

Unnes’s Cycling Background Behaviors

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Abstract—It was late 2009 when a green team namely Tim Pengembang Konservasi held a conference on bike-sharing concept. It proposed bike and walking priority program as part of Green Internal Transportation System Framework. Then it was followed by declaration of conservation campus in 20 March 2010. In the same year, Unnes got nearly 1.000 bikes from some Corporate Social Responsibility’s grant. From closed cordon line observation, it was found that there were more than 3.000 motorcycles was parking on Sekaran Campus at one time. Based on another survey, stratified cluster survey, it was predicted that Unnes society has willingness to cycle and walks inside Unnes’s sekaran area despite the fact that Unnes’s administration is trying really hard to catch up the demand. This paper is focused on cycling related fact observed from 2010-2012, and makes suggestion based on those facts.

Key words— Transportation, user behavioral, cycle, motor cycle, time, space

I. INTRODUCTION

Being labeled as Conservation University, Unnes is forced to have a duty to uphold its label. The effort include transforming motorized vehicles usage into non motorized ones. But there are lacks of academic research backing up those decisions. To ensure that decision will not marked as publicity gimmick, there are several students research which try to catch-up the academic requirements.

II. METHODOLOGY

The first research is traffic counting based on closed cordon line observation. The observation clustered into three close-adjacent areas which are Faculty of Sports Science and its surrounding, Faculty of Education and its surrounding, H building and its surrounding. This research is conducted by MuhAriefFirdaus and friends which one of the supervisor is Alfa Narendra. The second research is based on Stratified Cluster survey. The sample was stratified into its natural groups such as periods of study for students, and rank for faculties and staff. Moreover, it is also clustered into its natural area of activities, which based on their own faculty and department. This research is conducted by Arfitriyani, Daniel Agnes and Triwibowo which one of the supervisors is Alfa Narendra. Data collected from that research are presented in descriptive passages. There is also research on BRT user by Alfa Narendra cited.

III. DATA

Unnes’s Sekaran Campus is located in GunungPati District of Semarang City. It is on southern Semarang City. GunungPati is a hilly area, some are steep. It is like any other areas in Semarang City.

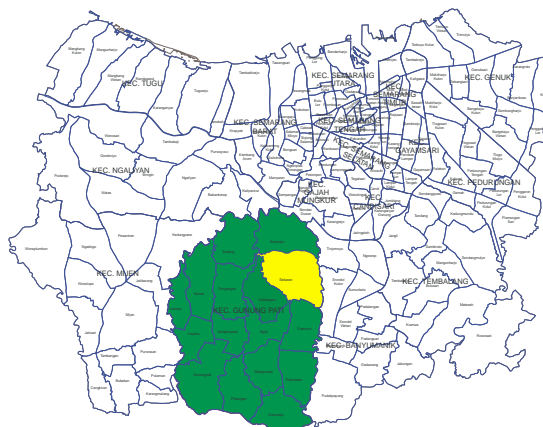


Fig 1. Sekaran Sub District on GunungPati District in Semarang City

On Semarang’s Bus Rapid Transit (BRT) user research, there are some conclusion can be drawn. First, a large amount of BRT user (218 of 510), have one motorcycle per family. 101 of the 218 users has planned to have another one, it means almost 50% families who already has one motorcycle, planned to have one. Moreover, there are 29 of 79 families who already own 2 motorcycles, also have planned to buy one more motorcycle. And there are 23 of 78 families who do not have any motorcycle, want to have one. That datum shows that there is huge demand on motorcycle ownership of BRT user, which is probably occurring in general (Alfa Narendra 2011).

Universita sNegeri Semarang these days has 1055 faculty members who clustered into eight faculties, 601Staffs, and 30.064registered students (2011).

Datum below are compiled from various research mentioned above. Table 1 is about the distance that society has to face. There are different patterns among Faculty, staffs and students.

Table 1. Travel Distance to Campus

	Distance (km)	Faculty	Staff	Student
1	< 1	6.59%	19.54%	79.34%
2	1-2	2.20%	17.24%	10.52%
3	2-4	12.09%	27.59%	6.40%
4	4-10	30.77%	13.79%	1.98%
5	10-20	31.87%	17.24%	1.45%
6	>20	16.48%	4.60%	0.30%
	Sum	100.00%	100.00%	100.00%

Travel distance is related to housing privileges, and social economic circumstances. Table 2 is shows housing selection among Unnes’s society.

