

Evidence of Collaboration and Connectivity of Sulawesi Railway Operations

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ABSTRACT

Keywords:

local wisdom;
p5ppra; madrasah;
decorative umbrella;
student character.

The development of railway infrastructure in Sulawesi aims to meet the needs of freight and passenger transportation, as well as to encourage regional economic growth. This study aims to analyze collaboration and connectivity in railway operations in Sulawesi, and evaluate the factors that influence the development of the railway network. The method employed is comparative descriptive analysis, utilizing the Government Collaboration model and NVivo tools to categorize the data. The results of the study show that the construction of the railway line reaches around 145 kilometers between Makassar and Parepare, with support from the central and regional governments and various stakeholders. In addition, the analysis shows that collaboration between stakeholders is important in realizing the success of this project. In conclusion, the development of the railway network in Sulawesi can improve mobility, accessibility, and efficiency of goods distribution, as well as contribute to sustainable economic growth. This study recommends the need for attention to technical planning and solving land acquisition problems for the sustainability of the project in the future.

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INTRODUCTION

Sulawesi has own Railways, which was built by Staatstramwegen op Celebes (STC) which is child company Staatsspoorwegen (SS) (Prabakti, 2024). this division not clear origin his suggestion, but recorded plan build track train fire Takalar – Makassar – Maros – Tanete . On July 1, 1923 the segment Takalar – Makassar (Passarboetoeng) is opened , while the construction process is ongoing Makassar–Maros– Tanete segment postponed for the sake of saving budget although permission Already set in Wet 22 December 1919 staatsblad 1920 No. 53 and Wet 18 March 1921 staatsblad No. 200. Takalar - Makassar route has 47 kilometers long (Caroles & Siegfried, 2022) Analisis Urgensi Pembangunan Hinterland Dry Port Berdasarkan Proyeksi Pertumbuhan Ekonomi Daerah: Studi Kasus Sulawesi Selatan: Analysis On The Urgency Of Hinterland Dry Port Development Based On Regional Economic Growth Projections: South Sulawesi Case Study (Gusty et al., 2024).

Sign in Plan Parent National Railways 2011–2030, Directorate General Railways enter track train Trans-Sulawesi fire as infrastructure priorities and strategic programs national. Railway fire built For reach areas important in Sulawesi Island. At the stage One government build track train fire from Makassar to Parepare. With train fire, then the area that has potential transport passengers and goods, including areas with commodity scale big will connected.

Within a period of time start woke up railway network in Sulawesi in 2015 to with moment This year 2024 period 9 years time, by him need know evaluation in accordance order priorities and capabilities Government moment This in implementation policies and collaboration that was carried out For railway development on Sulawesi Island (Booher, 2024).

The development of transportation infrastructure, especially railways, is one of the important aspects in supporting the economic growth of a region (Muhammad Irham Nurhidayat et al., 2022). In Sulawesi, the development of the railway network is expected to increase mobility and connectivity between regions, but the process is often hampered by various challenges (AS, 2016).

Some of the problems faced in the development of railways in Sulawesi include land acquisition, stakeholder involvement, and lack of collaboration between the central and regional governments (Jawa, 2023). This results in the slow implementation of infrastructure development needed to support efficient transportation (Ansell & Gash, 2024).

Several previous studies have shown the importance of collaboration in the development of transportation infrastructure (Dwiatmoko, 2018). However, there are still few studies that specifically analyze connectivity and collaboration in the context of railway operations in Sulawesi (Elfiera Rahma Dinanti, 2022).

The urgency of this research arises from the need to evaluate railway development projects in Sulawesi, especially as an effort to increase economic competitiveness and connectivity between regions (Dwiatmoko et al., 2020). With a better understanding of the challenges and potentials, it is hoped that infrastructure development can be carried out more effectively (Ames et al., 2019).

This research provides novelty by analyzing collaboration between various stakeholders and its impact on the development of the railway network in Sulawesi, which has not been widely discussed in previous studies (Davies & White, 2012).

The purpose of this study is to evaluate collaboration in railway operations in Sulawesi and identify factors that influence the success of infrastructure development.

The benefits of this research for the government and stakeholders are data-based information for more effective infrastructure planning and development, as well as improving connectivity and transportation efficiency.

The implications of the results of this study can be a reference for planning and policies for the development of railway infrastructure in Sulawesi, as well as providing recommendations for increasing collaboration between the government and related stakeholders.

METHODS

In order to achievement research, conducted analysis with 2 (two) methods analysis, namely with use comparative descriptive and analysis of the Collaborative Governance model through approach N-vivo device.

Comparative descriptive implemented with method compare similarities and differences a case with case other research. This study started with stage collection fact about descriptive and also causality factors that cause the emergence a phenomenon certain, for Then compared and analyzed For determine the optimal model.

a. Data Collection

1. Descriptive Comparative Method

- a. Data were collected through literature studies, interviews, and field observations.
- b. Researchers analyzed secondary data from official documents, reports, and previous studies on railway infrastructure development in Sulawesi.
- c. Interviews were conducted with stakeholders, including local governments, developers, and communities, to gain a deeper perspective on the challenges and successes faced.
- d. Observations were conducted to understand the physical and operational conditions of the existing railway network.

