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Analysis of Employee Working Hours in Reducing Congestion in Depok City

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Abstract

This study aims to analyze the effectiveness of regulating employee working hours in reducing traffic congestion in Depok City, a strategic area that serves as a buffer zone for Jakarta. Using a comprehensive research method that includes primary and secondary data collection, traffic performance analysis was conducted using the parameters of the Indonesian Road Capacity Manual (MKJI). The study focused on two main roads, Jalan Margonda Raya and Jalan Raya Sawangan, which are the centers of transportation activities. The main findings show that congestion is caused by limited road capacity, high private vehicle use, and low attractiveness of public transportation. Based on the simulation of the proposed scheme of regulating working hours and school hours, there is an improvement in the volume-capacity ratio (V/C) during peak hours, thus potentially reducing the level of traffic saturation. The study also made strategic recommendations on road infrastructure improvement, public transportation quality improvement, and policy coordination between the government, the community, and the private sector. The conclusions emphasize the importance of multi-stakeholder collaboration to implement integrated evidence-based policies. The results are expected to serve as a reference for the Depok City Government in designing more effective transportation management strategies, as well as making a real contribution to reducing congestion and improving the quality of life of urban residents.

Keywords: *Congestion, Working Hours Arrangement, Depok City.*

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INTRODUCTION

Depok City, as one of the buffer cities of DKI Jakarta, faces significant traffic congestion problems due to high population mobility. As a strategic area within the Jabodetabek region, Depok City has a high level of commuting, with more than 18% of its residents working outside their home city (BPS, 2021). The volume-capacity

ratio (V/C ratio) index on Jalan Margonda Raya was recorded at 0.91 in 2022, indicating that the road has exceeded its optimal capacity. The main factors contributing to this congestion include limited road capacity, the dominance of private vehicle use, and suboptimal public transportation services (Dishub Kota Depok, 2022).

As one of the solutions, regulating employee working hours is a strategic step that is considered to reduce traffic pressure during peak hours. However, previous research has focused more on physical infrastructure development and public transportation improvements, with a lack of studies on non-physical approaches such as working hour arrangements in managing traffic distribution. Hence, there is a gap in the literature indicating the need to explore the effectiveness of working hour arrangements in addressing congestion problems in developing cities.

This study aims to evaluate the effect of regulating employee working hours on traffic performance in Depok City through various simulation schemes. The results are expected to provide an empirical contribution to evidence-based policy making, as well as offer strategies that are integrated with Depok City's transportation development plan. Thus, this study is relevant not only for local policy makers, but also for broader urban transportation planning.

LITERATURE REVIEW

Existing Traffic Conditions

Traffic congestion in Depok City has become a chronic problem, especially on major roads such as Jalan Margonda Raya and Jalan Raya Sawangan. Based on the 2022 report, the volume-capacity ratio (V/C ratio) on Jalan Margonda Raya reached 0.91, indicating that the road capacity is almost fully utilized during peak hours. Jalan Raya Sawangan also experiences a similar pattern with the V/C ratio increasing every year. This condition is exacerbated by the growth in the number of private vehicles reaching more than 1 million units by 2022, while the growth of road infrastructure is relatively stagnant (Dishub Kota Depok, 2022). The low use of public transportation, which only accounts for 14.46% of total trips, adds to the traffic burden on the roads.

Congestion is also influenced by road user behavior, including a lack of discipline and the practice of illegal parking, which reduces effective road capacity. This creates a domino effect on travel time, transportation efficiency, and quality of life. Therefore, an innovative and integrated approach is needed to address these issues.

Traffic Performance Analysis

The traffic performance analysis in this study used the Indonesian Road Capacity Manual (MKJI, 1997) as the main reference. The evaluation was conducted by calculating the degree of saturation (DS), which measures the ratio between traffic volume and road capacity. The study also evaluated the free flow speed (FV) as an

indicator of transportation efficiency. The simulation results show that regulating working hours by dividing working time into several waves can reduce DS by 15% on Margonda Raya Road and increase traffic flow speed by 20% during the morning and evening peak hours.

