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【Indonesia】

Jakarta-Bandung High-Speed Railway: Based on Field Inspection

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1. Introduction

The Jakarta-Bandung High-Speed Railway Construction which began in January 2016, Operated in october 2023 as "Southeast Asia's first high-speed railway" from June 2017 to June 2020, the author worked at the Embassy of Japan in Indonesia and had the opportunity to be involved in the construction process. Since June 2023, the author has been working at this research institute and was fortunate to conduct an inspection ride during a business trip to Indonesia in March 2024.

This article will summarize the background of the Jakarta-Bandung High-Speed Railway construction, the details of the inspection ride, and the various challenges encountered.

2. Construction Background

(1) Japan Survey

Originally around 2008, the Japanese government began considering the construction of a high-speed railway between Jakarta and Surabaya. During this period, Japan actively engaged with the Indonesian government. promoting the benefits and feasibility of the project.[1]

Subsequently, there were repeated discussions between Japan and Indonesia, and Japan has started a feasibility study (F/S) in the end of 2013.[2]

In November 2014, the presidential transition from Susilo Bambang Yudhoyono to Joko Widodo occurred in Indonesia. Under the new Jokowi administration, there appeared to be a notably expressed by Minister of Transportation Ignasius Jonan, that Indonesia was not yet ready for high-speed rail.[3] Despite this shift in the Indonesian government's stance, Japan continued its feasibility study (F/S), anticipated by the hope that Indonesia would eventually adopt Japanese high-speed rail technology.

(2) Proposal from China

In March 2015, President Joko Widodo rode high-speed trains during his visits to Japan and China. During these visits, China also expressed interest in supporting the construction of high-speed railways in Indonesia.[4]

China's proposal outlined project costs totaling 880 trillion IDR (approximately $60 billion), with 75% financed by the China Development Bank and 25% funded by Chinese and Indonesian state-owned enterprises (with a contribution ratio of 40% from China and 60% from Indonesia). The proposal did not require government guarantees for the financing.[5] Japan's proposal utilizes Official Development Assistance (ODA) for a public project approach, highlighting a fundamental difference from China's proposal, which supports for a model involving private sector participation. It is important to note these differing premises between the two proposals.

(3) Respond of the Indonesia Government

Indonesian government, extensive deliberations were conducted regarding the proposals from both Japan and China. In September 2015, Indonesia conveyed to both Japan and China that introducing a high-speed railway over the relatively short distance between Jakarta and Bandung was deemed inappropriate. As a result, Indonesia withdrew from the original high-speed railway plan and instead expressed its intention to introduce a semi-high-speed railway system.[6]

However, subsequently, Indonesia announced that it would not retract the high-speed railway project. Instead, there was a policy shift indicating that the project could proceed under certain conditions: it must not use state budget funds, it should not require government guarantees, and it should be based on private-sector initiatives. This marked a change in direction. Indonesia then dispatched a special envoy to Japan, conveying its decision to adopt the Chinese proposal.[7]

(4) Construction

In January 2016, construction permits were issued, and a groundbreaking ceremony was held.

The Jakarta-Bandung High-Speed Railway was initially aimed to start operations during President Joko's first term in office but, [8] construction was significantly delayed due to issues such as land acquisition problem. There were reports that Indonesia had requested construction assistance from Japan at some point during the process. However, the Japanese government has explicitly denied any cooperation in the construction.[9]

After experiencing various twists and turns, the Jakarta-Bandung High-Speed Railway finally commenced operations on October 2, 2023. Following a free trial period of about two weeks, it officially opened to the public on October 18.

