Art and Transport: Enhancing Passengers' Experience with Historical Station Buildings in Java, Indonesia

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ABSTRACT

Railways have become the most sustainable transport compared to other modes and are expected to become the main backbone of future transport mobility. In Java, historical station buildings are now operated by a state-owned company, PT KAI. These buildings are designated as cultural heritage sites. Therefore, there is a need to identify how to enhance travellers' experience with these old buildings. There are three objectives of this study: identify the heritage preservation of railway stations globally, identify the trade-off between heritage preservation and day-to-day maintenance from the perspective of PT KAI and identifying how and what factors of the historical building can improve travellers' experience from Tugu Passengers' perspective. The methods used are literature review, online searching, and then in-depth interviews with service providers and service users to address the objectives. The result of this study reveals: firstly, there are different approaches to preserving the old stations: conservation and restoration; secondly, PT KAI's purpose in preserving the building is to provide intangible values related to the identity and culture of Indonesia's Railway History; thirdly, respondents were satisfied with condition of Tugu Station, and they have some advice to improve the old building with a special scent that represents Jogja's culture.

KEYWORDS: Indonesia Railway Company; heritage station; heritage preservation.

1 INTRODUCTION

1.1 Background

The growth of the population and the growth of intercity trips have led to the need for better public transportation. Every government has concerns about sustainability due to the risen of transport demand. Nowadays, railways have become the most sustainable transport compared to other modes and are expected to become the main backbone of future transport mobility (Giunta, 2023). Therefore, the railway station has an important role in public transportation in terms of attracting passengers (Bubuya Zelembu, 2021). It is noteworthy that numerous train stations have different characteristics, designs, and conditions. In Java, historical stations are now operated by a state-owned company, PT KAI (PT Kereta Api Indonesia). These buildings are designated as cultural heritage sites. According to Peira et al. (2022), railway heritage preservation is one of the ways to develop the tourism sector. Furthermore, Hagen and Heilligers (2015) identified that a good experience for train passengers in the station should consist of visual aspects such as design, architecture, cleanliness, and colours. Additionally, Vos and Hagen (2019) identified that passengers' perspective of the cleanliness station is affected by not only the quality but also other parameters such as scent, lighting, colour, and employee behaviour. Heritage preservation has various management approaches across the world. The trade-off between heritage preservation and day-to-day maintenance has become an issue in this era. According to Malik et al. (2023), heritage preservation can include conservation and restoration. Conservation is challenging because it consists of balancing between the originality of its heritage and adaptation to its contemporary requirements. The restoration is complex because it needs to keep the originality of its building as possible as it can. Based on these background issues associated with heritage preservation and the railway system in Indonesia, this study will analyse travellers' experiences with historical building stations.

1.2 Aim and Objectives

Based on the research question and rationale that have been defined, the issue of trade-off between heritage preservation and day-to-day maintenance is important to be identified. Therefore, the objectives of this study are:

- 1. Identify the heritage preservation of railway stations globally.
- 2. Identify the trade-off between heritage preservation and day-to-day maintenance from the perspective of PT KAI in preserving the historical station buildings in Java, Indonesia.

3. Identify how and what factors of the historical building can improve travellers' experience from the perspective of Tugu Station's Passengers.

1.3 Research Contribution

To the author's knowledge, this dissertation is the first research that raises the topic of heritage preservation and the day-to-day maintenance of railway stations in Indonesia. By using in-depth interview methods, this study can contribute to identifying the perspective of preserving the station as a heritage site both from service providers and passengers. Furthermore, perhaps this dissertation can increase the role of rail stations in attracting demand passengers. Additionally, it will influence stakeholders and train users to pay more attention to the current historical stations as a heritage site that needs to be preserved.

2 LITERATURE REVIEW

2.1 Passengers' Travelling Experience in Railway Station

The railway has a substantial role in the transportation sector. Therefore, the passenger's experience using the railway system cannot be ignored. According to Hagen and Heilligers (2015), the needs of customers can be defined through a pyramid with the base aims to get safety and reliability, followed by speed, ease, comfort, and the last is experience. Figure 2.1 shows the pyramid of customer needs.