In addition, the analysis shows that redistributing travel times can reduce saturation at major intersections, which are often congested. By shifting some trips to off-peak hours, the pressure on transportation infrastructure can be better managed.

Potential Working Hours Setting Policy

Previous research has shown that regulating working hours has great potential in reducing congestion. For example, similar policies implemented in major cities such as Jakarta have successfully reduced traffic load by 10% during peak hours (Dishub Kota Depok, 2022). However, the challenge in implementing this policy lies in the coordination between various stakeholders, including the government, the private sector, and the community.

For Depok City, the policy of regulating working hours requires not only a technical approach, but also a social one. Educating the public about the benefits of this policy is the key to success. In addition, careful planning is needed to integrate this policy with public transportation development, such as increasing the capacity and convenience of public transport modes. Thus, this policy can have a significant long-term impact on traffic management.

RESEARCH METHODS

This study uses a mixed-method approach with quantitative and qualitative approaches to evaluate the effect of working hour arrangements on traffic performance in Depok City. This approach was chosen to gain a holistic understanding of the existing traffic conditions as well as the effectiveness of the proposed working hour regulation scheme.

The main instruments used in this study include the Indonesian Road Capacity Manual (MKJI, 1997) guidelines for traffic performance analysis, survey forms for primary data collection, and traffic simulation software to model various working hour scenarios. The survey involved government employees, private sector employees, and students who play a significant role in traffic movement patterns on Margonda Raya and Sawangan Highway.

The sampling method was purposive sampling, which targeted respondents according to their demographic characteristics and travel activities. Primary data was collected through field surveys, which included an employee travel pattern survey, a private employee working hours survey, and a school travel characteristics survey. Secondary data was obtained from relevant agencies, including the Depok

City Transportation Agency and the Central Bureau of Statistics (Dishub Kota Depok, 2022).

Data collection techniques included structured interviews, direct observation, and peak hour traffic counts at the study locations. All data collected was then analyzed using a quantitative approach to calculate the volume-capacity ratio (V/C), degree of saturation (DS), and free flow speed (FV) based on the MKJI formula (Directorate General of Highways, 1997). Qualitative analysis was used to identify potential social constraints and implementation of the working hour policy.

The results of this quantitative and qualitative analysis are synthesized to evaluate the effectiveness of various working hour setting scenarios. The findings form the basis for developing integrated and evidence-based policy recommendations, which are expected to significantly reduce congestion in Depok City.

RESULTS AND ANALYSIS

This study shows that working hour arrangements have a significant impact on traffic performance in Depok City, especially on two main roads, namely Jalan Margonda Raya and Jalan Raya Sawangan. The simulation results show that the implementation of the working hour scheme can reduce the average volume-capacity ratio (V/C ratio) value by 15% in the morning (06.00-09.00) and afternoon (16.00-19.00) peak hours. The free flow speed (FV) on Jalan Margonda Raya increased from 20 km/h to 25 km/h after the implementation of the proposed scheme.

In addition, a combination scheme that integrates working hours with school hours provides the best results with a decrease in the degree of saturation (DS) of up to 18% compared to existing conditions. In the morning peak hour, the number of vehicles passing through the Margonda Raya section decreased by 12%, while on Jalan Raya Sawangan the decrease reached 10%.

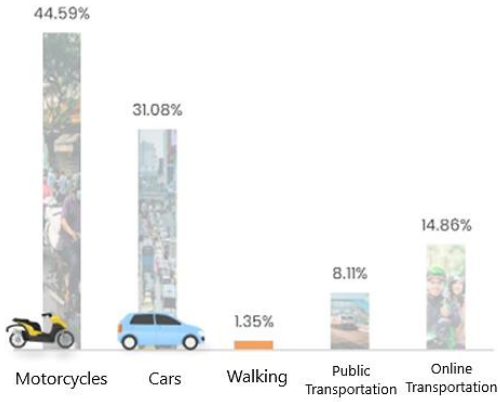

Figure 1. Modes used by Depok City Government Employees
Source: Researcher Data

A total of 62.2% of Depok City Government employees who work at the Depok Mayor's Office cross the Margonda Raya Road from the south while 37.94% come from

the north. The main modes used as transportation are motorcycles with a value of 44.59%, cars with a value of 31.08% and online transportation of 14.68%.

