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Private Vehicle Dependency in Pontianak City Through the Social Action Perspective

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ARTICLE INFO	ABSTRACT
Article history: Received : April 22 nd 2025 Revised : June 18 th 2025 Accepted : June 29 th 2025 Published : June 30 th 2025	In Pontianak City, the increasing reliance on private vehicles has significantly contributed to traffic congestion, environmental pollution, and challenges in urban mobility, raising critical concerns about the declining use of public transportation options such as the oplets. This study investigates the underlying reasons for the preference for private vehicles among the residents of Pontianak and examines the resulting impacts of the shift from public to private transportation. Grounded in Max Weber's Social Action Theory, the research employs a qualitative method involving 14
<i>Keywords :</i> Max Weber, Oplets, Private Vehicles, Public Transportation, Social Action, Transportation Preferences	
Correspondence:	purposively selected informants, with data

anggraenidsn@gmail.com	analyzed using Miles and Huberman's Interactive Model. The findings reveal that residents favor private vehicles due to a combination of internal factors—such as flexibility, comfort, time efficiency, convenience, economic considerations, safety, and travel purposes—and external factors, including inadequate public transportation infrastructure and weather conditions. These factors reflect how individual motives, rational choices, and situational influences shape transportation behavior. The shift has led to various impacts, including traffic congestion, air and noise pollution, higher accident risks, reduced social interaction, social stratification, and increasing individualism. The study concludes that enhancing the quality, accessibility, and attractiveness of public transportation is essential to reduce overdependence on private vehicles and

INTRODUCTION

Transportation is crucial for people to move from one place to another. An efficient and accessible transportation infrastructure is essential to support the movement of people and goods. Transportation enables various activities, highlighting its importance as an integral part of daily life. In Indonesia, transportation includes moving people and goods for public and private purposes. Public transit can provide a more economical alternative, while private vehicles offer higher flexibility (Helmmie and Joewono 2022).

As the capital of West Kalimantan Province, Pontianak City has experienced significant economic and population growth over the past few decades. This growth has directly impacted the increasing mobility needs of the community, making transportation a critical aspect of daily life. Alongside this development,



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transportation mode usage patterns have shifted in the city. In 2007, the role of public transportation, specifically oplets, accounted for 70 percent of community mobility in Pontianak. However, from 2009 to the present, residents have increasingly transitioned to private vehicles (Wulandari et al. 2018). The substantial rise in private vehicle use, including motorcycles and cars, now dominates Pontianak's roads, indicating a dependency on private vehicles in the city.

The increase in population and urbanization has directly contributed to the substantial rise in the number of vehicles in Pontianak City. In 2022, approximately 30 percent of all registered motor vehicles in West Kalimantan were located in Pontianak, comprising 781,862 two-wheeled vehicles (motorcycles) and 85,884 four-wheeled vehicles (cars) (Korlantas Polri 2023). Compared to Pontianak's population of approximately 669,790 inhabitants in the same year, this equates to an average ownership of two motorcycles per resident as a private means of transportation.

The dependency on private vehicles in Pontianak raises concerns about its impacts on urban mobility and sustainability. The increase in traffic volume has resulted in severe congestion at various points in the city, particularly during peak hours. Additionally, air quality in Pontianak has deteriorated due to exhaust emissions from the growing number of private vehicles (Napitupulu et al. 2018; Sari et al. 2017). Furthermore, the rising dominance of private vehicles also brings significant social and economic impacts. This shift also influences urban social dynamics, where interactions among citizens in public transportation are decreasing (Morgan et al. 2016; Wang and Akar 2019).

This study investigates the reasons behind the preference for private vehicles among Pontianak residents and the impacts arising from the shift in transportation mode from public to private vehicles. The findings of this research are expected to provide policy recommendations to improve public transportation and promote sustainable mobility. The study focuses on Pontianak residents aged 15 to 64, particularly those living in the area or planning to do so for a minimum of one year.

