

Vol. 4, No. 12, December 2024

e-ISSN: 2807-8691 | *p*-ISSN: 2807-839X

LEGAL UNCERTAINTY IN DIGITAL APPLICATION-BASED TRANSPORTATION SERVICES

M. Adi Putra, Rineke Sara

Universitas Borobudur, Indonesia *e-mail: adiputra392@gmail.com rineke_sara@borobudur.ac.id

Keywords

app-based transportation services, legal certainty, legal uncertainty, regulation

ABSTRACT

The rise of app-based transportation services has led to a shift in lifestyle from conventional to online, from shopping needs to public transportation orders and various other services. The study aimed to explore the legal uncertainty that currently exists in the regulation of apps-based transport services, as well as the barriers and efforts to create legal certainty in this context. This study analyzed the data through a qualitative approach, employing a combination of legal analysis and comparative methods. The results show that the lack of clear regulations regarding the use of two-wheeled vehicles as public transport creates significant weaknesses within the industry. The lack of fair competition principles in Indonesia is an important concern in the context of transportation regulation. This work provides valuable insights for policymakers, regulators, and stakeholders involved in the transportation sector, suggesting pathways for improving regulatory clarity and effectiveness. By analyzing these areas, future research could contribute valuable insights to aid policymakers in creating a more coherent, effective, and responsive regulatory environment that supports the sustainable growth of the app based transportation sector while ensuring the safety and protection of all parties involved. This research could include comparative analyses of successful regulatory models from other jurisdictions that have effectively harmonized their regulations while fostering innovation and consumer protection.

INTRODUCTION

Transportation serves as a means used by humans to carry out various activities. In the context of Indonesian society, transportation or transportation has a very important role. Generally, transportation can be defined as the activity of moving people or goods from one location known as the origin location to another location referred to as the destination location, for a specific purpose and using appropriate transportation means (Alumur et al., 2021; Bruton, 2021; Ceder, 2021; Iyer, 2021; Rodrigue, 2020). The function of transportation as a means of transport is crucial, as it is influenced by various factors, including the geographical conditions of an area (Abdullah et al., 2020; Aminzadegan et al., 2022; Brand et al., 2021; Tong et al., 2022; Wang et al., 2020). Thus, transportation can support development in various sectors and encourage the advancement of science and technology in the area.

Transportation is one of the most important aspects in Indonesia, given the significance of transportation services in meeting the public's transportation needs. Therefore, an integrated arrangement is necessary within the transportation system, especially in terms of using transportation services (Bruzzone et al., 2021; Cruz & Sarmento, 2020; Yan et al., 2020). Generally, transportation is defined as an activity that involves loading passengers or goods into a means of transportation, as well as moving those passengers or goods to a previously agreed destination. In Indonesia, there are three types of transportation: Air Transportation, Land Transportation, and Sea Transportation. Of these



three types, Land Transportation is the most commonly used by passengers compared to other types of transportation.

Transportation has become a primary need that must be guaranteed. With the rapid development of the transportation sector, various ideas and new transportation models have emerged. One of the modern types of transportation that is now available is online transportation. In this regard, the swift advancement of technology and information has led to significant changes in the processes and business strategies of public transportation (Adedoyin et al., 2020; Paiva et al., 2021; Petrov & Petrova, 2021). Nowadays, no company management neglects the product competition posed by its rivals. The use of information technology devices has become a necessity for public transportation companies, as seen in budgeting allocations and the implementation of information technology in company operations. Information technology is now viewed as one of the tools to compete in the global competition, evidenced by the shift in the function of information technology, which is no longer just an addition in the business process, but has become an integral part of the online public transportation company's operations.

The development of land transport in Indonesia has evolved significantly with the rise of application-based transportation services, which utilize vehicles managed by operators for profit. These companies, whether run by individuals or legal entities, aim to maximize profits while ensuring long-term sustainability. As smartphones and online platforms become integral to daily life, there has been a notable shift from traditional to online services, including public transportation (Bakogiannis et al., 2017; Liu & Ceder, 2015; Mashur et al., 2019). This transition reflects broader advancements in transportation and communication technologies, which have led to more sophisticated modes of service delivery. The emergence of online transportation services presents challenges that may not have been anticipated by lawmakers, particularly in relation to Law Number 22 of 2009 concerning Traffic and Road Transport, which mandates that public transportation companies obtain various permits for their operations. Overall, these developments highlight the dynamic interplay between technological innovation and regulatory frameworks in Indonesia's transportation sector.