From the survey of employee travel patterns, it was found that 68% of employees use private vehicles, while the rest use public transportation. This finding is in line with data from the Transportation Agency which notes that public transportation modes only account for 14.46% of total trips in Depok City (Dishub Kota Depok, 2022).

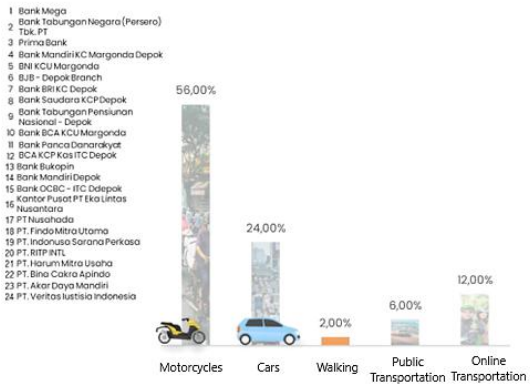

Figure 2. Transportation Modes of Private Employees Around the Mayor's Office
Source: Researcher Data

Based on the graph above, of the 24 companies, 56% of employees use motorbikes, then 24% use cars and 12% use online transportation.

Traffic Performance of Margonda Raya Road

The results show that working hour arrangements have a positive impact on traffic performance on Margonda Raya Road. Based on simulations conducted using the working hour scheme, a decrease in the volume-capacity ratio (V/C ratio) occurred in the morning and evening peak hours. In the morning peak hour, the V/C ratio dropped by 15%, indicating a significant improvement in traffic distribution. The free flow speed (FV) on Jalan Margonda Raya also increased, from 20 km/h to 25 km/h after the implementation of the working hour regulation scheme. This shows that the working hour policy can help reduce the level of congestion that occurs during peak hours.

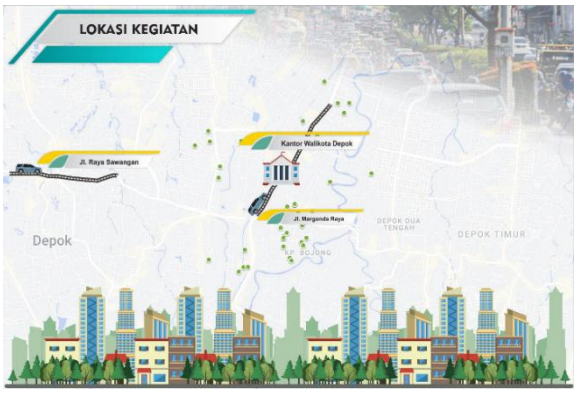

Figure 3. Segment Distribution of Margonda Raya Road
Source: Researcher Data

Further simulations show that working hour arrangements that incorporate school timings can also improve traffic performance on Margonda Raya Road. A reduction in the degree of saturation (DS) was recorded to 18% compared to the existing condition.

Traffic Performance Modeling with Proposed Working Hours Scheme on Margonda Raya Road

The traffic performance modeling in this study was carried out by formulating several schemes for changing the working hours of employees and schools in the study area. With these schemes, traffic performance is expected to be better than the existing conditions.

Scheme 1 (ASN of Depok City Government with 2 Shift entry scheme)

Figure 4. Proposed ASN Working Hours Scheme 1
Source: Researcher Data

In scheme 1, two shifts are planned for the civil servants of Depok City Government. Working hours in shift 1 start at 07.30 and end at 16.00 while Shift 2 starts at 10.00 and ends at 18.30. This scheme has an interval of 2 hours 30 minutes between the two shifts with 50% of employees working on shift 1 and 50% on shift two.

