



Assessing the Impact and Utilization of Three-Wheeled Cargo Motorcycles by MSMEs in Central Java

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Abstract – The increasing number of Micro, Small, and Medium Enterprises (MSMEs) has led to a high demand for transportation to support business operations. This is particularly true for the use of three-wheeled cargo motorcycles, which are widely used by MSME actors, especially in the Central Java region. This study focuses on eight regions where MSMEs operate: Semarang, Kendal, Ungaran, Demak, Boyolali, Klaten, Sukoharjo, and Solo. The research aims to identify the differences between three-wheeled motorbikes and pick-up trucks and to determine the level of need among MSME operators for three-wheeled motorbikes as transportation to support their business activities. The author employs a descriptive approach using qualitative methods. The research findings indicate several differences between three-wheeled motorcycles and pick-up trucks in terms of functionality. Three-wheeled motor vehicles are more stable, flexible, economically priced, fuel-efficient, and suitable for transporting small goods over short distances. There is a high level of community demand for the use of three-wheeled motor vehicles to support business operations, particularly for the sale of food and beverages such as fresh milk, tobacco, LPG gas cylinders, gallon mineral water, animal feed, and various agricultural commodities to traditional markets. Additionally, three-wheeled vehicles greatly assist MSME operators in their business operations by offering small-scale cargo transport capacity and facilitating access to regions with limited land availability for roads.

Keywords: Transportation; Three-wheeled Cargo Motorcycles; MSMEs; Central Java

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INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are active businesses owned by individuals or legal entities that are officially registered and meet the criteria for micro enterprises. The growth of the business world has seen rapid increases, as evidenced by rising consumer consumption rates in Indonesia. According to PeRSADA (Portal Satu Data KUMKM) data from the Department of Cooperatives, Small and Medium Enterprises of Central Java, 141,832 MSME units were recorded in Central Java in 2023, spread across the entire region. This number continues to grow each year. The various sectors of MSMEs naturally lead to differences in infrastructure and facility needs.

Operational support for businesses includes not only the physical spaces used for activities and business mobility but also the availability of suitable and efficient transportation modes. Some MSMEs require four-wheeled vehicles, while others need two-wheeled or three-wheeled cargo motorcycles. Three-wheeled cargo motorcycles are commonly used for transporting goods, facilitating business mobility from one point to another, and even serving as mobile shops with customized modifications.

One prevalent mode of transportation among MSME entrepreneurs is the three-wheeled motorized vehicle. These vehicles come in various types and specifications tailored to user needs, including well-known brands such as Tossa, Kaisar, Nozomi, Dayang, Bajaj, TVS, Piaggio, and Viar.

However, the use of three-wheeled cargo motorcycles for transporting goods sometimes sparks debate when compared to pickup trucks. Three-wheeled motorbikes are intended solely for specific uses and are classified as motorbikes. When comparing the performance of three-wheeled cargo motorcycles to pickup trucks, distinct differences become apparent. The functions and purposes of these two modes of transportation are influenced by the specific needs and usage goals of individual users in their operational activities.

Therefore, it is essential to discuss the differences between three-wheeled cargo motorcycles and pickup trucks, particularly in the context of supporting and sustaining business operations. Such discussions can help readers make more informed decisions about their transportation needs, intentions, and objectives.

The use of three-wheeled cargo motorcycles by MSME entrepreneurs significantly impacts product demand in the market. Based on interviews and observations conducted by the research team, nearly all informants expressed that owning three-wheeled cargo motorcycles is essential for their business operations. These vehicles are used both for transporting goods and as mobile shops. Consequently, the widespread use of three-wheeled cargo motorcycles plays a crucial role in ensuring smooth business operations. Additionally, reviews of this process are performed online.

RESEARCH METHOD

The research approach encompasses the entire process of a study, from problem formulation to drawing conclusions. This study employs a qualitative descriptive research method. Qualitative research is often referred to as an investigative approach because researchers typically collect data through face-to-face interactions and direct engagement with individuals involved in the research setting. According to Sugiono (2015), qualitative research should be based on positivist philosophy when applied to naturalistic objects. From these explanations, it can be concluded that qualitative descriptive research involves the collection and acquisition of data in an unadulterated manner, without imposing meaning.

