

Economic Behavior Dynamics of River Transportation Business Actors in Banjarmasin in Sustainable Economic Perspective

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Abstract. The river transportation business in Banjarmasin has continued to survive until now with various changes that have affected it. This study aims to analyze the dynamics of the economic behavior of river transportation business actors in Banjarmasin according to a sustainable economic perspective. The novelty of this research is that there has been no research related to the economic behavior of transportation business actors from the aspects of production, distribution, and consumption. This study uses a qualitative approach. The research subjects were river transportation business actors spread over eight locations, namely: 1) Alalak-Berangas ferry crossing, b) Siring Banjarmasin river-crossing tour, c) Sungai Baru kelotok rental, d) Banjar Raya-Tamban ferry crossing, e) Kuin Port, f) Taxi kelotok at Trisakti Port, g) Fishing boats at Rantauan Ilir Port, and h) Fishing boats at Banjar Raya Port. Data collection was carried out through in-depth interviews. Data were analyzed with a qualitative descriptive method. The results of the study show the dynamics of the economic behavior of river transportation business actors in the production aspect, namely the increase in the types of services offered by business actors which include people and goods transportation services and boat rental services for certain consumer needs. From the distribution aspect, the services provided cover areas outside Banjarmasin in a short radius. From the consumption aspect, business actors still use diesel fuel for the transportation services provided and utilize humans as the main workforce. The understanding of business actors about a sustainable economy is still low, which is shown by their economic behavior that is not oriented toward the concept of sustainability in running a business. The implication of this research is the need to instill a sustainable economic concept for river transportation business actors which can be initiated by related agencies or non-governmental organizations. This research contributes to providing a real picture of business implementation practices, especially in the transportation sector, associated with achieving sustainable development.

Keywords: Economic Behavior, River Transportation, Business Dynamics, Water Transportation Business, Sustainable Economic

1 Introduction

Due to their effects on many environmental, social, and economic factors, water transportation enterprises have a substantial impact on sustainable development. In terms of the environment, water transportation, especially maritime shipping, has a significant environmental impact. It aids in the destruction of marine ecosystems, greenhouse gas emissions, and air and

water pollution. However, the industry's adoption of sustainable practices can aid in reducing these adverse effects. The environmental effect of water transportation can be considerably reduced, for instance, by deploying fuel-efficient technologies, using cleaner fuels, and decreasing emissions through improved logistics and route planning. Additionally, taking action to stop oil spills, the spread of invasive species, and other types of pollution can help to protect marine ecosystems and biodiversity. In an effort to maximize this potential, it is also necessary to be able to utilize modern technology in the planning, implementation and evaluation processes [1].

Water transportation is essential for facilitating international trade, linking areas, and promoting economic growth from the standpoint of economic development. It makes it possible to transport goods, raw materials, and resources across international borders, which promotes wealth and economic expansion. Sustainable business practices can promote economic growth while reducing harmful environmental effects in the water transportation sector. For instance, enhancing energy efficiency, streamlining shipping routes, and putting money into environmentally friendly infrastructure can lower costs of operation, boost competition, and encourage long-term economic sustainability. Moreover, by generating jobs in industries like shipbuilding, port management, and logistics, water transportation can help local economies in coastal areas. Local communities can gain from the economic activity brought about by water transportation, which helps to combat poverty and promote social welfare. However, it is important to understand that maintaining the environment for economic behavior is very important [2].

Access to rural locations and community connectivity are two additional benefits of using water transportation. It makes it easier to trade, travel, and exchange information, products, and services. In disaster relief and humanitarian help, water-based transportation can be crucial, offering crucial support in times of need. To address potential social and cultural effects, it is crucial to make sure that the advantages of water transportation are fairly distributed and that local populations are actively involved in the decision-making process. However, government contribution is also needed to support the potential of air transportation in South Kalimantan. Government support to improve the quality of air transportation businessmen plays a very important role in improving the regional economy [3].

