

Inequality of Public Transportation Policy in the Disruptive Era Between Online and Conventional Transportation

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Abstract: Indonesia is one of the countries with a large market for online transportation. This paper describes a meta-analysis on policy inequality regarding public transportation. Meta-analysis and Computer Assisted Qualitative Data Software (CAQDAS) were utilized to evaluate the inequality of public transportation policy for conventional transportation. Scopus search engine was also used to identify broad literature on a particular policy regulation in Indonesia between 2010 and 2021. Then, this study employed online news related to the conflict between conventional and online transportation. The result disclosed a policy inequality between online and conventional transportation based on the social movement on online media. Thus, the government has to implement a strict policy applicable to transportation. The words “protest”, “regulation,” and “police” were also seen clearly on the issue. In addition, the protesters, comprised of drivers from Uber, GrabCar, and Go-Car, said that Transportation Ministry Regulation No 32/2016 would disadvantage them because it is too difficult to comply with the requirements. Hence, the government can decide on self-regulation to design a policy for online transportation. In this case, state law is still necessary when monopolistic attempts are made, unfair competition exists, public safety as consumers is maintained, and taxes are collected.

Keyword: *Inequality Transportation Policy; Online Transportation; Conventional Transportation.*

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INTRODUCTION

Dynamic changes in the transportation sector have created an impression that the government cannot regulate it (Goldfarb and Tucker, 2010). The tumultuous relationship between traditional transportation industry players and application-based transportation in various regions also contributed to the disruptive nature of online transportation (Gao and Chen, 2019). As a result, a policy must be rewritten for the Industrial Revolution 4.0 era, resulting in the birth of a disruptive sharing economy (Bento et al., 2014). Then, transportation usage of online platforms creates a lot of issues for transportation management (Adjat et al., 2020). The

disruptive innovation also creates complications since competition occurs between online and conventional platforms (Pratama, 2021). In this case, the online transportation sector operates on a fundamentally different business model from traditional transportation, which causes havoc with regulatory standards. It is because the regulatory paradigm used to control traditional modes of transportation cannot be simply transferred to online modes of travel. This issue then emerged and wreaked havoc on social life worldwide, including in the Philippines, Taiwan, the United States, the European Union, and Japan.

Specifically, Indonesia is one of the countries with a large market for online transportation (Zahara et al., 2021). The emergence of transportation-related internet applications complicates the conflict for market space in Indonesia's transportation history (Fajar, Zwerenz, and Setianingrum, 2019). Here, transportation is a critical component and function of economic and social life, development, and mobility, which evolve in tandem with and respond to advances in many areas and sectors. Rapid economic development has then elevated transportation to a critical mode of daily activity, and as a result, individuals are more circumspect in choosing the mode of transportation to be utilized. Accordingly, numerous transportation businesses provide and attempt to get travelers to purchase their goods and services. Hence, many factors affect customers choosing online or conventional transportation, such as service quality, safety quality, and accessibility quality.

However, some issues arise due to the habits and preferences of those using transportation services (Dewi, Ilmi, and Dewi, 2020). Along with conventional transportation, there is the problem of limited space for conventional transportation due to changing customer preferences for transportation modes (Prakoso et al., 2020). For example, big cities like Bogor are certainly affected by the competition for online and conventional transportation (Simarmata et al., 2019). In addition, the need for reliable and efficient transportation systems increases rapidly, especially in densely populated areas such as Bogor, where public transport networks are inadequate (Widyanti and Qurratu Ainizzamani, 2018). When combined with the large number of private vehicles clogging the city's highways, these requirements provide an ideal basis for developing the concept of a shared economy (Utama et al., 2020). Although the concept of a sharing economy is not new, the implementation coupled with increasing market demand, new business models, and the innovations of online transportation services, has sparked resistance from conventional transportation service providers, especially as they lost significant market share in a relatively short period (Siahaan and Legowo, 2019).

