ANALYSIS OF THE EFFECT OF GENERATING-DRAWING MOVEMENT FROM IMPRESSION MARKET TERMINAL NAMLEA CITY

(*Pengaruh Gerak Pembangkit-Gambar Dari Terminal Pasar Impresi Kota Namalea*)

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Abstract

The terminal is a center for the entry and exit of vehicles that have a high intensity in attracting movement as the generation and towing of the vehicle interacts to its destination. Based on the generation, which is generated based on the stages of movement generation, which produces a relationship model that connects land use parameters with the number of movements to a zone. Therefore, this study aims to identify the tank-pull modeling as the movement of transportation of vehicles, people, or goods per unit time. which serves as the center of community activities, the case study of the Presidential Instruction Market Terminal in the city of Namlea in this study there are two kinds of variables, namely a. The independent variables consist of land use systems and transportation systems, b. The dependent variable is the number of transportation needs calculated from the number of traffic flows of passengers, goods, and vehicles on the highway per unit time. Generation and withdrawal based on analysis at the Namlea Inpres market terminal on weekdays fluctuates from 17.00/hour to 77.80/hour. The highest pull-out occurred at 11:00-12:00 at 77.80 pcu/hour, while the lowest was at 17:00-18:00 at 17:00 pcu/hour. the attractiveness of the Inpres Namlea market terminal on holidays fluctuated from 23.40 pcu/hour to 72.60 pcu/hour. The highest draw-up occurred at 11:00-12:00 at 72.60 pcu/hour, while the lowest revitalization occurred at 17:00-18:00 at 23.40 pcu/hour.
Keywords: awakening; pull; Terminal; Namlea Inpres Market

Abstrak

Terminal merupakan pusat keluar masuknya kendaraan yang memiliki intensitas tinggi dalam menarik pergerakan saat pembangkitan dan penarik kendaraan berinteraksi dengan tujuannya. Berdasarkan pembangkitan, yang dibangkitkan berdasarkan tahapan-tahapan pembangkitan pergerakan, yang menghasilkan model hubungan yang menghubungkan parameter penggunaan lahan dengan jumlah pergerakan pada suatu zona. Oleh karena itu, penelitian ini bertujuan untuk mengidentifikasi pemodelan tangki-tarik sebagai pergerakan angkutan kendaraan, orang, atau barang per satuan waktu. yang berfungsi sebagai pusat kegiatan masyarakat, studi kasus Terminal Pasar Inpres di kota Namlea dalam penelitian ini terdapat dua macam variabel yaitu a. Variabel bebas terdiri dari sistem tata guna lahan dan sistem transportasi, b. Variabel terikat adalah jumlah kebutuhan transportasi yang dihitung dari jumlah arus lalu lintas penumpang, barang, dan kendaraan di jalan raya per satuan waktu. Pembangkitan dan penarikan berdasarkan analisis di terminal pasar Namlea Inpres pada hari kerja berfluktuasi dari 17.00/jam menjadi 77.80/jam. Pull-out tertinggi terjadi pada pukul 11:00-12:00 sebesar 77,80 smp/jam, sedangkan terendah terjadi pada pukul 17:00-18:00 pada pukul 17:00 smp/jam. daya tarik terminal pasar Inpres Namlea pada hari libur berfluktuasi dari 23,40 smp/jam menjadi 72,60 smp/jam. Draw-up tertinggi terjadi pada pukul 11:00-12:00 sebesar 72,60 smp/jam, sedangkan revitalisasi terendah terjadi pada pukul 17:00-18:00 sebesar 23,40 smp/jam.
Kata-kata kunci: Bangkitan; Tarikan; Terminal; Pasar Inpres Namlea

INTRODUCTION

The existence of a terminal in the city of Namlea, makes traffic activities in the city of Namlea become increasingly congested so that it affects the level of road service. This land use change will cause trip generation and attraction which will increase the traffic volume around the terminal. The addition of a large volume can be a new problem for congestion around the terminal.

In this regard, the authors conducted research on the analysis of the influence of the existence of a terminal in the city of Namlea. Transportation can be interpreted as an effort, moving, determining, or determining an object from other places, in other places it is more useful or can be useful for certain purposes (Miro, 2002).

