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Shift in the Use of River Transportation to Land Transportation in Banjarmasin City 2000-2020

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Abstrak

Transportasi sungai yang ada di Kota Banjarmasin mulai mengalami pergeseran dimana masyarakat lebih memilih menggunakan transportasi darat di bandingkan transportasi sungai. Hal ini terjadi karena beberapa faktor pendorong yang menyebabkan masyarakat mulai meninggalkan transportasi sungai. Karena Kota Banjarmasin mendapatkan julukan sebagai kota seribu sungai, hal ini berbanding terbalik dengan transportasi sungai yang mulai di tinggalkan. Penulisan ini bertujuan untuk mengetahui penyebab terjadinya pergeseran penggunaan transportasi sungai ke transportasi darat bagi masyarakat Kota Banjarmasin. Metode yang digunakan dalam penelitian adalah dengan menggunakan metode sejarah yakni dengan melalui empat tahapan, yaitu heuristik berupa pengumpulan sumber-sumber sejarah berupa data, kritik sumber, interpretasi (penafsiran) dan historiografi (penulisan sejarah). Hasil penelitian menunjukkan bahwa ada beberapa penyebab terjadinya penurunan penggunaan transportasi sungai yang menyebabkan masyarakat berpindah ke transportasi darat yaitu adanya penyempitan sungai serta pembangunan jembatan-jembatan yang terlalu rendah serta sampah menumpuk pada permukaan sungai yang menyebabkan kecepatan dalam arus transportasi sungai terhambat.

Kata kunci: sungai, transportasi, pergeseran.

Abstract

The river transportation in Banjarmasin City is experiencing a shift where people prefer to use land transportation over river transportation. This is happening due to several driving factors causing the community to abandon river transportation. As Banjarmasin City is dubbed as the city of a thousand rivers, this contrasts with the abandonment of river transportation. This writing aims to understand the reasons behind the shift from river transportation to land transportation for the people of Banjarmasin City. The method employed in this research is historical methodology, which involves four stages: heuristic, comprising the collection of historical sources such as data, source criticism, interpretation, and historiography. The research findings indicate several causes for the decline in river transportation usage, leading the community to shift to land transportation. These include river narrowing, construction of excessively low bridges, and accumulation of waste on the river surface, which hinder the speed of river transportation flow.

***Keywords**: river, transportation, shift.*

INTRODUCTION

Banjarmasin's surrounded by rivers, making it inseparable from them, thus rivers profoundly influence the lives of its residents. Similarly, the choice of transportation modes is influenced, where river transportation initially became the primary choice for the people of Banjarmasin. This is primarily because, initially, to travel anywhere, river transportation was the main option due to the limited availability of land roads.

The culture of the Banjarmasin community is a product of ecological

adaptation to the Banjarmasin region, characterized by rivers, tidal swamps, and surrounding rainforests. The rivers in Banjarmasin embody the philosophy of life for the Banjar people, giving rise to societal concepts related to rivers, such as "*kayuh baimbai*," meaning paddling together, which later became the motto of Banjarmasin City. This expression not only fits the context of Banjarmasin as the city of a thousand rivers but also conveys the spirit of cooperation and togetherness to achieve common goals. Rivers serve as the primary channels of transportation, the economic lifeline, and the means of cultural dissemination (Imron, 2022).

However, the increasing population in Banjarmasin has led to a growing demand for land for housing, prompting communities to repurpose riversides for settlements. Consequently, many rivers are dying out and narrowing due to the construction of houses along their banks, which has steadily increased over the years. This phenomenon has led to the displacement of rivers, resulting in a decline in river transportation availability (Ricklefs, 2008b).

The increasing presence of roads entering and dominating Banjarmasin City has led to a shift from river transportation to land transportation. The existence of roads serves as a background for this transition. According to data from the Banjarmasin City's Central Statistics Agency (BPS) in 2006, the total length of urban roads in Banjarmasin City was recorded at 549.584 km, with 86% paved. Additionally, 52% of the roads were in good condition, while 6% were heavily damaged.

Meanwhile, river transportation continues to decline due to various reasons, as it is gradually replaced by the rapidly growing presence of land transportation. The development of transportation is related to energy efficiency, time, and cost considerations. The increasing speed of travel, energy efficiency, and lower transportation costs make the influence of distance and time constraints almost negligible, resulting in the expansion of a city's reach and development. With the improving trend in transportation, Morlok suggests that economic constraints also become more flexible due to reduced travel costs and increased income levels, allowing people to spend more on transportation expenses (Morlok, 1984).