Moreover, anti-competitive behavior is not the only component contributing to the limited space for conventional transportation (Nasution, Erwin, and Bartuska, 2020). However, there are several policies and regulatory barriers that the government should not underestimate (Stanley et al., 2019). Regulatory asymmetry has also been discussed as another competition policy issue to be addressed, as in the telecommunications industry, where it may benefit new entrants in some cases or incumbents in some cases, and this issue becomes prominent in the case of online transport networks (Yuniastuti, Laksmono, and Sardjono, 2019). In this case, online transportation networks benefit from the lack of some of the legislative requirements that should apply to public transport companies, resulting in an imbalance of market power (Siyan et al., 2015). Due to the cost of policy compliance, the problem of policy asymmetry has prevented conventional transportation companies from offering fares as low as online transportation networks (Nasution, Erwin, and Bartuska, 2020). Apart from price, online transportation networks also benefit from adopting new technologies by users and drivers (or consumers and suppliers). This invention reduces production costs and enables lower-priced products (Rodríguez Bolívar, 2018).

Further, the inconsistent policies on online and conventional transportation and the problems of virtual public involvement have shown that the government's formalistic and regulatory approach cannot address more immediate and potentially future challenges. Hence, theoretical justifications for contemporary sharing economy problems are given to facilitate comprehension of the new public service challenge in a governance 4.0 context. Among the most notable is disruptive innovation, a game-changing idea that profoundly alters how people see contemporary companies. On the subject of app-based transportation and in line with the literature on evidence-based policy, the researchers would want to argue for the necessity of integrating more objective evidence into transportation policy in the future to address present

and potential future problems. Hence, this paper examines the policy inequality between online and conventional transportation.

App-Based Transport and Sharing Economy Policy

Zahra (2021) describes the public policy as everything the government chooses to do or not to do something. The definition is too narrow to describe public policy (Zahra et al., 2021). Meanwhile, two meanings can be taken from Thomas Dye's definition. First, Dye argues that government can only make public policy, not private organizations. Second, Dye reaffirms that the government is the one who decides the public policy regarding whether something should be done or not. In addition, the conceptual understanding of application-based transportation systems is rudimentary. Numerous names have been used to describe the digital environment for transportation systems and businesses (Wang, 2015). The most often used phrases are "sharing economy," "gig economy," platform-based economic activity, and mesh economy. Bathini (2021) defined the sharing economy via the lens of 17 concepts, including social sharing, collaborative consumption, and peer-to-peer economy (Bathini and Shalini, 2021). According to one basic definition, sharing economy is a mode of consumption that "occurs in structured systems or networks, where individuals engage in sharing activities, such as renting, lending, trading, bartering, and exchanging products, services, transportation solutions, space, or money (Zhang and Ukkusuri, 2021).

In reality, academics refer to the sharing economy as encompassing various businesses and professions (Chan, 2020). In this regard, some platforms link companies and highly trained and specialized individuals with direct access to work and a "loose" relationship between the business and its "employees," such as Topcoder, Expert360, and Kaggle (Rayle et al., 2016). There are, however, several alternative platforms that provide access to low-cost and somewhat "unskilled" labor, such as Uber, Taskrabbit, previously Homejoy, or Gojek in the case of Indonesia (Li et al., 2019). As a result, it would be a mistake to assume that the sharing economy is usually associated with smart or highly educated IT professionals. Here, the primary underlying idea is digital platforms connecting suppliers and customers (Sirait et al., 2021).

At the center of the sharing economy conceptual framework, a broad definition of a collaborative consumption system mobilizes underutilized asset resources via models and marketplaces that improve efficiency and access or an economic system in which an online platform connects supply and demand sides to facilitate transactions involving temporary access to idle resources (Pasaribu et al., 2019). While these are the broad topics on which experts agree, the viewpoints utilized to define the contents and explain the occurrences may vary (Zuraida, Iridiastadi, and Satalaksana, 2017). For instance, sharing economy products are classified into four broad categories: recirculation of commodities through eBay and Craigslist; enhanced usage of durable assets via Airbnb and Uber; service exchange via TaskRabbit and Zaarly; sharing of productive assets via Hackerspace and Skillshare (Tedjasaputra and Sari, 2016). Meanwhile, platform types are classified based on their sharing nature into three categories: rental platforms like 9flats, Airbnb, and HomeAway; reciprocal platforms like Behomm, Guest to Guest, and Home Exchange; free platforms like BeWelcome, Trustroots, and Couchsurfing. These categories may include a diverse variety of services encompassed by the sharing economy (Weinreich et al., 2020).