Similar studies have examined transportation choices, such as Ramelia and Setyono (2015), who found that the dependence of Pontianak residents on private

vehicles was at moderate level, with a score of 2.375. Purwoko et al. (2022) identified various factors, such as gender, income, occupation, travel distance, and travel time, that influence commuters' reluctance to shift from private cars to public transportation. Furthermore, Han et al. (2018) found that flexibility was the most significant variable influencing passenger satisfaction, followed by safety, accessibility, comfort, and economy. Considering these findings, this study emphasizes the importance of understanding individual motivations for choosing transportation modes, which aligns with Max Weber's Social Action Theory.

This research adopts an in-depth qualitative approach through interviews and field observations to explore the motivations, perceptions, and social patterns underlying community preferences for transportation modes, particularly private and public transportation such as oplets. Therefore, exploring the reasons behind residents' preferences for private vehicles or oplets is essential to understanding this phenomenon comprehensively. These transportation choices are vital as they affect urban planning, environmental sustainability, and the quality of life for the community (Rocha et al. 2023; Spears et al. 2016; Stojanovski 2019; Youssef et al. 2021).

METHOD

This article employs a qualitative research method with a phenomenological approach. This design facilitates an in-depth exploration of individuals' experiences and perceptions regarding their choices between private vehicle and public transportation alternatives, such as oplets, as well as the environmental implications associated with these choices. The phenomenological approach is particularly suitable for this study, as it allows for a nuanced understanding of the subjective meanings that inform individuals 'transportation decisions. The purposive sampling was utilized to select informants, focusing on residents of Pontianak City aged 15 to 64. Sampling continued until data saturation was reached, ensuring comprehensive coverage of the perspectives within the target demographic. Data were collected from 14 informants



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through in-depth, face-to-face interviews guided by a semi-structured questionnaire conducted from February 6 to 16, 2024.

Data collection was conducted through a series of systematic and immersive activities. The researcher carried out direct interviews with respondents, carefully transcribing their responses and taking detailed notes. Field observations were also made to capture the social context and real-life dynamics relevant to the research subject. Additional data were categorized based on their sources and relevance to the research questions. This process relied on theoretical guidelines as well as on active engagement and interaction in the field to accurately grasp the social phenomena under investigation. All notes and recordings were carefully organized to ensure the information gathered could be analyzed accurately and meaningfully.

Analysis was performed using Miles and Huberman's model, which consists of three main stages: data reduction, data display, and conclusion drawing. During the reduction stage, excessive or irrelevant data were sifted and condensed according to their relevance and importance to achieving the study's objectives. The display stage aimed to present the core information systematically, allowing clear identification of relationships and implications within the data. In the conclusion drawing stage, the researcher engaged in an in-depth reflection by comparing the findings with existing theories and literature, thereby uncovering new insights and a deeper understanding of the research context. This analytic process was conducted interactively and continuously until data saturation was achieved, consistent with Miles et al. (2019). This thorough approach ensured the data were rich, detailed, and provided robust insights into the studied phenomenon.

RESULT AND DISCUSSION

Motivations for Choosing Private Vehicles over Oplets

1. Internal Factors

Private vehicles are those used individually by a person or family, allowing travel at any time and to any destination. In this study, private vehicles refer to twowheeled motorcycles and cars. The findings reveal several reasons that drive

individuals to choose private vehicles, including flexibility, comfort, time efficiency, ease of access, economic considerations, inadequate public transportation in Pontianak City, safety factors, the purpose of travel, the number of travellers, and weather conditions.

Flexibility is a primary consideration for Pontianak residents when choosing private vehicles over public transport like oplets. Private vehicles offer individuals greater control over their travel schedule and route without external constraints (Othman and Ali 2020). Users can freely select their destinations without waiting for oplets to pick up other passengers or adhere to fixed routes. Respondents noted that motorcycles, in particular, provide more flexibility for reaching various destinations, whereas oplets are limited to single destinations and are infrequently available. Additionally, some respondents felt that private vehicles allow them to travel as they wish, including making multiple stops without time restrictions.

