and collecting primary and secondary sources relevant to railway development, coal mining, and transportation policies in South Sumatra. The primary sources comprised colonial railway planning documents, including Richter's (1910) report and *Staatsblad* 1912 No. 121; the *Netherlands East Indies Intelligence Service* report (1942); Indonesian government regulations concerning mining and railway institutions (1960–1998); parliamentary proceedings (Dewan Perwakilan Rakyat Republik Indonesia, 1986); technical publications on domestic coal supply to the Suralaya power plant (Kaswanto et al., 1987); and World Bank project reports published between 1978 and 1996. These materials were complemented by archival and institutional publications, including the archival guide issued by the National Archives of the Republic of Indonesia (ANRI), as well as publications from PT Bukit Asam and PT Kereta Api Indonesia. Secondary sources consisted of scholarly books, journal articles, and historical studies addressing colonial economic development, railway infrastructure, coal mining, nationalization, and economic decolonization. Sources were selected according to their chronological and geographical relevance, institutional provenance, thematic relationship to coal transportation, and suitability for addressing the research questions.

The second stage, source criticism, assessed the authenticity, credibility, and evidentiary value of the collected materials through external and internal criticism. External criticism examined the authorship, date of publication, institutional origin, documentary form, and provenance of each source to establish its authenticity and historical context. Internal criticism

evaluated the content, purpose, intended audience, institutional interests, and possible limitations of the information presented. Particular attention was given to the distinction between policy objectives, projected project outcomes, and documented operational achievements, especially in government regulations, technical reports, and World Bank project evaluations. Information concerning railway construction, coal production, transportation capacity, and institutional changes was compared across different source categories wherever corroborating evidence was available. Quantitative information was also examined according to its specific measurement units and scope, distinguishing coal production, freight tonnage, terminal throughput, and tonne-kilometres. This procedure was intended to prevent the comparison of indicators that represent different aspects of mining and transportation performance.

The third stage, interpretation, involved analysing the critically examined evidence to identify patterns of continuity and change in railway infrastructure, institutional arrangements, transportation policies, and coal distribution. Particular attention was given to distinguishing the colonial *Zuid-Sumatra Staatsspoorwegen* (ZSS) network from the postcolonial reorganization of railway transportation and the subsequent development of the Tanjung Enim–Tarahan corridor and Babaranjang system during the 1980s. The analysis also examined how political transitions, nationalization, institutional restructuring, investment decisions, and changing energy requirements shaped the geographical orientation and operational organization of coal transportation. By comparing evidence from different historical periods, the study identifies both the persistence of extractive transportation functions and the institutional and logistical changes that accompanied the development of the postcolonial coal transportation system.

The fourth stage, historiography, synthesized the findings into a chronological and analytical narrative organized around five historical periods: colonial railway development (1914–1942); Japanese occupation and the Indonesian Revolution (1942–1950); nationalization and institutional reorganization (1950–1966); New Order industrialization and coal logistics reorganization (1966–1986); and the establishment and development of the Tanjung Enim–Tarahan corridor and Babaranjang system (1986–2006). This periodization provides the basis for examining the changing relationship between railway infrastructure, state institutions, mining activities, and the distribution of coal in South Sumatra. The analysis also considers the limitations and consequences of infrastructural development, including project delays, financial constraints, labour-related issues, land acquisition, and environmental management.

This research is subject to limitations arising from the uneven availability of historical records and comparable quantitative data across the period under investigation. In particular, consistent annual statistics on coal production and railway freight volumes could not be established for all historical periods between 1914 and 2006. Consequently, quantitative evidence is used selectively and interpreted according to its original units, geographical coverage, and institutional context. The absence of comparable data is treated as a limitation of the available historical evidence rather than a basis for estimating undocumented production or transportation figures. These limitations inform the scope of the conclusions and indicate areas requiring further investigation through company archives, railway operational records, and additional local historical sources.

Colonial Railway Networks and Coal Transportation in South Sumatra, 1914–1942

The development of railway infrastructure in South Sumatra was closely associated with the establishment of the *Zuid-Sumatra Staatsspoorwegen* (ZSS), a regional operating division of the

Dutch colonial state railway administration, *Staatsspoorwegen* (SS). Its development reflected the colonial government's growing interest in providing transportation infrastructure to connect inland production areas with commercial centres and strategic ports. Following earlier surveys and planning initiatives, railway construction was undertaken by the colonial government under the legal framework of 30 December 1911 (Figure 1) (Dutch East Indies State Gazette 1912 No. 121). Rather than functioning exclusively as a passenger transportation system, the ZSS network was designed to facilitate the movement of agricultural products, minerals, and other commodities from the interior of South Sumatra and Lampung. The establishment of this state-operated railway network therefore formed part of a broader colonial economic strategy in which infrastructure development supported the expansion of commercial activities and the exploitation of regional natural resources (Ariwibowo et al., 2023; Kusuma et al., 2026).

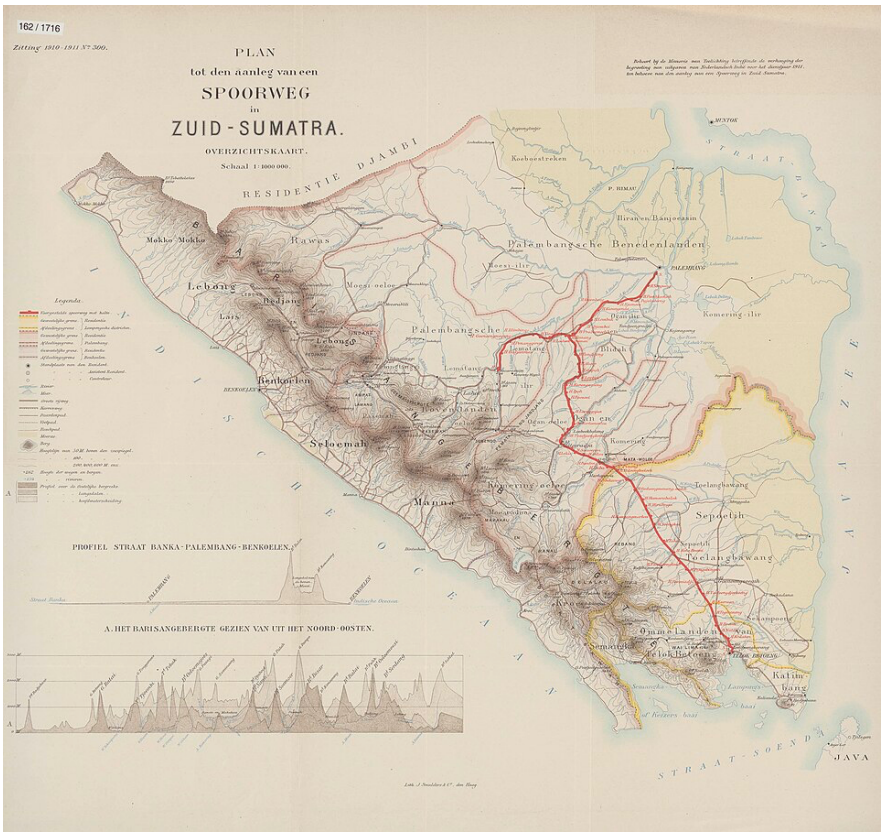


Figure 1. Plan for the construction of a railway in South Sumatra, 1911.
Source: Koninklijke Bibliotheek (National Library of the Netherlands), 1911.
https://hdl.handle.net/1887.1/item:816783

