

Legal Analysis of The Role of The Transportation Department in Supervising and Taking Action on Overloading Vehicles in Karanganyar Regency

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Abstract

Introduction: *Overloaded freight vehicles constitute a serious issue in road transportation systems as they contribute to traffic accidents and accelerate road infrastructure damage.*

Methods: *This study aims to analyze the effectiveness of supervision and enforcement of overloaded freight vehicles by the Transportation Agency of Karanganyar Regency and to identify the obstacles encountered in its implementation. This research employs an empirical juridical method with statutory and field approaches through in-depth interviews and document studies.*

Novelty: *This research offers a novel contribution by integrating a legal-institutional analysis with empirical findings on the implementation of supervision and enforcement mechanisms, particularly highlighting the limitations of administrative sanctions and intergovernmental authority fragmentation in addressing overloading violations.*

R&D: *The findings indicate that supervision and enforcement have been carried out through preventive and repressive measures, such as vehicle inspection (VI), weighing at weighbridges, joint operations, ticketing, and load reduction. However, their effectiveness remains suboptimal as violations persist and sanctions are predominantly administrative in nature.*

Conclusion: *The main obstacles include limited human resources, inadequate infrastructure and authority, economic pressure from freight companies, and structural constraints related to the division of authority between central and regional governments, which restrict the flexibility of supervision.*

Keywords: *Freight Transportation; Transportation Agency; Overloading; Supervision; Law Enforcement.*

INTRODUCTION

Indonesia as a developing archipelagic country is in dire need of transportation services to connect its regions, especially in supporting cargo movement (1). Cargo transportation services are crucial in this scenario. All of Indonesia's territory can be reached by land, sea, and air due to its location consisting of hundreds of small and large islands and waters, mostly lakes, rivers, and oceans (2). Both developed and developing countries, such as Indonesia, have always struggled with communication and transportation problems. Current traffic problems, both

statistically and qualitatively, are worse than in previous years, in terms of air pollution, traffic violations, accidents, and congestion (1).

National transportation policy is not only directed at supporting the mobility of people and goods, but also as part of a sustainable development strategy (3). The principles of sustainability in the transportation sector include energy efficiency, safety, and controlling environmental impacts. This approach is in line with Sustainable Development Goals (SDGs), especially points 9 and 11, which emphasize resilient infrastructure and safe transportation. The land transportation system must be regulated through legal mechanisms that can maintain a balance between economic aspects and public safety (4).

Road transportation plays an important role in supporting community mobility and economic activities and is a means of supporting community unity and welfare as reflected in the 1945 Constitution of the Republic of Indonesia (5). However, the development of transportation has also given rise to various problems that are constantly faced by both developed and developing countries such as Indonesia. The traffic problems that have emerged recently show an increasingly high level of seriousness, both qualitatively and quantitatively compared to previous years. This condition is seen from the increasing number of accidents, congestion, air pollution, and violations of traffic regulations (1). One of the problems that often occurs is goods transport vehicles carrying loads exceeding their capacity (overload) so that it can damage roads, obstruct traffic, and increase the risk of accidents (6).

Vehicles used to transport goods often do not meet the requirements set out in statutory regulations (6). When these vehicles carry loads exceeding the maximum limits set, various negative impacts arise, such as accelerated road damage and traffic jams due to vehicles moving slowly due to overloading (7). In addition, these conditions often trigger accidents. Law of the Republic of Indonesia Number 22 of 2009 concerning Traffic and Road Transportation has an important role in supporting national development and strengthening social integration to improve community welfare (6,8).

The government has established Law No. 22 of 2009 concerning Traffic and Road Transportation as the legal basis for regulating vehicles operating on highways. This law aims to improve the safety of road users, establish traffic ethics, and provide legal certainty for the public (9). Article 169 of Law No. 22 of 2009 requires drivers and freight companies to comply with provisions regarding loading procedures, carrying capacity, vehicle dimensions, and road

classifications which are monitored through vehicle weighing equipment. Violations of these provisions can be subject to sanctions as stipulated in Article 307 in the form of imprisonment for a maximum of two months or a fine of up to IDR 500,000.00. In addition, Article 19 paragraph (2) of Law No. 22 of 2009 regulates road classifications based on the capacity to support vehicle loads, namely Class I, II, III Roads, and Special Class Roads, in order to maintain the condition of road infrastructure and prevent damage due to overloaded vehicles (10).

Despite regulations regarding vehicle load limits, violations still frequently occur. According to Andilolo's research, raids conducted by the Karanganyar Police Traffic Unit still found many vehicles carrying loads exceeding their capacity (overload), including risky goods such as iron, stone, and large pipes, which have the potential to endanger the safety of road users (11). In addition, research by R. Fahmi Natigor Daulay shows that the transfer of authority for monitoring overloading to the Ministry of Transportation has not been effective due to technical and administrative constraints, such as limited UPPKB facilities, non-standard weighing equipment, damaged facilities, and a lack of human resources. Utilization of monitoring results has also not been optimal due to weak data recording and central-regional coordination, so that the monitoring function has not been maximized (12).

Fasahuddin et al. found that law enforcement against freight vehicles at the Mataram City Transportation Agency was suboptimal due to overlapping authority between the Transportation Agency and the Police. The City Transportation Agency's authority, which relies on coordination with the NTB Provincial Transportation Agency and the Police, coupled with limited weighing facilities, low driver legal awareness, and minimal synergy between agencies, are major obstacles, despite clear regulations (13).

These various problems indicate that monitoring overloaded vehicles still requires serious attention, particularly in field implementation. Therefore, this study was conducted to analyze the role of the Karanganyar Regency Transportation Agency in this supervision. and enforcement of overloaded vehicles at weighbridges and identifying obstacles encountered in its implementation.