Private vehicles provide enhanced flexibility in planning daily activities. Users can easily adjust their trips according to their needs and preferences, taking alternative routes to avoid traffic or reach destinations not accessible by public transportation. The choice of private vehicles for flexibility aligns with Max Weber's Social Action Theory concerning instrumental rationality. Individuals make rational decisions based on the flexibility and convenience that private vehicles offer to meet their transportation needs. This supports the research objective of understanding why Pontianak residents favor private vehicles over public options like oplets. Consistent with the study by Han et al. (2018), flexibility is the primary factor influencing passenger satisfaction, followed by safety, ease, comfort, and economic factors. It underscores how the flexibility provided by private vehicles significantly contributes to their appeal, thereby addressing the study's purpose of elucidating the motivations behind transportation choices in Pontianak.

Another reason private vehicles are often chosen over oplets is the level of comfort they provide. Private vehicle users have complete control over their environment, including temperature and cleanliness. Additionally, individuals enjoy better comfort with more personal space, avoiding the crowds and noise commonly



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encountered in oplets. In Pontianak, some oplet fleets have shifted to serve as cargo carriers, causing discomfort among passengers who may be mixed with goods. For many respondents, especially those earning an average of over 3 million Rupiah per month, private transportation costs are negligible compared to their desired comfort. This finding aligns with Affandi and Parikesit (2022), where comfort, enjoyment, and freedom are critical considerations in choosing private transportation.

Comfort is a strong motivator for choosing private vehicles as the primary means of mobility, offering a more relaxed and independent travel experience tailored to individual needs and preferences. This preference aligns with Max Weber's Social Action Theory, which posits that rational and non-rational factors influence personal choices. Through the concept of affective action, comfort highlights the role of emotions, feelings, and subjective meanings in shaping social actions (Muhlis and Norkholis 2016).

To reinforce the theoretical basis of this study, the observed preference for flexibility and comfort in transportation choices can be analyzed through Max Weber's typology of social action. Weber (2019) categorizes zweckrational (instrumentally rational) action as behavior directed toward achieving specific goals through the most efficient means. In the context of this research, respondents exhibit such rationality by selecting private transportation options that minimize delays and optimize autonomy. At the same time, emotional responses—such as discomfort associated with crowded oplets or anxiety over uncertain public transport schedules— illustrate the presence of affektuelles Handeln (affective action). This convergence of rational calculation and emotional impetus supports Weber's assertion that social actions are rarely driven by a single, isolated motive but often arise from overlapping logics. Büscher et al. (2011) similarly incorporate Weberian theory to explore how individuals adapt to urban transport infrastructures amid changing socio-technical dynamics.

Time efficiency is also a primary reason many choose private vehicles over relying on oplets. With a private car, individuals are no longer bound by the schedules and limited routes often associated with oplet use. They can adjust departure times and travel routes according to their needs and preferences. The availability of a private vehicle enables users to plan their trips based on their schedules without relying on public transportation schedules like those of oplets. Tailoring travel routes according to traffic conditions and road situations allows individuals to reach their destinations more punctually. Most respondents value their time more highly than the additional private transportation costs. This aspect of time efficiency aligns with Max Weber's Social Action Theory, mainly instrumental rationality, where individuals choose the most efficient means to achieve their desired goals.

Accessibility and convenience are also significant considerations when choosing private vehicles over oplets. Respondents prefer private vehicles as they better meet their needs, are more practical for reaching various destinations, and allow them to select a mode of private transportation based on road conditions. Private transportation use is also influenced by personal needs that public transport cannot always satisfy. This is supported by Affandi and Parikesit (2022), who argue that the choice of private transportation is linked to the intrinsic characteristics of private vehicles, including internal and external factors. These needs reflect individuals' efforts to select transportation that best suits their preferences and requirements, as demonstrated by rational decision-making in Max Weber's Social Action Theory.

Economic considerations also play a significant role in individuals' decisions to use private vehicles. Despite additional fuel and maintenance costs, some respondents prefer private vehicles over oplets. They find that it saves time and can be more economical in the long term, as they do not need to pay a fare each time they travel. Respondents noted that owning a private vehicle can help them better manage their expenses. Over time, the cost of using a private vehicle can be more efficient than recurring public transportation fees. This consideration aligns with Max Weber's Social Action Theory, where individuals tend to choose the most rational approach to achieve their goals. This instrumental rationality involves optimizing costs and benefits when deciding on transportation use.