Railway construction proceeded from two principal directions: Panjang (Oosthaven) in Lampung and Kertapati in Palembang. The first 12-kilometre section connecting Panjang and Tanjung Karang commenced operations on 3 August 1914, while the Kertapati–Prabumulih section, extending approximately 78 kilometres, opened on 1 November 1915. Construction subsequently expanded through additional sections connecting Prabumulih with the Muara Enim area and extending towards Lahat and other inland settlements. A branch railway was also constructed to connect the Tanjung Enim coal-mining area with the wider railway network. The two principal railway sections from Palembang and Lampung were eventually connected on 22 February 1927, forming an integrated regional network of approximately 529 kilometres. Further expansion continued towards Lahat, Tebing Tinggi, and Lubuklinggau,

with the final section completed in 1933. These developments established the ZSS as an important transportation infrastructure system linking the southern Sumatran hinterland with regional distribution centres and ports (Kusuma et al., 2026; Ravico & Susetyo, 2021).

The expansion of the railway network was closely connected to the development of the coal industry in Tanjung Enim. Although the area's mineral potential had been identified through earlier geological investigations, commercial coal mining under Dutch colonial administration began in 1919 using open-pit extraction methods. Between 1923 and 1940, mining operations also involved underground extraction, indicating the development of more intensive mining activities in the region (Maysuri et al., 2021). The construction of the railway branch connecting Tanjung Enim with the main network provided an important logistical link between the mining area and the broader transportation system. Railways facilitated the movement of extracted coal beyond the immediate mining region, reducing dependence on slower inland transportation and connecting resource-producing areas with commercial distribution points (Figure 2). Consequently, the development of coal mining and railway infrastructure should be understood as interconnected processes within the colonial government's wider strategy of regional economic exploitation.



Figure 2. Coal Transport Locomotive at the Bukit Asam Coal Mine in Tanjung Enim, South Sumatra.
Source: Photograph from the online collection of the Nationaal Museum van Wereldculturen (record identifier: 215464). https://hdl.handle.net/20.500.11840/215464

The distribution network involved two important transportation nodes: Kertapati in Palembang and Oosthaven (present-day Panjang) in Lampung. The inland railway connection through the Muara Enim–Prabumulih area provided access to Kertapati, where commodities could be transferred to river and maritime transportation. Irwanto (2010) explains that products from the interior, including areas around Lahat and Muara Enim, were transported towards Kertapati before being shipped onward to other commercial destinations, including Tanjung Priok. The strategic role of Kertapati in coal handling is also documented in a United States Army Air Forces intelligence report issued on 20 November 1942, which identified a coaling wharf at Kertapati equipped with four large cranes and a reported handling capacity

of 300–400 tons per hour (Netherlands East Indies Intelligence Service, 1942). Meanwhile, Oosthaven functioned as the southern terminus of the South Sumatran railway network and provided a maritime connection through a ferry service linking Sumatra with Java. Its development was also associated with the commercial interests of plantation enterprises in Lampung and surrounding areas. These two nodes therefore formed complementary components of the colonial transportation network, although the available evidence identifies Kertapati more directly as a coal-transfer facility than Oosthaven (Figure 3).



Figure 3. Coal Haulage at the Bukit Asam Coal Mine in Tanjung Enim, South Sumatra. Source: Photograph illustrating road-based coal transportation within the Bukit Asam mining area. From the online collection of the Nationaal Museum van Wereldculturen. https://hdl.handle.net/20.500.11840/240103

The role of the colonial state extended beyond the construction and operation of railway infrastructure. Through *Staatsspoorwegen* and its regional ZSS administration, the government assumed responsibility for developing and maintaining a transportation network that connected economically valuable inland areas with commercial and maritime infrastructure. At the same time, the location and direction of railway construction reflected the economic interests of colonial administration, mining activities, plantation enterprises, and foreign capital. Irwanto (2010) demonstrates that the railway routes connecting the Palembang hinterland with Kertapati and extending towards Oosthaven were also associated with commercial interests along the transportation corridor. This suggests that railway development was not simply a neutral process of technological modernization, but an integral component of the colonial political economy, in which public infrastructure facilitated commodity circulation and the extraction of regional resources. Nevertheless, the colonial network should not be interpreted as the direct predecessor of the later Tanjung Enim–Tarahan coal transportation corridor in its institutional and logistical configuration. The ZSS system was a broader regional railway network serving passengers, agricultural commodities, and mining products, whereas the dedicated Tanjung Enim–Tarahan corridor and the Babaranjang system emerged as a distinct postcolonial infrastructural reorganization during the 1980s.

War, Revolution, and the Disruption of Railway Infrastructure, 1942–1950

The Japanese occupation of the Dutch East Indies in 1942 marked a major turning point in the administration and operational priorities of railway transportation in South Sumatra. Following the Japanese military takeover of Palembang in February 1942, the colonial railway administration was replaced by a system reorganized according to Japan's wartime administrative structure. In Sumatra, railway operations were organized into separate regional divisions, with South Sumatra identified as *Nanbu Sumatora Tetsudo*. This arrangement differed from the railway administration in Java, where railway operations were consolidated under the *Rikuyu Sokyoku*, later known as *Tetsudo Sokyoku*. The reorganization placed railway transportation under Japanese military priorities and separated the administrative structure of the Sumatran network from that of Java. Although some Dutch personnel remained temporarily employed because qualified replacements were unavailable, Japanese officials assumed the principal leadership positions, while Indonesian railway employees gained opportunities to occupy strategic posts and receive technical training (ANRI, 2022; PT. Kereta Api Indonesia (KAI), 2026).

The wartime reorganization also affected the relationship between railway transportation and the coal-mining industry. In Tanjung Enim, the Japanese administration took over mining operations in 1942, redirecting the strategic value of coal resources towards the requirements of the occupation regime. Maysuri et al. (2021) explain that coal and other mineral resources were used to support Japanese military mobility and wartime activities. This development marked a shift from the commercial and colonial economic priorities that had characterized the earlier period towards a system increasingly subordinated to military requirements. Railway infrastructure consequently became part of a wider wartime logistical network connecting resource-producing areas with strategic distribution points. Nevertheless, the available evidence does not yet establish the precise volume of Tanjung Enim coal transported by railway during 1942–1945 or identify the full extent of changes in its distribution routes. Therefore, the wartime transformation is more securely understood through the documented transfer of mining control and the reorientation of resource use than through unsupported claims about the complete interruption or destruction of railway operations.

The end of Japanese occupation in August 1945 did not immediately restore the railway system to its previous administrative and economic functions. Following Indonesia's proclamation of independence on 17 August 1945, railway workers began taking control of railway facilities previously administered by the Japanese. At the national level, the takeover of the railway headquarters in Bandung on 28 September 1945 marked the establishment of the *Djawatan Kereta Api Republik Indonesia* (DKARI), which subsequently received its formal legal basis through Ministry of Transportation Memorandum No. 1/KA of 1946 (ANRI, 2022). This institutional transformation reflected the emerging effort of the Republic to establish control over strategic transportation infrastructure. In South Sumatra, however, railway facilities and routes became increasingly entangled with the wider military and political conflict between Republican forces and the returning Dutch administration. The colonial railway network was no longer used exclusively for commercial transportation; it was increasingly adapted to support troop movements, logistical distribution, and communication between military command centres.