Based on these provisions, it can be concluded that several public transportation services, such as motorcycle taxis (*ojek online*), do not meet the licensing requirements set forth in that article and are therefore considered illegal under the law. Thus, in this study, the authors discuss the legal uncertainty surrounding the regulation of app-based transportation services, as well as the barriers and efforts to create legal certainty in the regulation of app-based transportation services. The research contributes to the understanding of the complexities surrounding the regulation of app-based transportation services by addressing the legal uncertainties that currently exist in this field. It highlights the specific barriers that hinder the establishment of clear regulatory frameworks, as well as the efforts being made to achieve legal certainty. By analyzing these factors, the study provides valuable insights for policymakers, regulators, and stakeholders involved in the transportation sector, suggesting pathways for improving regulatory clarity and effectiveness. Ultimately, this work serves to inform ongoing discussions about the legal challenges and opportunities presented by the rise of app-based transportation services, thereby contributing to the development of more robust and equitable regulatory frameworks.

METHODS

In this research, the method undertaken was the statutory approach, also referred to as normative legal research, which involved identifying legal rules, principles, or doctrines to address issues of legal uncertainty in the regulation of app-based transportation services, as well as the barriers and efforts to create legal certainty in this area. The case approach involved analyzing and examining relevant cases used as guidelines for addressing legal problems. Additionally, the conceptual approach drew on viewpoints and doctrinal patterns developed in legal science. Through these various approaches, the research aimed to address the legal uncertainty related to the regulation of app-based transportation services and to explore the barriers and efforts involved in achieving legal certainty in this context.

The study utilized a variety of data sources, including legal texts, government regulations, court decisions, and academic literature related to app-based transportation services. Data generated from these sources comprised legal norms, regulatory frameworks, case law, and scholarly analyses that illustrate the current state of regulation and the associated legal uncertainties.

The author analyzed the data through a qualitative approach, employing a combination of legal analysis and comparative methods. This involved systematically reviewing relevant legal documents to

identify key provisions and ambiguities. The case approach allowed the author to examine specific legal cases that provide insights into how regulations are applied and interpreted in practice. Additionally, the conceptual approach facilitated the exploration of theoretical frameworks and doctrines in legal science, helping to contextualize the findings within broader legal principles. This comprehensive analysis aimed to illuminate the barriers to regulatory clarity and the efforts required to establish legal certainty in the regulation of app-based transportation services.

RESULTS

Legal Uncertainty Concerning the Regulation of App-Based Transportation Services

The realization of transportation businesses conducted by online transportation operators creates a legal relationship governed by applicable legal provisions. In this context, the legal relationship arises from transactions between business actors and passengers, expressed in the form of agreements to provide transportation services. This process is carried out via electronic methods, such as mobile applications, which facilitate both parties to engage in transactions. With this agreement, the rights and obligations of each party become clear and structured, providing a strong legal foundation for their interactions. In the agreement, online transportation operators grant passengers the right to receive the services or transportation that has been agreed upon. This right encompasses various aspects, such as comfort, safety, and punctuality in delivery. Operators also have the right to receive compensation or fare for the services provided. This compensation is deemed fair for the services rendered, and its amount is usually predetermined in the application or platform used. This creates a balance in the transaction, where each party obtains what they expect.

In addition to these rights, there are also obligations that must be fulfilled by both parties. Online transportation operators are obliged to provide transportation services that meet the agreed-upon standards. This includes obligations to maintain the condition of the vehicle, ensure passenger safety, and provide good customer service. Meanwhile, passengers also have an obligation to pay the service fee (tariff) according to the amount previously determined. This obligation represents passengers' responsibility for the use of the transportation services that have been agreed upon. One crucial aspect of business activities in the transportation sector, both for transporting people and goods on road traffic, is the aspect of licensing. For public transportation companies, legal requirements are manifested in the form of permits for transportation services. Article 78 paragraph (1) of Government Regulation Number 74 of 2014 concerning Road Transport requires public transportation companies that conduct the transportation of goods and/or people to have:

- 1) Permits for the transportation of people within routes:
- 2) Permits for the transportation of people outside of routes;
- 3) Permits for special transportation of goods.