3. Overview of the inspection

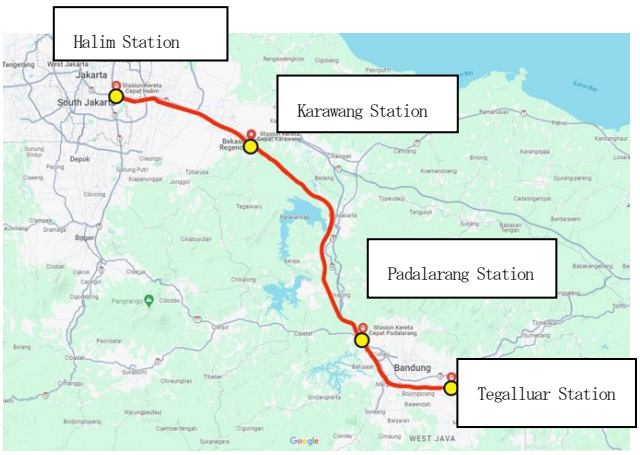
Below are the basic information and route map of the Jakarta-Bandung High-Speed Railway. Under Japan's proposal, the starting station for the Jakarta-Bandung High-Speed Railway was planned to be in the central area of Jakarta. However, based on the Chinese proposal, the first station was moved to Halim Station, which is located further away from the central business district of Jakarta, citing easier land acquisition as a reason for this decision. Similarly, the terminus station on the Bandung side is also constructed away from the center of Bandung. Therefore, it is particularly important for promoting the use of the Jakarta-Bandung High-Speed Railway to develop access to the stations.

Figure1 Basic Information of Jakarta-Bandung High-Speed Railway

Route	Jakarta-Bandung
Length	142km
No. of stations	4
Track Gauge	1,435mm
Max. Speed	350km/h
Initial project cost (estimate)	880,800 billion IDR (approximately 6 billion USD)

Source : Yuusuke Minami, "Analysis of High-Speed Railway Development Schemes in Southeast Asia and South Asia", excerpted from the AIRO Report, March 2024.

Figure2 Jakarta-Bandung High-Speed Railway Route Map

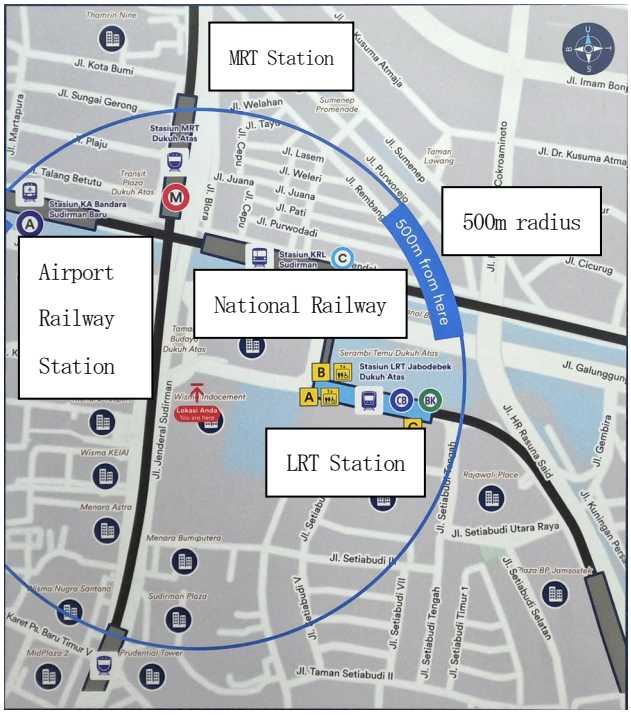


Source : Yuusuke Minami, "Analysis of High-Speed Railway Development Schemes in Southeast Asia and South Asia", excerpted from the materials of the 158th Transport Policy Colloquium, January 2024.

(1) Access from Jakarta to Halim Station

During the inspection, we first confirmed the access options to Halim Station, the starting station on the Jakarta side. Located in the heart of Jakarta, the Jakarta Capital Region LRT (referred to as "LRT" below) At Dukuh Atas Station of the Jakarta Capital Region LRT, transfers are available to the national railway, MRT, and airport access railway. However, LRT Dukuh Atas Station is situated slightly away from other railway stations, which can make transfers with large luggage challenging.