Based on the above description, the purpose of this study is to determine the effectiveness of the supervision and enforcement of overloaded vehicles by the Karanganyar Regency Transportation Agency and to analyze the factors that hinder the implementation of such supervision. This study is expected to provide academic benefits as a reference in the study of

transportation law and practically as evaluation material for related agencies in improving the effectiveness of supervision of freight vehicles on the highway.

METHOD/IDEA

The research method used in this research is empirical juridical research, namely research that examines law not only as a norm in statutory regulations, but also as real behavior in society (law in action) (14). This study aims to determine the effectiveness of supervision and enforcement of overloaded vehicles by the Karanganyar Regency Transportation Agency and to identify factors that hinder its implementation. The normative study in this study refers to laws and regulations relating to goods transportation on roads, especially Law Number 22 of 2009 concerning Traffic and Road Transportation and Regulation of the Minister of Transportation Number 60 of 2019 concerning the Implementation of Goods Transportation on Roads.

This research is qualitative in nature using a socio-legal approach, namely an approach that combines analysis of legal norms with empirical studies of their application in practice (14,15). The data sources used consist of primary data and secondary data. Primary data were obtained through interviews with sources related to the implementation of overloaded vehicle supervision, namely officers from the Karanganyar Regency Transportation Agency and goods transport drivers (truck drivers). Meanwhile, secondary data were obtained through literature studies that include primary legal materials in the form of related laws and regulations, secondary legal materials in the form of books, journals, and previous research, as well as data on overloaded vehicle violations obtained from the Karanganyar Regency Police. Data collection was carried out through literature studies, document studies, and interviews, which were then analyzed descriptively qualitatively to answer the research questions without using statistical calculations (16).

RESULTS AND DISCUSSION

Effectiveness of Supervision and Enforcement of Overloaded Vehicles (*Overload*) by the Karanganyar Regency Transportation Agency

The main legal basis for these regulations is contained in Law No. 22 of 2009 concerning Traffic and Road Transportation (9,17). Article 169 paragraph (1) emphasizes that drivers or freight transport companies are required to comply with provisions regarding loading procedures,

carrying capacity, vehicle dimensions, and the class of road used. Violations of these provisions can be subject to sanctions as stipulated in Article 307 of the LLAJ Law, namely imprisonment for a maximum of two months or a maximum fine of five hundred thousand rupiah. This provision shows that overloading violations are not only technical violations, but also legal violations that can endanger traffic safety and accelerate road damage.

The regulation of these obligations is followed by provisions on criminal sanctions as regulated in Article 307 of Law Number 22 of 2009. In this article it is emphasized that anyone who drives a motorized vehicle for transporting goods who does not comply with the provisions on loading procedures, carrying capacity and dimensions of the vehicle as referred to in Article 169 paragraph (1) can be punished with imprisonment for a maximum of two months or a fine of up to five hundred thousand rupiah. The formulation of this article shows that the violation overload has real legal consequences, so that law enforcement officers have a basis for taking action in the form of fines, stopping vehicles, or further legal proceedings if necessary (8).

Other regulations regarding criminal sanctions, the same law also provides supervisory authority to transportation agencies through administrative investigation mechanisms. This is regulated in Article 262 paragraph (1) which essentially states that Civil Servant Investigators in the field of traffic and road transportation are authorized to conduct inspections of the technical requirements and roadworthiness of motor vehicles, examine violations of permits for the transportation of people or goods, and monitor violations of vehicle loads and dimensions at weighing points. Civil Servant Investigators are also given the authority to prohibit or delay the operation of vehicles that do not meet technical requirements, as well as to confiscate vehicle inspection documents if violations are found. This norm places the Transportation Agency as part of the traffic law enforcement system, especially in the administrative and technical scope of vehicles (8).

This legal framework is strengthened by implementing regulations, one of which is the Minister of Transportation Regulation Number 60 of 2019 concerning the Implementation of Goods Transportation by Motorized Vehicles on Roads. This regulation regulates in more detail the implementation of goods transportation, starting from vehicle standards, loading procedures, dimensions, to the obligation to fulfill roadworthiness requirements. These provisions, among other things, emphasize that every goods transportation vehicle must meet technical and roadworthiness requirements and comply with the established dimensional and carrying capacity

limits. Based on this regulation, load supervision not only focuses on the weight of the goods being transported, but also the vehicle's compliance with technical specifications, operational permits, and land transportation safety standards (18).

Overloaded vehicle monitoring in Karanganyar Regency is carried out through several mechanisms, namely vehicle inspections through periodic motor vehicle inspections (KIR tests), field enforcement operations, and vehicle weighing at weighbridges. Based on the results of interviews with Dwi Tjahjo Arinto, S.E., M.M., monitoring is carried out through joint operations with the police which include administrative inspections such as driving licenses and vehicle registrations, as well as technical inspections of vehicles such as brake conditions, frames, vehicle dimensions, and suitability of loads to carrying capacity. These inspections aim to ensure that vehicles meet technical requirements and are truly roadworthy before operating.

Technically, the primary monitoring of freight vehicle loads is carried out through the Motor Vehicle Weighing Implementation Unit (UPPKB) or weighbridge. At this facility, vehicles are required to enter the weighing area to measure the total vehicle weight, axle load distribution, and compliance with the Permitted Total Weight (JBI) and Heaviest Axle Load (MST). Supervision not only assesses the total vehicle weight, but also the load pressure on each axle because it has a direct impact on the durability of the road structure (19).