Scheme 2 (ASN of Depok City Government with 3 Shift entry scheme)

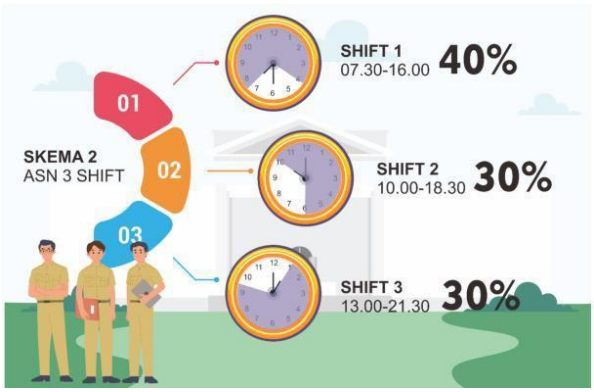

Figure 5. Proposed ASN Working Hours Scheme 2
Source: Researcher Data

In scheme 2, 3 shifts are planned for the civil servants of Depok City Government. Working hours in shift 1 start at 07.30 and end at 16.00, shift 2 starts at 10.00 and ends at 18.30, and shift 3 starts at 13.00 and ends at 21.30. The scheme has an interval of ± 2.5 hours between the three shifts with 40% of employees working on shift 1, 30% on shift 2, and 30% on shift 3.

Scheme 3 (ASN of Depok City Government with 1 Shift Entry Scheme)

Figure 6. Proposed ASN Working Hours Scheme 3
Source: Researcher Data

In scheme 3, 1 shift is planned for the civil servants of Depok City Government. Working hours start at 09.00 and end at 17.30.

Scheme 4 (ASN of Depok City Government with 2 Shift Entry Scheme)

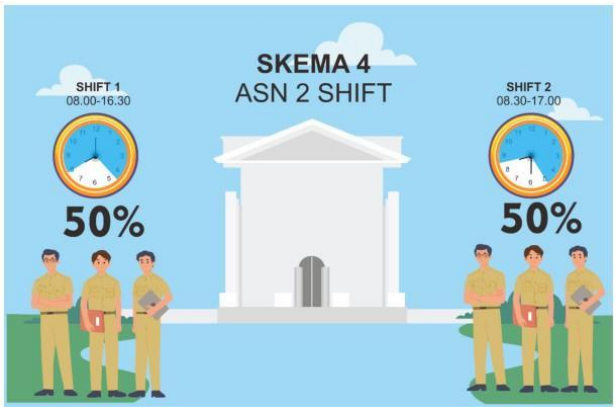

Figure 7. Proposed ASN Working Hours Scheme 4
Source: Researcher Data

In scheme 4, two shifts are planned for the civil servants of Depok City Government. Working hours in shift 1 start at 08.00 and end at 16.30 and shift 2 starts at 08.30 and ends at 17.00. This scheme has a 30-minute interval between shifts with
50% of employees working on shift 1 and 50% on shift 2.

Scheme 5 (ASN of Depok City Government with 2 Shift Entry Scheme)

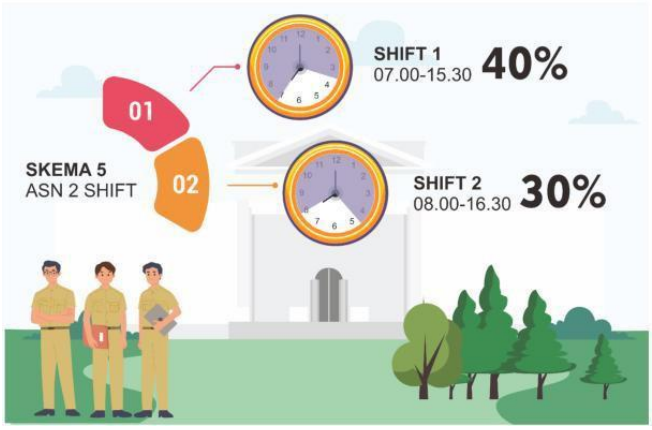

Figure 8. Proposed ASN Working Hours Scheme 5
Source: Researcher Data

In scheme 5, two shifts are planned for the civil servants of Depok City Government. Working hours in shift 1 start at 07.00 and end at 15.30 and shift 2 starts at 08.00 and ends at 16.30. This scheme has a 1-hour interval between shifts with 50% of employees working on shift 1 and 50% on shift 2.