Public transportation companies utilizing application-based information technology are required to comply with the provisions outlined in Ministerial Regulation Number 108 of 2017, particularly Article 36 paragraph 1. The cessation of operations for information technology-based public transportation companies that do not fulfill the obligations stipulated in Article 36 paragraph 1 is mandated to halt the operation of motor vehicles as well as the use of related applications. In running online transportation services, companies must be legally established according to the criteria set forth in Article 66 of PM 108 of 2017. According to Article 65, application companies in the land transportation sector must be Indonesian legal entities and must meet the following criteria:

- 1) Conduct contracts, sales, and/or service delivery as well as billing;
- 2) Have a bank account that is used to hold the proceeds from sales or service delivery in a bank that operates in Indonesia;
- 3) Control servers or data centers located in Indonesia;
- 4) Conduct marketing, promotion, and other assistance activities;
- 5) Provide services and resolution of consumer complaints.

The provision of transportation services for people and goods using vehicles on the road aims to meet minimum service standards, which include aspects of safety, security, comfort, and order on the road. To ensure that traffic management and road transportation meet safety and security standards, Law Number 22 of 2009 regulates technical requirements and periodic testing for motor vehicles. Every type of motor vehicle that has the potential to cause traffic accidents and environmental pollution is required to undergo periodic testing. The use of motorcycles as a means of transporting people for a fee is not only inconsistent with the applicable regulations but also lacks a business permit related to

company aspects as well as permits for the provision of goods or passenger transport. This constitutes a violation of Law Number 22 of 2009 concerning Traffic and Road Transportation and Government Regulation Number 74 of 2014 concerning Road Transport.

According to Government Regulation Number 74 of 2014 concerning Road Transport, motor vehicles are classified into four types: motorcycles, passenger cars, buses, and freight vehicles. In carrying out transportation activities undertaken as a service that involves the payment of a certain amount of money as compensation, the means of transport used must be public motor vehicles. Article 47 of the Traffic and Road Transport Law states that:

- (1) Vehicles consist of:
 - a. Motor vehicles:
 - b. Non-motor vehicles.
- (2) Motor vehicles, as referred to in paragraph (1) letter a, are classified based on type:
 - a. Motorcycles;
 - b. Passenger cars;
 - c. Buses:
 - d. Freight vehicles;
 - e. Special vehicles
- (3) Motor vehicles referred to in paragraph (2) letters b, c, and d are grouped according to their function:
 - a. Individual motor vehicles:
 - b. Public motor vehicles.
- (4) Non-motor vehicles, as referred to in paragraph (1) letter b, are classified into: Kendaraan yang digerakkan oleh tenaga manusia;
 - a. Vehicles driven by human power;
 - b. Vehicles driven by animal power.

The provisions of Article 47 paragraph (3) of the Traffic and Road Transport Law do not classify motorcycles as either individual motor vehicles or public vehicles. Therefore, Article 47 paragraph (3) emphasizes that motorcycles do not fall into the category of public transport. Additionally, Article 137 paragraph (3) states that goods transportation must use freight vehicles. Online motorcycle taxis also do not meet the provisions of Article 23 paragraph (1) of Government Regulation Number 74 of 2014, which requires public transport to have fixed and regular routes, whereas online motorcycle taxis do not operate under such routes. Furthermore, public transport is required to test motor vehicles concerning safety in the transportation of people.

Application providers such as Go-Jek, Uber, and Grab can be categorized as electronic system providers, defined as the utilization of electronic systems by state organizers, individuals, business entities, and/or the community. Through the electronic systems provided by the service providers, partners (drivers) utilize the system and electronic networks to interact with consumers. The use of information technology in conducting service trade businesses by application-based transportation providers, aimed at obtaining rewards or compensation, is often referred to as electronic commerce (ecommerce). Article 1 number 24 of the Trade Law defines trade as follows.

Trade through electronic systems is trade whose transactions are conducted through a series of electronic devices and procedures

In response to the phenomenon of app-based transportation business, the government, through the Ministry of Transportation, has formulated regulations in the app-based transportation sector since 2016. However, these two regulations issued by the Ministry of Transportation were annulled twice by the Supreme Court, rendering them null and void in general. Regulations related to app-based transportation to this day show that much of the regulation is still conducted through Regional Regulations (Perda). Regional authority in managing transportation affairs is stated in Article 6 paragraph 2 of the Traffic and Road Transport Law, which provides for the government to delegate part of the affairs to provincial and/or district/city governments. The delegation of authority aims to maintain public order and safety in transportation management. Regional regulations play a crucial role in regulating the operations of application-based transportation in their respective regions. With the existence of local regulations, regional governments have the flexibility to adapt transportation policies according to the needs and characteristics of their areas. This is important considering that traffic conditions, infrastructure, and community needs can vary significantly across regions. However,

regulation through regional regulations can pose challenges, such as variations in regulations among regions that may lead to uncertainty for app-based transportation business actors. Therefore, better harmonization of regulations between central and regional authorities is required to create legal certainty and optimally support the development of the app-based transportation industry while maintaining public order and safety.

