

The Impact of Migrant Population Activities and Their Push Factors on The Issue of Traffic in Malang City

Muhammad Fahmiriyan Nur Arifin

Urban and Regional Planning Department

Brawijaya University MT.Haryono Street No.167, Malang 65145, Indonesia

Correspondence Email: fhmarifin9@gmail.com

ABSTRACT

The purposes of this research is to identify the impact of the migrant population activities on the problem of traffic congestion along with the push factors of migrant population who do mobility in Malang. It is known that Level of Service (LOS) of Malang City roads has category F (traffic jam) which is dominated on weekdays. While category F on weekends, there are only a few roads. The F category, which is dominated on weekdays rather than weekends, illustrates that the mobility of migrants in Malang occurs on weekdays, with types of activities are lectures and work.

Keywords: Migrant Populations, Mobility, Push Factors, Traffic Congestion

INTRODUCTION

The development of Malang City in recent years has become an attraction for residents outside the region to move to Malang City. According to data from the Population and Civil Registration Department, in 2016 it was known that the population of Malang City had increased by 1.58 percent from the previous year. On average every month there are 2,218 new residents who move to the city of Malang. This population growth was caused by the migration of residents to work or study in Malang.

Every year there are certainly tens of thousands of students from outside the city who study at various universities in the city of Malang. There are also students who have completed their education and choose to settle in Malang. The increasing number of newcomers every year in the city of Malang directly provides a broad market for industry players, both in small and large scale. This means that the population growth of students and workers can drive the local economy of Malang City.

However, many cities with high population density also bring problems, especially related to the mobility of migrants in Malang. These problems can occur in various domains; both economic, social and cultural.

Some indicators that show problems due to migrants are seen from traffic conditions (Ekawati, Soeaidy, & Ribawanto, 2014). In addition, another problem is the tension between migrants and the original inhabitants of Malang, to the fading of the identity of the people of Malang City. In any major city, this problem often creates further social problems if ignored.

RESEARCH METHOD

The location in this research is Malang City area. The locations that are sampled are the locations that are the highest attraction in each Section of Planning Area (BWP) in Malang City. This type of research in this study is qualitative. The population in this study is the population outside the Malang City who are active in Malang City. This study uses samples in primary data collection. Because the population is unknown (the number of

migrants is unknown), the sample is taken using the Lemeshow formula and the number of respondents is 384. The sampling technique in this study uses the accidental sampling method, in which to obtain the data the researcher encounters the subject of people who happen to be found when passing through the pulling locations in each BWP.

RESULTS AND DISCUSSIONS

A. Level of Service

The level of service (LOS) is a measure of travel quality that in a broad sense describes the traffic conditions that may arise on a road due to various traffic volumes. According to MKJI (1997) the level of service is divided into six parts, namely:

1. Level of Service A
2. Level of Service B
3. Level of Service C
4. Level of Service D
5. Level of Service E
6. Level of Service F

From the six types of service levels above, those who meet the desired road requirements are service levels A, B, C and D where the volume of traffic to capacity is smaller, whereas at the service level E and F the volume of traffic to capacity is greater and not meet the expected quality, so that in these circumstances cause a decrease in service quality.

Table 1: Description Level of Service (LOS) Roads

Value	Characteristics	LOS
< 0,6	Free flow conditions with high speed and low volume	A
0,6 – 0,7	Steady current; operating speed is limited by traffic conditions	B
0,7 – 0,8	Steady current; vehicle speed and motion are controlled	C
0,8 – 0,9	The current is near stable, the speed is controlled	D
0,9 – 1	Current is unstable; speed sometimes stops; demand is approaching the road capacity	E
> 1	Current is forced; low speed; volume above capacity; long queue (stuck)	F

The results of the analysis show that there are several road directions in Malang that have a level of service that does not meet the expected quality, namely with LOS F, which means the current is forced, the speed is low; volume above capacity; and long queues (stuck). This indicates that the traffic volume is very crowded and has reached the service capacity limit of traffic that can be accommodated by the road.

Whereas for lines that have LOS E which means the current is unstable; speed sometimes stops; demand is approaching the road capacity also needs to be considered to be handled so as not to have a vehicle volume above the road capacity.

Table 2: Level of Service Roads by Category F

No	Intersection	Direction	LOS Category F		BWP
			Weekend	Weekdays	
1	Blimbing Intersection (T-junction)	Blimbing Market - Soekarno Hatta Street	F	F	Northeast Malang
		Soekarno Hatta Street - Blimbing Market		F	
		Soekarno Hatta Street - Hua Ind	F	F	
2	Fly-Over junction (T-junction)	Blimbing – Surabaya		F	Northeast Malang
		Surabaya - Blimbing		F	
		Surabaya - Arjosari	F	F	
3	Borobudur Intersection - S. Parman (T-junction)	Blimbing - Arjosari	F		Northeast Malang
		S. Parman – Arjosari	F	F	
		Arjosari – Pasar Blimbing	F	F	
		Arjosari – S. Parman	F	F	
4	ITN Intersection (crossroad)	Sumbersari - Veteran	F	F	North Malang
5	BCA intersection (crossroad)	Splindid - Semeru		F	Central Malang
		Avia - Kayutangan		F	
		Ijen – Splendid		F	
		Kayutangan - Avia	F	F	
6	Kasin Intersection (crossroad)	Dieng – Kasin Market	F	F	West Malang
		Kasin Market - Dieng		F	
		Jupri Street - Langsep Highway (Wagir - Cyber Mall)		F	
		Jalan Jupri - Jalan I. R. RAIS (Wagir- Kasin)		F	
7	Malang – Pakisaji	Malang - Pakisaji (Exit Malang)	F	F	Southeast Malang