Safety factors also play a crucial role in individuals' decisions to use private vehicles instead of oplets. Some respondents expressed concerns about security and



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safety when using oplets. They feel safer and more comfortable using private vehicles, as they have complete control over the vehicle and can avoid potential risks associated with oplets, such as accidents or crime. Choosing private vehicles for safety reflects the importance of self-protection in individuals' decision-making. Safety is also linked to emotional aspects in Max Weber's Social Action Theory, where actions are influenced by the need to feel safe and protected.

Additionally, travel purposes play an essential role in the decision to use private vehicles over oplets. Respondents indicated they choose private vehicles for their practicality and efficiency in reaching their destinations, especially when they need to visit multiple places on a single trip. Private vehicle use allows them to adjust their route and schedule according to their needs without being restricted by the limited schedules and routes of public transportation. The decision to use private vehicles based on travel purposes reflects individuals' efforts to optimize time and efficiency in reaching their goals. This aligns with Max Weber's Social Action Theory, where individuals act based on rational calculations to achieve their goals most efficiently.

The number of people travelling together is also a significant factor in individuals' decisions to use private vehicles. Several respondents indicated they choose private vehicles because they are more practical and economical when travelling with family or friends. Using a private vehicle allows them to share travel expenses and have more space to carry their belongings. The decision to use a private vehicle based on the number of people travelling reflects an effort to optimize efficiency and comfort during the journey. This aligns with Max Weber's Social Action Theory, where individuals act based on rational calculations to achieve their goals most efficiently.

2. External Factors

The finding in this study is the transformation of several oplet units in Pontianak into goods carriers, blending passenger and cargo services. This operational shift has not only reduced passenger capacity but also discouraged ridership due to diminished comfort and safety, particularly for women and elderly users. Such informal adaptations of public transit are rarely documented in Indonesian urban transport literature, indicating a specific local improvisation in response to declining profitability in passenger services. This transformation reflects a structural degradation of public transport rather than a user preference shift alone. It illustrates how users are pushed away from public transport by systemic inadequacy, not merely pulled by the benefits of private vehicles. This dimension enhances our understanding of modal shift by incorporating context-specific supply-side dynamics, a perspective supported by (Cervero 2000) in his analysis of informal transport systems in developing cities.

The inadequacy of public transportation in Pontianak City also contributes to the preference for private vehicles. Many oplets cannot reach all areas of the city, causing inconvenience and limitations for those who rely on public transportation. The inability of public transport to reach all areas creates difficulties for residents in conducting daily activities. This discomfort is a primary reason many prefer using private vehicles, ensuring they can reach their destinations efficiently and on time. The inadequacy of public transport creates uncertainty for passengers, as they may face long wait times or struggle to find a suitable route to their destination. In the context of Max Weber's Social Action Theory, using private vehicles as a more reliable and efficient alternative reflects instrumental rationality.

Weather also plays a crucial role in people's decisions to use private vehicles. Some respondents preferred private vehicles due to the comfort and protection they offer against extreme weather, such as heavy rain or intense heat. By using a private vehicle, they can avoid the discomfort associated with public transportation during adverse weather conditions. For instance, respondents prefer using a private vehicle to stay dry and avoid getting soaked in rainy conditions.

While private transportation provides freedom and flexibility, respondents acknowledged that it often contributes to traffic congestion, particularly during the rainy season when more people opt for cars. However, choosing private vehicles due to weather considerations reflects a blend of rational and non-rational factors, as outlined in Max Weber's Social Action Theory. The sensible aspect involves practical



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considerations, such as staying dry, warm, or cool during the journey. At the same time, the non-rational element may include emotional comfort and peace of mind when facing challenging weather conditions.