Transportation is a tertiary sector, meaning it provides services to other sectors such as agriculture, industry, trade, mining, education, health, tourism, and others. These sectors rely on transportation services to transport raw materials and finished products, as well as people (farmers, traders, employees, teachers, doctors, tourists, etc.) from origin to destination. The demand for transportation services from these sectors leads to the provision of transportation

services. In other words, transportation services stem from or are derived from the demand of other sectors. Therefore, the demand for transportation services can be referred to as derived demand (Adisasmita, 2015).

Transportation technology has successfully created high-speed transportation facilities, enabling journeys to be completed in shorter timeframes compared to traveling on foot. Arriving at the destination faster ensures that goods remain fresh, thus maintaining their high prices. For business travelers, reaching their destination more quickly means they are not late for trade agreements. In this context, transportation has created or added to the utility of time, known as time utility (Rahardjo Adisasmita, 2015).

With advancements in technology in the field of land transportation, which significantly impact speed and mobility compared to river transportation, this has resulted in a decline in river transportation as it struggles to compete, especially in terms of time efficiency and utilized technology. River transportation in Banjarmasin already utilizes engines, but with low capacity and limited speed.

The availability of land transportation has led to a decline in the use of river transportation, coupled with the availability of mass transportation options utilizing interconnected roads in Banjarmasin. This is in contrast to the declining use of river transportation for mass transit, which has become increasingly difficult to find. As a result, river transportation is gradually being sidelined. Additionally, river transportation faces challenges, such as not all areas of Banjarmasin having well-functioning rivers suitable for transportation. Many rivers cannot be navigated by river transportation modes. To address this issue, the Banjarmasin government has undertaken efforts such as river dredging and increasing the number of water transport stops distributed across various points in the city as part of an initiative to promote the use of river transportation.

The urgency of this research lies in attempting to examine the shift from river transportation to land transportation in Banjarmasin, which is renowned as the city of a thousand rivers. In reality, rivers are no longer a significant part of Banjarmasin's identity, as many rivers have been lost due to land use conversion and a decline in river transportation replaced by land transportation. This shift has garnered special attention from the government to preserve and conserve rivers and river transportation. The goal of this research is to identify the reasons behind the shift from river transportation to land transportation.

METHOD

The research method employed in this study is historical methodology (Daliman,

2012; Wasino, 2020). Historical methodology is closely related to systematic and effective procedures in investigating historical phenomena to obtain historical facts relevant to the theme under study (Dudung, 1999; Wardah, 2014). According to (Gottschalk, 1983), historical methodology encompasses: (1) selecting the subject to be studied, (2) gathering necessary sources of information to support the chosen subject, (3) scrutinizing the sources, and (4) extracting reliable elements. The synthesis obtained from these sources is known as historiography (Sari, 2008; Setiawan & Aman, 2018).

Historians, in addition to being skilled in using historical methods, must also keep up with the development of historiography. While historical methods may remain unchanged, the development of history as a discipline is marked by its methodology. This means that novice historians must understand the science behind these methods (Patterson, 2021; Ricklefs, 2008a). Novice historians must be adept at conducting heuristic research to find historical information from various sources such as written records, interviews, and other historical remnants or traces. Similarly, when constructing questions to unearth historical information, they must know how to critically critique both internal and external sources, addressing the 5 Ws (who, what, where, when, why) and one how (Anis & Susanto, 2023).

The data were obtained through field observations and direct interviews with owners of river and land transportation, as well as with users of both modes of transportation. Data collection involved requesting information from the Transportation Agency of Banjarmasin City and the Central Statistics Agency of Banjarmasin City, as well as data obtained from informants and relevant literature sourced from the Regional Library of South Kalimantan Province and the Library of Lambung Mangkurat University.

RESULTS AND DISCUSSION

Background of the Shift from River Transportation to Land Transportation in Banjarmasin City

As the population of Banjarmasin City continues to increase each year, the need for transportation access, both for mass transit of people and goods, becomes increasingly crucial and in higher demand. This necessitates easy, fast, and cost-effective transportation access, especially in urban areas like Banjarmasin, where the mobility of residents is significantly high.

The city's geographical setting, surrounded by rivers, means that Banjarmasin is inseparable from its rivers, which exert a significant influence on the lives of its residents. Initially, river

transportation, particularly through traditional boats like *jukung* and *kelotok*, was the primary choice of transportation for the people of Banjarmasin. This preference was due to the city's geographic conditions, characterized by abundant waterways, making river transportation the most efficient mode of travel for accessing various destinations within the city.