No	Intersection	Direction	LOS Category F		BWP
			Weekend	Weekdays	
		Pakisaji - Malang (Entered Malang)	F	F	
8	Malang – Singosari	Malang - Singosari (Exit Malang)		F	Northeast Malang
		Singosari - Malang (Entered Malang)	F	F	
9	Malang - Dau	Dau - Malang (Entered Malang)	F	F	North Malang
		Malang - Dau (Exit Malang)	F	F	
10	Malang - Pakis	Malang – Pakis (Exit Malang)	F	F	East Malang
		Pakis – Malang (Entered Malang)		F	

B. Pushing Factors of Residents Outside Malang Come to Malang City

As many as 384 respondents from outside the city of Malang who came to the city of Malang with the factors driving work, study, shopping, medical treatment, vacationing, and spending time with the amount of each BWP as follows.

Table 3: Pushing Factors of Residents Outside Malang Come to Malang

BWP Malang	Push Factors*						
	1	2	3	4	5	6	7
North Malang	36	105	9	5	10	11	3
Northeast Malang	22	6	9	1	6	3	4
East Malang	22	28	5	0	6	1	4
Southeast Malang	6	8	2	2	5	5	0
Central Malang	33	26	3	5	4	0	3
Wet Malang	12	13	1	0	3	0	1

*Note. 1 = Work, 2 = Study, 3 = Shopping, 4 = Medical Treatment, 5 = Vacationing, 6 = Spend time, 7 = Others.

In North Malang BWP, 105 respondents (59%) of residents outside the city of Malang who came to the city of Malang were motivated by learning. This is related to the large number of campuses in North Malang BWP. There are 11 campuses in BWP North Malang that attract and generate residents outside the city of Malang to come to Malang, the majority of the newcomers are students.

As many as 28 respondents (42%) residents outside the city of Malang were encouraged to come to the city of Malang to study at the Northeast Malang BWP. Although in North East Malang BWP there is no trip generation and attraction in the form of campuses/universities, there are still many students outside Malang who are encouraged to come to Malang who live and do activities in North East Malang BWP, such as living around Araya and Sulfat Housing, shopping at the Blimbing Market,

Bunulrejo Market and Sanan Industrial Estate, or a temporary stop at Blimbing Station or Arjosari Terminal.

In East Malang BWP there were 8 respondents (29%) of residents outside the city of Malang who were encouraged to come to Malang with the majority of learning. This is because at East Malang BWP there is a generation and attraction of Wisnuwardana University as a center of learning activities at BWP East Malang. In addition, many students also live in the Sawojajar Housing Area and shop at the Sawojajar Market.

In the Southeast Malang BWP, the majority of residents outside the city of Malang who were driven to come to Malang were working is 22 respondents (43%). This is because there is a Block Office which is the location of generation and attraction at BWP Southeast Malang. Besides that, there is a trip generation of Gadang Market, Panti Nirmala Hospital, Kota Lama Station and Hamid Rusdi Terminal as shopping facilities, medical treatment and an easy transportation system which are factors driving the population outside the city of Malang to come to Work is the biggest motivating factor for the population outside the city of Malang to come to the city of Malang in BWP Central Malang, which is 33 respondents (45%). This is because the location of the generation and attraction in BWP Central Malang in the form of trade areas, hospitals, stations, mosques and city parks so that they are closely related to workers who work at these locations.

In West Malang BWP, the biggest motivating factor for the population outside the city of Malang to come to Malang was learning is 13 respondents (44%). But the number of migrants who work at BWP West Malang also approaches the majority, which is 12 respondents (40%), this is because at BWP Malang West there are several campuses and shopping centers namely Merdeka University, STIKI, STIE Indonesia, Kanjuruhan University, Cyber Mall, Kasin Market and Sukun Market.

CONCLUSIONS

Based on the results of surveys and calculations, it is known that the level of road service category F (traffic) in Malang is dominated on weekdays. While category F on holidays, there are only a few roads. Intersections with category F are at Blimbing intersections, Fly-Over intersections, Borobudur intersections - S. Parman, ITN intersections, BCA intersections, Kasin Interchanges. The entrance of Malang City with category F is Malang - Pakisaji, Malang Singosari, Malang Dau and Malang Pakis.

Category F which is more common on weekdays than holidays, illustrates that mobility that occurs in Malang City, occurs on weekdays, with the type of activity that is college and work.

Therefore, it is necessary to establish innovative policies by the city government of Malang such as centralizing the area as one of the policies for spatial planning and facilitating control of the movement of its population, for example setting specific areas devoted to the education, trade, and so on. Thus, the buildup of traffic flow is more or less controlled, and social mapping will be easily carried out. But the negative impact of this policy is the loss of the nature of the local population based on the potential of their home region.

REFERENCES

Ekawati, N. N., Soeaidy, M. S., & Ribawanto, H. (2014). Kajian Dampak Pengembangan Pembangunan Kota Malang Terhadap Lalu Lintas. *Jurnal Administrasi Publik (JAP)*, 129-133.

Pemerintah Kota Malang. *Rencana Tata Ruang Wilayah (RTRW) 2010-2030*. Malang: Pemerintah Kota Malang.

Republik Indonesia. (1997). *Manual Kapasitas Jalan Indonesia (MKJI)*. Jakarta: Kementerian Pekerjaan Umum.

Tamin, O. Z. (2000). *Perencanaan dan Pemodelan Transportasi*. Bandung: ITB.