A. Objectives and Data Sources

1. Objectives: This research aims to provide relevant information about the purpose of transportation modes, focusing on the specifications and usage of three-wheeled cargo motorcycles among MSME entrepreneurs in Central Java. Every research study is invariably directed toward specific research objectives, derived from the

population as the object of data collection. These objectives clarify the steps taken to gather data.

2. Data Sources: The primary focus of this study is MSME entrepreneurs in Central Java, who serve as informants. A total of 20 informants are spread across various regions in Central Java, including Semarang, Ungaran, Kendal, Demak, Boyolali, Klaten, Sukoharjo, and Solo. Additionally, the researcher obtained information from other supporting sources.

B. Data Collection Techniques

In collecting data, the author employs interview techniques. Interviews involve oral question-and-answer sessions between two or more individuals, fostering communication with specific intentions, purposes, and interests. According to Hardani (2020), the purpose of conducting interviews is to construct knowledge about people, events, activities, organizations, emotions, motivations, demands, and other relevant aspects. The author uses a structured interview technique to gather research information, analyzing the responses provided by each respondent.

C. Data Analysis Techniques

The author employs the Miles and Huberman model for data analysis, which involves data collection, data reduction, data presentation, and drawing conclusions. According to Siyoto (2015), qualitative data analysis begins by reducing the data obtained from various sources, as explained below:

1. Data Reduction: According to Siyoto (2015), data reduction involves summarizing and selecting essential elements, focusing on what is considered important, identifying themes and patterns, and discarding unnecessary information. An alternative approach to data reduction is through abstraction, where efforts are made to create concise summaries of core processes and statements while adhering to research procedures and guidelines.
2. Data Presentation: Data presentation occurs through brief descriptions, charts, inter-category relationships, flowcharts, and similar formats. Initially displaying data provides a better understanding of actual occurrences and aids in planning subsequent work based on prior comprehension (Hardani, 2020).
3. Drawing Conclusions: Drawing conclusions represents the essence of research findings, describing final opinions based on the preceding discussions or decisions derived from either inductive or deductive thinking methods, as outlined by Hardani (2020).

Conclusions must be relevant to the research focus, objectives, and findings through interpretation and discussion.

RESULTS AND DISCUSSIONS

The distribution of Micro, Small, and Medium Enterprises (MSMEs) spans various regions across the Indonesian archipelago, particularly those operating in the province of Central Java. Three-wheeled cargo motorcycles are frequently used as auxiliary transportation for buying and selling activities. To ensure smooth business operations over an extended period, prioritizing supportive infrastructure and facilities becomes essential. The judicious selection of transportation modes, aligned with specific needs and desired specifications, is informed by the practical utility of these resources.

The rapid growth of the commercial vehicle industry has led to the emergence of numerous three-wheeled motorized vehicle brands, including well-known names like Tossa, Viar, and Kaiser. This research is supported by data obtained from interviews with 20 MSME informants scattered across Semarang, Kendal, Demak, Ungaran, Boyolali, Klaten, Sukoharjo, and Solo.

In general, three-wheeled cargo motorcycles and pickup trucks serve similar functions and purposes. Both are commonly used for transporting goods and supporting business operations. They can also be adapted as mobile shops for selling household items, vegetables, and fruits, often seen as roadside stalls or cafes. However, each mode of transportation has its own advantages and limitations when considering specifications. The following are the results of our observations and interviews with academics in the engineering sector and three-wheeled vehicle owners who are MSMEs. Aspects such as design type, carrying capacity, primary usage, and safety performance—including mobility from one point to another—play a role in the decision-making process for MSME entrepreneurs.