Along with technological developments, the weighbridge monitoring system is also supported by digital devices such as Weight in Motion, dimensional sensors, CCTV, and integration of ticketing and vehicle inspection databases (20). This digitalization allows the process of measuring and recording violations to be carried out electronically, thereby increasing data accuracy while strengthening the monitoring and enforcement functions of goods transport vehicles.

Abbas Salim (in Novie Hari Purnomo) explains that freight transportation supervision is necessary to maintain a balance between logistics mobility needs and infrastructure capacity, because an imbalance between the two will cause road damage, wasteful maintenance costs, and an increased risk of accidents. Freight supervision is not just about enforcing regulations, but also as an instrument for protecting public interests in the transportation system (20).

Based on interviews, monitoring of overloaded vehicles is carried out through weighing at weighbridges and field operations integrated with administrative and technical vehicle inspections. Dwi Tjahjo Arinto, S.E., M.M., stated:

“Overloaded vehicles are monitored through weighing at weighbridges and field operations. In addition to checking the load weight, officers also conduct administrative and technical inspections of the vehicles. These inspections cover the condition of the brakes, the vehicle frame, the vehicle dimensions, and the suitability of the load type to the vehicle's carrying capacity. This is done to ensure the vehicles are truly roadworthy and do not endanger safety or road infrastructure.”.

Monitoring through weighing has direct relevance to efforts to protect road infrastructure (21). Damage to national roads in many cases is influenced by vehicles. *Over Dimension Over Loading* (ODOL) vehicles that pass continuously. Technical analysis shows that ODOL vehicles are the dominant factor causing road damage because excessive loads accelerate the decline in the pavement's service life before the design period is reached. This condition is characterized by an increase in the value of *International Roughness Index* (IRI), decrease *Pavement Condition Index* (PCI), as well as reduced remaining road service life. The phenomenon of damage due to overload. This is also reinforced through analysis of the vehicle axle load based on weighing data. Trucks with loads exceeding the standard produce Vehicle Damage Factor which is much greater than the national standard, thus accelerating the deterioration of the road pavement structure. Repeated excessive loads cause cumulative damage which results in increased road preservation costs and a decrease in the quality of transportation services (7).

From a driver's perspective, these inspection procedures are directly experienced in the field. Supri Haryono explained that during inspections, officers not only assess vehicle documentation but also check that the load matches the carrying capacity. He explained:

“During roadside inspections, officers typically check vehicle documents, such as driver's licenses and vehicle registration documents, then assess the type of cargo being carried and estimate its weight. I've been asked to unload some of my cargo because it was deemed to be over capacity. After the load was unloaded, I was allowed to continue my journey, subject to applicable regulations.”.

The oversight mechanism also includes administrative inspections of vehicles and transportation permits. These inspections include vehicle documents, proof of passing periodic inspections, and freight transportation permits. These inspections are conducted to ensure that vehicles not only meet load limits but are also technically and legally fit for operation. In transportation legal oversight, administrative inspections serve as an initial filter to prevent vehicles from failing to meet the requirements for operating on public roads (21).

Field supervision is often integrated with joint cross-agency operations. The involvement of the police, transportation agencies, and other agencies is necessary because supervision...*overload* touching on both technical and law enforcement aspects. This coordination pattern is considered important because load violations are often related to violations of dimensions, documents, and traffic safety (22).

Supervision efforts are also accompanied by a strategy for handling violations through improving weighing facilities, strengthening the ticketing system, and inter-agency cooperation. Facility improvements such as adding weighing equipment and monitoring technology are carried out to narrow the gap for violations, while institutional collaboration aims to strengthen the consistency of enforcement of regulations in the field (6). This mechanism shows that cargo supervision is carried out through a layered approach, starting from vehicle testing, weighing loads, administrative inspections, to technology-based supervision. This layered system was established because violations overload are not only influenced by technical factors of the vehicle, but also economic factors, the behavior of business actors, and weak legal compliance (23).

Enforcement against overloaded vehicle violations is essentially a repressive step in the road transportation law enforcement process following on-site supervision and technical inspections. This enforcement is an important indicator in assessing the effectiveness of control Over Dimension Over Loading (ODOL), because at this stage the law is tested not only from the perspective of the existence of norms, but also its coercive power and deterrent power against perpetrators of violations. Normatively, enforcement has been regulated in Law No. 22 of 2009 concerning Traffic and Road Transportation, which classifies violations of dimensions and loads as violations of technical requirements and vehicle loading procedures. Forms of enforcement applied in the field include tickets or criminal sanctions, administrative fines, orders to unload loads, vehicle detention, and prohibitions on continuing the journey before the provisions are met (8).

In terms of enforcement, vehicle loading violations are generally handled through ticketing, administrative fines, orders to reduce the load, or even vehicle impoundment for serious violations. Complete data on the number of enforcement actions against overloaded vehicles by the Karanganyar Police Traffic Unit from 2021 to 2025 can be seen in the following table.

Table 1. *Number of Actions Against Overload and Overdimension Violations by the Karanganyar Police Traffic Unit in 2021–2025*

No	Month	2021	2022	2023	2024	2025
1	January	0	37	22	27	11
2	February	0	33	42	14	11
3	March	2	27	26	24	1
4	April	2	20	25	12	1
5	May	3	15	20	18	7
6	June	9	40	27	10	8
7	July	4	31	17	12	5
8	August	39	24	11	7	4
9	September	28	22	14	8	7
10	October	16	14	4	21	0
11	November	23	0	6	0	0
12	December	20	4	5	3	0
Amount		146	267	219	156	55

Based on data in Table 1 obtained from the Karanganyar Police, the number of enforcement actions against overloaded vehicles between 2021 and 2025 was recorded at 843. When viewed annually, the number of enforcement actions shows a fluctuating but decreasing trend. In 2021, there were 146 cases, then a significant increase in 2022 to 267 cases. Furthermore, in 2023, the number of enforcement actions decreased to 219 cases and decreased again in 2024 to 156 cases. A significant decrease was seen in 2025, with 55 enforcement actions.