Transportation is an inseparable part of human life. Human activities and their various needs cannot be fulfilled by just staying in one place. Means of transportation help humans in traveling time from one place to the destination.

According to Ofyar Z. Tamin, the basic goal of transportation planners is to estimate the amount and location of transportation needs (eg determining the total movement, both for public transport and private transport) in the future or plans to be used for various transportation planning investment policies.

The systems approach to transport planning can be described in terms of a macro transport system consisting of several micro transport systems. The transportation system as a whole (macro) can solve several smaller (micro) systems, namely; (a) system of activities; (b) transportation infrastructure network system; (c) traffic movement system; and (d) institutional system. Each of these systems are interrelated with each other.

Movement is the transition from one place to another by means of means. A city can be viewed as a place where activities occur or as a pattern of land use. The location where the activity is carried out will affect humans and human activities will affect the location where the activity takes place.

Movement is strongly influenced by the purpose or intent of a trip and the time of the trip. The purpose of the trip can be in the form of educational, economic, social activities, and so on. Travel times also vary depending on the purpose of the trip. For example, in the morning the travel time increases due to the purpose of the trip to school or to work.

According to Ofyar Z. Tamin, traffic movement arises because of the process of fulfilling needs. We need to move because our needs cannot be met where we are. Each land use or activity system (the first micro system) has a certain type of activity that will generate movement and will attract movement in the process of meeting needs.

Hutchinson in Wika. S (2009) classifies movements into two main groups, namely home-based trips and non-home-based trips. Home-based movement is a journey that originates from home to the desired destination and is usually permanent in nature, including movement to work, shopping, and school. Non-home-based movement is travel originating from a place other than home, including movement between work and shop, business movement between two workplaces.

Based on the background above, several problems can be formulated as follows: How is the Influence of Generation-Attractive on the movement of land transportation modes from downtown Namlea to outside the city? and How is the road performance around Namlea City Inpres Market Terminal after the terminal is operational? while the research objectives

The aims of this study are: To determine the performance of the road around the Namlea City Inpres Market Terminal after the terminal operates and to determine the magnitude of the attraction

generation value that occurs at the Namlea Inpres Market Terminal.

RESEARCH METHOD

Traffic control at the terminal is carried out on. Working days are Monday, Tuesday, Wednesday and Thursday, short days are Friday and Saturday and holidays are Sunday.

Based on the objectives, the scope of the research, the data collection methods used in the preparation of this final project are secondary data and primary data.

Secondary data is data obtained by contacting related agencies directly so that the correct data is obtained to support the writing of the final project, while primary data is data obtained by direct research.

Traffic volume data collection by means of Photo Documentation of traffic flow movements across roads and intersections near the terminal, data collection is carried out at hours that have variations in traffic volume and speed. For every two-hour observation, 15 minutes of time slicing was given. To facilitate this method of data collection, each time slicing uses a form or recording sheet. So at every observation for 15 minutes a change is made with a new form.

DISCUSSION

Road Geometric Type and Condition

Based on a survey of the type and geometric conditions of the road on the Jl. Lelemuku and Jl. Mawar Indah, then the geometric condition of the cross section of the Jl. Lelemuku and Jl. Mawar Indah as presented in Table 4.1 and Figure 4.1.

Table 4.1. The Geometric Condition of the Cross Sections of Jl.Lelemuku and Jl. Beautiful Roses

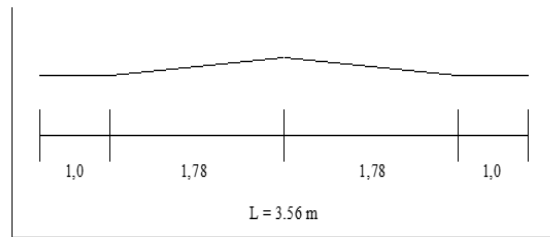| Description	Side A	Side B	Total	Average
Average traffic lane width	1.78	1.78	3.56	1.78
Kereb (K) or shoulder (B)	B	B	-	-
Kereb - barrier distance (m)	-	-	-	-
Effective shoulder width (inside + outside) (m)	1.0	1.0	2.0	1.0
Median aperture (none, few, many)	Tthere is not any			

(Source: Traffic Survey Results, 2015)

Figure 4.1. The Geometric Condition of the Cross Sections of Jl. Lelemuku and Jl. Mawar Indah.

