

## Faktor koreksi parkir di badan jalan terhadap kapasitas jalan (studi kasus : Jalan Jatinegara Barat Jakarta Timur) = The correction factor of parallel on street parking on road capacity

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### Abstrak

[<b>ABSTRAK</b><br>

Secara teoritis dampak keberadaan parkir pada kapasitas jalan diperhitungkan melalui koreksi yang didasarkan pada pengurangan lebar lajur tanpa memperhitungkan dinamik manuver kendaraan. Tujuan penelitian ini adalah menganalisa besarnya faktor koreksi terhadap kapasitas jalan akibat dinamika kegiatan parkir paralel di badan jalan pada kawasan pusat perdagangan grosir ?lama di pusat kota. Bias koreksi kapasitas dihitung dengan membandingkan kapasitas MKJI dengan kapasitas MKJI yang sudah tervalidasi dan terkoreksi akibat faktor parkir. Proses validasi dan kalibrasi menggunakan data rekaman pukul 04.00 sampai pukul 22.00 pada hari kerja untuk mewakili kondisi tiada parkir dan hari libur untuk mewakili kondisi ada parkir. Analisis data meliputi perhitungan kapasitas teoritis ( $C_t$ ), analisis kapasitas aktual ( $C_a$ ), validasi kapasitas MKJI, dan analisis bias kapasitas. Analisa kapasitas aktual dilakukan dengan kalibrasi model Underwood, sedangkan perhitungan kapasitas teoritis menggunakan persamaan MKJI. Kapasitas tervalidasi dan terkoreksi faktor parkir ( $C_t^*$ ) didapat melalui persamaan  $C_a = 4,936.C_t - 11281$  dan  $C_t^* = 0,763.C_t + 913,5$ . Dari analisis bias kapasitas diperoleh, semakin besar lebar efektif jalan maka semakin kecil bias kapasitas, semakin tinggi hambatan samping maka semakin rendah bias kapasitas, dan semakin besar ukuran kota maka semakin kecil bias kapasitasnya.

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<b>ABSTRACT</b><br>

Theoretically, the parking impact on road capacity is calculated through correction based on lane width reduction regardless of vehicle dynamic maneuvers. The objective of this study is to analyze the correction factor of road capacity due to the dynamics of on-street parallel parking at an old' wholesale market in downtown area. Bias correction capacity is calculated by comparing MKJI capacity with validated MKJI capacity and corrected with parking factor. The validated and calibration process using recording data at 04.00 AM until 10.00 PM on weekdays to represent the condition of no parking and on holidays to represent the condition of parking. Data analysis includes analysis of the theoretical capacity ( $C_t$ ), actual capacity analysis ( $C_a$ ), validated MKJI capacity, and bias capacity analysis. Actual capacity analysis is done by calibrating the model Underwood, meanwhile the theoretical capacity analysis is done by using

the equation MKJI. The validated capacity and corrected with parking factor ( $Ct^*$ ) obtained in equation  $Ca = 4.936 \cdot Ct - 11281$  and  $Ct^* = 0.763 \cdot Ct + 913,5$ . From the bias analysis, it is shown that the bigger effective road width then the smaller bias capacity, the higher side friction then lesser bias capacity, and the bigger city size then smaller bias capacity.;Theoretically, the parking impact on road capacity is calculated through correction based on lane width reduction regardless of vehicle dynamic maneuvers. The objective of this study is to analyze the correction factor of road capacity due to the dynamics of on-street parallel parking at an old' wholesale market in downtown area. Bias correction capacity is calculated by comparing MKJI capacity with validated MKJI capacity and corrected with parking factor. The validated and calibration process using recording data at 04.00 AM until 10.00 PM on weekdays to represent the condition of no parking and on holidays to represent the condition of parking. Data analysis includes analysis of the theoretical capacity ( $Ct$ ), actual capacity analysis ( $Ca$ ), validated MKJI capacity, and bias capacity analysis. Actual capacity analysis is done by calibrating the model Underwood, meanwhile the theoretical capacity analysis is done by using the equation MKJI. The validated capacity and corrected with parking factor ( $Ct^*$ ) obtained in equation  $Ca = 4.936 \cdot Ct - 11281$  and  $Ct^* = 0.763 \cdot Ct + 913,5$ . From the bias analysis, it is shown that the bigger effective road width then the smaller bias capacity, the higher side friction then lesser bias capacity, and the bigger city size then smaller bias capacity., Theoretically, the parking impact on road capacity is calculated through correction based on lane width reduction regardless of vehicle dynamic maneuvers. The objective of this study is to analyze the correction factor of road capacity due to the dynamics of on-street parallel parking at an 'old' wholesale market in downtown area. Bias correction capacity is calculated by comparing MKJI capacity with validated MKJI capacity and corrected with parking factor. The validated and calibration process using recording data at 04.00 AM until 10.00 PM on weekdays to represent the condition of no parking and on holidays to represent the condition of parking. Data analysis includes analysis of the theoretical capacity ( $Ct$ ), actual capacity analysis ( $Ca$ ), validated MKJI capacity, and bias capacity analysis. Actual capacity analysis is done by calibrating the model Underwood, meanwhile the theoretical capacity analysis is done by using the equation MKJI. The validated capacity and corrected with parking factor ( $Ct^*$ ) obtained in equation  $Ca = 4.936 \cdot Ct - 11281$  and  $Ct^* = 0.763 \cdot Ct + 913,5$ . From the bias analysis, it is shown that the bigger effective road width then the smaller bias capacity, the higher side friction then lesser bias capacity, and the bigger city size then smaller bias capacity.]