The strategic role of railway transportation became particularly visible during the Indonesian Revolution in South Sumatra between 1945 and 1949. The existing railway network connected Palembang with important inland areas, including Prabumulih, Muara Enim,

Lahat, and Lubuklinggau, allowing it to function as a means of transporting personnel and military supplies. Wijaya & Yusuf (2025) identify three principal functions of railway transportation during this period: military mobilization, logistical distribution, and strategic communication. Railway facilities supported the movement of troops, weapons, ammunition, food, medical supplies, and fuel, while railway employees also contributed to the transmission of information between military positions. The network's strategic significance, however, also made railway infrastructure vulnerable to sabotage and competing attempts to secure control over important routes. Consequently, railway operations became closely dependent on the changing military situation and the territorial control exercised by opposing forces.

The conflict surrounding railway transportation was closely connected to the changing position of Republican military forces in South Sumatra. Following the five-day and five-night Battle of Palembang on 1–5 January 1947, Republican military units were required to withdraw from the city under the subsequent ceasefire arrangements (Wijaya et al., 2025). The headquarters of the Sub-Komandemen Sumatera Selatan (SUBKOSS), initially established in Palembang, was relocated to Lahat, while the headquarters of Division II Garuda moved to Prabumulih. Railway stations and connecting routes therefore assumed an important role in supporting the movement of military personnel from urban centres towards inland defensive positions. During the Dutch military offensive launched in July 1947, Dutch forces occupied areas extending from Payakabung to Prabumulih and subsequently advanced towards Lahat. Before the Dutch advance reached Lahat, the SUBKOSS headquarters had been relocated to Lubuklinggau to maintain organizational continuity and reorganize Republican military forces (Ravico & Susetyo, 2020). These developments illustrate how railway infrastructure became embedded in the territorial and logistical strategies of the Indonesian Revolution rather than functioning solely as an instrument of economic transportation.

At the national level, the return of Dutch forces in 1946 also produced competing railway administrations. The Dutch attempted to restore railway operations through the *Staatsspoorwegen/Verenigde Spoorwegbedrijf* (SS/VS), which brought together railway companies operating under Dutch authority, while the Republic continued developing its own railway administration through DKARI. This situation reflected the wider political division of the revolutionary period, in which control over transportation infrastructure was closely associated with territorial authority and the capacity to administer strategic economic assets. The railway system in South Sumatra consequently formed part of a contested transportation landscape in which operational continuity, military requirements, and competing administrative arrangements shaped the use of existing infrastructure. The precise condition of individual railway sections, bridges, stations, and coal-handling facilities, however, requires further examination of contemporary operational and maintenance records rather than being inferred solely from the general history of military conflict (ANRI, 2022; Wijaya & Yusuf, 2025).

The recognition of Indonesian sovereignty following the Round Table Conference in December 1949 provided the basis for consolidating railway administration under the new national government. In 1950, the Republican railway administration (DKARI) and the Dutch railway organization (SS/VS) were integrated into the *Djawatan Kereta Api* (DKA) through Minister of Transportation, Labour and Public Works Decision No. 2 of 1950 (ANRI, 2022). This institutional transition marked the end of competing colonial and Republican railway administrations and established a unified framework for national railway management. In South Sumatra, the period therefore represented a transition from wartime administrative control and revolutionary military utilization towards the consolidation of railway infrastructure under the Indonesian state. Nevertheless, the transfer of administrative

authority did not automatically restore the railway system to its pre-war operational conditions. The postcolonial government inherited an infrastructure system shaped by wartime priorities, political conflict, and institutional fragmentation. These legacies formed the historical context for subsequent nationalization and the reorganization of coal transportation during the 1950s and 1960s.

Nationalization and Institutional Reorganization of Coal Transportation, 1950–1966

The transfer of sovereignty from the Netherlands to Indonesia at the end of 1949 marked an important turning point in the ownership and administration of the coal-mining industry in South Sumatra. In 1950, the Indonesian government nationalized the Air Laya mining assets in Tanjung Enim, which had previously been developed under Dutch colonial administration. The corporate history of PT. Bukit Asam identifies this transition with the establishment of *Perusahaan Negara Tambang Arang Bukit Asam* (PN TABA), reflecting the transfer of mining authority from colonial administration to the Indonesian state (PT. Bukit Asam, 2025). This change represented more than a transfer of ownership, as coal resources increasingly became part of the national government's responsibility for managing strategic economic assets (Wardodjo, 2018). Nevertheless, nationalization did not immediately transform the existing mining facilities, transportation routes, or production arrangements. The new government inherited an established mining complex and railway connections that continued to shape the movement of coal from Tanjung Enim to regional distribution centres.

The institutional consolidation of the mining industry continued during the early 1960s. An important legal development was Government Regulation (*Peraturan Pemerintah*) No. 93 of 1961 (State Gazette of the Republic of Indonesia 1961 No. 117), which formally established the *Perusahaan Negara Tambang Batubara Bukit Asam*. The regulation transferred the rights, obligations, equipment, assets, and business activities of the preceding enterprise to the newly established state company. It also specified that the company's headquarters would be located in Tanjung Enim and that its activities would include coal extraction, purification, processing, and sales. In parallel, Government Regulation No. 86 of 1961 (State Gazette 1961 No. 110) established the *Badan Pimpinan Umum Perusahaan-Perusahaan Tambang Batubara Negara* (BPU), which was responsible for coordinating and supervising state-owned coal-mining enterprises. Its responsibilities included coordinating equipment procurement, financing, product sales, technical activities, administration, personnel, and training. These regulations demonstrate that the nationalization process was followed by a more structured institutional arrangement in which individual state mining enterprises operated within a broader system of government coordination.

A similar institutional transformation occurred within the railway administration. Following the consolidation of the railway system in 1950, the *Djawatan Kereta Api* (DKA) became responsible for managing railway operations previously administered under competing Republican and Dutch organizations. On 25 May 1963, Government Regulation No. 22 of 1963 (State Gazette 1963 No. 43) formally established the *Perusahaan Negara Kereta Api* (PNKA), transferring the rights, obligations, equipment, assets, and business activities of DKA to the new state enterprise. This institutional change reflected the government's effort to reorganize railway transportation within the framework of state-owned enterprises and national economic planning. The formation of PNKA also coincided with the reorganization of the coal-mining sector, creating two state-controlled institutional structures responsible for coal production and railway transportation respectively. Although the available evidence does not establish the detailed contractual relationship between PNKA and PN TABA during this

period, the existing railway connection between Tanjung Enim and Kertapati demonstrates their operational interdependence in the distribution of coal.