The decline in enforcement actions could indicate two possibilities. In reality, compliance with load limit regulations by freight transport operators is increasing. However, on the other hand, the decline could also be influenced by factors such as the intensity of supervision, limited personnel, and the frequency of enforcement operations in the field. Therefore, further analysis is needed to determine whether the decline truly indicates successful law enforcement or whether there are obstacles in its implementation (23).

During the implementation of enforcement, the focus is often still on drivers as the direct perpetrators in the field. IPDA Faham Rosyadi explained that ticket sanctions are more often given to drivers because they are the parties operating the vehicle when the violation is discovered, while the responsibility of the transportation company or the owner of the goods has not been fully touched by law. Tickets are issued when officers find violations through inspection activities in the field, either through checking vehicle documents, proof of passing periodic inspections (KIR test), or through the process of weighing vehicles during enforcement operations. In positive legal provisions, overdimension violations can be charged under Article

277 of Law Number 22 of 2009 concerning Traffic and Road Transportation (LLAJ Law), while violation *overloading* regulated in Article 307 of the LLAJ Law which contains the threat of criminal sanctions in the form of imprisonment or fines.

Driver experience also shows that violation *overload* often influenced by economic pressures and company demands. One truck driver stated that the load is usually determined by the company or the owner of the goods, leaving the driver with little choice but to transport the load. This situation demonstrates that violation *overload* not only caused by individual behavior, but also by logistics systems and economic pressures in the freight industry.

Several indicators can be used to assess the effectiveness of supervision, including the level of business compliance, the reduction in the number of violations, the impact on road damage, the consistency of supervision, and the effectiveness of sanctions. From a regulatory perspective, the legal provisions regarding ODOL are actually quite adequate, as they regulate vehicle dimension limits, carrying capacity, and criminal and administrative sanctions. However, in practice, the effectiveness of supervision is still influenced by various factors such as limited supervisory personnel, uneven weighing facilities, and a legal culture among business actors that remains tolerant of overloading practices.

Soerjono Soekanto's theory of legal effectiveness explains that the success of law enforcement is influenced by five factors: the law itself, law enforcement officers, infrastructure, society, and legal culture. In the context of vehicle supervision, *overload*, regulations are actually already available, but the apparatus and infrastructure factors are still limited, while the legal culture of transportation business actors tends to be permissive towards violations (24). In addition, Lawrence M. Friedman's legal system theory also explains that the effectiveness of the law is influenced by three elements, namely legal structure, legal substance, and legal culture (25,26).

1. Legal Structure

In terms of legal structure, the problem lies not in the availability of institutions, but rather in the effectiveness of their performance in the field. Institutionally, supervision of overloaded vehicles has been supported by the Department of Transportation, the Police, and weighing facilities, thus fulfilling the concept of legal structure according to Lawrence M. Friedman (25). However, in practice, supervision is not optimal because it still relies on

periodic raids, while overloaded vehicles often operate outside the scope of supervision. This shows that the existing legal structure does not have adequate reach.

This condition was also acknowledged by Dwi Tjahjo Arinto, S.E., M.M., who explained:

“In terms of authority, the Transportation Agency clearly has a supervisory function. But in the field, we can't monitor every passing vehicle. Personnel are limited, and weighing equipment isn't available on all routes. So, supervision is still selective, depending on the operation. This is something that transportation operators sometimes exploit.”.

This explanation demonstrates that the structural problem lies not in the legitimacy of authority, but rather in the capacity for implementation. In Friedman's framework, a weak legal structure will make it difficult for the law to function effectively even when norms are in place.

2. Legal Substance

In fact, there are no gaps in the substance of the law. Regulations regarding vehicle dimensions, load limits, loading procedures, and even the threat of criminal sanctions are formulated in sufficient detail in legislation. Theoretically, this demonstrates that the law provides clear standards of conduct for transportation businesses.

The problem isn't the absence of regulations, but the way they're enforced. Enforcement often involves administrative fines or traffic tickets, while criminal sanctions are rarely used. This results in violations *overload* not perceived as a serious violation, but rather as merely an operational risk. At this point, there is a gap between the formulation of the norm and the reality of its implementation.

This phenomenon demonstrates that the legal substance does not yet fully exert economic coercive power. As long as the benefits of carrying excess cargo outweigh the penalties, regulation will struggle to be effective. This aligns with transportation law studies that show that the lack of firm enforcement of sanctions allows the practice of ODOL to persist despite regulatory oversight.

Field experience shared by Supri Haryono also illustrates this situation:

“We know there's a load limit under the rules. But in practice, companies still demand maximum capacity. Drivers don't have many options. If they're stopped, they're ticketed, and sometimes they're told to reduce their load, but then they continue driving. So the rules are there, but in practice, it depends on the conditions.”.

The statement shows that the substance of the law has not fully bound the behavior of business actors because its implementation is not yet consistent.

3. Legal Culture

The most crucial element lies in legal culture. Lawrence Friedman defines legal culture as a society's attitudes, values, and perspectives on the law. Overloaded vehicles, in contrast to the legal culture of transportation operators, still show a high tolerance for violations.