Table 4.1 and Figure 4.1 show that Jl. Lelemuku and Jl. Mawar Indah is a 2-way 2-lane without median (2/2 UD). The geometric condition of the road body width is 3.56 meters where the lane width per direction is 1.78 meters and the shoulder width is 1 meter.

Road Segment Capacity

Condition of the free flow velocity based on the side resistance factor on the Jl. Lelemuku and Jl. Mawar Indah on weekdays is presented in a tabular manner as in Table 4.2. below this :

Table 4.2. Free Flow Speed on Jl. Lelemuku and Jl. Beautiful Roses (Weekdays)

Peak Traffic Time Period	Basic free flow speed Fvo (km/h)	Adjustment factor for FVw lane width (km/h)	Fvo + FVw (2) + (3) (km/jam)	Factor adjustment		Speed free flow FV (4) x (5) x (6) (km/h)
				FFVsp side barriers	City size FFVcs	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
07.00-08.00	42	0	42	0.93	0.90	35.154
08.00-09.00	42	0	42	0.93	0.90	35.154
09.00-10.00	42	0	42	0.93	0.90	35.154
10.00-11.00	42	0	42	0.93	0.90	35.154
11.00-12.00	42	0	42	0.93	0.90	35.154
12.00-13.00	42	0	42	0.93	0.90	35.154
13.00-14.00	42	0	42	0.93	0.90	35.154
14.00-15.00	42	0	42	0.93	0.90	35.154
15.00-16.00	42	0	42	0.93	0.90	35.154
16.00-17.00	42	0	42	0.93	0.90	35.154
17.00-18.00	42	0	42	0.93	0.90	35.154

(Source: Traffic Survey Results, 2015)

free flow speed on weekdays on the Jl. Lelemuku and Jl. Mawar Indah is 35,154 km/hour.

The condition of the free flow velocity based on the side resistance factor on the Jl. Lelemuku and Jl. Mawar Indah on holidays is presented in a tabular manner as in Table 4.3.

Table 4.3. Free Flow Speed on Jl. Lelemuku and Jl. Beautiful Roses (Holidays)

Traffic Flow Volume

The traffic tone described in the study includes traffic volume conditions both in vehicles/hour and in junior high school units/hour, as well as the composition of traffic flow. Aspects of the traffic hue, both on the Jl. Lelemuku as well as at the intersection of Jl. Lelemuku–Jl. Mawar Indah is described in the following sub-sections.

Based on a survey of traffic flow conditions, the number of vehicles passing on the Jl. Lelemuku and Jl. Mawar Indah can then get an overview of the volume of traffic flow on weekdays. and the volume of traffic on this weekday, taken the volume of traffic

on a very extreme day, namely the volume on Monday, as shown in Table 4.6, Table 4.7, Figure 4.2a, Figure 4.2b, Figure 4.3a and Figure 4.3b.

Table 4.6, and Figure 4.2a. that the number of motorized vehicles passing on the Jl. Lelemuku to Namlea Market Inpres Terminal on weekdays is evenly distributed at 58 vehicles/hour consisting of 20 light vehicles and 39 motorcycles. The results of the traffic volume conversion in units of smp/hour are also shown in Table 4.6, and Figure 4.2b

Table 4.6, and Figure 4.2b average traffic volume values on the Jl. Lelemuku to Namlea Market Inpres Terminal is 26.90 pcu/hour, with a minimum volume value of 5.8 pcu/hour and a maximum volume during peak traffic hours of 39.4 pcu/hour.

Table 4.6. Traffic Flow Volume from Jl. Lelemuku to Namlea Inpres Market Terminal (Weekdays)