The relationship between the mining industry and railway transportation became particularly evident through the rehabilitation of the Tanjung Enim–Kertapati railway line. According to Government Regulation in Lieu of Law (*Peraturan Pemerintah Pengganti Undang-Undang*) No. 9 of 1960, which amended the 1959 budget of the state enterprises governed by the *Indische Bedrijvenwet* (I.B.W.), the government identified the 156-kilometre Kertapati–Tanjung Enim route as vital for coal transportation and emphasized the urgent need to improve its railway infrastructure and rolling stock. The same regulation shows that, to finance the rehabilitation and procurement programme, the government had secured a loan of approximately US$3 million from the Development Loan Fund, signed in July 1959. The project, implemented by DKA with subsequent involvement from PNKA and supported by United States technical assistance, involved track replacement, ballast improvement, and the introduction of additional railway equipment. Historical accounts of the project record the replacement of approximately 162 kilometres of track from the lighter R25 to the heavier R42 rail type, alongside improvements to track-maintenance facilities at Lahat. In 1962, six D52 locomotives were transferred from Java to strengthen coal transportation, while 400 coal wagons ordered from Romania began arriving in the same year. The rehabilitation project was completed on 30 November 1963 (Roda Sayap, 2022b).

This rehabilitation programme is significant because it demonstrates both the continuity and transformation of the colonial railway network. The Tanjung Enim–Kertapati connection had already existed during the colonial period; therefore, the post-independence project did not establish an entirely new coal transportation route. Instead, it upgraded inherited infrastructure to accommodate the operational requirements of the national coal industry. The replacement of railway tracks, improvement of supporting facilities, and procurement of additional locomotives and wagons indicate an effort to strengthen the logistical capacity of an existing transportation corridor. In this respect, the relationship between PN TABA and DKA/PNKA was expressed through the continued use and rehabilitation of railway infrastructure connecting the mining area with Kertapati. The government's explicit identification of this route as vital for coal transportation also demonstrates that railway infrastructure remained an important component of national resource management despite changes in political authority and institutional ownership.

Nevertheless, the development of the coal industry during this period was constrained by broader economic and technological changes. Historical data published by the Provincial Energy and Mineral Resources Office of Banten indicate that Indonesian coal production increased from approximately 107,000 tonnes in 1945 to a peak of 969,000 tonnes in 1952, before declining to approximately 320,000 tonnes in 1966. The same account identifies Bukit Asam as one of the principal contributors to national coal production during this period (Dinas Energi dan Sumber Daya Mineral Provinsi Banten, 2013). The decline was associated with several structural constraints, including the deterioration of mining facilities, limited capital, shortages of technical equipment and spare parts, and the changing demand for coal as a transportation fuel. From the 1950s onwards, steamships and steam locomotives increasingly adopted diesel engines, reducing the use of coal as fuel for transportation. This development affected the traditional domestic market for coal, although it did not eliminate the need to transport extracted coal by railway to industrial and commercial destinations. The distinction between coal used as locomotive fuel and coal transported as a commercial commodity is therefore important when assessing the changing relationship between the mining and

railway sectors.

The experience of South Sumatra between 1950 and 1966 illustrates that nationalization did not produce an immediate or complete break with the colonial economic and infrastructural system. Although mining assets and railway administration came under Indonesian state control, the basic geographical orientation of coal transportation continued to rely on the inherited Tanjung Enim–Kertapati connection. What changed was the institutional framework governing the mining and railway sectors, alongside the gradual modernization of railway infrastructure through state investment and international technical assistance. The rehabilitation project of 1959–1963 represents an important example of this transition: it combined the continued use of an established railway route with efforts to improve its technical capacity for national coal transportation. Consequently, this period should be understood as a phase of postcolonial institutional consolidation and selective infrastructural modernization, providing the foundation for the more extensive reorganization of coal logistics and the emergence of the Tanjung Enim–Tarahan corridor during the New Order period.

State-Led Industrialization and the Reorganization of Coal Logistics, 1966–1986

The political and economic consolidation of the New Order government after 1966 introduced a new phase in the development of Indonesia's mining and transportation sectors. During the First Five-Year Development Plan (Repelita I, 1969/1970–1973/1974), the government prioritized economic rehabilitation and the improvement of infrastructure, including transportation and electricity facilities. However, Indonesia's growing dependence on petroleum during the 1960s and 1970s contributed to a decline in domestic coal production, which had previously exceeded two million tonnes annually before 1945 but fell to below 0.5 million tonnes during the 1970s. The international oil crises and increasing domestic petroleum consumption subsequently encouraged the government to reconsider the role of coal within the national energy system. In 1976, a presidential instruction called for the maximum possible utilization of coal for future electricity generation and industrial activities. This policy direction was reinforced by Repelita III (1979/1980–1983/1984), which prioritized a more diversified domestic energy supply and encouraged coal development wherever technically and economically feasible (World Bank, 1990). Consequently, coal mining and transportation in South Sumatra increasingly became part of a broader state-led strategy to diversify energy sources and reduce domestic dependence on petroleum.

The reorganization of the coal-mining industry during this period involved several institutional changes rather than a straightforward transition from one company to another. Following the nationalization of the Air Laya mining assets in 1950, the historical corporate chronology of Bukit Asam records the establishment of *Perusahaan Negara Tambang Arang Bukit Asam* (PN TABA). A subsequent legal restructuring occurred under Government Regulation No. 23 of 1968, which established the *Perusahaan Negara Tambang Batubara* (PNTB). Government Regulation No. 42 of 1980 on state capital participation then provided the legal basis for establishing *Perusahaan Perseroan (Persero) PT Tambang Batubara Bukit Asam*, officially established on 2 March 1981. Its initial state capital originated from part of the assets previously held by PNTB. Meanwhile, as stipulated in Government Regulation No. 28 of 1984, the government converted the PNTB established in 1968 into *Perusahaan Umum (Perum) Tambang Batubara*. These developments indicate that the institutional transformation of the coal-mining sector involved distinct legal and organizational arrangements, rather than a simple renaming of PN TABA into PTBA. The establishment of PTBA provided a state-owned

corporate structure responsible for developing the Bukit Asam mining operations, including the expansion and modernization of the Tanjung Enim coal-producing area (Republic of Indonesia, 1968, 1980, 1984; PT Bukit Asam, 2025).

Institutional changes also affected the management of railway transportation. Following the establishment of *Perusahaan Negara Kereta Api* (PNKA) in 1963, the government transferred its business form into a state railway service organization, *Perusahaan Jawatan Kereta Api* (PJKA), through Government Regulation No. 61 of 1971. This arrangement placed railway operations within the government's public-service and transportation administration framework. PJKA subsequently became a major institutional actor in the development of the South Sumatran railway network, particularly as coal transportation requirements expanded. The relationship between PTBA and PJKA became increasingly important because the development of mining capacity required corresponding improvements in railway infrastructure, locomotives, freight wagons, and coal-handling facilities. Thus, the reorganization of the mining and railway sectors established the institutional foundations for a more integrated coal transportation system, although the two organizations retained distinct responsibilities for mining production and railway operations (World Bank, 1981).