In conclusion, the water transportation industry affects sustainable development in both positive and bad ways. Water transportation may help create a more sustainable and connected world by implementing sustainable practices, reducing environmental pollution, fostering economic growth, and ensuring social fairness. To achieve the objectives of sustainable development while preserving the crucial role of water transportation in global trade and connectivity, the industry must be encouraged to embrace innovation, energy efficiency, and environmental responsibility.

There have been several studies on the impact of water transportation business on sustainable development such as: a) Inland waterway transport (IWT) has better energy efficiency and lower levels of CO₂ emissions compared to road and rail [4], b) water transport can have positive impacts on the economy and society, as seen in a study analyzing the impacts of water transport development on the economy and society in the Slovak Republic [5], c) Water transport systems can provide an unconventional solution to meet current mobility needs and make urban transport more sustainable [6], and d) There are major challenges to sustaining inland waterways in the context of social-economic development and climate change, and the maintenance of river health is of particular importance in supporting the long-term provision of ecosystem goods, services, and values for future needs [7].

Overall, the studies suggest that water transportation business can have positive impacts on sustainable development, particularly in terms of energy efficiency and reducing CO₂ emissions.

However, there are also challenges to sustaining inland waterways and maintaining river health, which need to be addressed to ensure long-term sustainability.

Based on the search results, there is a gap in research regarding the economic behavior of water transportation business actors and its impact on sustainable development. While there are studies that discuss the importance of maritime transport for economic growth [8], the specific economic behavior of water transportation business actors and its effect on sustainable development is not extensively explored. The existing research primarily focuses on broader aspects such as the importance of water transportation for economic growth [8], the formation of sustainable economic development measures in the context of inland water transport management [9], and the role of actors in achieving sustainable development at the local level [10]. However, there is limited research specifically addressing the economic behavior of water transportation business actors and its direct impact on sustainable development. To fill the gap of previous research, this study aims to analyze the dynamics of the economic behavior of river transportation business actors in Banjarmasin according to a sustainable economic perspective.

2 Literature Review

Sustainable development is of utmost importance for several reasons. Firstly, it ensures the preservation of our planet's resources and ecosystems. By adopting sustainable practices, such as renewable energy sources, responsible waste management, and conservation of biodiversity, we can mitigate the detrimental impact of human activities on the environment. This preservation is crucial to maintain the Earth's natural balance, support diverse ecosystems, and safeguard the well-being of countless species, including our own. Moreover, sustainable development promotes the efficient use of resources, reducing waste and enhancing environmental resilience, which in turn contributes to the overall stability and longevity of our planet's ecosystems.

Secondly, sustainable development is essential for the well-being and prosperity of present and future generations. By integrating economic, social, and environmental aspects, sustainable development fosters long-term economic stability. It encourages businesses to adopt sustainable practices that not only reduce costs and increase efficiency but also contribute to societal well-being. By addressing social inequalities, promoting education, healthcare, and decent work, sustainable development ensures a more equitable and inclusive society. Moreover, sustainable development encourages innovation and the development of green technologies, which can lead to new job opportunities and economic growth while minimizing the negative impact on the environment. By prioritizing the needs of both current and future generations, sustainable development enables us to create a more prosperous, fair, and resilient world.

Economic behavior plays a critical role in sustainable development as it directly influences resource consumption, production patterns, and the overall environmental footprint. Unsustainable economic behavior, such as overconsumption, resource depletion, and pollution, can have detrimental effects on the environment and hinder long-term sustainable development goals. In addition, there is also research that finds that service providers create adaptive service systems to environmental conditions and local communities that are wetland areas [11].

Firstly, unsustainable production and consumption patterns contribute to the depletion of natural resources and environmental degradation. Industries that rely on non-renewable resources or engage in excessive extraction practices can lead to resource scarcity and ecosystem destruction. Additionally, high levels of consumption, often driven by consumerism and

unsustainable lifestyles, generate significant amounts of waste and pollution. These negative impacts on the environment, such as pollution of air, water, and soil, contribute to climate change, biodiversity loss, and other environmental crises, compromising the sustainability of ecosystems and future generations' well-being.