With the increasing population of Banjarmasin City, the demand for land has risen, leading to higher land prices in the city area. This situation has compelled residents to seek affordable housing options, resulting in many utilizing the riverbanks to build homes. Consequently, the rivers have undergone a functional shift and have become narrower. The presence of houses along the riverbanks in Banjarmasin has become a common sight. Residents have established settlements following the flow pattern of the rivers, causing the rivers to undergo a functional transformation into residential areas.

During that time, Banjarmasin City struggled to keep up with the urbanization trend, making urban planning increasingly challenging. Areas that were once swamps have now been transformed into residential areas with interconnected roads. Connectivity and access to information for city residents have also improved significantly with the advent of radio and television. The city's population is heterogeneous, with some individuals quickly adapting to change while others are slower to embrace it (Subroto & Prawitasari, 2021).

The consequence of rivers transitioning into residential areas is that they become shallower and narrower. This transformation impacts river navigation, which is a crucial means of transportation relied upon by the population. Interactions between different places or contacts among residents primarily occur through navigating waterways such as rivers, canals, lakes, coastal waters, and straits. These water routes are integral parts of the physical geography of South Kalimantan, including Banjarmasin (Subiyakto, 2005).

In the life of the Banjarmasin community, which is visibly influenced by river culture, rivers play a vital role and serve various functions and benefits. Rivers function as transportation routes, especially in areas where road infrastructure is limited, making rivers the primary traffic arteries. Economically, the presence of numerous rivers in the physical environment also drives the local economy, creating a river-based economy. For the economy to thrive, efficient and supportive transportation systems are essential to ensure smooth and timely economic activities.

Efforts to facilitate transportation, distribute goods, and foster interactions among community members are not solely reliant on major rivers but also extend to

smaller rivers, their tributaries, and canals. At the very least, the Banjar community is familiar with three types of canals: *anjir*, *handil*, and *saka* (Subiyakto, 2005). In this regard, these three canals play a significant role in river transportation, thereby aiding in the movement of goods and people.

As the population grows, the demand for transportation increases, particularly for transporting goods to support the local economy and delivering essential commodities to the community. In addition to goods transportation, transportation also facilitates the mobility of people. This necessitates the availability of efficient, accessible, cost-effective, and time-efficient transportation modes.

According to Yuni Efendi, a 60-year-old cargo truck driver who has been operating a cargo transportation business at Sudimampir Market since 2008, the ease of road access in Banjarmasin City has made land transportation more convenient than river transportation.

This is because of the interconnected road networks in the city, which make land transportation, particularly by trucks, more accessible and efficient for carrying goods compared to river transportation.

Factors Causing the Shift in River Transportation Usage

Since ancient times, the presence of rivers has played a crucial role in the lives of the people of Banjarmasin City, where rivers serve as transportation routes in the city area. The interconnected rivers flowing through the city and merging into the Barito River, the largest river in South Kalimantan, provide significant benefits. Although the use of river transportation by the people of Banjarmasin is decreasing, it does not mean that river transportation is disappearing altogether. Some residents still rely on river transportation.

Waterfront areas have always been vital spaces for human activities, serving as crucial hubs for social and economic interactions throughout history. The development history of urban areas worldwide highlights the importance of water bodies as one of the oldest and most significant elements in social and economic life. They function not only as transportation routes but also as centers for trade, economic activities, international interactions, and territorial expansion. Considering their diverse functions, waterfront areas are undeniably essential spaces (Supriyadi, 2008).

Therefore, the existence of rivers as water bodies is crucial, especially concerning river transportation. Furthermore, with the geographical conditions of Banjarmasin City, which is abundant in rivers, earning it the title of "the city of a thousand rivers," the significance of river transportation is

emphasized. The designation of the city as the "city of a thousand rivers" already illustrates the abundance of rivers in Banjarmasin. Consequently, the presence of river transportation is a common occurrence in the city.

However, over the years, the number of rivers has been diminishing due to urban planning and dense population settlements, altering the primary function of river existence. As rivers become narrower and their roles are replaced, coupled with the increasing presence of roads, the availability of river transportation decreases. This decline in river transportation has become a concern due to its dwindling presence and usage.

Based on data obtained from the Central Statistics Agency of Banjarmasin City, it is evident that river transportation usage in the city decreased from 419 fleets in 2018 to only 132 fleets in 2020. This decline indicates a significant reduction in the utilization of river transportation. Considering the abundant presence of rivers in Banjarmasin's geographical conditions, river transportation should ideally be the primary mode of transportation for the city's residents. Moreover, the people of Banjarmasin live within a river culture that is inseparable from their way of life.