The growing importance of coal in national energy planning became particularly evident in the development of the Suralaya Steam Power Plant in West Java. The first two generating units, each with an initial capacity of 400 MW, were designed to operate using either oil or coal, reflecting the government's intention to diversify the fuel supply for electricity generation. The development of Suralaya was therefore closely connected to plans for expanding the Bukit Asam coal mines and establishing a reliable transportation system between South Sumatra and Java. In 1976, the state coal-mining enterprise requested assistance from the World Bank to rehabilitate and expand the Bukit Asam mining operations. An engineering loan of US$10 million, approved in May 1978, financed feasibility studies and technical planning for an integrated mining and transportation project. Subsequent studies considered the development of Bukit Asam's coal production to approximately three million tonnes annually, with 2.4 million tonnes intended for Suralaya Units I and II and the remaining 0.6 million tonnes allocated to other domestic industrial consumers. This arrangement reflected a shift in the economic role of Tanjung Enim from a regional coal-producing area towards a strategic supplier within Indonesia's emerging electricity and industrial development system (World Bank, 1978, 1990).

The proposed Bukit Asam Coal Mining Development and Transportation Project subsequently integrated mining expansion, railway rehabilitation, port construction, and maritime transportation. Approved by the World Bank in January 1982 through Loan 2079-IND, amounting to US$185 million, the project involved the development of a three-million-tonne-per-year open-pit mine, the upgrading and expansion of approximately 405 kilometres of the South Sumatra railway network, the procurement of additional locomotives and freight wagons, and the construction of a new coal-loading terminal at Tarahan in Lampung. The existing Kertapati terminal in Palembang was also scheduled for improvement to maintain local coal distribution and limited anthracite exports. In addition, the project included a specially designed self-unloading vessel with a capacity of 9,200 deadweight tonnes to transport approximately 2.4 million tonnes of coal annually across the Sunda Strait to Suralaya. The integrated system was designed to increase the railway network's eventual coal-transport capacity to approximately 5.6 million tonnes annually. This project represented a major change in the logistical orientation of coal transportation, as the southern route through Lampung and Tarahan was developed to connect the Tanjung Enim mining area more directly with the

electricity market in Java (World Bank, 1981).

The selection of the southern transportation route also reflected the government's long-term expectations regarding coal production and distribution. During the project preparation process, several mining technologies, railway alternatives, port locations, and shipping systems were evaluated. Although the World Bank's economic analysis estimated that the eastern route through the Palembang area could have 12–15 percent lower discounted costs at an initial transportation capacity of 2.5 million tonnes annually, the Indonesian government preferred the southern route because it offered greater possibilities for future expansion and reduced certain risks associated with river transportation. At higher projected shipment levels, particularly around 5.6 million tonnes annually, the southern route was considered more suitable from a long-term logistical perspective. This decision demonstrates that the development of the Tanjung Enim–Tarahan corridor was not simply a technical extension of the existing colonial railway network. Rather, it represented a deliberate reorganization of coal logistics in response to changing energy requirements, projected production capacity, and the geographical distribution of domestic industrial demand (World Bank, 1981).

The implementation of the project required coordination between PTBA, PJKA, the Ministry of Mines and Energy, the Ministry of Communications, and other government agencies. A special organization within PJKA, known as *Kelompok Proyek Pengembangan Pengangkutan Batubara dengan Kereta Api* (KP3BAKA), was established to coordinate the railway component, while separate project coordination arrangements connected the mining, railway, terminal, and shipping components. Contractors began working on the project during the final quarter of 1981, and the World Bank loan became effective in April 1982. Nevertheless, implementation encountered delays associated with financing negotiations, procurement, institutional coordination, and the construction of supporting infrastructure. The World Bank's subsequent project completion assessment also identified weaknesses in project monitoring, noting that progress reports were frequently three to four months behind schedule and that the coordinating committee was not always effective in ensuring timely corrective action (Table 1). These findings indicate that the integration of mining and transportation infrastructure required substantial administrative and technical adjustments, rather than proceeding as an automatic consequence of state investment (World Bank, 1981, 1990).

Table 1. Bukit Asam Coal Supply to Suralaya PLTU

Fiscal year	Coal Receipt from Bukit Asam (tons)	Coal Consumption of Suralaya PLTU (tons)
1984/1985	180.060	80.969
1985/1986	273.329	920.812
1986/1987	656.581	1.549.540

Source: Kaswanto et al. (1987, p. 3)

The relationship between Bukit Asam and Suralaya also reveals the limitations of the coal diversification programme during its initial implementation. Suralaya Unit I began operating in July 1984, while the expansion of the generating complex increased the demand for a stable supply of coal. However, contemporary technical research published in 1987 reported that between July 1984 and March 1987, Suralaya received approximately 2.98 million tonnes of coal, of which 1.11 million tonnes, or 37.24 percent, originated from Bukit Asam, while the remaining 1.87 million tonnes, or 62.76 percent, consisted of imported coal, primarily from Australia and China (Kaswanto et al., 1987). The research attributed this supply gap

partly to the inability of mining expansion and supporting infrastructure, particularly coal-terminal development, to keep pace with the construction and operation of the power plant. This evidence demonstrates that although the government had established an integrated plan connecting coal production, railway transportation, and electricity generation, the actual provision of domestic coal remained constrained by production and logistical capacity. Therefore, the New Order's coal diversification strategy should be examined not only through its policy objectives and infrastructure investments but also through the difficulties encountered in implementing the planned system.

By 1986, the development of state-owned mining enterprises, the reorganization of railway management under PJKA, and the construction of the southern coal transportation route had established important foundations for the subsequent transformation of coal logistics in South Sumatra. Nevertheless, the completion of the railway infrastructure should be distinguished from the full operational readiness of the entire transportation system. The World Bank's project completion report records that the railway component was ready to begin coal transportation to Tarahan on 1 June 1986, whereas the Tarahan terminal was not ready to receive and stockpile coal until 15 August 1988 and commenced operation on 1 November 1988. Accordingly, the period 1966–1986 is best understood as the phase of state-led institutional consolidation, energy-policy reorientation, and the initial construction of an integrated coal transportation corridor. The subsequent development of Babaranjang and the full operation of the Tanjung Enim–Tarahan logistical system should therefore be examined as a further stage in this longer historical transformation (World Bank, 1990).

The Emergence of the Babaranjang Corridor and Tarahan Coal Terminal, 1986–2006

The establishment of the Tanjung Enim–Tarahan coal transportation corridor during the second half of the 1980s represented a major reorganization of railway infrastructure in South Sumatra. Unlike the colonial railway network, which had connected various inland production areas with regional commercial centres and ports, the new corridor was specifically designed to transport large quantities of coal from the Bukit Asam mining area to the Tarahan terminal in Lampung. Its development formed part of the integrated Bukit Asam Coal Mining Development and Transportation Project, which linked mining expansion, railway rehabilitation, port construction, and maritime transportation to meet the growing demand for coal at the Suralaya Steam Power Plant in Java. The project required coordination between PT. Bukit Asam (PTBA), the state railway administration, and other government institutions responsible for energy and transportation. Consequently, the emergence of the Babaranjang corridor should be understood not as an unchanged continuation of the colonial railway network, but as a purpose-built postcolonial logistical system that adapted and expanded inherited railway infrastructure to serve national energy and industrial priorities (Dewan Perwakilan Rakyat Republik Indonesia, 1986; World Bank, 1990).