*Overload*Overloading is no longer seen as an aberration, but rather as part of business practice. Distribution cost efficiencies, shipping demands, and business competition have shaped the perception that carrying excess cargo is "normal." In situations like this, compliance with the law is not born of awareness, but simply from fear of raids. The working relationship between drivers and companies also reinforces this culture of violation. Drivers are often powerless to refuse overloading due to economic pressures. The following statement clarifies this situation:

"We drivers actually understand the risks, especially on damaged roads or long descents. But if we don't carry the company's load, we might not be called back to work. So, we have no choice but to continue driving."

This statement demonstrates that violations do not arise from isolated individual actions, but rather from the culture of the freight industry. Within Friedman's framework, such a permissive legal culture will always undermine the effectiveness of the legal structure and substance.

In addition to internal law enforcement factors, the effectiveness of oversight is also influenced by inter-agency coordination. Handling ODOL vehicles cannot be done sectorally, but requires cooperation between the Transportation Agency, the Police, the Ministry of Transportation, and road management agencies. This coordination includes joint operations, the exchange of violation data, and outreach to transportation business operators. Without good coordination, oversight tends to be partial and enforcement becomes inconsistent (27).

Obstacles for the Karanganyar Regency Transportation Agency to Supervise and Follow Up on Overloaded Vehicles

Oversight of overloaded vehicles in Karanganyar Regency still faces various obstacles. These obstacles can be classified as internal, external, and structural.

1. Internal Barriers

Obstacles originating from within the institution are primarily related to the availability of human resources, infrastructure, budget support, and the scope of enforcement authority. In terms of human resources, the number of supervisory officers is still not commensurate with the size of the supervision area and the high mobility of goods transport vehicles passing through the Karanganyar Regency area. This is the reason why supervision cannot be carried out comprehensively, but only focused on certain points that are considered prone to violations. The problem does not stop at the number of personnel, but also on technical competence which is not yet fully evenly distributed in the ability to weigh vehicles, measure dimensions, and read axle load distribution (22).

Based on the interview results, Dwi Tjahjo Arinto, S.E., M.M., an official from the Karanganyar Regency Transportation Agency, explained that the limited number of officers meant that monitoring of overloaded vehicles could not yet reach all vehicles passing through the area (28). In addition, monitoring was also hampered by limited infrastructure such as weighing equipment and supporting facilities for monitoring overloaded vehicles (19).

In addition to human resources, internal obstacles are also evident in the limited monitoring facilities and infrastructure. Vehicle load monitoring is highly dependent on the accuracy of weighing equipment and other supporting facilities. However, field observations revealed damaged weighing equipment, a limited number of weighing devices, and the absence of portable weighing equipment that could support weighing activities in different locations. The absence of these facilities makes it impossible to directly monitor certain road sections, especially distribution routes far from weighbridges. On the other hand, weighbridge operations have not yet been fully operational due to technical constraints and limited facility maintenance (29).

These limitations are also influenced by inadequate budget support. Implementing enforcement operations, maintaining weighing equipment, and providing operational facilities require significant funding. Supervision activities cannot be carried out routinely, but must be adjusted to the availability of funds at specific periods due to budget constraints. Consequently, the intensity of supervision becomes unstable and opens up room for violators to adjust their operational hours. Another internal issue relates to the enforcement authority held by the Transportation Agency. Institutionally, the Transportation Agency has technical

and administrative oversight authority, but not all violations can be prosecuted independently because actions that have criminal consequences still require police involvement through joint operations. This dependency makes the enforcement process not always able to be carried out quickly and flexibly (29).

2. External Barriers

Oversight of overloaded vehicles also faces obstacles stemming from external factors, particularly those related to driver behavior, transportation company policies, and the economic dynamics of the logistics sector. Overloading violations in freight transport are not always caused by a lack of understanding of legal provisions. These problems are often related to work systems and operational distribution demands. The implementation of deposit targets, tight delivery deadlines, and pressures for cost efficiency encourage business operators and drivers to transport goods beyond the specified limits. In such situations, compliance with load limit regulations is often placed as a secondary priority. This shows that the issue of legal compliance does not solely depend on individual driver awareness. Compliance is also influenced by the working relationship between drivers and transportation companies, as well as by the goods distribution system that demands speed and efficiency across the board (30).

Overloading is often maintained because it is believed to reduce logistics costs and increase profit margins for shipping companies. A single trip's maximum load is considered more efficient than multiple trips with the specified load, especially for medium- and long-distance distribution. This pattern then creates economic rationality among business actors, believing the risk of administrative sanctions is still smaller than the potential profits from this practice.*overload*. In the eyes of society, violations are no longer seen as deviations, but as part of the company's operational strategy (30,31).

Freight transport drivers often find themselves in a dilemma when faced with exceeding specified loads. Some drivers are aware of the regulations regarding vehicle load limits and the safety risks that can arise if a vehicle is overloaded. However, the load capacity is generally determined by the company or the owner of the goods, so drivers only operate vehicles within the specified load limits. Work pressure and dependence on income make it difficult for drivers to refuse, fearing they will no longer be offered work. This was conveyed by Supri Haryono, who stated that overloading is usually not the driver's decision, but rather

comes from the warehouse or company, while the driver simply drives the vehicle within the specified load. This statement emphasizes that overloading violations cannot be viewed solely as an individual driver's fault, but rather relates to the work patterns in freight transport activities, which place drivers as implementers of the company's operational system.

In addition to legal awareness and economic pressures, external obstacles are also evident in the proliferation of various violations committed by transport operators. Many overloaded vehicles deliberately avoid weighbridge facilities by choosing alternative routes, traveling at night, or exploiting roads with minimal supervision. In certain instances, a pattern has even emerged known as "*cat and mouse*" between drivers and officers, where information about the location of the raid is quickly spread through communication between drivers (6). Supervision is considered to be reactive because the perpetrators of violations adjust their movements to the schedule and location of the supervision.