The Impact of the Shift from Public to Private Transportation in Pontianak City 1. Environmental Impact

The shift from public to private transportation in Pontianak City has led to various impacts, influenced by the socio-demographic conditions of the community, such as average monthly income, age, and educational attainment. Perceptions of these impacts vary according to the socio-demographic status of individuals. One of the primary consequences observed is increased traffic congestion. Difficulties in accessing public transportation have driven a rise in private vehicle use, worsening congestion, especially during adverse weather and peak hours. The growing number of vehicles on the road, coupled with less disciplined driving behaviours, has contributed to this escalation in congestion (Ali et al. 2021; Stavrinos et al. 2013).

This study offers important insights into the complex interplay of various factors influencing transportation choices in Pontianak. While it effectively highlights these dynamics, it also acknowledges certain limitations. The qualitative approach allows for rich, nuanced insights into individuals 'experiences, but the purposive sampling method may capture a limited range of perspectives. Nevertheless, this focus enriches our understanding of the unique challenges faced by residents, emphasizing the pressing need for improvements in public transportation systems and urban planning.

Moreover, the study's comprehensive analysis of both demographic and infrastructural factors captures the multifaceted nature of transportation dynamics, contributing valuable knowledge to the field. Although specific local contexts may pose challenges to generalizing findings to other urban areas, the insights gained from Pontianak can inform broader discussions about sustainable mobility. By addressing the factors that drive transportation decisions, this research lays a vital foundation for

future studies and policy initiatives aimed at enhancing urban mobility and shaping more effective transportation strategies.

The shift to private transportation also has adverse environmental effects, particularly regarding air pollution. High emissions from increasing numbers of vehicles threaten air quality, with older, less roadworthy vehicles exacerbating pollution. This pollution can negatively impact human health and the environment, leading to respiratory issues such as asthma and lung disease. Noise pollution from traffic also emerges as an environmental issue that demands attention. Besides congestion and pollution, increasing private vehicle use raises the risk of traffic accidents, especially among less experienced drivers, compounded by poor road conditions and a lack of traffic discipline. Nonetheless, there are positive aspects of this shift. Some individuals are more motivated to take risks by purchasing private vehicles, encouraging them to work harder. However, perceptions of the social impact of this shift vary depending on individuals' perspectives and experiences.

Efforts to improve public transportation in Pontianak City are essential to enhance community mobility and quality of life. This includes revitalizing public transportation services, such as oplet, improving bus terminals and stops, and considering free public transportation for the community. Additionally, integrating online transportation services and imposing restrictions on private vehicles could increase public transport's appeal. In other words, collaboration among the government, the community, and other relevant stakeholders is vital to establishing a more efficient and sustainable transportation system in Pontianak City. Efforts to mitigate environmental impact require awareness and more progressive steps in promoting sustainable transportation, such as adopting eco-friendly vehicles and enhancing accessible and efficient public transportation infrastructure.

2. Social Impact

The social impact of this shift also entails implications that warrant close attention, one being the decrease in social interactions among individuals. With more people opting for private vehicles, direct interactions in public spaces, such as at bus stops or within public transit, are likely to diminish. This shift may reduce



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opportunities for communication and direct social engagement among community members.

The use of private vehicles, especially those that are luxurious and expensive, often symbolizes high economic status (Siahtiri et al. 2022). Conversely, individuals who drive simpler vehicles or do not own a private vehicle may be perceived as having a lower economic status. This phenomenon reflects the social polarization that can emerge within society. Additionally, using private vehicles can foster individualism and egocentrism among individuals. When driving a private vehicle, particularly in traffic situations, they focus on their interests and needs without considering those of others around them. Some informants noted that one should be mindful of others while navigating traffic. Still, private car or motorcycle users often behave like they dominate the road, reflected in reluctance to yield or prioritize others at intersections or in heavy traffic.

Expectations for improvement and development of public transportation in Pontianak City are an essential part of efforts to enhance mobility and quality of life. Various measures are anticipated to improve the efficiency and comfort of public transportation. Reviving oplet services is a primary aspiration, which could be achieved by expanding the fleet and modernizing existing vehicles. This includes enhancing the appearance of oplet vehicles to make them more attractive and comfortable for passengers.