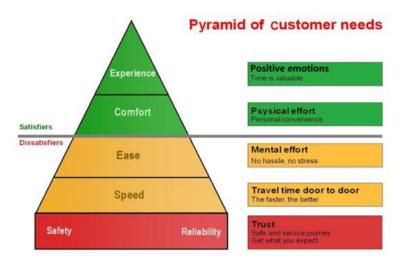


Figure 2.1 Customer needs in public transportation service (Hagen and Heilligers, 2015)

2.2 Cultural Heritage Preservation

There are various cultural and historical sites in the world that have substantial value, consisting of education, history, and art. Therefore, it is vitally important to preserve this type of cultural heritage for future generations, city characteristics, and urban space development (Lisienkova and Lisienkova, 2020; Malik et al., 2023). Therefore, there is a need to manage the cultural heritage. Cultural Heritage Management (CHM) is explained as a protection and management process of galore and individual Cultural Heritage (CH) elements related to the expansion of society and its changing necessity (Nomishan et al., 2023). One of the cultural heritage sites is the old railway station. The railway station has an important role in the transportation sector. The ongoing research Borges (2020) proposed a new framework for heritage conservation using traditional approaches. Some indicators have been evaluated for railway heritage preservation, such as architectural, historical, social, and economic aspects. The challenges of preservation have various forms that need to be tackled very carefully by integrating the stakeholders. Therefore, the conceof heritage preservation has become a hot issue across the world. Representing the value of heritage preservation between day-to-day maintenance of heritage stations may contribute to improving the quality of railway service transport quality.

2.3 Historical Station Preservation Globally

According to Malik et al. (2023), heritage preservation can include conservation and restoration. Conservation is challenging because it consists of balancing between the originality of its heritage and adaptation to its contemporary requirements. In addition, the restoration is complex because it needs to keep the originality of its building as possible

as it can. Therefore, historical building preservation can be defined in two types, which are retaining as much as possible the original materials and rebuilding the building with new materials.

a. Spanish Railway Station (Spain)

Spain's historical stations have been built by the top-notch railway companies in the country: Norte and MZA (Martínez-Corral et al., 2022). According to Martínez-Corral et al. (2022), the preservation of each station is derived differently based on each local and regional government. Most of the Spanish stations are preserved by original materials from many years ago. It is noteworthy that this study is concerned with the challenges related to the historic structure preservation of the stations. None of these stations had their original buildings demolished. However, the challenges of preserving these buildings consist of the change of original features when maintaining the stations and the lack of preservation policies. For example, after the Spanish War in 1937, there were substantial materials of the structure, such as the original balustrade and railing, were changed in Almeria Station (Cuéllar and Martinez-Corral, 2018). Therefore, Cuéllar and Martinez-Corral (2018) mentioned that railway station preservation in Spain is considered as retaining as much as possible the similar state as it was built, even though the changing intensity varies. Based on the research above, it can be seen that retaining the original material of heritage stations is being used in some countries to keep the authentic and historical value of its stations.

b. Harbin Railway Station (China)

According to Zhang (2023), the complex dynamics of Harbin heritage is represented in Harbin Railway Station. This station was constructed by Russia and it represents the combination of Russian-China histories. The city's colonial past and postcolonial transformation were also represented in its station. Harbin Station has been renovated twice. It was the first railway station in China until its demolition in 1960 (Zhang, 2023). The second generation of Harbin Station was demolished in 2017 and was changed by the third generation in 2018, with a very similar to the first old station design (Zhang, 2023). Furthermore, Zhang (2023) pointed out the processes of Harbin Railway Station have been "made" as a heritage site. There were various efforts that have been taken by stakeholders, consisting of the government, heritage organizations, and local communities, to promote and preserve this station as a historical and cultural symbol of Harbin City. However, the old style has an important sense of colonial nostalgia. It can be seen that the government changed the building back to its original version. To maintain and preserve the originality, identity, and culture of Harbin, the architecture is the same as its original version. The research Zhang (2023) reveals that the historical preservation approach in China prefers to retain the original architecture using new materials.