The use of two-wheeled vehicles as public transportation within the context of application-based transport has not been specifically regulated in the aforementioned Ministerial Regulations. This indicates that application-based transportation utilizing two-wheeled vehicles is at risk of law enforcement actions due to non-compliance with the provisions outlined in the Traffic and Road Transport Law, including Article 47 and other provisions. The lack of clear regulations regarding the use of two-wheeled vehicles as public transport creates legal uncertainty for business actors in the app-based transportation sector. Without guidelines or regulations governing this, business actors and drivers may face the risk of law enforcement actions, such as raids or sanctions, due to non-compliance with existing regulations. This can lead to financial losses and damage to the reputation of transportation service providers.

The failure to enforce fair competition principles in Indonesia is an important concern in the context of transportation regulation. Article 2 of Law Number 5 of 1999 concerning the Prohibition of Monopoly Practices and Unfair Competition states that "Business actors in Indonesia in conducting their business activities are based on economic democracy by taking into account the balance between the interests of business actors and the public interest." This provision indicates that to realize healthy business competition, all business actors, including transportation companies operating in Indonesia, must be treated equally before the law. Although there are two types of transportation companies with different business models, unequal treatment between them can result in distortions in competition. This difference in treatment may hinder the creation of a healthy competitive climate, where every company must have the same opportunity to compete in the market. If one type of service receives more favorable treatment than the other, then there will be injustice in business competition.

The annulment of several articles in the Ministerial Regulation concerning app-based transportation regulations has led to lighter requirements that must be adhered to by operators and drivers of app-based transportation. This creates a situation where the licensing and oversight requirements for vehicles used as public transport become less stringent, both for the service providers and for their drivers. One glaring operational difference between application-based transportation and conventional transportation is that application-based transportation companies are not required to have special marks as road transport, there is no obligation to complete valid travel documents, nor are there any requirements regarding the lettering and identification of vehicles that must be met by special hire transport. This inequality in requirements can lead to shifts in market structure, which may disadvantage conventional transportation companies that must comply with stricter regulations.

The legality of app-based transportation, as currently regulated through various regulations, has not succeeded in ensuring freedom to operate, particularly in the app-based transportation services sector. In several regions, there has been rejection and prohibition of app-based transportation operations. Several Regional Regulations have been issued which explicitly prohibit the use of two-wheeled vehicles (motorcycles) based on applications because such vehicles do not fall into the category of public transportation means. However, on the other hand, base motorcycle taxis operating without using online applications previously did not face similar enforcement or rejection. Additionally, the prohibition against online taxis from carrying passengers in airport areas has also become a focus. This prohibition is imposed on online taxis that do not meet the provisions in Ministerial Regulation Number 108 of 2017 concerning the Provision of Motor Vehicle Public Transport Not on Routes. In this regulation, this type of service is referred to as special hire transport, which is required to meet various vehicle and service requirements. Referring to information from hukumonline.com, to operate in the airport area, application-based special hire transport must fulfill all requirements and regulations established by the Ministry of Transportation.

Consumer protection in the use of app-based transportation services is regulated by several relevant legislative provisions. This is very important considering that the transaction scheme in app-based transportation services involves three parties: the application provider, the partner/driver, and the service user/consumer. Both the application providers and partners (drivers) have responsibilities to meet user rights in utilizing these services, including:

- 1. Providing a reliable and secure system for users in accordance with the provisions stated in Article 16 of the Electronic Information and Transactions Law (UU ITE).
- 2. Ensuring comfort and safety in traffic for users.

Partners or drivers play a crucial role in ensuring that the app-based transportation services they provide are safe and comfortable for consumers. They are the direct link between the application providers and service users. Therefore, the quality of service they provide greatly influences user satisfaction and trust. However, challenges arise when the recruitment process for partners/drivers is often based solely on each application provider's internal policies, without clear and consistent standards. Ambiguity in driver qualification standards and recruitment procedures may pose serious risks. In the absence of clear criteria, companies risk hiring individuals who may not have adequate backgrounds or abilities for the job. This can lead to various consumer complaints, such as unprofessional behavior or even actions that could result in criminal acts, such as fraud or violence. This uncertainty creates an unsafe environment for users, which in turn can harm the reputation of the application providers themselves.