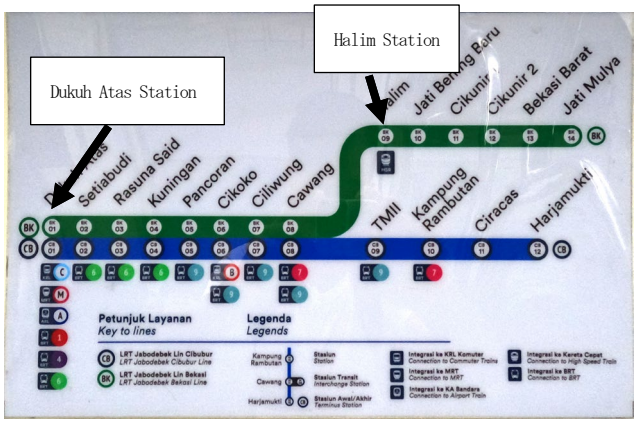
Picture1 Location of Dukuh Atas Station



Source：Dukuh Atas Station Navigation Map

From LRT Dukuh Atas station to LRT Halim station is approximately 13 km, taking about 30 minutes to travel. Considering that during my assignment in Jakarta, it took about 45 minutes to drive from central Jakarta to Halim Airport, it can be said that traveling by LRT to Halim station at the scheduled time has become significantly more convenient, without worrying about traffic jams.

Picture2 LRT Map

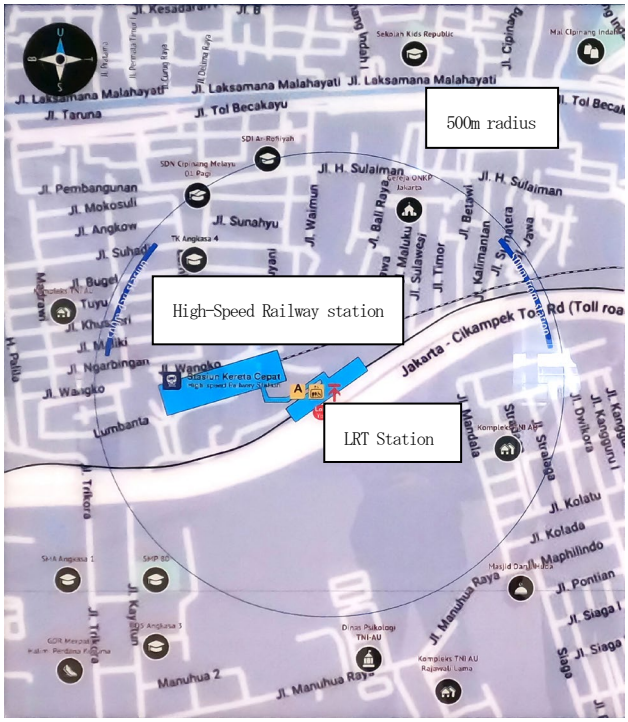


Source：Photo display inside the LRT

(2) Access in Halim Station

From LRT Halim Station to the high-speed railway station, it's approximately a 5-minute walk via a covered access footbridge. Near the high-speed railway station entrance, there are also dining options available.

Picture3 Location of Halim Station



Source： Picture of guide map taken at nearby Halim Station

Picture4 Passageway between LRT Harim Station and High Speed Rail Harim Station

However, there are still relatively few users transferring between the LRT and the high-speed railway, with most users accessing Halim Station for the high-speed railway using taxis or private cars. Additionally, there are also bus services operating to Halim Station.