Scheme 6 (ASN of Depok City Government with Flexible Entry Scheme)

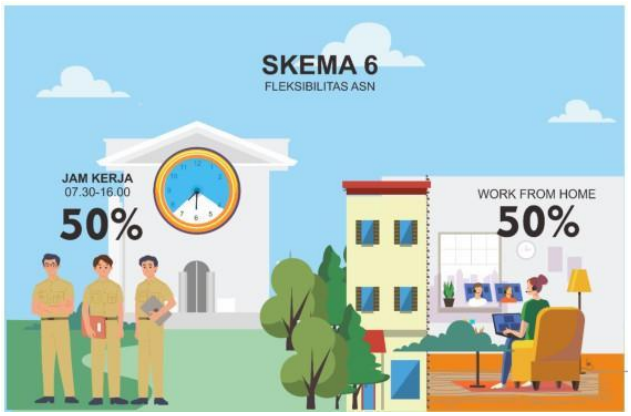

Figure 9. Proposed ASN Working Hours Scheme 6
Source: Researcher Data

In scheme 6, flexibility is planned for the civil servants of Depok City Government. Working hours start at 07.30 and end at 16.00. This scheme has 50% of employees working in the office and 50% at home or other places (WFH/WFA).

Arrangement of School Entrance Hours is Divided Into 2 Sessions

Figure 10. Proposed School Hours
Source: Researcher Data

School hours are planned in 2 sessions for schools around the Depok Mayor's Office. Session 1 starts at 07:00 until 12:00 while session 2 starts at 10:00 until 14:00. The scheme has a 3-hour interval between the two sessions with 50% load on session
1 and 50% on session 2.

Private Company Working Hours Arrangement with 2 Shifts

Figure 11. Proposed Working Hours of Private Employees
Source: Researcher Data

Working Hours Arrangement is planned for 2 shifts for Private Companies around the Depok Mayor's Office Complex. Working hours in shift 1 start at 08.00 and end at 16.00 while Shift 2 starts at 10.00 and ends at 18.00. The proposed working hours have a 2-hour interval between the two shifts with 50% of employees working on shift 1 and 50% on shift 2.

Traffic Performance of Sawangan Highway

On Jalan Raya Sawangan, the results showed a 10% decrease in the V/C ratio during the morning and evening peak hours after the working hour arrangement was implemented. This decrease was lower than on Jalan Margonda Raya, indicating that the working hour arrangement had a greater impact on road sections with higher traffic volumes. Free flow speed (FV) also increased significantly on Jalan Raya Sawangan, albeit on a smaller scale compared to Jalan Margonda Raya.

Figure 12. Segment Distribution of Sawangan Highway

Source: Researcher Data

Traffic Performance of Sawangan Highway
Scheme 1 (ASN of Depok City Government with 2 Shift Entry Scheme)

Figure 13. Proposed ASN Working Hours Scheme 1
Source: Researcher Data

In scheme 1, two shifts are planned for the civil servants of Depok City Government. Working hours in shift 1 start at 07.30 and end at 16.00 while Shift 2 starts at 10.00 and ends at 18.30. This scheme has an interval of 2 hours 30 minutes between the two shifts with 50% of employees working on shift 1 and 50% on shift two.

Scheme 2 (ASN of Depok City Government with 3 Shift Entry Scheme)