Partners/drivers also have an obligation to provide transportation services that are not only safe but also comfortable for users. This includes the responsibility to ensure the suitability of the vehicles used, such as technical conditions and cleanliness. Additionally, they must comply with existing traffic safety standards for both two-wheeled and four-wheeled vehicles. Adhering to these standards is not only to protect users but also to protect themselves from potential legal and financial risks that may arise from violations of regulations.

Legal uncertainty in regulating app-based transportation services results in various significant weaknesses within the industry. One major weakness is the lack of clarity in regulations, making it difficult for business actors to understand their rights and obligations, thereby creating a situation where regulatory interpretations can vary between companies. This has the potential to lead to unhealthy competition, where companies that are more aggressive in interpreting regulations might be able to disregard certain obligations, such as safety standards or driver training. Conversely, companies striving to comply with regulations may suffer competitive disadvantages as they must bear additional costs to ensure their compliance. This uncertainty also impacts user trust; when users lack a clear understanding of their rights and protections, it can reduce their interest in utilizing app-based transportation services. Additionally, the inconsistency in enforcement and oversight adds complexity to the situation, where unaddressed violations create unfairness for companies operating legally. These weaknesses create an ecosystem that is vulnerable to illegal and unethical practices, which ultimately can damage the industry's overall reputation and reduce investment potential in this sector. Therefore, to address these weaknesses, efforts are needed to create clearer, more detailed, and responsive regulations to ongoing market dynamics and technological developments.

Obstacles and Efforts in Creating Legal Certainty for Regulating Application-Based Transportation Services

One of the main challenges in regulating application-based transportation services is the lack of clear and detailed regulations. Many of the existing regulations only cover general aspects and do not provide specific guidelines regarding operational implementation. This ambiguity often stems from the fact that regulations are unable to keep pace with the rapid development of technology and business models emerging in the application-based transportation industry. This creates gaps that allow for various interpretations by both business actors and authorities. The lack of clarity in regulations can lead to significant differences in interpretation among business actors, potentially leading to unhealthy competition. For example, one company may understand that they do not need to meet certain requirements, while another company interprets the regulations as obligations. This uncertainty not only disrupts market stability but can also cause financial losses for companies trying to comply with the law. Service users also become confused about their rights and obligations, which can lower their trust in the application-based transportation system. This ambiguity can cause obstacles in enforcement efforts. When regulations are unclear, law enforcement agencies struggle to enforce the rules consistently. As a result, many violations go unaddressed, worsening the situation and creating a sense of injustice among compliant business actors. To address this issue, a comprehensive review of the existing regulations is needed, involving all stakeholders, including business actors, service users, and the government. Developing more detailed and specific regulations will help create a fairer and more transparent environment in the application-based transportation industry.

Differences in regulations between the central government and local governments are a crucial issue in regulating application-based transportation services. In Indonesia, although there are laws and regulations set by the central government, each region has the authority to create regional regulations (Perda) according to local needs and conditions. This can lead to varying regulations, where one region may have stricter or more lenient provisions compared to another. Consequently, application-based transportation business actors often face confusion regarding legal compliance. This uncertainty creates operational challenges for business actors. For instance, a company operating in several regions must comply with various regulations that may conflict with one another. In one region, they may be allowed to operate without certain requirements, while in another region, they may face strict prohibitions or restrictions, such as bans on the use of two-wheeled vehicles for transport services. These differences not only confuse companies but can also affect the consistency of the services provided to users. Service users may perceive unfairness and uncertainty, especially if the services they expect are not available in certain areas due to differing regulations. The disparity in regulations between the central and local governments can also hinder the overall development of the application-based transportation industry. When business actors are confronted with various non-uniform legal requirements, it can reduce investor interest in investing in this industry. The existence of inconsistent regulations may also lead to competitive injustices among companies operating in various regions.

