

## Studi karakteristik dan bangkitan perjalanan industri kota Depok = Freight characteristic and trip generation study of industry in Depok

Annisa, author

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### Abstrak

Subsektor perindustrian dan perdagangan merupakan salah satu ujung tombak perekonomian yang telah banyak memberikan kesejahteraan kota Depok. Untuk menunjang perekonomian, efisiensi sistem logistik kota perlu ditingkatkan. Maksud dan tujuan dari penelitian ini adalah menganalisis karakteristik perjalanan angkutan barang, menentukan dan menganalisis faktor-faktor yang mempengaruhi jumlah perjalananan yang dibangkitkan, serta membuat model matematis hubungan antara jumlah perjalananan yang dibangkitkan dengan faktor-faktor yang mempengaruhinya. Penelitian ini difokuskan pada distributor dari kelompok Industri Logam, Mesin, Elektronika Dan Aneka (ILMEA) khususnya komoditas logam dan bahan bangunan yang berlokasi di Depok. Data diperoleh melalui wawancara, Manual Counting selama jam operasi pada 7 distributor yang tersebar di Depok, penyebaran angket Travel Diary Survey yang diberikan kepada pengemudi truk angkutan barang dari distributor yang merupakan objek penelitian. Data dianalisis dengan menggunakan metode regresi linear OLS (Ordinary Least Square). Hasil analisis menunjukkan bahwa produksi dan tarikan perjalanan truk angkutan barang distributor logam dan bahan bangunan dipengaruhi oleh jumlah kepemilikan kendaraan dengan nilai determinansi berturut-turut, 0.959 dan 0.987. Tipe pengiriman barang lebih dari satu tujuan dalam satu rit (multi drop) terjadi sebanyak 62% dan sisanya (38%) merupakan pengiriman dengan satu tujuan per rit (single drop), rata-rata waktu bergerak kendaraan angkutan barang untuk pengiriman (Movement in Delivery) adalah 67.47 menit, untuk proses drop barang (Stay for Unloading) 19.72 menit dan untuk kembali ke lokasi awal (Movement in Backhaul) sebesar 50.04 menit.

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Industry and trade sector is one of the main economical proponents that made a lot of welfare improvement especially in Depok, Indonesia. Therefore, to increase the economic level of Depok, efficiency of city logistic system needs to be improved. This research is aimed to analyze trip characteristics and factors that influence the amount of trips made by industrial sector, as well as creating a mathematical model of the relationship between the number of trips and it's factors. This research is focused on distributors of a group of commodity of metals, machinery, electronics and Multifarious goods (ILMEA) (which classification is made by ministry of Industrial and Trade of Indonesia), especially for metals and building materials commodity located in Depok. Data was obtained through interview, Manual Counting during operation hours at 7 distributors located in Depok and questionnaire about Travel Diary Survey were also carried out to freight drivers from distributors which are the object of this research. The data were analyzed using linear regression method of OLS (Ordinary Least Square). The results show that the trip attraction and trip production of metal and building material distributors are affected by the distributors vehicle ownership with values of determination are 0.959 and 0.987, respectively. The percentage of multi drop is 62% of all recorded trips, and the reminder (38%) is single drop trips. The average time of freight vehicle movement for delivery purposes (Movement in Delivery) is 69.99 minutes, time for stay at the destination to drop off

the goods (Stay for Unloading) is 19.72 minutes and time to move back to the initial location (Movement in Backhaul) is 50.04 minutes.