2.4 Railway Station in Indonesia

Firstly, the original history of the railway is identified that before 1900, the Netherlands designed the station on Java Island during colonialism. The studies of Sulistyani (2023) and Sulistyani (2024) identified the styles that have been used in railway stations throughout Java's history. Furthermore, this research pointed out that the design comes from European architects and has been adapted to the cultural and functional requirements of the climate in Indonesia over time. This study also discussed the preservation challenges associated with the current rapid urban development. There are some issues related to the stations, such as the missing historical features, the lack of conservation methods, and the crucial requirements integrating the old and new modern buildings.

3 METHODOLOGY

This study is qualitative research and uses various methods for objectives. The methods for each objective can be seen in Table 3.1 below:

No	Objective	Methods			
1	Identify heritage station preservation globally	Literature Review and Online Searching			
2	Identify the trade-off between heritage preservation and day-to- day maintenance from the perspective of the Indonesia Railway				
	Company (PT KAI) in preserving the historical station buildings in Java, Indonesia				
3	Identify how and what factors of the historical building can improve travellers' experience from the perspective of passengers at historical Tugu Station				

Table 3.1 Methods for objectives

4 RESULTS

4.1 Historical Station Preservation in Indonesia

Nowadays, based on the government statement on the website of the Ministry of Education, Culture, Research, and Technology, the government has made various efforts to preserve cultural heritage by carrying out national registration, repatriating cultural heritage in other countries, developing cultural heritage areas, and preserving cultural heritage through Technical Implementation Units (UPT) in different areas, such as Cultural Heritage Conservation Centre (BPCB), Cultural Value Preservation Center (BPNB), and the Borobudur Conservation Center (Kemendikbudristek, 2022). The author identified that the railway stations did not be discussed on that website. Therefore, the author accessed the previous website of Indonesia Railway Company (PT.KAI), which provides information about the heritage station. However, a detailed technical approach related to railway station preservation cannot be found on the website. Therefore, there is a lack of information on the official website of PT.KAI about railway station preservation in Indonesia led the author to obtain more information by conducting the interview with the employee of PT KAI. Detailed information about railway preservation approaches in Indonesia, which had not been found on the website and literature review, will be discussed in Section 4.2, which provides the result of an interview with PT KAI employees.

4.2 Indonesia Railway Company's Perspective on Preserving Historical Station Buildings in Java, Indonesia

Based on the interviews with the PT KAI employees, the heritage status of the station is declared by the government (national and regional). However, the responsibility to manage the site is PT KAI, as the owner of the asset. Furthermore, the purpose of preserving the historical stations is based on the result of the interview with three employees of PT KAI is identified in the following points below:

- 1. Identity Icon of Each City
 Based on the interview, all respondents stated that the main purpose of preserving the old building in Java Island is to give the identity of each city. In fact, people know the station better than the city names. For example, people know better Kutoarjo Station is in Purworejo, Semarang Tawang and Semarang Poncol are in Semarang, and Tugu is in Jogja. Therefore, the station is the identity of the city.
- 2. Introducing history and cultures to domestic and foreign tourists
 According to all respondents in the interview, based on the passengers' data, the travellers who chose KAI services were not only domestic but also some of them were foreigners. It can be seen that most of the primary stations were located in the city centre and it helps them to go to their city destinations in Java. Preserving the old building has indirectly introduced the history and culture to the visitors; it includes intangible values that have been obtained by PT.KAI as the only operator of train passenger service provider for many years.
- 3. Giving a nostalgic feeling to the passengers.