Table 2. Housing Selection

	Housing	Faculty	Staff	Student
1	Private housing	98.90%	82.76%	6.29%
2	Boarding House	1.10%	16.09%	92.24%
3	Lodging House	0.00%	1.15%	1.47%
	Sum	100.00%	100.00%	100.00%

Time and space - or in this case schedules, location (housing and Unnes), and distance, derive transport pattern, such as time and schedule, modal split, and route selection.

Table 3 below shows society’s modal split and their alternatives. While on main modal, they are relatively pointing on one vehicle, meanwhile cycling is not considered as major alternative.

Table 3. Modal Split

Daily Transportation	Daily Transportation			Alt. Daily Transportation		
	Faculty	Staff	Student	Faculty	Staff	Student
1 Private Car	42.86%	13.79%	1.19%	4.55%	1.54%	0.25%
2 Motor Cycle	49.45%	73.56%	55.56%	14.77%	4.62%	2.95%
3 Transit	1.10%	1.15%	0.70%	37.50%	46.15%	5.41%
4 Cycle	0.00%	2.30%	6.29%	6.82%	3.08%	8.52%
5 Vehicle Sharing	2.20%	4.60%	20.55%	22.73%	26.15%	52.74%
6 Walking	4.40%	4.60%	15.72%	13.64%	18.46%	30.14%
Sum	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

That modal split directly affects the number of motorcycle active in campus. Since most of society’s member are motorcycle users.

Fig 2.Motorcycle In Campus 2010

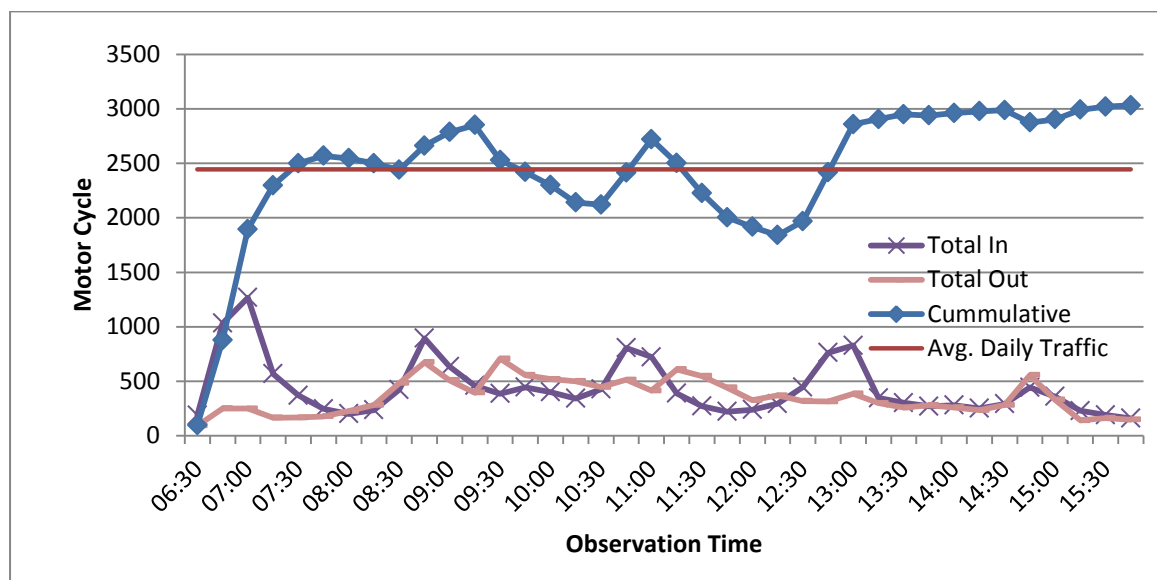


Figure 2 shows that Motorcycle’s Peak Time in Unnes happened at 16:00 while 3032 motorcycle were located inside Unnes, and there were 2445.526316 motorcycles on average daily observation. This pattern is derived from students’ class schedule.

Since there are trends on green policy, people also ask whether they want to get a bike to support the policy. Table 4 below shows how people have tried to get a bike.

Table 4.How People Got the Bike

	Faculty	Staff	Student
1 Friend's Bike	0.00%	0.00%	5.25%
2 Campus's Bike	43.84%	62.82%	43.04%
3 Private Bike	28.77%	10.26%	20.15%
4 Buy Cycle on Incentive	27.40%	26.92%	31.56%
Sum	100.00%	100.00%	100.00%

On the otherhand, there are several obstacles to run. Those obstacles are mentioned in Table 5.