Picture5 People waiting for a car at Halim Station

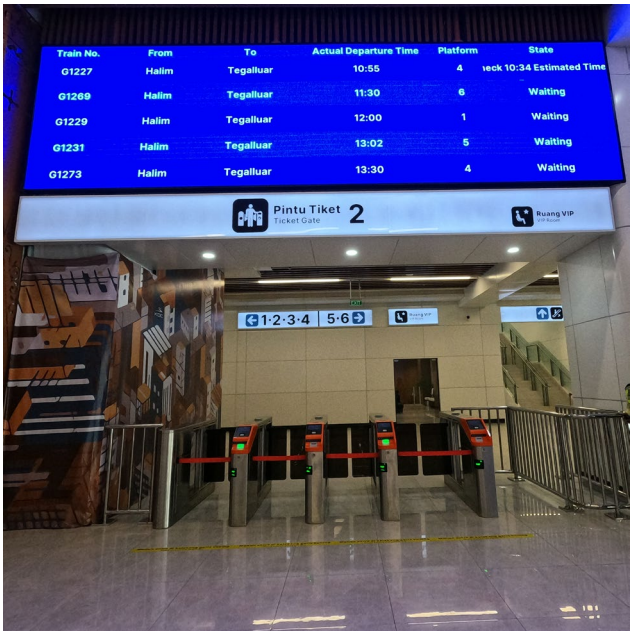
(3) View of Halim Station

There are also small shops lineup in the Halim station. Due to land acquisition issues, the Jakarta-Bandung high-speed railway seems to be using the expressway and most of surrounding land for station and track construction. Halim station itself also located near the expressway entrance. It is appeared to be many restrictios on development around Halim station such as the necessarily to improve the expressway.

Picture6 The view inside Halim Station

The Jakarta-Bangung high-speed train runs approximately once every 30 minutes. To enter the concourse at Halim station, tickets and baggages need to be checked and inspected. The ticket gates open 30 minutes before the departure time and the ticket is checked by QR code system. If you purchase it at the vending machine, you will received a paper ticket and you will have to insert the ticket at the ticket gate. You'll see the train is already waiting when you pass the ticket gate and get off to the platform.

Picture7 Ticket gate at Halim station



Picture8 The view of Halim station platform

(4) From Halim Station to Padalarang Station

There are 3 classes for seats which are first class, business class, and premium economy class. There were only 4 passengers including myself on the train on car no.1 for premium economy class that departed on 10:00am.

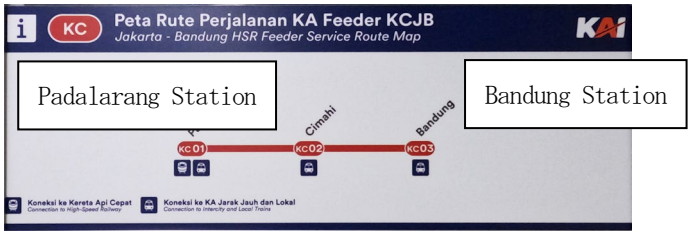
The train accelerated to nearly 350km/h, there was no particularly large shaking, and the ride was not bad. Currently, all train schedules pass through Karawang Station.

Picture9 Vehicle speed display

(5) From Padalarang Station to Bandung Station (Feeder train)

There are two stations on the Bandung side: Padalarang station and Tegalluar station. The free feeder train to JNR Bandung station is on Padalarang station. Most of the passengers got off at this station and took the feeder train to Bandung station. It took about 30 minutes to get to Bandung station.

Picture10 Feeder train stations



Source : Picture of the display inside feeder train

Picture11 Feeder train

(6) Tegalluar Station

There is no direct train or bus access from Bandung station to Tegalluar station. For this time of visit, we took taxi from Bandung station. It is about 20km which took about 40 minutes.

Currently, there ia a train depot beyond Tegalluar station. It seems like it was built in the middle of farmland. Even though there is an access to the road, there is only few developments in the surrounding area. There stil have a lot of potential for development.