Secondly, economic behavior can either promote or hinder the adoption of sustainable practices and technologies. Economic incentives, regulations, and market forces can shape the behavior of businesses and individuals. Governments and policymakers play a crucial role in creating frameworks that incentivize sustainable practices through policies such as environmental regulations, carbon pricing, and subsidies for green technologies. Conversely, unsustainable economic policies or the lack of incentives for sustainable practices can perpetuate unsustainable behaviors and hinder progress towards sustainable development.

Previous research on the impact of water transportation businesses on sustainable development has focused on understanding the environmental, economic, and social dimensions. It has identified the need for sustainable practices within the industry to mitigate environmental impacts, promote economic development, and ensure social equity. Further research is necessary to explore innovative solutions, policy frameworks, and technological advancements that can enhance the sustainability of water transportation and contribute to the broader goals of sustainable development.

There are several research that discuss the economic behavior of water transportation business actors and their impact on sustainable development. Previous study defined the governance arrangements required for sustainable waterways that safeguard multiple water uses and healthy coexistence with urban settlements, while fostering economic growth [4], the cruise tourists' sustainable behavior and their level of satisfaction at destinations [12], the dimensions of systemic sustainable transport development, including reducing the negative impact of transport on the environment and boosting the efficient use of public funds in transport projects [13], the importance of maritime transport for economic growth in the European Union [8], also the role of actors in achieving sustainable development and quality of life with regards to water management, transport, infrastructure, land use, drinking [10].

It is important to learn about the economic behavior of water transportation business actors that can affect sustainable development because water transportation is a crucial component of the global economy, accounting for around 80% of worldwide trade [8]. However, the environmental impact of water transportation can be significant, and it is important to find ways to reduce this impact while still fostering economic growth. Understanding the factors that influence the economic behavior of water transportation business actors can help policymakers develop effective strategies to promote sustainable development in this sector [9]. Additionally, the involvement of various actors, such as public administration entities, companies, and individual and corporate customers, is crucial in achieving sustainable development in the transport service sector [13]. By examining the role of actors in achieving sustainable development, policymakers can identify areas where action is needed to promote sustainable practices and ensure that all stakeholders are involved in the process [10]. Overall, understanding the economic behavior of water transportation business actors is essential for achieving sustainable development in this sector and promoting economic growth while minimizing negative environmental impacts [14].

Previous research discusses the sharing economy among Indonesian urban communities, especially in the online transportation business [15]. Another research reviews the literature relevant to market environmentalism in the water sector, focusing on five themes, including the privatization of resources [16]. A comprehensive study on the sustainable transportation system in India and lessons to be learned from other developing nations found that increased economic

activity reduces the environmental efficiency of inland transportation [14]. Additionally, an article on the role of actors in the processes of sustainable development at the local level, experiences from the Czech Republic, showed that actors play an important role in achieving sustainable development with regards to water management and transport [10].

3 Research Methods

The research methods used in this article is qualitative method. It's based on the type of research that try to collect economic behavior information from respondents that will explain the condition according to the purpose of this research. The research subjects were river transportation business actors spread over eight locations in Banjarmasin area, namely: 1) Alalak-Berangas ferry crossing, b) Siring Banjarmasin river-crossing tour, c) Sungai Baru kelotok rental, d) Banjar Raya-Tamban ferry crossing, e) Kuin Port, f) Taxi kelotok at Trisakti Port, g) Fishing boats at Rantauan Ilir Port, and h) Fishing boats at Banjar Raya Port. Data collection was carried out through in-depth interviews directly to research respondents. Data were analyzed with a descriptive method.

4 Results and Discussion

The existence of water transportation in Banjarmasin has been around for a long time and has played a big role in the routine activities of the people of Banjarmasin City. It turns out that water transportation in Banjarmasin City has now developed when compared to the past, water transportation only focused as a means of transportation for people, but now water transportation is widely used in various things such as being a typical tourist attraction of Banjarmasin City, as a means of transporting goods and as a means of selling. Production behavior carried out by water transportation business actors is the production of services, namely transportation, and delivery. Currently, the water transportation business in Banjarmasin City has developed not only to distribute people but also goods, both for daily needs and tourism. Although there are many water transportation business people in Banjarmasin City, the great thing is that judging from the type of market, this water transportation business on average is all types of perfect competition markets. This indicates that public interest or interest in water transportation in Banjarmasin is still very high.