Ambiguity regarding driver qualifications and recruitment processes is a serious issue in regulating application-based transportation. In this industry, drivers (partners) play a crucial role in providing services to users. However, without consistent and clear standards regarding the qualifications that drivers must possess, the risks to user safety and comfort significantly increase. This can create situations where unqualified drivers or those with questionable backgrounds can easily join and operate as transportation service providers. Inconsistent qualification standards also create uncertainty for application service providers and users. Companies may have varying recruitment policies based on their respective visions and missions, resulting in drivers with vastly different backgrounds and qualifications. On one hand, this may provide flexibility for companies, but on the other hand, it can pose safety risks, particularly if drivers lack adequate experience or training. Service users have the right to receive safe and reliable services, and the lack of qualification standards can raise doubts and erode trust in application-based transportation services. Furthermore, the ambiguity surrounding driver qualifications may contribute to rising instances of legal violations. Without stringent verification and training processes, there is a possibility that drivers may engage in actions that violate legal and ethical norms, such as excessive passenger loading, driving under the influence of alcohol, or displaying aggressive behavior towards passengers. This not only harms users but can also tarnish the reputation of the application-based transportation industry as a whole.

One of the main challenges in creating legal certainty in regulating application-based transportation is the lack of effective oversight and law enforcement. When existing regulations are not accompanied by adequate oversight efforts, violations of the rules can easily occur, leading to negative impacts on the entire transportation ecosystem. The government's inability to consistently enforce the law can lead to illegal practices, such as operating vehicles without permits, fare fraud, and services that do not meet safety standards. The absence of strict oversight not only harms service users but also creates injustices for companies that comply with regulations. Companies that have fulfilled all legal requirements and operational standards, such as licensing, driver training, and vehicle maintenance, risk facing competitive disadvantages. This is due to the existence of non-compliant companies that can offer lower fares or services that do not meet standards. Consequently, this injustice can lead to unhealthy competition in the market, where law-abiding companies are outcompeted by those operating illegally. A lack of law enforcement also adversely affects public trust in application-based transportation services. Users may become hesitant to use available services if they realize that many drivers or companies are not complying with regulations. In the long run, this can reduce user interest in using application-based transportation services and affect the overall growth of the industry. Therefore, it is crucial for the government to enhance oversight and law enforcement capacity within this sector.

In light of the rapid development of application-based transportation, drafting more comprehensive regulations is a necessary step. Clear and detailed regulations will provide a robust legal framework for all stakeholders in the industry, including application service providers, drivers, and service users. With comprehensive regulations, the rights and obligations of each party can be well defined, thereby reducing the potential for disputes and creating legal certainty. One important aspect

that needs to be regulated is the qualifications and recruitment process for drivers. Regulations should establish minimum standards that drivers must meet, such as educational background, health checks, and safety training. By having clear standards, the quality of the services provided can be improved, enhancing user safety and comfort. Additionally, regulations should include mechanisms for addressing complaints and issues faced by service users, ensuring they feel protected and have channels to express their concerns. Regulations should also encompass fare aspects and cost transparency. Service users have the right to know the cost details they need to pay before using the services, and application service providers should be required to provide clear information regarding fares and potential additional costs. Ambiguity regarding costs often leads to user dissatisfaction and can potentially result in disputes between users and service providers. Therefore, regulations that establish transparency obligations regarding costs will help create a more harmonious relationship between business actors and users. The drafting of regulations should also involve input from various stakeholders, including industry actors, consumer organizations, and academics. By involving various stakeholders in the regulatory drafting process, the government can ensure that the resulting regulations genuinely reflect the needs and challenges faced in the field. This will also enhance the legitimacy of the regulations and ensure that all parties feel involved in the decision-making process.

Harmonizing regulations between the central and local governments is crucial to creating an efficient and effective application-based transportation system. When regulations implemented at the central level differ from those at the local level, business actors and service users often experience confusion. For example, if a certain region imposes restrictions or bans that do not apply in other regions, this can hinder company operations and create legal uncertainty. In this context, regulatory harmonization can help establish the necessary certainty for all parties involved. Involving various stakeholders in the regulatory drafting process is a crucial step in achieving harmonization. The central and local governments need to collaborate with application service providers, drivers, service users, and civil society organizations to formulate regulations that are not only fair but also practical. By incorporating diverse perspectives, the resulting regulations will be more relevant and responsive to field needs. For example, input from drivers and service users can provide valuable insights into their challenges and expectations regarding application-based transportation services. The regulatory harmonization process should also include the establishment of uniform standards related to driver qualifications, vehicle safety, and service tariffs. Consistent standards will help ensure that all business actors operate under the same legal framework, reducing the risk of unhealthy competition. This will also enhance protection for service users, as they will know that the services they use meet governmentset standards. Harmonization can also help reduce the administrative burden for business actors. With uniform regulations, application service providers will not need to adapt to various differing regulations in each region. This will allow them to focus on improving service quality and innovation, which in turn can enhance user satisfaction. On the other hand, local governments can more easily conduct oversight and law enforcement if the regulations applied are consistent.

