

INTISARI

Proyek pembangunan infrastruktur di lingkungan Jalan Tol Jakarta – Cikampek menjadi penyebab kemacetan di jalan tersebut. Pemerintah membuat paket kebijakan untuk mengurangi kemacetan meliputi pengaturan kendaraan pribadi melalui skema ganjil – genap, penyediaan Lajur Khusus Angkutan Umum (LKAU) dan pengaturan jam operasional kendaraan golongan 3, 4, dan 5. LKAU yang seharusnya digunakan bus justru digunakan oleh kendaraan nonbus sehingga mempengaruhi kinerja jalan tersebut. Tujuan penelitian ini untuk mengidentifikasi profil segmen ruas jalan dan pelanggaran LKAU pada segmen Jalan Tol Jakarta – Cikampek, menemukan faktor-faktor yang mempengaruhi pengemudi mobil penumpang melanggar LKAU dan menganalisis pengaruh pelanggaran LKAU terhadap kinerja segmen jalan tol.

Metode analisis yang digunakan yaitu regresi logistik biner dengan menggunakan data dari survei wawancara pengemudi mobil penumpang, simulasi dengan Vissim dan perhitungan dengan Manual Kapasitas Jalan Indonesia (MKJI) menggunakan data inventarisasi jalan, volume lalu lintas pada jam sibuk dan kecepatan arus bebas.

Hasil analisis menunjukkan volume lalu lintas tertinggi terjadi pada Hari Senin pukul 06.00 – 07.00 WIB yaitu sebesar 5645 kendaraan/jam atau 6092 smp/jam dengan kecepatan arus bebas rata-rata 61,19 km/jam, pelanggaran LKAU tertinggi dilakukan oleh mobil penumpang sebesar 63,09%, segmen jalan dilengkapi 6 marka LKAU dan memiliki kapasitas sebesar 9476 smp/jam. Faktor yang berpengaruh signifikan pada pelanggaran LKAU meliputi kondisi lalu lintas, pengetahuan kebijakan LKAU, pemahaman marka LKAU, penegakan hukum, kondisi pengemudi dan kondisi permukaan jalan. Pelanggaran LKAU oleh pengguna jalan menurunkan kecepatan rata-rata tempuh bus sedang sebesar 10,36 km/jam dan bus besar sebesar 11,19 km/jam selain itu juga meningkatkan kecepatan mobil penumpang sebesar 9,01 km/jam, mobil *pick up* sebesar 8,08 km/jam, truk kecil sebesar 7,81 km/jam dan truk 2 as sebesar 7,79 km/jam.

Kata Kunci: LKAU, Vissim, regresi logistik biner, kecepatan rata-rata tempuh

ABSTRACT

Construction of infrastructures near Jakarta – Cikampek Toll Road cause a traffic jam on the road. Because of this, government made a policy to decrease the level of the traffic jam, including the regulation of odd-even scheme for private vehicles, a special lane for public transportation (Lajur Khusus Angkutan Umum – LKAU) and the regulation of operational hour for vehicles categorized as 3rd, 4th and 5th group (Golongan 3, 4 dan 5). The LKAU should be used by buses as the public transportation, however other vehicles, which are non-bus, also go through on this lane. Thus, it influences the performance of the road. This study aims to identify a road segment profile and violation on the LKAU of Jakarta – Cikampek Toll Road, identify the factors which can be the cause of private vehicles drivers violating the LKAU, and finally analyze the impact of the violation on the LKAU to the performance of the toll road segment.

Binary logistic regression is used as the analysis method using interview data of private vehicles drivers. In addition, calculation using Manual Kapasitas Jalan Indonesia (MKJI) and simulation using VISSIM is conducted to the road inventory data, traffic volume at peak-hour and free flow speed based.

The results show that the highest traffic volume is on Monday at 6 a.m. until 7 a.m., which is 5645 vehicles/hour or 6092 pcu/hour with 61,19 km/hour of the average of free flow speed and violation of The LKAU is dominated by private vehicle with 63,09%. On the road segment, 6 LKAU road markings are provided with 9476 pcu/hour of the road segment capacity. On the other hand, several factors that can cause the violation of the LKAU are identified, namely the traffic condition; the understanding of drivers about the LKAU policy and the LKAU markings; the law enforcement; the condition of the drivers and the road surface. From the analysis, the violation of the LKAU causes a decrease of 10,36 km/hour of the average travel speed for medium buses and 11,19 km/hour for the large-sized buses. Other than that, it increases 9,01 km/hour of the private vehicles travel speed, 8,08 km/hour of the pick-ups, 7,81 km/hour of small-sized trucks and 7,79 km/hour of two-axles trucks.

Keywords: LKAU, Vissim, binary logistic regression, average travel speed