In the National Transportation System, transportation networks are crucial elements as they regulate transportation services connecting various transportation nodes across the country through main routes, feeders, and pioneering routes. The arrangement of main routes, feeders, and pioneering routes resembles a conventional tree pattern, consisting of a trunk, branches, and twigs (Jotin et al., 2005).

However, the opposite scenario is occurring in transportation in Banjarmasin City. Despite being nicknamed "the city of a thousand rivers," Banjarmasin is losing its identity as a city friendly to its rivers. This is because many rivers have been converted for other land uses, and several have been filled with soil to construct buildings along their banks. As a result, disruptions in river transportation routes have occurred, hindering the operations of river transportation fleets and limiting their access to various parts of Banjarmasin City. Consequently, this trend is leading to the replacement of river transportation with other modes of transport.

Picture 1. Riverside Settlement of Pangeran River
(Personal Documentation, 2023)

The settlements in Banjarmasin located along the riverbanks have formed

as a result of historical processes influenced by the surrounding geographical conditions. Rivers serve as the main arteries for traffic and transportation, economic lifelines, means of cultural dissemination, areas of authority for the royal palace, and territories of Dutch colonization from the 17th to the 19th century. This lengthy process has led to the concentration of settlements along the riverbanks, eventually giving rise to river culture (Idwar, 1982).

The low awareness of the importance of rivers has led to their loss of function. Additionally, the narrowing of rivers has further exacerbated the difficulties in river transportation access for the residents of Banjarmasin who rely on existing river transportation services. The constriction of rivers has prompted a shift towards land transportation as it is more efficient in terms of time and speed and can reach almost all areas, whereas river transportation has encountered obstacles due to poorly managed rivers.

Meanwhile, the Banjarmasin City Government has established regulations regarding river management, as outlined in Regional Regulation No. 22 of 2007 concerning river management, Regional Regulation No. 31 of 2012 concerning the determination and regulation of riverbank and former river utilization, and Banjarmasin City Regional Regulation No. 15 of 2016 concerning efforts to improve river management (Angriani et al., 2019).

Picture 2. Narrowing of Handil in Alalak Utara Subdistrict, Banjarmasin City (Personal Documentation, 2023)

Based on picture 2, the field findings reveal that many *saka* channels are now mostly non-functional due to river silting caused by land use changes, resulting in narrowing due to the construction of houses along the riverbanks. This has caused difficulties for river transportation access and even led to the death of many rivers due to soil filling. Additionally, household waste dumped into the river has caused river siltation, disrupting river transportation fleets and causing obstacles, prompting people to shift to land transportation.

Saka refers to smaller water channels compared to *handil* and in Banjarmasin, many *saka* are found around major rivers in the city. *Saka* typically serves as private channels used to channel water and serve as pathways to riverside settlements. They also function as river transportation routes, but their presence is now being overshadowed by residential developments.

Another factor contributing to the shift from river to land transportation is the construction of bridges intensified by the Banjarmasin City Government to facilitate activities and ensure smooth economic activities. Given Banjarmasin's low-lying and watery terrain with numerous rivers, bridges are crucial as connectors between areas. However, bridge construction in Banjarmasin has received inadequate attention, with many bridges being unsuitable for river transportation.

Picture 3. Barito Bridge
(Instagram post @warga banua, accessed on August 17, 2023)

The decline of river transportation in Banjarmasin began with the construction of the Barito Bridge, inaugurated by President Soeharto in 1997, which connects the regions of South Kalimantan and Central Kalimantan. The road construction was part of a program to improve road and bridge infrastructure initiated by the then Governor of South Kalimantan, Ir. M Said (1984–1995). The program aimed to complete the road network in Banjarmasin and surrounding areas leading to other regions, implement hotmix programs for all roads in cities across South Kalimantan, and improve the entire provincial and district road networks. Initially, all roads were unpaved dirt roads. The asphalt paving of roads began in 1996, progressively and continuously, and was completed in its entirety by 1999 (Imron, 2022).

The construction of the Barito Bridge marked the rapid development of land transportation, surpassing river transportation. This led to a decrease in river transport activity, affecting both passenger and cargo traffic. The establishment of the Barito Bridge and the improvement of road quality from Banjarmasin to Palangkaraya resulted in the growth of inter-provincial, inter-district, and even inter-city and inter-village road transport. Such conditions had a significant impact on river transportation. An article in the Banjarmasin Post dated April 27, 1997, reported that after the establishment of the Barito Bridge, operators of speedboats, longboats, and water taxis experienced a decrease in the number of fleets and passengers, leading to a decline in river transportation (Imron, 2022).