1. Differences Between Three-wheeled cargo motorcycles and Pickup Trucks Three-wheeled motorbikes and pickup trucks are distinct types of vehicles in terms of design, capacity, and usage. However, it's essential to recognize that these differences significantly influence the suitability of transportation modes. Let's explore several key aspects that highlight the contrasts between the two:

1.1. Design Aspect - Three-Wheeled Motorbikes: These vehicles have three wheels arranged in a configuration typically forming a triangle or

aligned side by side. The additional wheel provides greater stability compared to conventional two-wheeled motorcycles. Entrepreneurs, especially those with extensive business needs, find this stability appealing when considering three-wheeled motorbikes as a transportation option. - Pickup Trucks: Pickup trucks have four wheels and usually feature a design where the driver's cabin is separate from the rear cargo bed used for transporting goods. Both three-wheeled motorbikes and pickup trucks share a similar feature: a rear bed capable of accommodating or carrying a substantial volume of items.

1.2. Cargo Capacity Aspect - Three-Wheeled Motorbikes: Typically designed to carry one or two passengers or small-scale cargo, although some models come equipped with additional seats or small cargo space at the rear. In contrast: - Pickup Trucks: These vehicles offer larger cargo capacity and can handle heavier loads. The spacious rear bed allows for transporting sizable items or materials, such as construction materials or standard equipment, without exceeding the maximum load capacity. The overall determination of load capacity varies based on individual users' needs and operational requirements.

1.3. Usage and Function - Three-Wheeled Motorbikes: Commonly used for personal or commercial transportation in urban or rural areas, covering relatively limited distances from one location to another. They serve daily travel needs or act as transportation tools for delivering small-scale goods. - Pickup Trucks: Primarily employed for commercial, agricultural, or construction purposes, often covering longer distances or even transporting goods beyond their immediate region. Pickup trucks are frequently used for carrying large items, heavy equipment, or construction materials. The usage and function of both modes depend on the user's intentions and requirements.

1.4. Performance and Safety: Three-wheeled motorbikes typically exhibit more responsive performance and better maneuverability in urban traffic. However, they may be more vulnerable to poor road conditions or extreme weather due to their smaller size and weight. Additionally, their specifications often lack various safety features, limiting their suitability for long-distance

operations. In contrast, pickup trucks generally offer more stable performance and can handle various road conditions and heavy loads. They are typically equipped with additional safety features such as seat belts, airbags, and advanced braking systems. Consequently, in terms of safety, pickup trucks outperform three-wheeled motorbikes, which cannot fully substitute for pickup trucks due to their differing performance and safety characteristics. Therefore, three-wheeled motorbikes and pickup trucks significantly differ in design, capacity, usage, and performance. The choice between the two depends on the user's needs and intended purpose for the vehicle.

2. The Level of Community Needs for the Use of Three-Wheeled Motor Vehicles to Support Business Activities

Table 1 Ownership of Three-Wheeled Cargo Motorcycle

Clasification	Total
Already Have	15
Don't Have Yet	5
	20

The overall ownership of three-wheeled motor vehicles, as obtained by the author from interviews with numerous micro, small, and medium-sized enterprises (UMKM) scattered across the Central Java region, including areas such as Semarang, Kendal, Demak, Ungaran, Boyolali, Klaten, Sukoharjo, and Solo, reveals the percentage of ownership. The majority of UMKMs in these regions have already incorporated three-wheeled vehicles into their business operations to facilitate smooth business activities. Specifically, 15 UMKMs utilize three-wheeled vehicles for transportation of goods, distribution, and as mobile kiosks, while 5 UMKMs have yet to acquire such vehicles. In 2023, many UMKMs transitioned to using three-wheeled vehicles due to their effectiveness in supporting operational efficiency.

Notably, the specifications of three-wheeled vehicles vary across different brands and models. Consumers are offered various types of three-wheeled motorcycles tailored to their individual needs, including preferred brands. Several motor vehicle manufacturers, especially those producing three-wheeled motorcycles, offer a wide range of well-known brands. Consumers consider these brands based on various aspects, each with its unique preferences. As for information regarding ownership of vehicles by brand in the market, can be seen on Figure 1:

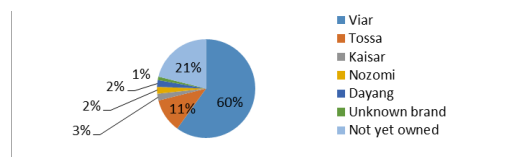


Figure 1 Diagram of Number of Three-Wheeled Motorcycle Brand Users of MSMEs in Central Java