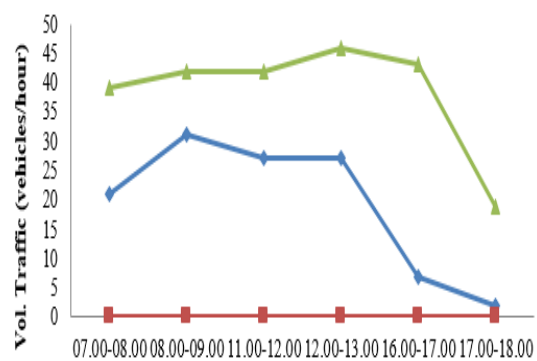| Peak Traffic Time Period	Traffic Flow Volume (Vehicles/hour)				Traffic Flow Volume (pcu/hour)
	Light Vehicle (LV)	Heavy Vehicle (HV)	Motorcycle (MC)	Amount	
07.00-08.00	21	0	39	60	28.8
08.00-09.00	31	0	42	73	39.4
11.00-12.00	27	0	42	69	35.4
12.00-13.00	27	0	46	73	36.2
16.00-17.00	7	0	43	50	15.6
17.00-18.00	2	0	19	21	5.8
Statistik :					
Minimum Value	2	0	19	21	5.8
Maximum Value	31	0	46	73	39.4
Average value	19	0	39	58	26.9

Figure 4.2a. Relationship Vol. Traffic and time in (vehicles/hour) on Jl. Lelemuku to Namlea Inpres Market (Weekdays) (Source: Data Analysis Study Program. Civil Engineering FT. Uniqbu, 2015).
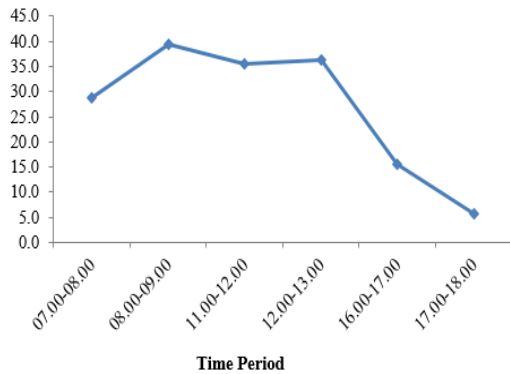

Figure 4.2b. Relationship Vol. Traffic and time in (pcu/hour) on Jl. Lelemuku to Namlea Inpres Market (Weekdays) (Source: Data Analysis Study Program. Civil Engineering FT. Uniqbu, 2015).

While in Table 4.7 and Figure 4.3a that the number of motorized vehicles passing from Namlea Market Inpres Terminal to Jl. Mawar Indah on weekdays is evenly distributed at 55 vehicles/hour consisting of 19 light vehicles and 37 motorcycles. The results of the traffic volume conversion in units of smp/hour are also shown in Table 4.7, and Figure 4.3b.
Table 4.7, and Figure 4.3b. the value of the average volume of vehicles passing from the Namlea Market Inpres Terminal to the Jl. Mawar Indah is 25.8 pcu/hour, with a minimum volume value of 11.2 pcu/hour and the maximum volume during peak traffic hours is 40.4 pcu/hour.

CLOSING

Results Based on the discussion in Chapter IV above, the following conclusions can be drawn: Results Based on the analysis of road performance around the Namlea Market Inpres Terminal, the results of the analysis are as follows:
a) The value of the degree of saturation (DS) of traffic on weekdays fluctuates with an interval of 0.004 to 0.030, for Jl. Lelemuku and 0.008 to 0.030 for Jl. Mawar Indah where, the highest degree of saturation occurs at intervals of peak hours at 08.00 – 09.00 for Jl. Lelemuku and occurs at busy hour intervals 11.00 – 12.00 for Jl. Beautiful rose. And the lowest degree of saturation occurred in the time period from 17.00 to 18.00 for both roads. The value of the degree of saturation (DS) of traffic on Holidays fluctuates with an interval of 0.007 to 0.033, for Jl. Lelemuku and 0.011 to 0.029 for Jl. Mawar Indah where, the highest degree of saturation occurs at intervals of peak hours at 08.00 – 09.00 for Jl. Lelemuku and occurs at busy hour intervals 11.00 – 12.00 for Jl. Beautiful rose. And the lowest degree of saturation occurred in the time period from 17.00 to 18.00 for both roads. Results Based on the Analysis of Generation-Pull Terminal Pasar Inpres Namlea, the results of the analysis are as follows: The Namlea Inpres Market Bangkitan-Tarik Terminal on weekdays fluctuates from 17.00 pcu/hour to 77.80 pcu/hour. The highest generation draw occurred at 11:00-12:00 at 77.80 pcu/hour, while the lowest draw occurred at 17:00-18:00 at 17.00 pcu/hour.

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