On the other hand, the weak deterrent effect of sanctions also strengthens external barriers to oversight. Relatively small administrative fines and the predominance of enforcement against drivers make violations more likely. *overload* is still perceived as a calculated operational risk. Several studies on ODOL law enforcement show that as long as the economic benefits of overloading outweigh the sanctions imposed, voluntary compliance is difficult to achieve (32,33). This results in violations tending to recur and even become normalized in goods distribution practices.

This series of external factors shows that obstacles to supervision do not only stem from weak legal awareness, but also from the structure of economic incentives, work relations, and the adaptation of business actors to supervisory patterns. This situation places the supervision of overloaded vehicles in a complex position, because officials are not only faced with violations of the law, but also with the distribution system and economic interests that support the practice of violations themselves (6).

3. Structural Barriers

Structural obstacles in monitoring overloaded vehicles are related to the regulatory construction and division of authority in the land transportation system. Law Number 22 of 2009 concerning Traffic and Road Transportation has regulated the obligations of drivers and transportation companies to comply with provisions regarding loading procedures, vehicle carrying capacity, vehicle dimensions, and road class as stipulated in Article 169 paragraph

(1). In addition, Article 262 paragraph (1) gives authority to Civil Servant Investigators (PPNS) in the field of traffic and road transportation to conduct technical inspections of vehicles. However, in practice, repressive law enforcement authority remains with the Republic of Indonesia National Police so that the Transportation Agency can generally only conduct administrative supervision and initial inspections of vehicles suspected of violating load regulations (8).

Structural barriers also relate to the management of motor vehicle monitoring facilities, particularly the Motor Vehicle Weighing Implementation Unit (UPPKB), or weighbridges. Management of these facilities falls under the authority of the central government through the Ministry of Transportation. Centralized weighbridge management leaves local governments, including the Karanganyar Regency Transportation Agency, without full operational control over the primary vehicle load monitoring instrument. This situation limits local governments' flexibility in determining the intensity of weighing operations and developing monitoring facilities tailored to the characteristics of freight traffic in their areas.

In addition, structural obstacles are also influenced by the division of government affairs as regulated in Law Number 23 of 2014 concerning Regional Government. In the regional government system, the transportation sector is included in concurrent government affairs whose authority is divided between the central, provincial, and district/city governments. Several strategic transportation facilities such as national roads, type A terminals, and weighbridges are under the authority of the central government. This division of authority means that regional governments do not have full control over all goods transportation supervision instruments, so that supervision of overloaded vehicles in the regions is not fully responsive to the condition of goods transportation traffic in their areas (32).

In addition, the authority to enforce traffic violations also involves the police. The Department of Transportation generally only has technical and administrative oversight authority, while enforcement in the form of ticketing or legal proceedings falls under the authority of the police (32). This condition means that the law enforcement process against overloaded vehicles often requires cross-agency coordination and cannot always be carried out quickly.

Based on the description above, obstacles to monitoring overloaded vehicles in Karanganyar Regency can be classified into three main categories, namely internal, external, and structural in the form of the following table:

Table 3.1 *Classification of Obstacles to Overloaded Vehicles*

Types of Obstacles	Factors / Sub-Aspects	Description / Example	Impact on Supervision
Internal	HR	The Transportation Agency's number of supervisory officers is still limited compared to the vast area of supervision and the high volume of freight vehicles passing through Karanganyar Regency. Furthermore, the technical skills of officers in weighing vehicles, measuring dimensions, and checking axle load distribution are not yet fully distributed among all personnel.	Supervision cannot be carried out comprehensively across all goods distribution routes and is only focused on certain points that are considered prone to violations, so that there are still overloaded vehicles that can pass without being detected.
	Facilities and infrastructure	The availability of monitoring facilities, such as vehicle weighing equipment, remains limited. In some cases, weighing equipment is damaged or portable weighing equipment is not readily available for mobile use on various roads. Weighing facilities are also not available on all freight distribution routes.	Vehicle load monitoring is suboptimal, especially on roads far from weighing facilities. This situation creates opportunities for overloaded vehicles to operate on routes beyond the reach of monitoring.
	Budget Support	Supervisory activities such as enforcement operations, weighing equipment maintenance, and procurement of operational facilities require adequate budget support. However, in practice, available funds are limited, so not all supervisory activities can be carried out routinely.	The intensity of supervision has become unstable and is only carried out at certain times. This situation can be exploited by transport operators to adjust operating hours to avoid inspections.
	Enforcement Authority	The Transportation Agency generally only has technical and administrative oversight authority, while criminal enforcement, such as ticketing, falls under the jurisdiction of the	The Department of Transportation cannot always carry out enforcement actions quickly and independently. Reliance on coordination with