The service provided by water transportation business people in Banjarmasin is a maximum service, business people not only serve Banjarmasin residents but also serve all residents/people who want to use water transportation. The transportation business also serves fast time without wasting the time of customers who want to cross so they make such a system that is effective for users of water transportation.

The operational time of the water transportation business in Banjarmasin turned out to be quite long from morning to night. The water transportation business in Banjarmasin is still needed because of the needs of different communities in terms of activities, work, age, and residence. This is the reason for water transportation business people to maximize their business operational period because it serves the various time needs needed by the people of Banjarmasin City. This finding is also in line with Shadiqi et al [17] that many people prefer comfortable transportation with good accessibility.

Water transportation in Banjarmasin can be a meaningful income for water transportation business people in Banjarmasin City so that business people continue to run their businesses well.

Once constrained by the Covid-19 outbreak which made their business empty of customers, business people did not want to leave this water transportation business so they did additional things as their income when there were few customers from water transportation even so this did not make business people retreat in running the water transportation business.

It turns out that large events and tourist groups can increase income for water transportation business people in Banjarmasin. Every major event invites many people to come to places where there is a water transportation tourism business, so that event visitors are interested in riding water transportation tours at the event venue as well as tourist groups, whether it's from companies, or study tour students or from immigrants outside Banjarmasin City they are also interested in trying to feel the sensation of walking down the river with *kelotok*.

From the perspective of consumption, there are two things that are highlighted, namely the use of labor and fuel. It can be seen the difference in the number of workers then and now, the labor resources in the water transportation business in Banjarmasin City although not much, but each worker performs their duties optimally efficiently and effectively so that the business runs smoothly and does not cost much of the salary per worker.

Transportation businessmen still use diesel fuel, this is relevant with the economic principle that people tend to use the lowest cost to get the maximum profit. But on the other hand, there are negative impacts that accompany being less friendly to the environment as shown by the presence of fuel waste found in river areas. In addition, dependence on one source of fuel makes it difficult for business people to survive in maintaining business if there is no more fuel.

Local wisdom, often rooted in traditional knowledge and cultural practices, can have a profound influence on economic behavior and contribute to sustainable development. Firstly, local wisdom often emphasizes the importance of community and collective well-being over individual gain. It promotes values such as sharing, cooperation, and reciprocity, which can shape economic behavior in a sustainable manner. For example, in many indigenous communities, there are traditional systems of resource management that ensure the sustainable use of natural resources. These systems often involve community-based governance, where decisions regarding resource extraction, farming practices, and fishing techniques are made collectively, taking into account the long-term sustainability of the ecosystem. By prioritizing community interests and considering the ecological balance, local wisdom guides economic behavior towards practices that promote sustainability and resilience. Related with the research results, the using of river for business transportation in Banjarmasin historically based on local wisdom from the past that have dependency with river for their daily lives activities.

Secondly, local wisdom often incorporates principles of frugality, moderation, and the efficient use of resources. Many traditional cultures have developed practices to minimize waste and maximize resource efficiency. In this research, this principles shown from the type of service that provided by the business actor that focusing on short distance trip by consumers of water transportation

In summary, local wisdom can significantly influence economic behavior by promoting values of collective well-being, resource management, and resource efficiency. By drawing on traditional knowledge and cultural practices, local wisdom offers insights and approaches that contribute to sustainable economic development. Integrating local wisdom into economic decision-making processes can help foster environmentally conscious practices, enhance community resilience, and promote sustainable development at the local and global levels.