The situation worsens as the construction of bridges within Banjarmasin becomes increasingly uncontrolled and fails to meet the standards set for riverside areas. This is because many bridges are built without adequate consideration for their height. Consequently, numerous rivers become

impassable for river transportation modes due to low-lying bridges, forcing residents to switch to more efficient land transportation methods.

Image 4. A.Yani Road Bridge at KM 4
(Personal Documentation, 2023)

Based on the research findings, Image 4 shows the rivers along A.Yani Road where many river transports cannot pass through due to the presence of bridges that do not meet the standard height. Therefore, in this case, the bridge height and the water surface are the same, making it impossible for river transportation to pass under the bridge. Moreover, based on the factual findings of the researchers, many bridges along A.Yani Road are shown to be non-standard and unfriendly to river transportation, with the number of bridges that are not too high exceeding 20. This is what makes river transportation start to decline because of the difficulty of access due to the bridges that cannot be crossed by river transportation.

Another factor that causes people to switch from river transportation to land transportation is the damage to the river ecosystem in Banjarmasin. The shift in culture from river orientation to land among the people of Banjarmasin has resulted in rivers no longer being clean. Many solid wastes such as plastic, clothing, cans, bottles, leaves, and cardboard are found in houses along the river. Some are stuck on the house poles, on the floors of stilt houses, or trapped by bridge structures that are almost touching the river surface. These wastes mix with water plant debris such as water hyacinth and nipah trapped in one location, forming a pile of garbage. All of this contributes to the occurrence of river siltation and narrowing in Banjarmasin (Imron, 2022).

Image 5. Piled-up Garbage in Sungai Andai, Banjarmasin City
(Personal Documentation, 2023)

Based on the findings in the field shown in image 5, which illustrates a lot of garbage piled along the rivers in Banjarmasin, especially household waste and wild plants, aside from damaging the beauty of the river, the piled-up garbage also causes obstacles for river transportation, as the river cannot be navigated due to being obstructed by water hyacinth waste, which amounts to thousands and clogs the river. This

situation leads the community to shift to land transportation, which is considered faster in terms of time.

The notion of speed in transportation can be viewed in two ways. Firstly, the time taken by vehicles or cargo (goods and passengers) during the journey from one place to another. Secondly, the time required to prepare goods or passengers for a journey, which is then followed by subsequent travel, including the interval time for loading, unloading, refueling, and vehicle repairs (Adisasmia 2014).

Therefore, this is a result of the accumulation of waste and the shallowing of rivers, which renders the rivers impassable for river transportation. Consequently, there is a lack of rapid and efficient transportation access, leading the community to prefer land transportation over river transportation. This shift in preference towards land transportation is the cause of the shift in the usage of river transportation to land transportation.

CONCLUSION

The description above highlights the geographical conditions of Banjarmasin, a city abundant with rivers that flow through and divide its territory. Initially, the presence of rivers heavily influenced the activities of the community, becoming ingrained in the culture of the Banjarese people. However, from the early 2000s until now, there has been a shift away from reliance on rivers, including a transition in transportation preference from river to land.

Entering the early 2000s, the population density of Banjarmasin increased, leading to a greater demand for land and housing. In response, residents initiated building houses along the riverbanks to address the housing shortage. While initially serving as a solution, these riverside settlements not only disrupted the natural landscape but also contributed to river narrowing and silting due to the presence of buildings along the riverbanks.

Initially, river transportation was favored by the people of Banjarmasin as it was the primary mode of transportation available. Rivers served as the main arteries for both human and goods transportation, facilitating the distribution of goods to meet the community's needs and driving economic activity. However, the dominance of river transportation began to decline with the construction of the Barito Bridge spanning the Barito River. This decline was keenly felt by river transportation service providers in Banjarmasin.

With the inauguration of the Barito Bridge by President Soeharto in 1997, river transportation began to decline, giving way to land transportation, especially with the extensive development of roadways. By the year 2020, numerous

land transportation vehicles could easily be found on the streets of Banjarmasin, marking a stark contrast to the dwindling presence of river transportation, which seemed to fade into obscurity with each passing year.

Furthermore, the proliferation of buildings along the riverbanks, with their backs facing directly toward the river, exacerbated the issue. This setup led to widespread dumping of waste into the river by residents, resulting in rivers being choked by various forms of debris, including household waste, bamboo, wooden debris, and even wild plants like water hyacinths. The presence of water hyacinths, in particular, became a frequent hindrance in the rivers, prompting the populace to shift to land transportation. The accumulation of waste obstructed the rivers, impeding the smooth operation of river transportation. Consequently, many people began to favor land transportation over river transportation.

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