Types of Obstacles	Factors / Sub-Aspects	Description / Example	Impact on Supervision
		police. Therefore, in many cases, enforcement of violations requires joint cross-agency operations.	other agencies sometimes delays handling violations.
External	Driver Behavior	Many truck drivers continue to exceed the maximum load limits because they follow the company's or the owner's instructions. Drivers are often merely tasked with carrying out the work and therefore lack the authority to determine the amount of cargo carried.	Overloading violations are not only caused by individual driver errors, but are also influenced by the work system in the freight industry, making supervision more difficult to control only through action against drivers.
	Company policy	Some shipping companies set delivery and distribution cost efficiency targets, encouraging the transport of large quantities of goods in a single trip. Overloading is believed to reduce operational costs and increase company profits.	Compliance with load limit regulations is often a secondary priority compared to the interests of business efficiency, so that the practice <i>overload</i> still occurs even though it has been regulated in laws and regulations.
	Violation Mode	Transport operators often use various methods to avoid supervision, such as choosing alternative routes that do not have weighbridges, traveling at night, or utilizing road sections that are rarely inspected.	Supervision becomes reactive because perpetrators adjust their movements to the location and time of the surveillance operation, making it difficult to monitor violations consistently.
	Deterrent Effect of Sanctions	Sanctions for overloading violations generally take the form of tickets or administrative fines, which are relatively small compared to the economic benefits of overloading. Furthermore, enforcement is more often directed at drivers than at transportation companies.	Violation <i>overload</i> tends to recur because business actors consider sanctions as an operational risk that is still tolerable, so that the level of legal compliance with load limit provisions is still low.
Structural	Regulatory Construction	Provisions regarding vehicle load limits and dimensions are clearly stipulated in the Road Traffic and Transportation Law. However, in practice, oversight and enforcement authority is divided	The Transportation Agency cannot directly impose criminal sanctions for violations found, so the law enforcement process often

Types of Obstacles	Factors / Sub-Aspects	Description / Example	Impact on Supervision
		between the Transportation Agency and the police.	requires cross-agency coordination.
	Transfer of Authority of UPPKB	Management of Motor Vehicle Weighing Implementation Units (UPPKB) or weighbridges is under the authority of the central government through the Ministry of Transportation.	Regional governments have limitations in regulating the operation of weighing facilities or determining the intensity of supervision that is appropriate to the conditions of goods transport traffic in their area.
	Division of Government Affairs	In the regional government system, several transportation facilities such as national roads and type A terminals are under the authority of the central government.	Oversight of overloaded vehicles by local governments cannot fully cover the entire transportation network because some authority lies at different levels of government.

CLOSING

1. Conclusion

Supervision and enforcement of overloaded vehicles (overload) in Karanganyar Regency has been implemented based on Law Number 22 of 2009 and its implementing regulations through vehicle inspection (KIR) tests, field inspections, and weighing at weighbridges. Enforcement is carried out through ticketing, administrative fines, and unloading. Data from the Karanganyar Police Traffic Unit for 2021–2025 shows a downward trend in violations, although it has not been fully effective in optimally suppressing violations.

Its implementation still faces internal, external, and structural obstacles. Internal obstacles include limited human resources, infrastructure, and budget. External obstacles relate to the behavior of business actors and drivers who continue to operate overloading due to demands for cost efficiency. Meanwhile, structural barriers arise from the division of authority between agencies, with the Transportation Agency focusing on administrative oversight while criminal enforcement falls to the police. Furthermore, the central government manages weigh stations, which limits regional flexibility. This situation highlights the need for improved oversight facilities, strengthened inter-agency coordination, and increased business compliance.

2. Suggestion

Based on the research results, it is recommended that the Karanganyar Regency Transportation Agency improve the effectiveness of overloaded vehicle supervision by strengthening human resource capacity, optimizing infrastructure such as weighing equipment and digital technology, increasing routine supervision, and strengthening coordination with the Police and outreach to transportation business actors. In addition, the Central Government through the Ministry of Transportation needs to strengthen the structural policy of ODOL control by reviewing the division of central and regional authorities, increasing budget support and weighing facilities, and emphasizing the application of sanctions that not only target drivers but also corporations to create a deterrent effect and support the effectiveness of supervision in the regions.

REFERENCE

1. Budiarto A, Mahmudah. Rekayasa Lalu Lintas. Semarang: UNS Press; 2007. 1 p.
2. Muhammad A. Hukum Pengangkutan Niaga. Bandung: Citra Aditya Bakti; 1998.
3. Frazila RB, Zukhruf F, Nugroho TS, Karsaman RH, Rahman H. Pengembangan Metode Penilaian Indikator Transportasi Berkelanjutan di Indonesia. *J Tek Sipil*. 2021;28(1):73–82.
4. Nauli BP. Sustainable Development Goals (SDGs) 9: Industry, Innovation, and Infrastructure during the COVID-19 Pandemic in Indonesia. *J Hub Int*. 2024;10(2).
5. Bassith RF Al, Kurnianingsih M. Counseling Against Traffic Violations by Drivers Under the Influence of Alcohol (Case Study in Surakarta City). *Int Conf Restruct Transform Law*. 2024;2(2):152–7.
6. Ardhan J, Susanti A. Analisis Penanganan Permasalahan Overdimension Overloading di Ruas Jalan Mojokerto – Surabaya. *Mitrans J Media Publ Terap Transp*. 2023;1(2):203–12.
7. Tosulpa ME, Putranto LS. Analisis Penanganan Pengaruh Kerusakan Jalan Nasional Akibat Muatana Berlebih di Provinsi Lampung. *J Tek Sipil Cendekia*. 2025;6(2):238–55.
8. Undang-Undang Nomor 22 Tahun 2009 tentang Lalu Lintas dan Angkutan Jalan. 22 2009.
9. Sukmawati A, Farid AM. Causality Study of Drunk Driver Traffic Violations on Road. *DiH J Ilmu Huk*. 2025;21(1):31–42.
10. Anggara A, Ukas. Pertanggungjawaban Pidana Terhadap Badan Usaha sebagai Pelaku Tindak Pidana Gangguan Fungsi Jalan. *Sci J J Ilm Mhs*. 2009;1(2):1–10.