 Based on the interview, all respondents mentioned that the other purpose of preserving the old building is to give a nostalgic feeling to the passengers. The passengers can open up their memories of their childhood when using the train stations. It will increase their positive emotions about their trip experience. This feeling is not only presented by the train passengers but also by the pick-up at the station, which is mostly their families, relatives, and friends.
- 4. Belongs to KAI's vision and mission.
 - Two respondents in the interview mentioned that PT KAI made the heritage department to the old stations. This action is being taken after the heritage sites were designated by local and regional governments. As the operator and owner of the station, they need to obey the regulations that have been set by the government. Initially, there is a conflict when the station is claimed as a heritage because there is no additional funding and incentives that have been given by the government to the stakeholders. Therefore, to tackle the problem related to preservation management, they reform the management to follow and obey the heritage status that has been declared. It is one of the ways how to keep PT KAI's reputation and dedication to providing train services.

4.3 Passengers' Perspective in Tugu Station as the Heritage Station in Java, Indonesia

In this section, there were ten passengers which selected to be respondents in terms of in-depth interviews with Tugu Passengers. The first screening is making sure that the respondents have visited Tugu Stations more than twice and have regularly used a train as their mode of transportation. The average range of respondents is aged 20-40 years; 60% of the respondents are men, 20% are civil servants, 20% are employees, 40% are students, 10% are retired, and 10% are others. Three of the respondents have visited the stations in five provinces on Java Island in 2 years. Furthermore, Table 4.1 shows the respondent's opinion about Tugu Station as a Heritage Site. Respondents were

asked about the point of five factors that influenced their experience while waiting in Tugu Station, such as architecture, design, cleanliness, smells/scent, and lighting. Interestingly, most of them were satisfied with the architecture of Tugu Station. However, five of ten respondents who have transport and civil engineering backgrounds stated that the design/layout of Tugu Stations was not good. The passenger flow between long-distance train passengers, intercity train passengers, and KRL train passengers is not managed properly. It is mainly caused by the mixed traffic between all passengers. PT KAI, as the stakeholder, needs to be concerned about this current condition. The deeper questions were asked about how to improve the current condition of Tugu Station and other Stations in Java; 8 respondents gave the same advice to increase the originality and characteristics of Tugu Station in terms of providing a special scent that is different from one station to another station. For instance, they have mentioned that PT KAI needs to provide a Javanese scent, such as ginger, lemongrass, and jasmine, in Tugu Station.

Respondents	Current Conditions Opinion of Tugu Station					
Respondents	Design	Architecture	Cleanliness	Smell	Lighting	
R.1 / SA	2	4	4	3	3	
R.2 / THM	2	4	4	4	3	
R.3 / LL	4	4	4	3	4	
R.4 / LS	3	5	5	5	4	
R.5 / YG	3	5	3	3	4	
R.6 / DW	3	4	4	4	5	
R.7 / JS	4	5	4	4	4	
R.8 / AD	4	4	4	3	4	
R.9 / AA	4	4	3	4	5	
R.10 / JN	2	5	4	4	4	

Table 4.1 Respondents' response to the current condition of Tugu Station.

5 CONCLUSION

There are three conclusions of this study, as follows:

- 1. There are different approaches to preserving the old stations; conservation and restoration. However, both of them still keep the original architecture in terms of keeping art, history, and identity values.
- 2. PT KAI's purpose in preserving the old building is one of the ways to keep its image and reputation. Rebuilding the new station with new materials can destroy the history and images of PT KAI. Moreover, it is identified that keeping the original structure and doing the day-to-day maintenance is cheaper than rebuilding the new one, there is no urgency to take a huge renovation like what has been done to Harbin Railway Station. In addition, these intangible values are mostly related to the identity, culture, and historical values of railway history in Indonesia.
- 3. Respondents were satisfied with the current condition of Tugu Station. However, there is one aspect that seems to need to be upgraded, for instance, the design/layout of the station. Moreover, passengers have some advice to improve the current old building with special scent that represents the Jogja's culture.