Effective oversight and law enforcement are key to ensuring that regulations in the applicationbased transportation sector are followed. With the increasing number of business actors in this field, it is essential for the government to have robust mechanisms to monitor and evaluate compliance with existing regulations. Without adequate oversight, violations of regulations can easily occur, creating injustices for compliant business actors and harming users. One step that can be taken is the establishment of a dedicated supervisory body that has the authority to monitor application-based transportation operations. This body should be responsible for conducting routine inspections, audits, and evaluations of application service providers, driver partners, as well as compliance with safety and service standards. With the presence of this supervisory body, business actors will be more motivated to comply with regulations due to the risk of oversight and sanctions that may be imposed. Additionally, this body can serve as a liaison between the government and business actors, helping facilitate communication and educating stakeholders about applicable regulations. It is also important to establish clear and firm sanctions for regulatory violations. The sanctions imposed should be proportional to the violations committed, ranging from warnings to the revocation of operating licenses. Consistent law enforcement will provide a deterrent effect for business actors who may violate rules and affirm that the government is serious about creating a fair and responsible business environment. Firm sanctions will not only increase compliance but also protect consumers from detrimental practices.

Adapting to technological advancements is another crucial factor in regulating the application-based transportation industry. With rapid technological innovations, such as the use of algorithms for

fare regulation, driver rating systems, and increasingly sophisticated mobile applications, existing regulations need to be designed to adapt to these changes. If regulations remain static and unresponsive to technological developments, it will be challenging to regulate companies that rely on advanced technologies, potentially leading to legal uncertainties and complicating business operations. The government has a responsibility to conduct periodic reviews of existing regulations. This review should involve various stakeholders, including business actors, service users, academics, and legal practitioners, to obtain a comprehensive perspective on the challenges and opportunities within the industry. Consequently, regulations can be updated or restructured based on existing field needs, ensuring they remain relevant and effectively support the development of application-based transportation. The regulatory adaptation process also requires clarity in communication between the government and business actors. The government needs to educate business actors about regulatory changes and provide clear guidance on implementing new regulations. Conversely, business actors should also be proactive in providing input to the government regarding existing regulations and the challenges they face in implementation. Positive interaction between both parties will expedite the process of adapting regulations to technological advancements, creating a healthier and more sustainable business ecosystem.

CONCLUSION

Application-based transportation services provide convenience and efficiency, yet they face significant challenges that hinder legal certainty and protect all stakeholders involved. While the transaction process between businesses and passengers establishes a clear legal relationship, existing regulations are often general and inconsistent between central and local governments, leading to confusion for operators who must navigate varying regional rules. Issues surrounding licensing, safety standards, and driver qualifications further complicate compliance, with the annulment of certain regulations by the Supreme Court adding to the uncertainty. The lack of clear recruitment standards for drivers poses risks to consumer safety and can damage the reputation of service providers. To foster a sustainable business environment, comprehensive and harmonized regulations are needed, along with strengthened oversight and enforcement mechanisms. The current regulatory ambiguity can lead to unhealthy competition and diminish public trust, underscoring the necessity for the government to involve stakeholders in reform efforts. Future research should focus on developing a cohesive regulatory framework, examining stakeholder perspectives, analyzing the impact of regulatory changes, and exploring technological enhancements for oversight, all aimed at supporting the industry's growth while ensuring safety and protection for users.