11. Andilolo JP, Tuasikal H, Markus DP. Implementasi Hukum Lalu Lintas dalam Undang-Undang Nomor 22 Tahun 2009 Tentang Lalu Lintas dan Angkutan Jalan. *UNES Law Rev.* 2024;6(4):11717–29.
12. Daulay RFN. AKIBAT HUKUM PERALIHAN KEWENANGAN PERHUBUNGAN (Studi Kasus Balai Pengelola Transportasi Darat Wilayah II Provinsi Sumatera Utara) Januari. *GRONDWET J Huk Tata Negara Huk Adm Negara.* 2024;3(1):338–63.
13. Fasahuddin, Lestari BFK, Haerani R. Kewenangan Dinas Perhubungan Kota Mataram Dalam Upaya Penegakan Hukum Terhadap Kendaraan Angkutan Barang Berdasarkan Undang-Undang Republik Indonesia Nomor 22 Tahun 2009 Tentang Lalu Lintas Dan Angkutan Jalan. *Unizar R J.* 2025;4(1).
14. Marzuki PM. *Penelitian Hukum.* Jakarta: Kencana; 2014.
15. Seorjono S, Mamudji S. *Penelitian Hukum Normatif.* Jakarta: Rajawali Pers; 2015.
16. Sugiyono D. *Metode Penelitian Kuantitatif, Kualitatif, dan Tindakan.* Bandung: Alfabeta; 2013. 189–190 p.
17. Sagoro LA, Surbakti N. *Perlindungan Hukum Terhadap Sopir Truk karena Kelalaian Mengakibatkan Orang Lain Meninggal Dunia.* 2015.
18. Peraturan Menteri Perhubungan Nomor 60 Tahun 2019 tentang Penyelenggaraan Angkutan Barang dengan Kendaraan Bermotor di Jalan. 60 2019.
19. Abuzar, Wibowo GDH, Risnain M. Pelaksanaan Pengawasan Terhadap Kendaraan yang Muatannya Melebihi Daya Angkut dan Dimensi Berdasarkan Undang-Undang No. 22 Tahun 2009 tentang Lalu Lintas dan Angkutan Jalan di Pulau Lombok. *J Educ Dev.* 2022;10(3):760–70.
20. Purnomo NH. Evaluasi Penggunaan Sistem Jembatan Timbang Online (JTO) Terintegrasi dengan Metode PIECES Framework. *J Algorithn.* 2023;20(1):87–98.
21. Syafira A. Peran Dinas Perhubungan Kota Medan Dalam Pengawasan Transportasi Umum Rute Marel-an-Amplas (Studi Di Dinas Perhubungan Di Kota Medan). *J Ilmu Mhs Huk [JIMHUM].* 2022;2(1):1–20.
22. Daivi KIS, Dewi AASL, Suryani LP. FUNGSI PENGAWASAN DINAS PERHUBUNGAN DALAM PENERTIBAN. *J Prefer Huk.* 2022;3(2):370–8.
23. Muttaqin R, Halim A, Setyawan SRA. Analysis of Law Enforcement Against Over Dimension Over Load (ODOL) Violations According to the Road Traffic and Transportation

- Law. J Restor Huk dan Polit. 2024;2(02):71–7.
24. Soekanto S. Pengantar Penelitian Hukum. Jakarta: Rajawali Pers; 2009.
 25. Friedman LM. The Legal System, A Social Science Perspective. New York: Russell Sage Foundation; 1974.
 26. Razak A. Mewujudkan Pemilu Adil dan Bermartabat: Suatu Tinjauan Sistem Hukum Lawrence M . Friedman. Fundam J Ilm Huk. 2023;12(2):471–88.
 27. Rahmawati NMY, Dewi NKRK. Sinergitas Antara Kepolisian dan Dinas Perhubungan dalam Upaya Penanggulangan Rekayasa Lalu Lintas di Wilayan Polresta Denpasar. J Huk Mhs. 2021;1(2):197–207.
 28. Anugerah G, Basyari P, Basmantra IN. Analisis Terkait Overdimension Overload (ODOL) dalam Angkutan Barang Ditinjau dari Hukum Pidana dengan UU No . 22 Tahun 2009 Tentang Lalu Lintas Angkutan Jalan. JURPIKAT (Jurnal Pengabdian Kpd Masyarakat). 2025;6(4):2158–68.
 29. Samad H. Overdimensi dan Overloading Lalu Lintas Kendaraan Angkutan Barang melalui Suatu Uji Penimbangan Kendaraan Bermotor di Maccopa Kabupaten Maros. Universitas Hasanuddin; 2019.
 30. Wiramukti AK, Devanti FAR, Prastika KR, Hidayah SF, Sadri PDA. Socialization of Zero Over Dimension Over Loading Policy to Freight Transport Drivers at UPPKB Kalitirto. J Pengabdian Kpd Masy Semangat Nyata untuk Mengabdikan (JKPM Senyum). 2025;5(1):49–56.
 31. Muhajirin A, Sialana F, Ratuanak AMD. Penyelesaian Kasus Kecelakaan Lalu Lintas pada Polresta Pulau Ambon dan. J Pengabdian Masy dan Ris Pendidik. 2025;3(4):2048–65.
 32. Armajaya MRL. Analisis Yuridis terhadap Penerapan Kebijakan Zero Over-Dimension dan Over-Loading (Bebas Ukuran Lebih dan Muatan Lebih) di Indonesia. SIBATIK JURNAL J Ilm Bid Sos Ekon Budaya, Teknol dan Pendidik. 2022;1(12):2719–38.
 33. Pratama SCA, Nurwati, Ilyanawati YA. Upaya Penegakkan Hukum Terhadap Pengendara Angkutan Barang Over Loading Menurut Undang Undang No . 22 Tahun 2009 Tentang Lalu Lintas Dan Angkutan Jalan di Wilayah Hukum Polres Bogor. Karimah Tauhid. 2024;3(22):9538–52.