Furthermore, reactivating bus terminals and stops is crucial for improving the accessibility of public transportation. By creating a connected, obstacle-free system and adding more stops, it is hoped that people will find it easier to access public transportation services. Another hope is the implementation of free public transportation systems, as seen in other major cities like Trans Koetaradja in Banda Aceh, Trans Banjarmasin in Banjarmasin, and Jaklingko in Jakarta (Itsnaini and Alexander 2024). Ensuring vehicle safety through regular emissions testing and updating public transportation fleets in line with modern standards is essential for maintaining quality and safety. Public transit use could foster valuable social interactions if public transportation regains popularity with a smooth-running system,

organized stops, comfortable vehicles, affordable fares, and streamlined payments. Informants noted that children who use public transportation can become braver and more independent.

To enhance the attractiveness of public transportation in Pontianak, integrating with online transportation services is essential. Improved spatial design, clear and accessible public transit information, and the introduction of larger, faster vehicles are expected to elevate service quality significantly. Additionally, moderating private vehicle use through increased parking fees and progressive taxation could encourage a shift toward public transit. Raising awareness about traffic discipline and enforcing stricter rules and penalties is crucial to creating a safe and orderly transportation environment for all road users. Thus, collaboration among the government, the public, and other stakeholders is vital for developing a more efficient and sustainable transportation system.

CONCLUSION

The shift from public to private transportation in Pontianak City is driven by various considerations categorized as internal factors, such as flexibility, comfort, time efficiency, safety, and personal convenience, and external factors, including inadequate public transportation infrastructure and unfavorable weather conditions. These motivations reflect how individual values, rational choices, and situational contexts influence transportation decisions. This behavioral shift has resulted in significant environmental impacts, including increased traffic congestion, air and noise pollution, and a higher risk of traffic accidents. In addition, the social impact is marked by a decline in public interaction, the emergence of socioeconomic disparities, and rising individualism. These findings underscore the urgency of improving the quality, accessibility, and attractiveness of public transportation to reduce reliance on private vehicles. An integrated, sustainable mobility approach supported by government, community, and stakeholder collaboration is essential to address both the causes and consequences of this transition while promoting equitable and environmentally responsible urban transport systems.



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BIBLIOGRAPHY

- Affandi, L., and D. Parikesit. 2022. 'Faktor-Faktor Psikologis yang Menjadi
 Pertimbangan Utama Penggunaan Mobil Pribadi Dan Sepeda Motor Di Jakarta'.
 Jurnal Profesi Insinyur Universitas Lampung 3(1):6–9. doi:10.23960/jpi.v3n1.73.
- Ali, Akbar et al. 2021. 'Traffic Efficiency Models for Urban Traffic Management Using Mobile Crowd Sensing: A Survey'. Sustainability. doi:10.3390/su132313068.
- Büscher, Monika et al. 2011. Mobile Methods. Routledge: London.
- Cervero, Robert. 2000. *Informal Transport in the Developing World*. Nairobi: United Nations Centre for Human Settlements (Habitat).
- Han, Yan et al. 2018. 'Research on Passenger's Travel Mode Choice Behavior Waiting at Bus Station Based on SEM-Logit Integration Model'. *Sustainability* 10(6). doi:https://doi.org/10.3390/su10061996.
- Helmmie, Elshaan, and Tri Basuki Joewono. 2022. 'Elasticity of Travel Time and Travel Cost of Private Vehicles and Public Transportation in Bandung, Indonesia'. *Civil Engineering Dimension* 24(2):101–8. doi:10.9744/ced.24.2.101-108.
- Itsnaini, Faqihah Muharroroh, and Hilda B. Alexander. 2024. 'Transportasi Umum di Sejumlah Kota Gratis, Bisakah Diterapkan di Seluruh Indonesia?' https://lestari.kompas.com/read/2024/01/12/090236386/transportasi-umum-disejumlah-kota-gratis-bisakah-diterapkan-di-seluruh?page=all.
- Korlantas Polri. 2023. 'Data Jumlah Kendaraan Roda Dua Dan Roda Empat 2022'. https://satudata.pontianak.go.id/dataset/data-jumlah-kendaraan-roda-dua-danroda-empat [24-07-2023]
- Miles, Matthew B. et al. 2019. *Qualitative Data Analysis: A Methods Sourcebook* (Fourth Edition. 4th ed. Arizona State University, USA: SAGE Publications, Inc.
- Morgan, Rosemary et al. 2016. 'Performance of Private Sector Health Care: Implications for Universal Health Coverage'. *The Lancet* 388(10044):606–12.

doi:10.1016/s0140-6736(16)00343-3.