RESEARCH METHOD

This research used a meta-analysis method with the Scopus database as premier data. Scopus search engine was used between 2010 and 2021 to identify broad literature on a specific policy regulation in Indonesia. Scopus is one of the most extensive citations and abstract databases of peer-reviewed literature, such as scientific journals. Although several publications discussed various policy online transportation, this analysis focused only on international journals extracted using the Scopus search engine. The initial search identified publications related to policy research in their titles, abstracts, or keywords: (TITLE-ABS-KEY (conventional AND transportation) AND TITLE-ABS-KEY (Indonesia)) AND PUBYEAR > 2010 AND (LIMIT-TO (SUBJAREA, "SOCI")) (TITLE-ABS-KEY (online AND transportation) AND TITLE-ABS-KEY

(Indonesia)). Screened results were saved into separate marked lists at the end of each search iteration, and then the researchers used them. The data files were then cleaned and imported into a VOS viewer as a data visualization program to build and view network maps based on collated data. Accordingly, the published articles were categorized and reviewed through many variables. The researchers examined the research areas covered to identify patterns in online transportation and conventional transportation policy. In addition, the researchers did a bibliometric analysis using VOS viewer software to classify the network connections underlying published articles. Using frequency analysis of simultaneous citation (co-citation), common keywords, and mutual knowledge within publishing titles and abstracts (co-occurrence), the researchers built network maps to analyze the connection of publications. Meta-analysis was also conducted to systematically access the applied policy theory of multiple studies in various disciplines.

Furthermore, this study also utilized NVivo's qualitative data analysis software (Kaefer, Roper, and Sinha, 2015). For almost 25 years, NVivo has been utilized in qualitative studies (Paulus et al., 2017). It is a computer-based or computer-assisted qualitative data analysis tool for structural and sequential data (Dollah, Abduh, and Rosmaladewi, 2017; Edwards-Jones, 2014; Sotiriadou, Brouwers, and Le, 2014; Woods et al., 2016). The purpose of utilizing NVivo was obtained to explain the existing policy transportation online and conventional. Although apart from performing data analysis, it was also an analytical tool. This study used data from the online media coverage of elections carried out in Indonesia to obtain the reason for sentiment and argument in societies. The NVivo 12 plus software was employed to collect online data through a method that required the ability to filter, select, and categorize data (Snelson, 2016). It was carried out from online media, using interpretation skills and abilities. Therefore, various studies are essential in classifying and linking data between online media and interpreting words in sentences from all information.

RESULTS AND DISCUSSION

In this section, concepts were explained in several visualizations related to the theme of this study, and 67 terms were identified in the 150 articles. Furthermore, their reviews with VOS viewers revealed six concept clusters. The five clusters are shown in Table 1. The names of the ideas generated from the cluster density display are presented in Figure 1. Additionally, color coding was utilized to see a list of the ideas that stood out in each cluster. The objective was to discover as many topics as possible that had been addressed often in past studies and make them available for future research. Then, Figure 1 depicts the cluster density, denoted by a distinct color for each cluster.