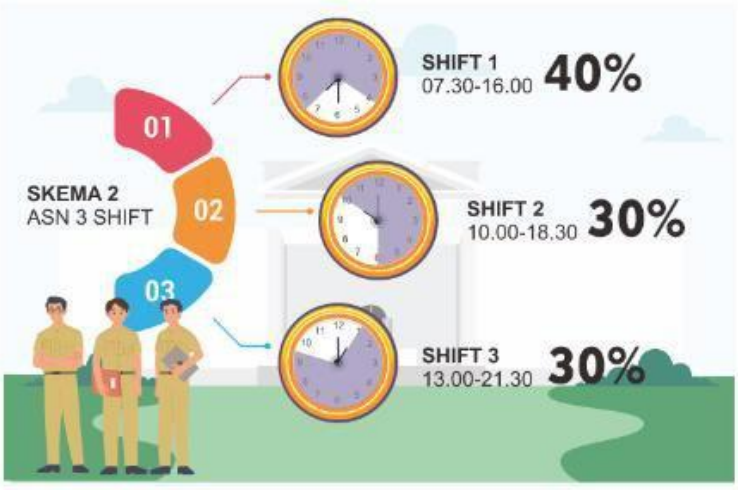

Figure 14. Proposed ASN Working Hours 3 Shift Scheme 2
Source: Researcher
Data

In scheme 2, 3 shifts are planned for the civil servants of Depok City Government. Working hours in shift 1 start at 07.30 and end at 16.00, shift 2 starts at 10.00 and ends at 18.30, and shift 3 starts at 13.00 and ends at 21.30. The scheme has an interval of ± 2.5 hours between the three shifts with 40% of employees working on shift 1, 30% on shift 2, and 30% on shift 3.

Scheme 3 (School Entrance Hours Divided into 2 Sessions)

Figure 15. Proposed School Hours Around Sawangan
Source: Researcher Data

In scheme 3, 2 sessions are planned for Schools around Jalan Raya Sawangan. Session 1 starts at 07.00 until 12.00 while for session 2 starts at 10.00 until 14.00. This scheme has a 3-hour interval between the two sessions with 50% load in session 1 and 50% in session 2.

A comparison of the schemes tested shows that the integrated working hour scheme with school hours gives the best results, with a 12% reduction in vehicle volumes in the morning peak hour. Working hour schemes separated by employment sector (government and private) also show a reduction in vehicle volume, but are not as effective as the integrated scheme.

Comparative Analysis of Performance between Schemes

A comparison between the various schemes showed that a working hour arrangement involving the distribution of working time in several waves gave the most optimal results. This scheme is able to reduce congestion, improve traffic flow speed, and reduce the degree of saturation (DS) significantly on both main roads studied. The implementation of a working hour policy involving the education sector (school hours) provides greater improvements, as it reduces traffic pressure at the same time as working hours.

Table 1. Comparison of V/C Ratio Values between Schemes on Margonda Raya Road

Jam	Arah ke Jakarta (A-B)										Arah ke Bogor (B-A)									
	Eksisting	Skema 1	Skema 2	Skema 3	Skema 4	Skema 5	Skema 6	Sekolah	Swasta	Total	Eksisting	Skema 1	Skema 2	Skema 3	Skema 4	Skema 5	Skema 6	Sekolah	Swasta	Total
05.00-06.00	0.64	0.64	0.64	0,64	0,64	0,65	0,64	0.64	0.64	0.64	0.57	0.57	0.57	0,57	0,57	0,50	0,57	0.57	0.57	0.57
06.00-07.00	0.83	0.74	0.76	0.79	0,74	0,74	0,74	0.79	0.82	0.69	0.77	0.70	0.71	0,77	0,70	0,70	0,70	0.73	0.75	0.64
07.00-08.00	0.87	0.77	0.79	0.82	0,77	0,77	0,77	0.82	0.85	0.72	0.84	0.77	0.79	0,71	0,77	0,77	0,77	0.80	0.83	0.72
08.00-09.00	0.79	0.79	0.79	0.79	0,70	0,79	0,79	0.79	0.79	0.79	0.78	0.78	0.78	0,65	0,72	0,78	0,78	0.78	0.78	0.78
09.00-10.00	0.61	0.70	0.66	0.65	0,61	0,61	0,61	0.65	0.62	0.76	0.67	0.73	0.71	0,67	0,67	0,67	0,67	0.71	0.68	0.79
10.00-11.00	0.59	0.68	0.64	0.63	0,59	0,59	0,59	0.63	0.60	0.74	0.59	0.66	0.63	0,59	0,59	0,59	0,59	0.63	0.61	0.72
11.00-12.00	0.65	0.65	0.71	0.61	0,65	0,65	0,65	0.61	0.65	0.61	0.67	0.67	0.71	0,67	0,67	0,67	0,67	0.62	0.67	0.62
12.00-13.00	0.75	0.75	0.81	0.75	0,75	0,75	0,75	0.75	0.75	0.75	0.71	0.71	0.75	0,71	0,71	0,71	0,71	0.71	0.71	0.71
13.00-14.00	0.69	0.69	0.69	0.69	0,69	0,69	0,69	0.69	0.69	0.69	0.64	0.64	0.64	0,64	0,64	0,64	0,64	0.64	0.64	0.64
14.00-15.00	0.60	0.60	0.60	0.64	0,60	0,60	0,60	0.64	0.60	0.64	0.60	0.60	0.60	0,60	0,60	0,60	0,60	0.64	0.60	0.64
15.00-16.00	0.66	0.66	0.66	0.66	0,66	0,57	0,66	0.66	0.66	0.66	0.65	0.65	0.65	0,65	0,65	0,58	0,65	0.65	0.65	0.65
16.00-17.00	0.72	0.63	0.65	0.72	0,63	0,63	0,63	0.72	0.70	0.61	0.77	0.70	0.71	0,77	0,70	0,70	0,70	0.77	0.75	0.69
17.00-18.00	0.70	0.61	0.63	0.70	0,61	0,80	0,61	0.70	0.69	0.60	0.77	0.70	0.72	0,64	0,70	0,84	0,70	0.77	0.76	0.69
18.00-19.00	0.63	0.72	0.68	0.63	0,72	0,72	0,63	0.63	0.64	0.73	0.60	0.67	0.64	0,47	0,67	0,67	0,60	0.60	0.62	0.68
19.00-20.00	0.57	0.66	0.62	0.57	0,66	0,57	0,57	0.57	0.58	0.67	0.58	0.65	0.62	0,58	0,65	0,58	0,58	0.58	0.60	0.66
20.00-21.00	0.56	0.56	0.56	0.56	0,56	0,56	0,56	0.56	0.56	0.56	0.53	0.53	0.53	0,53	0,53	0,53	0,53	0.53	0.53	0.53
21.00-22.00	0.56	0.56	0.62	0.56	0,56	0,56	0,56	0.56	0.56	0.62	0.52	0.52	0.56	0,52	0,52	0,52	0,52	0.52	0.52	0.56