After conducting interviews with MSMEs in the eight regions, we found that 20 merchants, accounting for 79% of MSMEs, own three-wheeled vehicles with various brands. Meanwhile, 21% of MSMEs still do not have three-wheeled cargo motorcycles. The number of ownerships of three-wheeled vehicles and information obtained by researchers from interviews shows that MSMEs spread across these eight regions are dominated by the use of three-wheeled cargo motorcycles with the Viar brand, which is the most in demand. The unit specifications offered by three-wheeled vehicles with the Viar brand are the most sought after and closely match the needs of businesses in the micro, small, and medium sectors.

As MSME actors, many informants stated that the success of their business operations is greatly influenced by the use of three-wheeled cargo motorcycles, which function both as a mode of transporting goods and as a medium for selling. However, from the results of the interviews, data on the buying interest of MSME players in the purchase of three-wheeled cargo motorcycles to support the smooth running of business operations show that the majority of informants either do not have or currently have no desire to buy the vehicle.

In the purchasing motivation, consumers naturally analyze to assist in the decision-making process according to their desires. One of the motivations for purchasing a three-wheeled vehicle is driven by factors that influence purchasing decisions, thereby creating an urge to fulfill the need or desire to own the vehicle unit. Based on the research design, the ownership motivation of MSME players spread across Central Java in the decision to purchase a three-wheeled motorized vehicle departs from the aspect of the vehicle's usefulness, as follows:

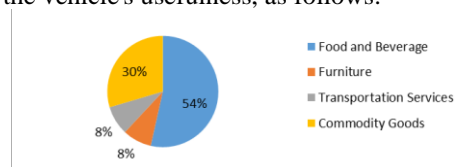


Figure 2 Three-Wheeled Cargo Motorcycle Transport Usability Diagram

In the research survey, vehicles were allocated to facilitate the selling of food and beverages, furniture, and transportation services. These vehicles transport merchandise such as fresh milk, tobacco, LPG gas cylinders, animal feed, and plantation MSME commodities to be sold in traditional markets. The majority of informants own three-wheeled motorbikes, which prove highly beneficial in business operations due to their capacity to transport a large amount of goods and their ease of access to roads or areas with limited land.

However, not all informants agreed on the effectiveness of using three-wheeled cargo motorcycles to support their business activities. While some felt benefited by their presence, others felt less helped. This discrepancy stems from the varied needs for facilities and infrastructure among different types of business activities conducted by MSME actors.

Overall, the level of community need for three-wheeled cargo motorcycles is significant, evident from their intention to use them to enhance the smooth running and support of business operations for MSME actors.

CONCLUSION

It can be concluded about the content of the context that discusses the significant differences both in terms of specifications and uses of three-wheeled cargo motorcycles that are different from pick-up cars and the level of need for the use of three-wheeled cargo motorcycles for the community in supporting business operations as MSME actors, as follows;

1. Three-wheeled vehicles have been used as a tool for the community, especially in Central Java, generally used for personal or commercial transportation in urban or rural areas for a long time. The utilization of Tricycle Vehicles for MSMEs is widely used to sell food and beverages such as fresh milk, tobacco, LPG gas cylinders, gallon mineral water, animal feed, and plantation commodities that will be sold to traditional markets. In addition, Three-Wheeled Motor Vehicles can greatly assist MSME actors in business operations by utilizing the capacity of small-scale freight transportation and making it easier to access various areas with roads that have limited land.
2. Three-Wheeled Motor Vehicles are different from pickups when viewed from the function of Three-Wheeled Motor Vehicles have various advantages,

namely more stable (Stability), superior in maneuvering on roads that have limited land (Flexibility), can be obtained at a lower price than four-wheeled vehicles (Economical), fuel efficient (Efficient), and suitable for small freight transport over short distances.

3. Three-wheeled vehicles are vital for MSMEs, providing essential support for their operations. To ensure the sustainability and growth of these businesses, it is imperative that all stakeholders, including the government, collaborate to create effective regulations that support and facilitate the use of three-wheeled vehicles in the commercial sector.

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