The construction programme involved both new railway sections and improvements to existing infrastructure. The Pidada–Tarahan branch connected the existing railway network in the Bandar Lampung area with the new coal terminal, while additional track construction linked Muara Enim with Tanjung Enim Baru, where a dedicated train-loading system was developed. The broader project also included a shortcut at Prabumulih and improvements to approximately 405 kilometres of existing railway infrastructure. These works involved track replacement, bridge reinforcement, the construction of longer passing loops, improvements to railway signalling and telecommunications, and the upgrading of the network to support heavier axle loads and longer freight trains. Historical railway documentation records the

reinforcement of 57 steel bridges and 47 concrete bridges, alongside the installation of mechanical signalling equipment at existing and newly constructed stations (Roda Sayap, 2022a; World Bank, 1990). These developments demonstrate that the new corridor depended not only on newly constructed track sections but also on the modernization and integration of an existing regional railway network.

The operational development of the Babaranjang system began before the permanent Tarahan terminal was completed. During the initial implementation phase, coal shipments to Tarahan commenced in June 1986, with an initial shipment of approximately 10,000 tonnes. By July 1986, around 60,000 tonnes had been transported through the corridor, although railway operations were still constrained by the limited sections of track that had been upgraded to accommodate heavier axle loads. A parliamentary working-visit report in September 1986 recorded that three train formations, each consisting of approximately 40 wagons, were operating daily between Tanjung Enim and Tarahan over a route of about 420 kilometres. The report also noted that only around 30 percent of the route had been upgraded to support a 19-tonne axle load at that time, restricting the amount of coal that could be loaded into individual wagons (Dewan Perwakilan Rakyat Republik Indonesia, 1986). On 1 October 1986, the *Kereta Api Batubara Rangkaian Panjang* (Babaranjang) was officially introduced by the *Perusahaan Jawatan Kereta Api* (PJKA), marking the establishment of a dedicated railway service for transporting coal from Tanjung Enim to Tarahan (Roda Sayap, 2022a).

The development of the Babaranjang fleet also involved the introduction of specialized locomotives and freight wagons. Historical railway accounts record the procurement of 259 open wagons with a nominal capacity of 50 tonnes each, imported from Canada in knocked-down form and assembled by PT Industri Kereta Api (INKA). The project also provided for the acquisition of 30 CC202 diesel-electric locomotives financed through Canadian credit arrangements. Fifteen locomotives arrived in Indonesia in 1986, while the remaining fifteen arrived at Panjang on 31 January 1990. Three additional CC202 locomotives were procured in 1995, further strengthening the available locomotive fleet (Roda Sayap, 2022a). During the initial operational period, however, the nominal wagon capacity should not be confused with the actual loading capacity. The early 40-wagon formations reportedly transported approximately 1,200 tonnes, equivalent to about 30 tonnes per wagon, because infrastructure improvements were not yet complete. Thus, the development of Babaranjang's carrying capacity was a gradual process shaped by the interaction between rolling-stock procurement, track conditions, bridge capacity, and operational management.

The development of the Tarahan coal terminal experienced delays that affected the implementation of the integrated transportation project. Although the railway connection was ready to begin transporting coal to Tarahan on 1 June 1986, the permanent terminal was not ready to receive and stockpile coal until 15 August 1988. It officially commenced operations on 1 November 1988, while its designed monthly throughput of 200,000 tonnes was achieved in July 1989 (World Bank, 1990). These delays were partly associated with settlement problems affecting the foundation of the rotary car dumper and the time required to complete supporting facilities on land. To maintain coal deliveries during construction, the project established temporary unloading and conveyor facilities at Tarahan. The World Bank's completion report recorded that this temporary system handled approximately 60,000 tonnes per month and transported a cumulative total of 1.8 million tonnes between June 1986 and September 1988. This arrangement enabled the supply of coal to Suralaya to begin before the permanent terminal and the complete railway system reached their intended operating capacity.

The completion of the Tarahan terminal established a more integrated transportation chain connecting the mining area, railway network, maritime facilities, and electricity generation in Java. Coal was loaded at Tanjung Enim Baru, transported by Babaranjang to Tarahan, transferred through the terminal's handling system, and subsequently shipped across the Sunda Strait to Suralaya. The institutional relationship underpinning this system involved several state-owned enterprises with distinct responsibilities. PTBA managed coal production and sales, PJKA operated the railway transportation service, and PT Pelayaran Bahtera Adhiguna was involved in maritime transportation. The coal sales agreement between PTBA and PLN, together with transportation agreements between PTBA, PJKA, and the shipping company, formed the contractual basis of this integrated logistical chain. Nevertheless, the World Bank's completion assessment noted that some transportation and sales agreements were finalized only after coal deliveries had already begun, indicating that institutional coordination did not always keep pace with the rapid implementation of infrastructure projects (World Bank, 1990).

The institutional framework of coal and railway transportation continued to change during the 1990s. In 1990, under Government Regulation No. 56 of 1990, the government dissolved *Perusahaan Umum Tambang Batubara* and transferred its assets to PTBA as additional state capital, consolidating the state-owned coal-mining business under the Bukit Asam company. In the railway sector, PJKA had already been transformed into *Perusahaan Umum Kereta Api* (Perumka) through Government Regulation No. 57 of 1990, which took effect in 1991. This was followed by Government Regulation No. 19 of 1998, which converted Perumka into *Perusahaan Perseroan (Persero) PT Kereta Api*. These institutional changes altered the organizational framework governing coal production and railway transportation, while the Tanjung Enim–Tarahan corridor continued to operate as a major logistical connection between the mining region and the electricity market in Java.

The growing importance of the South Sumatran railway system is reflected in its freight performance during the 1990s. According to the World Bank's 1996 Railway Efficiency Project assessment, coal was the dominant commodity transported by the South Sumatra Railway, moving from the Bukit Asam mining area at Tanjung Enim to Tarahan for onward shipment to Suralaya and to Kertapati in Palembang. Between 1988/1989 and 1994, coal-related freight traffic increased by more than 20 percent annually and reached approximately 1.9 billion tonne-kilometres in 1994. This figure exceeded the total freight traffic recorded on the Java railway and represented approximately 48 percent of Perumka's nationwide freight traffic (World Bank, 1996). These figures demonstrate the growing significance of coal transportation within the national railway system. However, the volume expressed in tonne-kilometres measures freight transport performance by combining cargo weight and distance; it should not be interpreted as 1.9 million or 1.9 billion tonnes of coal physically transported.

The economic contribution of the corridor nevertheless involved important financial and operational limitations. The World Bank's 1990 completion report recorded that project coal production reached approximately 2.0 million tonnes annually at the project closing stage, below the initial appraisal target of 3.1 million tonnes annually. The project's estimated economic rate of return also declined from 12.2 percent at appraisal to approximately 2.2 percent in the completion assessment. Differences between projected and actual coal prices, delays in infrastructure completion, and lower-than-anticipated coal sales affected the financial performance of the project. In its 1996 assessment, the World Bank further noted that Suralaya coal was among the few freight services in Perumka that covered variable costs and contributed to fixed costs, whereas other coal transportation in South Sumatra covered only

direct operating costs. These findings suggest that high railway freight volumes did not automatically translate into equivalent financial returns across all transportation services. The economic performance of the corridor therefore depended not only on its physical capacity but also on coal prices, operating costs, tariff arrangements, and the volume of regular shipments (World Bank, 1990, 1996).