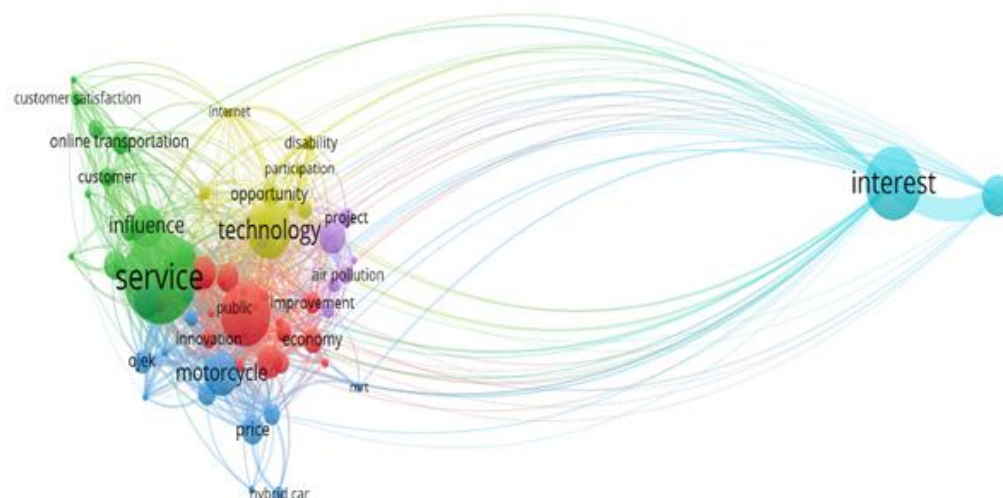


Figure 1. Relation of Terms in Policy of Online Transportation and Conventional Transportation

The identification in the form of mapping in Figure 1 might assist researchers, particularly new ones, in getting a head start on their study. For instance, when students discover a topic of interest in a specific area in which they are interested, they may use this study to read publications about that subject. In Cluster 1, the related concepts are the economic issue, innovation, improvement, public service, tourism, and government policy. In Cluster 2, the related concepts are customer, customer stratification, service online transportation, and service quality. Within Cluster 3, the related concepts are car sharing, company, motorcycle, the ride-hailing app, online, and price. In Cluster 4, the related concepts are a challenge, participation, and conventional transportation. In Cluster 5, the related concepts are air pollution, climate change, interest, and quality.

For researchers who want to discuss the theme of online policy transportation and conventional transportation, this clustering will help analyze what concepts are related. For example, when a researcher chooses cluster 1, the starting point that needs to be the body literature is the concept of government policy.

Table 1. Terms Clustering in Policy of Online Transportation and Conventional Transportation

Cluster	Concept Name	Total items
Cluster 1	Economic issue, innovation, improvement, public service, tourism, and government policy	23 items
Cluster 2	Customer, customer stratification, service online transportation, and service quality.	13 items
Cluster 3	Car sharing, company, motorcycle, ride-hailing app, online, and price	13 items
Cluster 4	Challenge, participation, and conventional transportation	9 items
Cluster 5	Air pollution, climate change, interest, and quality	9 items

The case of Cluster 1 is related to an economic issue, innovation, improvement, public service, tourism, and government policy. It indicates that the government should implement a strict policy on online transportation to prevent the impact on the economic sector of conventional transportation. The public service innovation implemented by online transportation emphasizes conventional transportation to get to a customer. The convenience of online transportation affects customers' options to use online rather than conventional transportation. The safety services provided by online transportation also reduce conventional transportation customers. In this case, the paradigm of conventional transportation assumption not implementing safety standards still highlights societies. Hence, the government must improve its regulation and policy to support conventional transportation.

In the case of Cluster 2, it is related to the customer, customer stratification, service online transportation, and service quality. It denotes that customer stratification is important for conventional transportation to compete with online transportation. Thus, conventional transportation has to improve its service to get customers. The widespread use of app-based transportation services such as Gojek, Grab, Maxim, and other online companies has also resulted in changes in the business habits and interactions between drivers and their clients. Previously, traditional *ojek* drivers were under no duty to offer excellent services to their passengers since the connection was personal and the rates were flexible. However, with application-based services, consumers can provide feedback and comments on any service offered. If drivers cannot deliver services per the requirements, they may be suspended from the partnership or even dismissed (Putri et al., 2019). Such a rating system for services would undoubtedly motivate suppliers and drivers to offer the best possible service, which would benefit most consumers.

Furthermore, the case of Cluster 3 is related to car sharing, company, motorcycles, the ride-hailing app, online, and price. It refers to the price aspect that the customer considers. The new

ministerial order established a pricing structure for application-based transportation services (Sultan et al., 2019). The basic rate was established to guarantee those vehicle owners could finance their vehicle's maintenance expenses and prohibit operators from engaging in unfair competition. The ceiling tariff was also established to safeguard customers from operators' excessive and irrational pricing practices. Additionally, rules were established about the technical feasibility of the vehicles, the maximum number of cars a business may register, and the operating regions in which the firms may operate.