Table 5.Things toManage for Non Cyclist

	Faculty	Staff	Student
1 Difficult, Dirty, Dog-tiring	26.51%	24.05%	24.32%
2 No Cycle Line	32.53%	11.39%	22.71%
3 Harsh Climate	12.05%	18.99%	13.35%
4 Time Consuming	10.84%	25.32%	7.76%
5 Less Mobile	8.43%	6.33%	18.38%
6 No Proper Cycle	13.25%	7.59%	9.50%
7 Non Cyclist	2.41%	3.80%	1.82%
8 Other	2.41%	2.53%	2.17%
Sum	100.00%	100.00%	100.00%

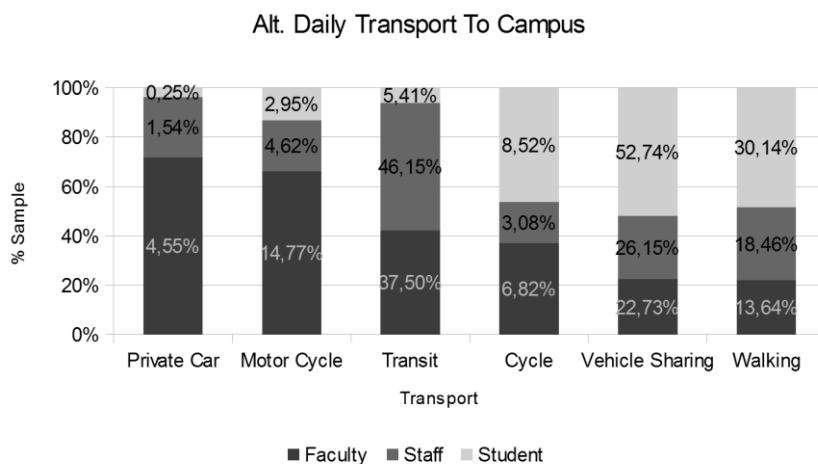
IV. ANALYSIS

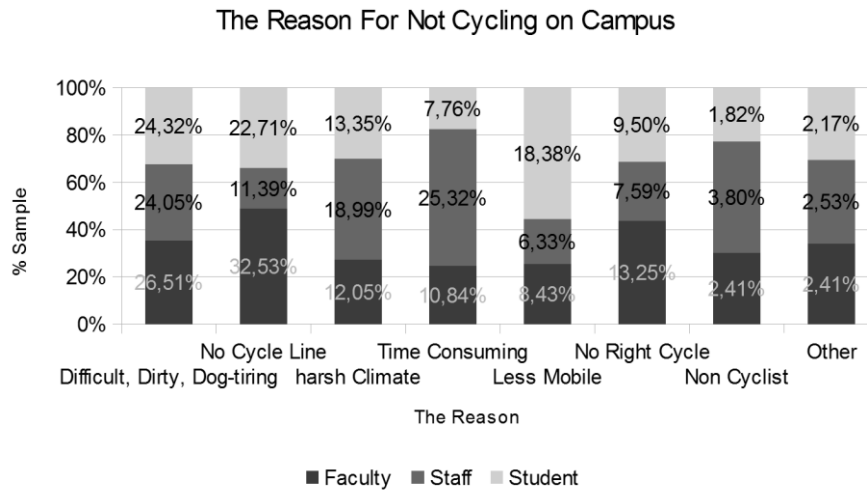
Steep terrain of GunungPatidistrict is considerably difficult to cope by average cyclist even more by non-cyclist. So travel distance and terrain are the main factors of the policy. At this point, students are considered as main policy’s market.

Unfortunately, cycling is not viewed as an alternative. It is due to some obstacles mentioned in Table 5, moreover in Table 1 and 3. Even though there are some difficulties, but there are some hopes here. Most people who have willingness to use cycling around campus are relying on campus’s bike. Furthermore, some obstacles listed in Table 5 are manageable by campus’s bus, especially the dirty one.

V. CONCLUSION

Unnes should focus on main factor, both stakeholders and obstacles. Main stakeholder is the students, which are easy to manage, since they have shortest travel distances and has closer transport alternatives to become cyclist.





So, to win students' heart, Unnes should focus on main student's problem, which are Difficulties, No cycling line and less mobile. Fortunately, Unnes has provided shuttle bus that could cope with those problems. But, we need to ensure that this condition manageable.

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