- Muhlis, Alis, and Norkholis Norkholis. 2016. 'Analisis Tindakan Sosial Max Weber dalam Tradisi Pembacaan Kitab Mukhtashar Al-Bukhari (Studi Living Hadis)'. *Jurnal Living Hadis*. doi:10.14421/livinghadis.2016.1121.
- Napitupulu, Budiman et al. 2018. 'Analysis of Air Pollution Caused by Mass Transportation Design Changes'. *Matec Web of Conferences* 195:4021. doi:10.1051/matecconf/201819504021.
- Othman, Abdul Ghapar, and Kausar Hj Ali. 2020. 'Transportation and Quality of Life'. *Planning Malaysia*. doi:10.21837/pm.v18i13.774.
- Purwoko, Budi Aji et al. 2022. 'Willingness To Modal Shift From Private To Public Transportation in Jakarta Metropolitan Area'. *Planning Malaysia* 20(2):22–34. doi:10.21837/pm.v20i21.1089.
- Ramelia, Pratiwi, and Jawoto Sih Setyono. 2015. 'Ketergantungan Terhadap Kendaraan Pribadi Di Kota Pontianak Kalimantan'. *Jurnal Teknik PWK* 4(1):107–18.
- Rocha, Hudyeron et al. 2023. 'Exploring Modal Choices for Sustainable Urban Mobility: Insights From the Porto Metropolitan Area in Portugal'. *Sustainability* 15(20):14765. doi:10.3390/su152014765.
- Sari, Kartika et al. 2017. 'Reduction of CO2 Emission From Transportation Activities in the Area of Pasar Besar in Malang City'. *Iop Conference Series Earth and Environmental Science* 70:12018. doi:10.1088/1755-1315/70/1/012018.
- Siahtiri, Vida et al. 2022. 'Unlocking Consumer Consideration Set Size Formation for Luxury Services: A Study of Self-identification, Brand Status and Anticipated Emotions'. *International Journal of Consumer Studies* 46(6):2488–2502. doi:10.1111/ijcs.12801.
- Spears, Steven et al. 2016. 'Driving Reduction After the Introduction of Light Rail Transit: Evidence From an Experimental-Control Group Evaluation of the Los Angeles Expo Line'. Urban Studies 54(12):2780–99. doi:10.1177/0042098016657261.

Stavrinos, Despina et al. 2013. 'Impact of Distracted Driving on Safety and Traffic



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Flow'. Accident Analysis & Prevention. doi:10.1016/j.aap.2013.02.003.

- Stojanovski, Todor. 2019. 'Urban Form and Mobility Choices: Informing About Sustainable Travel Alternatives, Carbon Emissions and Energy Use From Transportation in Swedish Neighbourhoods'. Sustainability 11(2):548. doi:10.3390/su11020548.
- Wang, Kailai, and Gulsah Akar. 2019. 'Factors Affecting the Adoption of Autonomous Vehicles for Commute Trips: An Analysis With the 2015 and 2017 Puget Sound Travel Surveys'. *Transportation Research Record Journal of the Transportation Research Board* 2673(2):13–25. doi:10.1177/0361198118822293.
- Weber, Max. 2019. *Economy and Society: A New Translation*. Harvard University Press.
- Wulandari, Meity et al. 2018. 'Identifikasi Faktor Pendukung Dan Penghambat Pengguna Angkutan Umum'. JeLAST: Jurnal Teknik Kelautan, PWK, Sipil, Dan Tambang 5(2):1–15.
- Youssef, Zaher et al. 2021. 'Modeling the Modal Shift Towards a More Sustainable Transport by Stated Preference in Riyadh, Saudi Arabia'. *Sustainability* 13(1):337. doi:10.3390/su13010337.