Source: Researcher Data

Based on the table above, it can be seen that for the V / C Ratio value of Jakarta direction traffic at 06.00-07.00 hours decreased by 11% in Scheme 1 (ASN 2 Shift) from the Existing value of 0.83 to 0.74. In Scheme 2 (ASN 3 Shift) decreased by 9% from 0.83 to 0.76. In Scheme 3 (ASN 1 Shift), Scheme4 and Scheme 5 (ASN 2 Shift) and Scheme 6 (ASN Flexibility) decreased by 11% from 0.83 to 0.74. In School Engineering 2 Sessions decreased by 5% from 0.83 to 0.79. And in the Private Employee Working Hours Engineering decreased by 2% to 0.82. Then in the Total Scheme (Combined Scheme 1, School and Private) decreased by 18% from 0.83 to 0.69.

Table 2. Comparison of V/C Ratio Values between Schemes on Sawangan Highway

Jam	V/C Ratio				
	Eksisting	PNS Ske 1	PNS Ske 2	Sekolah	Total
05.00-06.00	0.39	0.39	0.39	0.39	0.39
06.00-07.00	0,78	0,66	0,68	0,63	0,52
07.00-08.00	0,90	0,79	0,81	0,76	0,64
08.00-09.00	0,80	0,80	0,80	0,80	0,80
09.00-10.00	0,53	0,65	0,60	0,65	0,76
10.00-11.00	0,45	0,56	0,52	0,59	0,71
11.00-12.00	0,71	0,71	0,78	0,56	0,56
12.00-13.00	0,68	0,68	0,75	0,54	0,54
13.00-14.00	0,66	0,66	0,66	0,66	0,66
14.00-15.00	0,65	0,65	0,65	0,77	0,77
15.00-16.00	0,65	0,65	0,65	0,65	0,65
16.00-17.00	0,80	0,68	0,71	0,80	0,68
17.00-18.00	0,86	0,74	0,77	0,86	0,74
18.00-19.00	0,71	0,78	0,78	0,71	0,78
19.00-20.00	0,55	0,67	0,63	0,55	0,67
20.00-21.00	0,43	0,43	0,43	0,43	0,43
21.00-22.00	0,43	0,43	0,50	0,43	0,43

Source: Researcher Data

The results also show the importance of a working hour policy that is coordinated with the development of better public transportation, as the use of private vehicles still dominates people's travel in Depok City. The research suggests that improving the quality and accessibility of public transport will be an important component to support the working hour policy.