REFERENCES

- Abdullah, M., Dias, C., Muley, D., & Shahin, M. (2020). Exploring the impacts of COVID-19 on travel behavior and mode preferences. *Transportation Research Interdisciplinary Perspectives*, 8. https://doi.org/10.1016/j.trip.2020.100255
- Adedoyin, F. F., Bekun, F. V., Driha, O. M., & Balsalobre-Lorente, D. (2020). The effects of air transportation, energy, ICT and FDI on economic growth in the industry 4.0 era: Evidence from the United States. *Technological Forecasting and Social Change*, 160. https://doi.org/10.1016/j.techfore.2020.120297
- Alumur, S. A., Campbell, J. F., Contreras, I., Kara, B. Y., Marianov, V., & O'Kelly, M. E. (2021). Perspectives on modeling hub location problems. *European Journal of Operational Research*, 291(1). https://doi.org/10.1016/j.ejor.2020.09.039
- Aminzadegan, S., Shahriari, M., Mehranfar, F., & Abramović, B. (2022). Factors affecting the emission of pollutants in different types of transportation: A literature review. *Energy Reports, 8*. https://doi.org/10.1016/j.egyr.2022.01.161
- Bakogiannis, E., Siti, M., Kyriakidis, C., & Vassi, A. (2017). *Using Traditional and New Digital Technology Tools to Promote Sustainable Mobility: Current Trends in the Evolving Transformation of the Smart City* (pp. 113–133). Springer. https://doi.org/10.1007/978-3-319-54558-5_5
- Brand, C., Götschi, T., Dons, E., Gerike, R., Anaya-Boig, E., Avila-Palencia, I., de Nazelle, A., Gascon, M., Gaupp-Berghausen, M., Iacorossi, F., Kahlmeier, S., Int Panis, L., Racioppi, F., Rojas-Rueda, D., Standaert, A., Stigell, E., Sulikova, S., Wegener, S., & Nieuwenhuijsen, M. J. (2021). The climate change mitigation impacts of active travel: Evidence from a longitudinal panel study in seven

- European cities. *Global Environmental Change*, 67. https://doi.org/10.1016/j.gloenvcha.2021.102224
- Bruton, M. J. (2021). *Introduction to Transportation Planning*. Routledge. https://doi.org/10.4324/9781003155690
- Bruzzone, F., Cavallaro, F., & Nocera, S. (2021). The integration of passenger and freight transport for first-last mile operations. *Transport Policy*, *100*. https://doi.org/10.1016/j.tranpol.2020.10.009
- Ceder, A. (Avi). (2021). Urban mobility and public transport: future perspectives and review. *International Journal of Urban Sciences*, *25*(4). https://doi.org/10.1080/12265934.2020.1799846
- Cruz, C. O., & Sarmento, J. M. (2020). "Mobility as a service" platforms: A critical path towards increasing the sustainability of transportation systems. *Sustainability (Switzerland)*, *12*(16). https://doi.org/10.3390/SU12166368
- Iyer, L. S. (2021). AI enabled applications towards intelligent transportation. *Transportation Engineering*, *5*. https://doi.org/10.1016/j.treng.2021.100083
- Liu, T., & Ceder, A. (2015). Analysis of a new public-transport-service concept: Customized bus in China. *Transport Policy*, *39*. https://doi.org/10.1016/j.tranpol.2015.02.004
- Mashur, R., Gunawan, B. I., Fitriany, Ashoer, M., Hidayat, M., & Aditya, H. P. K. P. (2019). Moving from traditional to society 5.0: Case study by online transportation business. *Journal of Distribution Science*, *17*(9). https://doi.org/10.15722/jds.17.09.201909.93
- Paiva, S., Ahad, M. A., Tripathi, G., Feroz, N., & Casalino, G. (2021). Enabling technologies for urban smart mobility: Recent trends, opportunities and challenges. *Sensors*, *21*(6). https://doi.org/10.3390/s21062143
- Petrov, A. I., & Petrova, D. A. (2021). Open business model of COVID-19 transformation of an urban public transport system: The experience of a large Russian city. *Journal of Open Innovation: Technology, Market, and Complexity, 7*(3). https://doi.org/10.3390/joitmc7030171
- Rodrigue, J.-P. (2020). *The Geography of Transport Systems* (5th ed.). Routledge https://doi.org/10.4324/9780429346323
- Tong, X., Mohapatra, S., Zhang, J., Tran, N. H., You, L., He, Y., & Gin, K. Y. H. (2022). Source, fate, transport and modelling of selected emerging contaminants in the aquatic environment: Current status and future perspectives. *Water Research*, *217*. https://doi.org/10.1016/j.watres.2022.118418
- Wang, T., Qu, Z., Yang, Z., Nichol, T., Clarke, G., & Ge, Y. E. (2020). Climate change research on transportation systems: Climate risks, adaptation and planning. *Transportation Research Part D: Transport and Environment*, 88. https://doi.org/10.1016/j.trd.2020.102553
- Yan, J., Liu, J., & Tseng, F. M. (2020). An evaluation system based on the self-organizing system framework of smart cities: A case study of smart transportation systems in China. *Technological Forecasting and Social Change*, 153. https://doi.org/10.1016/j.techfore.2018.07.009