Local businesses play a crucial role in driving sustainable development from an economic behavior perspective. They have the potential to contribute significantly to the environmental, social, and economic aspects of sustainable development at the local level. Firstly, local businesses often have a closer connection to their communities and a better understanding of local needs and

challenges. This proximity allows them to design and implement business models that align with sustainable practices and cater to local demands. For example, local businesses may prioritize sourcing products locally, promoting sustainable agriculture, or utilizing renewable energy sources. By integrating sustainability into their operations, these businesses can reduce their ecological footprint, minimize resource consumption, and contribute to the preservation of local ecosystems. Additionally, local businesses often provide employment opportunities within the community, fostering social inclusivity and reducing income inequalities. By investing in local talent and engaging in fair employment practices, they contribute to the social well-being and resilience of the community.

Secondly, local businesses can stimulate local economies and enhance economic resilience. They often circulate a significant portion of their revenue within the local community by sourcing goods and services from other local businesses. This multiplier effect helps create a robust and diversified local economy, reducing dependence on external sources. Moreover, local businesses tend to have a vested interest in the long-term prosperity of their communities, leading them to engage in responsible business practices. By fostering economic stability, local businesses contribute to the overall sustainability of the region and support the achievement of sustainable development goals. Unfortunately, the understanding of water transportation business actors in Banjarmasin still have a limited knowledge of a sustainable economy, as seen by their lack of attention to the notion of sustainability in corporate operations. It must be a concern for the future, considering this business will still exist and affected directly to the water sustainability specifically in Banjarmasin area.

In conclusion, local businesses, with their close ties to communities, have a unique opportunity to promote sustainable development from an economic behavior perspective. By embracing sustainable practices, creating local employment opportunities, and contributing to the local economy, they can drive positive change at the grassroots level. Their commitment to sustainability can lead to improved environmental outcomes, enhanced social well-being, and increased economic resilience, ultimately contributing to the broader goal of sustainable development.

Economic behavior has a significant impact on sustainable development. By adopting sustainable production and consumption practices, promoting green technologies, and aligning economic incentives with sustainable goals, we can mitigate negative environmental impacts and foster a more sustainable and equitable future. Conversely, unsustainable economic behavior can hinder progress, exacerbate environmental challenges, and compromise the well-being of current and future generations.

Overall, sustainable development in the water transportation industry requires Banjarmasin governance arrangements that safeguard multiple water uses and healthy coexistence with urban settlements, while fostering economic growth. Additionally, reducing the negative impact of transport on the environment and boosting the efficient use of public funds in transport projects are important dimensions of systemic sustainable transport development.

5 Conclusion

The findings of the study demonstrate the dynamics of the economic behavior of river transportation business actors in the production aspect, specifically the expansion of the service types provided by business actors, which now include services for the transportation of people and goods as well as boat rentals for specific consumer needs. In terms of distribution, the services

offered reach a little radius outside of Banjarmasin. Business actors continue to provide transportation services using diesel fuel, and they mostly use people as their workforce. It can be concluded that the lack of economic activity that is focused on the idea of sustainability in business operations indicates that business actors' comprehension of a sustainable economy is still not fully support into sustainable development goals. This is also related to the findings Hendriyanto & Radam [18] that in general business actors also use water transportation because it is close to their residential environment. Economic activities involving water transportation must also take into account courtesy, safety, and occupational health and safety (OHS), as well as the availability of information regarding the services provided[19].

This research has the implication that river transportation business actors need to be introduced to a sustainable economic paradigm. This can be done by connected agencies or non-governmental groups. This research limited into economic behaviors' exploration of one business type in Banjarmasin area that related with water transportation and the sustainability concern. future research could delve deeper into the economic behavior of water transportation business actors, examining factors such as pricing strategies, investment decisions, operational efficiency, and their implications for sustainable development. Additionally, studying the relationship between economic behavior and sustainability indicators such as environmental impact, social responsibility, and resource management would provide valuable insights into the overall sustainability of the water transportation industry. Overall, while there is some research on the economic aspects of water transportation and sustainable development, there is a need for more specific studies that focus on the economic behavior of water transportation business actors and its direct impact on sustainable development.

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