The case of cluster 4 relates to the challenge, participation, and conventional transportation. It means the emergence of online transportation has become a challenge to conventional transportation. Hence, the role of government as a decision-maker is essential to maintain issues. On the other hand, official reactions to alternate modes of transportation have been shaky, owing to a lack of vision and an insufficient grasp of the new problems posed by the digital environment and direct involvement. Following massive strikes and defensive responses from conventional public transportation in early 2015, the government pledged to ban app-based transportation companies. However, within a few months, there were vehement critiques from professionals, passionate consumers, young entrepreneurs, and the public. Given that the app-based transportation services created new employment possibilities and economic riches while partially resolving consumer complaints, the government subsequently shifted policy dramatically by permitting Gojek and Grab to operate in several Indonesian cities. In May 2018, the government-supported Gojek, which employs millions of drivers and has 18 app-based on-demand services, expanded its operations.

Then, in the case of cluster 5, it is related to air pollution, climate change, interest, and quality. It signifies the impact environmental aspect of transportation. Concerning this, the undeniable side effect of transportation is air pollution. Hence, several countries urge public transportation to use electric rather than fuel oil since it is important to maintain climate change.

Furthermore, several aspects concern the government's maintaining inequality between conventional and online transportation (Akimova, Arana-Landín, and Heras-Saizarbitoria, 2020). As is often the case in developing nations, Indonesia's public transportation supply is insufficient to keep up with urbanization and population growth (Fernando et al., 2018). Trains, buses, and smaller vehicle transportation are available in major cities. However, owing to their limited availability and difficulty, such amenities are not always feasible for individuals traveling to and from their offices and distant locations. As a result, online transport modes such as Grab and Gojek have become the main option for customer mobility. Since the 1980s, residents have used motorbikes to provide short-distance trips in many places where buses and automobiles are inaccessible. This form of travel is often referred to as "*ojek*." Numerous town and municipality authorities do not consider motorcycles a means of transportation. There have been instances when the government decided to allow online transportation to operate have, prosecuted motorbike owners and destroyed "*pangkalan*" (the *ojek* stations). It makes a demand for app-ride services stronger and cannot be met by non-motorized *becak* or motorized *bajaj*.

Consequently, individuals in urban and rural regions benefit from online transportation as an informal and "personalized" mode of travel. In metropolitan regions where residents are irritated by traffic congestion and inadequate public transportation, online transportation offers a realistic option for finding a shorter route or navigating traffic congestion. In addition, online transportation would aid in point-to-point mobility in remote regions where people lack access to cars owing to the terrain and insufficient road infrastructure. As online transportation driving becomes more lucrative, there has been an increase in the number of professional drivers whose primary employment is the online driver.

Moreover, the change in behavior of customers who choose online transportation over conventional transportation impacts social conflict. The social movement of inequality policy between conventional and online transportation then appears online. Based on Figure 2, the words "protest", "regulation," and "police" are seen clearly on the issue. The protesters, comprised of drivers from Uber, GrabCar and Go-Car, said that Transportation Ministry Regulation No 32/2016 would disadvantage them because it is too difficult to comply with the requirements. The regulation requires drivers to legally join a licensed transportation company

or cooperative to operate app-based transport services. The drivers will also have to obtain special driving licenses, while their vehicles must pass roadworthiness tests, similar to other public transportation forms. The protesters marched from Gelora Bung Karno Stadium to the nearby legislative complex on Jalan Gatot Subroto. App-based transportation drivers previously planned to stage the rally in front of the State Palace and the offices of the Ministry of Transportation. However, the Jakarta Police refused to issue them permits.

