MH Thamrin

Traffic Congestion on the MH Thamrin Road Corridor and the Design of an Application Supporting Efficient Transportation

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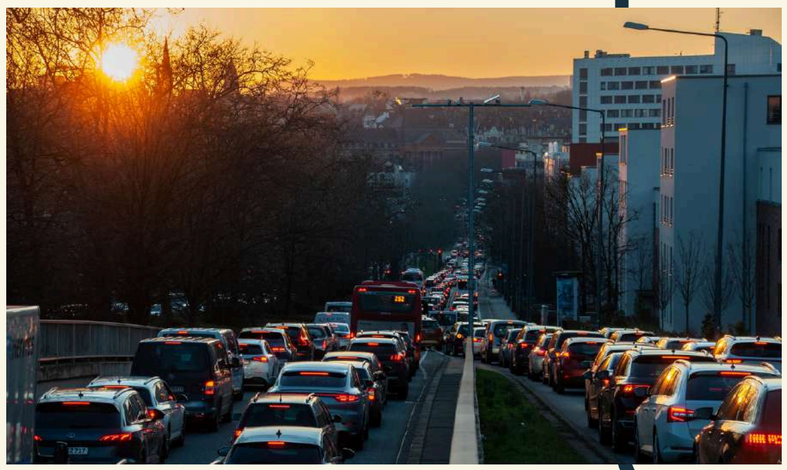

Introduction

Analysis Data Source

- Utilizes traffic data from the MH Thamrin road corridor.
- Selected as a primary hub for activity and mobility in Jakarta.

Comparative Method

- Benchmarks empirical results against ITDP recommended traffic management strategies and others literature.

Evaluation Objective

- To assess the alignment between empirical data and current policy approaches.

Background

- Jakarta experiences chronic traffic congestion, especially during peak hours
- MH Thamrin is a strategic urban corridor with high traffic demand
- Congestion reduces transport efficiency, productivity, and air quality
- ITDP highlights Jakarta as a key case for traffic management reform

Sources: https://itdp.org/2025/06/24/jakarta-traffic-management-strategies-for-indonesia-stmagazine-36/

Problem Statement

- Traffic demand exceeds road capacity
- High dependency on private vehicles
- Limited effectiveness of single policies (e.g., odd–even)
- Need for integrated and technology-supported solutions

Sources:

- **https://itdp.org/2025/06/24/jakarta-traffic-management-strategies-for-indonesia-stmagazine-36/**
- **https://www.sciencedirect.com/science/article/abs/pii/S2213624X25000173**

Analysis (Literature & Case Studies)

- Traffic congestion occurs due to demand–capacity imbalance
- Poor signal coordination and road geometry worsen delays
- Induced demand sustains congestion in car-oriented cities
- Intelligent Transportation Systems (ITS) improve traffic optimization

Sources:

- **https://jurnal.ittc.web.id/index.php/jibs/article/view/1771**
- **https://journal.uib.ac.id/index.php/jce/article/view/9076**
- **https://arxiv.org/abs/2106.02315**

Identification of Key Issues in Jakarta

- Dominance of private vehicles
- Recurrent peak-hour congestion
- Inefficient parking management
- Limited integration of public transport modes
- Environmental and economic impacts

Sources:

- **https://jurnal.ittc.web.id/index.php/jibs/article/view/1771**
- **https://itdp.org/2025/06/24/jakarta-traffic-management-strategies-for-indonesia-stmagazine-36/**

Impacts of Traffic Congestion

Economic
Longer travel time, higher fuel costs

Environmental
Increased emissions and air pollution

Social
Stress, accident risk, reduced quality of life

Efficiency
Transport efficiency declines significantly

Sources:

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- https://itdp.org/2025/06/24/jakarta-traffic-management-strategies-for-indonesia-stmagazine-36/

Design of Traffic Solutions

- Congestion Pricing / Electronic Road Pricing
- Parking Reform
- Public Transport Integration
- Odd–Even as part of Transport Demand Management

Sources:

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Implementation Strategy

- Development of a simple traffic support application
- Uses existing traffic data (volume, speed, congestion level)
- Focused on peak hour conditions on MH Thamrin
- Provides basic traffic information and route awareness
- Supports traffic management efforts, not replacing policies

Evaluation Strategy

- Comparison of traffic conditions before and after application use
- Average travel time on MH Thamrin
- Traffic volume and congestion level trends