Picture12 The view of Tegalluar Station

4. Points to notice and issues during the ride inspection

(1) Fare・Boarding rate

The journey from Halim Station to Padalarang Station

takes 30 minutes, and the fare for a premium economy seat is 250,000 IDR (approximately 2,400 yen, converted at a rate of 100 IDR = 0.96 yen) [10], The journey from Tegalluar Station to Halim Station takes 50 minutes, and the fare is also 250,000 IDR. The fare is subject to dynamic pricing, and the price for a premium economy seat varies between 150,000 IDR and 250,000 IDR depending on the occupancy rate. [10]

As mentioned above, there are only 4 people out of 70 seats in the morning train from Halim for the premium economy class. On the other hand, the seates had and occupancy rate of about 70-80% on the evening train to Halim.

The Shinkansen between Osaka and Nagoya cost about 6,500JPY, while the high-speed train between Jakarta and Bandung which has the same distance cost only 2,400JPY, the fare is relatively lower. It has been reported that it will take 150 years to recover the construction costs. [11]

(2) Speed・Ride comfort

As mentioned above, the ride comfort is not bad. According to the speed displayed in front of the vehicle. It accelerated smoothly with almost no major shaking during the ride.

Considering that it takes about 2 hours by car from Jakarta to Bandung without traffic jams, and in most cases 3-4 hours due to traffic, it is amazing that you can get from Jakarta to Bandung in only 1 hour in total.

(3) Access・Development nearby the station

As mentioned above, although there is a feeder train from Padalarang high-speed railway station to JNR Bandung station, considering that most users access Halim and Tegalluar stations by car, the access to the stations can be considered an issue. Furthermore, development around the station has not yet progressed, this could continues to be an issue.

5. Further Development

(1) Extending the discussion

The ride quality of the Jakarta-Bandung high-speed railway is surprisingly good and it seems to have a generally good reputation in Indonesia, with cumulative number of passengers exceeding 2 millions in the 5 months since its opening. [12]After the ride, I met with officials from the Ministry of Transport in Jakarta and was told "It would be a waste for the high-speed railway to remain at its current distance of 140km. I think we should discuss an extension plan as soon as possible". In addition, the railway does not seem to have been a particular issue in the presidential election held in February, this year.

There are reports that discussions are underway between Indonesian and Chinese governments regarding the extension [13], and the Indonesian Ministry of Transport has also expressed a desire to make it a national strategic project as soon as possible. [14]

(2) Japan's response

Although construction of the Jakarta-Bandung high-speed railway had been delayed, there must have been a determination among Japanese officials that it would be completed and Japan should be prepared how to respond for the X day that will eventually arrive.

What Japan can appeal to this is to "Export the high-quality infrastructure", and the projects that I was involved in while working at the Japancese Embassy in Indonesia include the Jakarta Mass Rapid Transit (Jakarta MRT) [15], Patimban Newport (construction and operation) [16], and Java North Line Upgrading project [17].

In fact, the opening for the first phase of the Jakarta MRT nort-south line in March 2019 had an enormous impact. The opening ceremony was as lively as President Joko Widodo's election campaign for his second term.

(3) Conclusion

Nevertheless, the completion of the Jakarta-Bandung high-speed railway is likely to have a major impact within Indonesia. Furthermore, if the line is extended to Surabaya in the future, and the two major cities of Java which are Jakarta and Surabaya are connected by high-speed rail, the effect will be even greater.

In response to this situation, Japan first needs to assess the effects and challenges of the Jakarta-

Bandung high-speed railway. Additionally, our institute presented Japan's strengths in high-speed railway development support at a colloquium in January 2024.[18]It is because in projects that supported by Japan, initiatives such as support for institutionalizing legal systems and technical standards during the design stage, and support for station area development during the construction stage are implemented depending on the project stage. Japan's strength lies in this kind of planned, step-by-step soft supports tailored to the situation and needs of the implementing country. It is necessary to constantly verify these strengths that Japan has. Base on this studied, it is important for Japan to contribute to the development of high-speed railways in Indonesia and other regions.

I would like to continue researching Japan's challenges and strategies for expanding infrastructure overseas.

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