Further, Gojek drivers encounter problems with conventional transit drivers, other Gojek drivers, and Gojek businesses. Confrontations with traditional transportation drivers happened, either verbally or physically. This dispute was generated by traditional transportation drivers who experienced a loss of revenue because of Gojek. For this case, various parties have attempted to resolve conflicts via mediation, which resulted in regulations governing the locations of pick-up points or pick-up zones permitted for Gojek drivers. In addition, conflicts among Gojek drivers arose due to the difference in the number of Gojek drivers and Gojek customers.



Figure 2. Rejection of Conventional Transportation for Online Transportation Policy

On the one hand, conflict is a necessary component of all public policies. Policymakers must regard public policy as a political tool for allocating values in this manner (Irawan et al., 2020). Public policy is basically about determining "who receives what and who pays given relative resource scarcity" (Medeiros et al., 2018). However, the issue then becomes who owns the value and how it will be distributed by the policymaker or which public has its value included in public policy. Few studies have examined the importance of conflict in public policy (Indrawati and Yusliansyah, 2017). Still, the relationship between value allocation in public policy as a source of conflict should be further investigated by examining the empirical substance of cases of public sector organizational structuring policies to gain a better understanding of the conflict and the central role of value in public policy practice that is not always focused on the bureaucratic environment (Rayle et al., 2016).

In this case, conflict theory served as the foundation for an examination of the constitutionality of public policies regulating land transportation regulations for passengers

riding on online-based motorcycles (GoRed) and land transportation regulations for passengers riding on conventional motorcycles (*ojek*) (Kushins and Behounek, 2020). According to them, social class classification is no longer determined by legal possession of the property but also by power interactions (Sultana and Thompson, 2017). Three critical ideas are at work here: power, interests, and social groupings. In turn, the resulting divergence of interests may result in group conflict or actual conflict between groups whose interests are hostile (Osei, 2018).

By competing with established business players, disruptive innovation has altered the current business paradigm (Mutiarin et al., 2019). The government attempted regulation but was considered ineffective or improper since it retained the same viewpoint as traditional modes of transportation (Ambarwati, Nugroho, and Suharto, 2019). Then, the tight policy should be applied, but with the addition of a new notion called adaptive policy (Wijayanto et al. 2018). The government may then use self-regulation to establish a policy for online transportation (Bidari 2018). Self-regulation is a legal framework created by corporate players or commercial groups to regulate the transportation sector more effectively, flexibly, and collaboratively. Here, state legislation is still required when monopolistic efforts are made, unfair competition occurs, the community's consumer safety is protected, and taxes are paid (Wiryawan 2020).

The development of application-based transportation has also generated debate about its benefits and drawbacks (Bargar et al., 2019). On the one hand, internet transportation may be convenient for drivers and customers (Sirait et al., 2021). On the other hand, internet transportation has come under fire from traditional transportation drivers, who see it as unlawful transportation that snatches away drivers' livelihoods (Sholikah et al., 2017). There are also many issues that traditional transportation drivers often complain about when it comes to the operation of application-based transportation, including operating permits, car plate colors, pick-up locations, and rates (Murdi, Supanto, and Novianto 2020).

CONCLUSION

This study concludes that disruptive innovation has changed from the existing business model by competing with old business actors. The government has also tried to regulate but is deemed a failure or not proper because it still uses the same perspective as conventional transportation arrangements. Hence, the strict policy should apply but with a different concept, known as an adaptive policy. Here, the government can follow self-regulation to decide on a policy for online transportation. Self-regulation is a legislative structure developed by corporate actors or business organizations to govern the transportation industry more effectively, flexibly, and cooperatively. In this case, state law is still necessary when monopolistic attempts are made, unfair competition exists, the community's safety as consumers is maintained, and taxes are collected.

Moreover, policymakers should see public policy as a political instrument for this value allocation. Public policy is fundamentally concerned with deciding "who gets what and who pays in light of relative resource scarcity." However, the question becomes who owns the value and how the policymaker will share it or whose public has its value incorporated into public policy. Until recently, little research has been conducted on the significance of conflict in public policy. Therefore, the relationship between value allocation in public policy and conflict should be investigated further by examining the empirical substance of cases of public sector organizational structuring policies to understand better the conflict and the central role of value in public policy practice that is not always focused on the bureaucratic environment.

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