CONCLUSIONS

This research successfully demonstrates that regulating employee working hours in Depok City can significantly reduce traffic congestion, especially on Jalan Margonda Raya and Jalan Raya Sawangan. Through the simulation of the working hour scheme, the results prove that changes in working time can reduce the volume-capacity ratio (V/C ratio) and increase the free flow speed (FV) during the morning and evening peak hours. A scheme that integrates working hours with school hours is shown to provide the best results in reducing traffic load and degree of saturation (DS).

This research makes a novel contribution to the field of traffic management by introducing working hour arrangements as an effective non-physical solution, which has previously received little attention in the urban transportation literature. The findings broaden the understanding of congestion management by incorporating social and policy factors in the analysis, potentially providing policy alternatives in cities with similar congestion problems.

This research also highlights the importance of coordination between the public and private sectors in implementing effective working hour policies.

Collaboration between parties is needed to ensure the policy can run smoothly, as well as create social change that supports the policy.

Theoretically, this study fills a gap in the existing literature on working hour regulation and traffic load distribution, and provides empirical evidence supporting the implementation of such policies. Methodologically, this study introduces a combined approach of traffic performance simulation and social survey to evaluate urban travel timing policies. Overall, this study enriches the knowledge of traffic management by providing empirical evidence on the effectiveness of working time arrangements in reducing congestion, and encourages the implementation of evidence-based policies in urban transportation planning.

Based on the research results, it is recommended that the Depok City Government consider the implementation of a working hour policy as a strategic measure to reduce congestion. This is especially important for major roads that have high traffic loads, such as Margonda Raya and Sawangan Highway. Furthermore, coordination between the government, private sector, and educational institutions is needed to ensure the smooth implementation of this policy.

In addition, this study also suggests that the policy of regulating working hours
be integrated with efforts to improve the quality and capacity of public transportation. Improving connectivity between activity centers and sub-centers in Depok City will further support the reduction of dependence on private vehicles, and encourage people to switch to public transportation modes.

For future research, it is recommended to conduct further studies by considering other variables, such as road user behavior and environmental impacts, which may also affect the effectiveness of the working hour policy. In addition, a similar study with a larger scale and longer timeframe could provide a deeper understanding of the long-term impact of this policy on urban congestion and people's quality of life.

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REFERENCES

Afrin, T., & Yodo, N. (2020). A survey of road traffic congestion measures towards a sustainable and resilient transportation system. *Sustainability*, *12*(11), 4660. *https://doi.org/10.3390/su12114660:contentReference[oaicite:1]{index=1}*

ANTARA News. (2022). *Ditlantas: Working Hours Arrangement Effectively Addresses*. *DKI Congestion*. ANTARA News.

National Law Development Agency (BPK RI). (2009). *Law Number 22 Year 2009 on Road Traffic and Transportation*. Jakarta: Government of the Republic of Indonesia.

Central Bureau of Statistics. (2021). National Labor Force Survey February 2021. Jakarta: BPS.

Černický, Ľ., & Čulík, K. (2024). Research on the impact of flexible working hours on reducing traffic delays in the city. *Applied Sciences, 14*(17), 7941. *https://doi.org/10.3390/app14177941:contentReference[oaicite:0]{index=0}*

Depok City Transportation Office. (2022). Annual Report on Transportation Performance of Depok City. Depok: Depok City Transportation Department.

Directorate General of Highways. (1997). *Indonesian Road Capacity Manual (MKJI)*. Jakarta: Department of Public Works.

Sabounchi, N. S., & Naumann, R. B. (2022). Trends and insights from transportation congestion pricing policy research: A bibliometric analysis. *International Journal of Environmental Research and Public Health, 19*(12), 7189. *https://doi.org/10.3390/ijerph19127189:contentReference[oaicite:2]{index=2}*

VOI. (2022). *The Plan to Regulate Working Hours in Jakarta is Constrained by Regulations*. VOI.id.