The expansion of the corridor also involved social and environmental consequences that should be considered alongside its logistical achievements. The World Bank's project completion report documented difficulties in acquiring land for the Panjang extension towards Tarahan North, including evacuation procedures and the redesign of the original route following disagreement from the local government. These processes contributed to delays in railway construction, although the report does not provide sufficient information to establish the total number of households affected or the longer-term social consequences of the acquisition. At the mining site, the project encountered difficulties recruiting skilled personnel because of the remote location and the technical requirements of the new equipment. Employees also expressed concerns about the imbalance between wages and the responsibilities associated with operating and maintaining mining machinery. PJKA, meanwhile, faced a need for additional staff training in railway traffic management, while delays in completing telecommunications facilities created operational difficulties during the initial period (World Bank, 1990). These findings reveal that the development of the corridor depended not only on capital investment and technical improvements but also on the availability of skilled workers, administrative coordination, and the management of local land requirements.

Environmental management constituted another limitation of the project. Although an environmental study had been prepared for the mining component, the World Bank's evaluation observed that environmental considerations received insufficient attention during construction. The project lacked an adequately implemented environmental action plan, dedicated trained personnel, and a sufficient operating budget, while water quality was identified as a principal area of concern. Environmental safeguards were also not consistently incorporated into supplier and subcontractor agreements, limiting PTBA's ability to ensure that contractors involved in activities such as mud removal applied adequate safeguards. These findings do not establish the extent of actual environmental contamination, but they demonstrate weaknesses in the institutional arrangements for environmental monitoring and protection during the project's implementation (World Bank, 1990). Consequently, the expansion of coal transportation should not be assessed solely through increases in freight traffic and infrastructure capacity, but also through the environmental responsibilities and social costs associated with mining and railway development.

By 2000, the importance of Bukit Asam within Indonesia's coal industry remained substantial. A retrospective production table published by the Korea Trade-Investment Promotion Agency (KOTRA) reported PT. BA production of approximately 10.746 million tonnes in 2000, compared with total national coal production of 76.885 million tonnes (Table 2). This company-wide figure included PT. BA mining operations and should not be interpreted as the volume produced exclusively at Tanjung Enim or transported through the Babaranjang corridor. Nevertheless, it indicates the continued importance of the state-owned mining company within an increasingly expanding national coal industry (Korea Trade-Investment Promotion Agency, 2008). The available railway statistics examined for this study provide a strong benchmark for the corridor's importance in 1994, but do not yet establish a directly comparable annual volume of Babaranjang freight for 2000. This distinction is

important because production figures, railway tonnage, and tonne-kilometre measurements represent different indicators of mining and transportation performance.

Table 2. Indonesian Coal Production by Producer, 2000–2006 (Thousand Tonnes)

Year	PT. Bukit Asam	Private companies	Total Production	Annual Growth
2000	10.746	66.139	76.885	-
2001	10.212	82.328	92.540	20,4%
2002	9.482	93.890	103.372	11,7%
2003	10.027	104.251	114.278	10,6%
2004	8.707	123.645	132.352	15,8%
2005	8.607	158.462	167.069	26,2%
2006	9.292	184.469	193.761	16,0%

Source: Korea Trade-Investment Promotion Agency (2008)

The emergence of the Babaranjang corridor between 1986 and 2006 therefore illustrates both continuity and transformation in the history of coal transportation in South Sumatra. The colonial ZSS network provided the geographical and infrastructural foundations for subsequent railway development, but the Tanjung Enim-Tarahan corridor involved new railway connections, substantial track rehabilitation, specialized rolling stock, a purpose-built coal terminal, and coordination between state-owned mining, railway, shipping, and electricity enterprises. The principal continuity lay in the use of railway infrastructure to facilitate resource extraction and commodity distribution, while the major transformation involved the integration of coal transportation into a national energy supply system serving the electricity market in Java. At the same time, project delays, financial underperformance, labour constraints, land acquisition difficulties, and weaknesses in environmental management reveal that this infrastructural transformation was neither automatic nor without costs. The Babaranjang system thus represented a new postcolonial configuration of an older extractive railway landscape, in which inherited infrastructure was selectively upgraded and reorganized to support the national state's changing economic and energy priorities.

Conclusion

This research reveals that the historical development of coal transportation in South Sumatra between 1914 and 2006 was characterized by the continuity of railway infrastructure and the transformation of institutional arrangements and economic priorities. During the colonial period, the *Zuid-Sumatra Staatsspoorwegen* (ZSS) network facilitated the transportation of coal from the Tanjung Enim mining area to regional distribution centres, particularly Kertapati, as part of the colonial economic system. Following the Japanese occupation and the Indonesian Revolution, railway administration and control over transportation infrastructure underwent significant changes before being consolidated under the Indonesian government. The nationalization of Bukit Asam's mining assets in 1950, the institutional transition from DKA to PNKA and PJKA, and the rehabilitation of the Tanjung Enim–Kertapati railway connection during 1959–1963 reflected the state's efforts to reorganize inherited infrastructure. A further transformation occurred during the New Order through the development of the dedicated Tanjung Enim–Tarahan corridor and the introduction of the Babaranjang system in 1986, followed by the operation of the permanent Tarahan coal terminal in 1988. By 1994, coal transportation accounted for approximately 48 percent of Perumka's nationwide freight traffic, demonstrating the growing significance of the South Sumatran railway network within Indonesia's transportation system (World Bank, 1996). These findings establish that the

Babaranjang corridor was not a direct continuation of a single colonial railway line, but a new postcolonial logistical configuration developed through the adaptation and integration of inherited railway infrastructure.

The findings also demonstrate that infrastructural modernization did not automatically eliminate the economic, institutional, and social challenges associated with resource transportation. Project delays, financial constraints, land acquisition difficulties, labour-related issues, and weaknesses in environmental management affected the implementation of the Tanjung Enim–Tarahan transportation system. Historically, the transformation of coal transportation in South Sumatra illustrates how the Indonesian state reorganized inherited colonial infrastructure to support changing national economic and energy priorities, while maintaining the central role of resource extraction in regional development. This research is limited by the uneven availability of comparable historical data, particularly annual coal production and railway freight volumes across the entire 1914–2006 period, as well as the limited quantitative evidence concerning the long-term social and environmental consequences of railway and mining development. Further research using company archives, railway operational reports, local government records, contemporary newspapers, and oral history could provide a more detailed understanding of labour relations, local community experiences, and the long-term consequences of coal transportation infrastructure in South Sumatra.

References

Afandy, S., Rustopo, & Dharsono. (2019). Changes In Construction of Logo PT. KAI Year 1953-2011. Proceedings of the 5th Bandung Creative Movement International Conference on Creative Industries 2018 (5th BCM 2018), 529–537.

ANRI. (2022). Guide arsip transportasi: Perkeretaapian di Indonesia 1862–2011.