REFERENCES

Borges, B.A.B. 2020. A New Approach to the Concepts of Conservation to Identify and Evaluate Railway Heritage through Indicators. *HoST - Journal of History of Science and Technology*. **14**(1), pp.183-195.

Bubuya Zelembu, D. 2021. Influence Of Passenger Characteristics And Behaviour On Railway Station Design: Review Paper. *International Journal of Innovations in Engineering Research and Technology*. **8**(10), pp.168-179.

Cuéllar, D. and Martinez-Corral, A. 2018. History, architecture, and heritage in the railway station of Almería (1892-2017). Labor e Engenho. 12, pp.306-330. Giunta, M. 2023. Trends and Challenges in Railway Sustainability: State of the Art on Measures, Strategies, and Assessment Tools.

Hagen, M. and Heilligers, M. 2015. Effect of Station Improvement Measures on Customer Satisfaction. *Journal of Traffic and Transportation Engineering*. 3. Hagen, M., Peters, J., Galetzka, M. and Pruyn, A. 2008. *The influence of colour and light on the experience and satisfaction with a Dutch railway station.*Coulour and light on the platform: Two virtual experiments.

Kemendikbudristek. 2022. Issued PP Number 1 of 2022, the Government Invites the Community to Be Involved in Cultural Heritage Management. [Online]. [Accessed 5 July]. Available from: https://birohukum.kemdikbud.go.id/terbitkan-pp-nomor-1-tahun-2022-pemerintah-ajak-masyarakat-terlibat-dalam-pengelolaan-cagar-budaya/#:~:text=PP%20No.%201%2F2022%20ini,sumber%20daya%20budaya%20bagi%20kepentingan

Lisienkova, L. and Lisienkova, T. 2020. Evaluation of railway stations as cultural heritage objects. *IOP Conference Series: Materials Science and Engineering*. **918**(1), p012010.

Malik, Z.U.A., Waheed, T., Akhter, S.S., Kasusar, Y., Shabbir, S., Ismail, R., Arid, M.B. and Fazeel. 2023. The Importance Of Heritage Conservation, Preservation, And Restoration In Pakistan. *Journal of Positive School Psychology*. 7, pp.227-239.

Martínez-Corral, A., Cárcel-Carrasco, J., Carnero, M.C. and Aparicio-Fernández, C. 2022. Analysis for the Heritage Consideration of Historic Spanish Railway Stations (1848–1929). *Buildings*. [Online]. **12**(2).

- Nomishan, T.S., Tubi, P.-K. and Gubam, D.S. 2023. Cultural heritage management and the effect of corruption in Nigeria: hampering sustainable development via cultural heritage destruction. *Journal of Cultural Heritage Management and Sustainable Development.* 13(4), pp.662-684.
- Peira, G., Lo Giudice, A. and Miraglia, S. 2022. Railway and Tourism: A Systematic Literature Review. *Tourism and Hospitality*. [Online]. **3**(1), pp.69-79.
- Sulistyani, H. 2023. The evolution of railway station architecture in Java. Journal of Asian Architecture and Building Engineering. 22(5), pp.2613-2621.
- Sulistyani, H. 2024. A Digital Preservation for the Indonesian First Terminus. Preservation, Digital Technology & Culture. 53.
- Vos, M.C. and Hagen, M.v. 2019. Objective and subjective predictors of perceived cleanliness in train stations. *Transportation Research Procedia.* **42**, pp.109-117.
- Wang, Y., Zhang, Z., Zhu, M. and Wang, H. 2020. The Impact of Service Quality and Customer Satisfaction on Reuse Intention in Urban Rail Transit in Tianjin, China. Sage Open. 10(1), p2158244019898803.
- Zhang, W. 2023. Heritage making and interpretation in postcolonial Harbin: contemporary urban memory of the Russian-built Harbin Railway Station and beyond. *Journal of Cultural Heritage Management and Sustainable Development.* 13, pp.761–776.