2. Collaborative Governance Model

- a. After data collection, analysis was conducted to identify relationships and interactions between various stakeholders involved in the development of the railway network.
- b. Researchers used NVivo software to categorize and analyze qualitative data, so as to identify key themes in collaboration and challenges faced.
- c. This analysis included grouping data based on similarities and differences in stakeholders' experiences and views on the development process.

b. Data Analysis

1. Data obtained from interviews and observations were analyzed descriptively to describe the current conditions and compare between various cases of railway development in Sulawesi.
2. The results of the analysis are then evaluated based on factors that influence collaboration and development, and their impact on the success of infrastructure projects. Using this approach, the study aims to provide a comprehensive picture of the effectiveness of collaborative governance in the development of railway infrastructure in Sulawesi.

RESULTS AND DISCUSSION

Target development network of Railways on Sulawesi Island is For connecting regions/ cities that have the potential transport passengers and goods or product commodity scale big, fast high, with use low energy and supportive development city integrated through integration cities in coastal areas, both industry and also tourist as well as agropolitan Good forestry , agriculture and Plantations (Plans) Development Sulawesi Island Network Based on KP 296 of 2020 concerning RIPNAS).

Total length track that will developed on Sulawesi Island until with The year 2030 is approximately 4,669 km with location station (for up and down requirements passengers and/ or goods) are in every capital district / city and several location potential transport passengers and goods . Withdrawal route track train fire and determination location station, already consider location potential economy and its outlet nodes as well as with consider aspects of spatial planning, geology, topography, and location vulnerable disasters and obstacles natural and also artificial, also criteria technical track train fire.

Need development infrastructure track on Sulawesi Island using wide gauge 1435 mm with burden axle load minimum 18-22.5 tons and type R-54 or R-60 rails and room benefit track train fire 16 m (Yani, 2021). However need be noticed lower a number of location track train fire that crosses area river big, area mountains and power support limited land. Conditions This need consequence planning route track train fire in need attention in aspect planning technical. Plan location station train fire set based on consideration pattern and size movement passengers and goods (logistics and commodities) main), location capital district/city (inter- zone center) capital district/city movement passengers and goods logistics) and location production commodity main (Trianah et al., 2024).

Operational pattern journey of Railways done For know pattern operational train fire (time) travel, amount travel and amount series train fire needed) and for know need means train fire until age services, Needs means transport train fire counted based on comparison potential transport with capacity transport train fire. The size capacity transport train fire passengers and goods customized with pattern operational train the fire that has been set (Utama, 2021).

Calculation results need cost development network of Railways For need cost development of 17 lines train fire on Sulawesi Island reached Rp. 214,363.65 billion, consisting of from cost development infrastructure track train fire reached Rp. 195,549.30 billion, the cost procurement means train fire (transportation) passengers and goods) reached Rp. 7,569.64 billion, the cost liberation land / relocation land reached Rp. 11,205.60 billion and costs preparation (studies) technical: FS, DED, Amdal) reached Rp. 39.11 billion.

Next process is For know benefit if implemented development railway lines on Sulawesi Island. Study of benefits using the model from results research by Diego de Melo Conti (2019). Diego identified Benefits of Collaborative Governance, One of reason main, city adopting the Collaborative Governance model is benefits of participation can lead to policy good public (Rizky et al., 2023).

Based on the hierarchy diagram about development infrastructure Railways in Sulawesi, Development and operational strategies that become theme important. In the Development and Operational Strategy section, the aspects like development projects and specifications more Details explained For support development more infrastructure good. Subsidy pioneers and regulations also become factor important in support implementation of the financing program (Rizky et al., 2023). On the other hand, the Sustainable Strategy emphasizes on the necessary policy suggestions taken, how to settlement dispute land and potential sustainability system manage what must be be noticed For term length. The Potential and Market Share theme includes support to support train fire For as transport public and transportation logistics so that increase efficiency transportation . Development

goals main is increase mobility, accessibility, and support growth economy in a way comprehensive. Collaborative Governance or governance collaborative covers collaboration with various stakeholders interests and roles as well as public in realize the development program . Impact development No only nature positive but also negative, which entails assessment and mitigation For minimize loss. Impact Positive development covering efficiency cost logistics, reduce time travel as well as to unravel congestion. Changes society that occurs during the construction process infrastructure train fire must also be managed with good so as not to give impact bad sustainable.