Ariwibowo, G. A. (2018). Aktivitas Ekonomi Dan Perdagangan Di Karesidenan Lampung Pada Periode 1856 Hingga 1930. Patanjala: Jurnal Penelitian Sejarah Dan Budaya, 10(2), 331–346. https://doi.org/10.30959/patanjala.v10i2.361

Ariwibowo, G. A., Budiman, H. G., & Listiana, D. (2023). Pembangunan Jaringan Transportasi di Lampung (1859 -1927). PURBAWIDYA, 12(1), 49–69. https://doi.org/10.55981/purbawidya.2023.95

Davis, C. B., Wilburn, K. E., & Robinson, R. E. (1991). Railway Imperialism, 1830–1914. Greenwood.

Dewan Perwakilan Rakyat Republik Indonesia. (1986). Risalah resmi Dewan Perwakilan Rakyat Republik Indonesia tahun sidang 1986/1987, masa persidangan I, rapat paripurna ke-3, 8 September 1986. DPR RI.

Dick, H., Houben, V. J. H., Lindblad, J. T., & Thee, K. W. (2002). The Emergence of a National Economy: An Economic History of Indonesia, 1800–2000. Allen and Unwin.

Dinas Energi dan Sumber Daya Mineral Provinsi Banten. (2013, November 7). Sejarah pertambangan.

Dutch East Indies State Gazette 1912 No. 121. (1912).

Erman, E. (1999). Miners, Managers and the State: A Socio-Political History of the Ombilin Coal-Mines, West Sumatra, 1892–1996. Universiteit van Amsterdam.

Irwanto, D. (2010). Venesia dari Timur : Memaknai Produksi dan Reproduksi Simbolik Kota Palembang dari Kolonial sampai Pascakolonial. Ombak.

Irwanto, D., & Sair, A. (2014). Metodologi dan Historiografi Sejarah. Eja Publisher.

Kaswanto, T., Sumartono, & Soedarsono, A. ASoedarsono, A. A. (1987). Kemampuan batubara dalam negeri dalam menunjang operasi PLTU Suralaya.

Korea Trade-Investment Promotion Agency. (2008). 인도네시아 석탄산업 동향 [Indonesia coal industry trends].

Kusuma, D. P., Hamid, A. R., & Setiawan, A. M. (2026). The Role of Tanjung Karang Station in the Transportation Network in Lampung, 1911-1942. Fajar Historia: Jurnal Ilmu Sejarah Dan Pendidikan, 10(1), 103–115. https://doi.org/10.29408/fhs.v10i1.33809

Kusumo, R. (2021, October 15). Merayakan 35 Tahun KA Babaranjang, Kisah Kereta Api Terpanjang di Indonesia. Good News From Indonesia.

Lindblad, J. T. (2008). Bridges to New Business: The Economic Decolonization of Indonesia. KITLV Press.

Maysuri, T., Sair, A., & Yusuf, S. (2021). Sejarah Penambangan Batubara Bukit Asam di Tanjung Enim. HISTORIA Jurnal Program Studi Pendidikan Sejarah, 9(1), 87–96. https://doi.org/10.24127/hj.v9i1.2672

Mrázek, R. (2002). Engineers of Happy Land: Technology and Nationalism in a Colony. Princeton University Press.

Netherlands East Indies Intelligence Service. (1942). Air objective folder no. 94.2: South Sumatra area. U.S. Army Air Forces.

Prijono, A. (1988). The role of the state mining enterprises in Indonesia with special focus on development of the coal sector. Minerals & Energy - Raw Materials Report, 6(3), 170–180. https://doi.org/10.1080/14041048809409919

PT. Bukit Asam. (2025). Laporan tahunan 2025: Navigating an integrated energy ecosystem.

PT. Kereta Api Indonesia (KAI). (2026, July 27). Sejarah Kantor Pusat KAI.

Ravico, R., & Susetyo, B. (2021). Sejarah Pembangunan Jalur Kereta Api Sebagai Alat Transportasi Di Sumatera Selatan Tahun 1914-1933. Agastya: Jurnal Sejarah Dan Pembelajarannya, 11(1), 68–82. https://doi.org/10.25273/ajsp.v11i1.8052

Ravico, & Susetyo, B. (2020). Merekonstruksi Sejarah Sub Komandemen Sumatera Selatan : Studi Historis terhadap Koleksi Museum Subkoss Garuda Sriwijaya. Tamaddun: Jurnal Kebudayaan Dan Sastra Islam, 20(1), 1–14. https://doi.org/https://doi.org/10.19109/tamaddun.v20i1.5744

Richter, J. F. . (1910). Rapport Nopens Den Aanleg van Staatsspoorwegen in Zuid-Sumatra (Deel I). Landsrukkerij.

Roda Sayap. (2022a, July 30). Jalan Panjang Babaranjang.

Roda Sayap. (2022b, October 17). Rehabilitasi Jalan Rel di Sumatera Selatan.

Staatsblad 1912 No. 121

Utama, N. J., Suryadi, A., Atno, & Amin, S. (2019). The Dualism Impact in Coal Business in Muara Enim Regency (South Sumatra Province) in The Reformasi Era. Proceedings of the 1st International Conference on Environment and Sustainability Issues, ICESI 2019, 18-19 July 2019, Semarang, Central Java, Indonesia. https://doi.org/10.4108/eai.18-7-2019.2290358

Wardodjo, W. W. (2018). Ekonomi Indonesia 1950-an dan Penguasaan Negara terhadap Perusahaan Kereta Api. Indonesian Historical Studies, 2(2), 96–106. https://doi.org/10.14710/ihis.v2i2.3862

Wardojo, W. W. (2018). Sejarah Kereta Api Kota Solo 1864–1930. Kendi.

Waskito, W. W., Singgih, T. S., Endang, S., & Yety, R. (2020). Socio Cultural Reactions Before the Nationalitation of Dutch Railroad in Indonesia. The 5th International Conference on

Energy, Environmental and Information System (ICENIS 2020), 202, 6. https://doi.org/10.1051/e3sconf/202020207049

Wijaya, T., Aulia, J. A., Amelia, S., Mayasari, S., Yusuf, S., & Yati, R. M. (2025). Peranan Dr. A.K Gani dalam Masa Revolusi Fisik Sumatera Selatan (1945-1949). Jurnal Artefak, 12(1), 41–50. https://doi.org/10.25157/ja.v12i1.18214

Wijaya, T., & Yusuf, S. (2025). Dinamika peranan transportasi kereta api di Sumatra Selatan dalam revolusi fisik, 1945-1949. Agastya: Jurnal Sejarah Dan Pembelajarannya, 15(2), 145–156. https://doi.org/10.25273/ajsp.v15i2.21955

World Bank. (1978). Report and recommendation of the President of the International Bank for Reconstruction and Development to the Executive Directors on a proposed loan to the Republic of Indonesia for the Bukit Asam Coal Mining and Transportation Engineering Project (Repor.

World Bank. (1981). Report and recommendation of the President of the International Bank for Reconstruction and Development to the Executive Directors on a proposed loan to the Republic of Indonesia for the Bukit Asam Coal Mining Development and Transportation Project (Repor.

World Bank. (1990). Project completion report: Republic of Indonesia coal mining and transportation engineering project (Loan S-9-IND) and Bukit Asam coal mining development and transportation project (Loan 2079-IND) (Report No. 8820).

World Bank. (1996). Indonesia: Railway efficiency project—Staff appraisal report (Report No. 15646-IND).