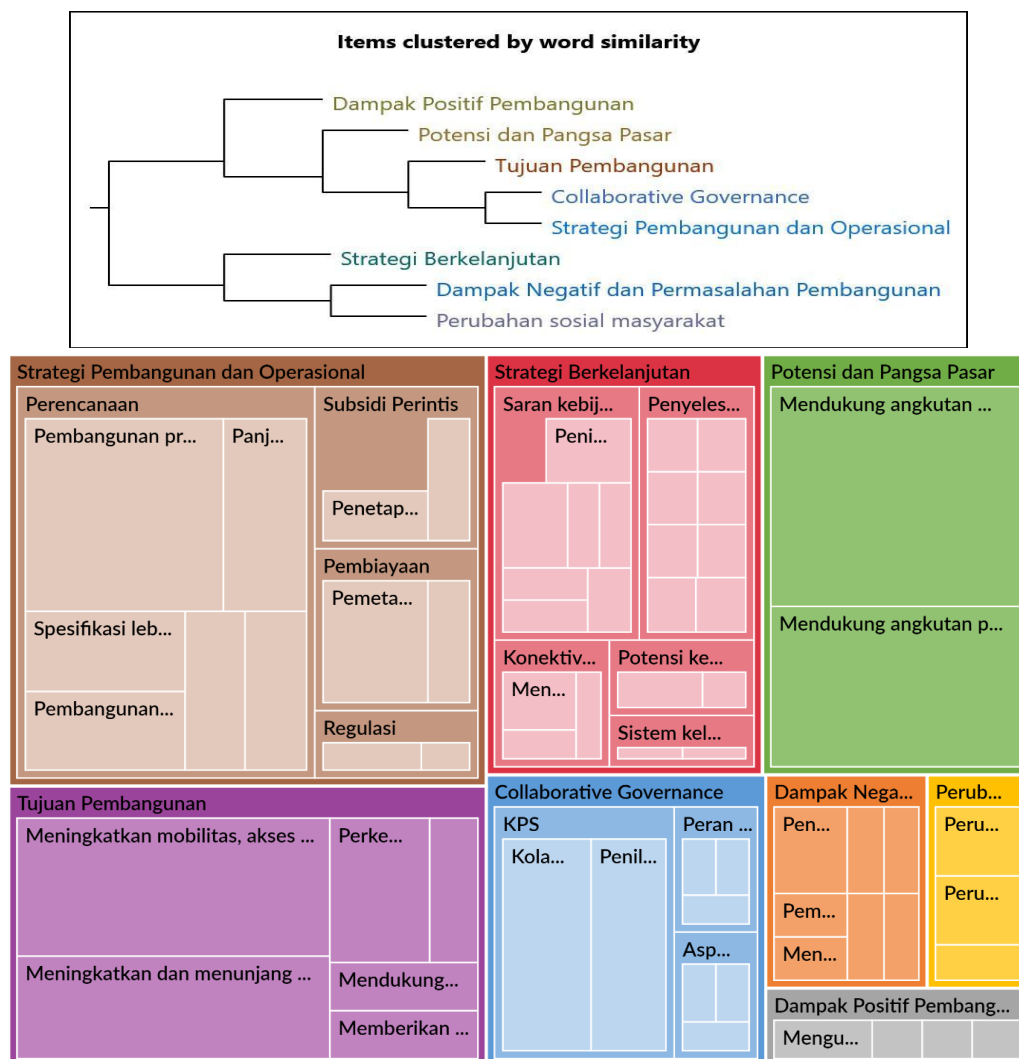


Figure 1. Coding Result Hierarchy Diagram

The figure shows the results of the clustering analysis of the NVIVO application based on word similarity. In this analysis, items such as Positive Impacts of Development, Potential and Market Share, and Development Goals are grouped because they have similar meanings or contexts that are closely related to development and its impacts (Ramli et al., 2023). Other groups are Collaborative Governance and Development Strategy and Operations, which show a close relationship in governance and strategy implementation. Sustainable Strategy

source Power local For support growth inclusive and sustainable economy in Sulawesi Island.

CONCLUSION

The results of the analysis can be concluded that the development of the railway network in Sulawesi, which involves collaboration between various stakeholders, is very important to achieve the success of the project. In the context of Collaborative Governance, the results of the study underline that effective participation from the central government, local governments, and local communities can improve transparency, accountability, and effectiveness in the implementation of infrastructure projects. The implications of the use of Collaborative Governance in this project are the creation of a better communication mechanism between all parties involved, allowing for faster identification and resolution of problems. In addition, this collaboration can ensure that the needs and aspirations of the community are considered, so that the project does not only focus on technical and economic aspects, but also on sustainable social impacts. By integrating a collaborative approach, the railway project in Sulawesi can be more responsive to emerging challenges, such as land acquisition and human resource needs. The sustainability of the project will be more assured, because stakeholders feel ownership and investment in the process, which in turn will increase public support and the success of project implementation in the future. Therefore, the implementation of Collaborative Governance is key to ensuring that the development of railway infrastructure in Sulawesi is not only financially successful, but also provides long-term benefits for the community and the environment.

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