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8. CAR DEPENDENCY AMONG YOUNG INDONESIAN PROFESSIONALS: AN EXPLORATORY STUDY

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ABSTRACT

The phenomenon of car dependence among individuals has been causing problems in various cities in Indonesia. The main objective of this exploratory study is to unveil the psychosocial and demographic factors that are deemed to be the predictors of individuals' dependency on personal cars. The application of the conceptual model of this study surpasses the rational and logical explanation, especially among the middle-high or above class of young professionals growing up in big cities. Quantitative method approach was used on the participants living in Jakarta, Yogyakarta, and Surabaya, which are the representatives of well-known big cities in Indonesia. The data were collected through survey in psychological scales and demographic questions. The result of this study are as follows: 1) Instrumental uses of one's personal car use seems to be stronger than symbolic and affective meanings; 2) Intention to reduce the use of personal car plays a huge role to mediate the relation of car-use problem awareness and car dependence; 3) Gender is the only demographic characteristics that shows participants' car dependence differences; Results and limitations of this study are discussed within the implication for theoretical and practical uses in Organizational Behavior studies

Key words: Car dependency, Young professionals, Resistance, Public Transportation, Organizational behavior

INTRODUCTION

Today, many urban experts and researchers mutually agree that city planners in developing countries are walking on the thin ice. One of the main concerns following the condition that a little bit of miscalculation on drafting and implementing the city policy may lead into car dependency (Kodukula, 2010). Before then, individuals who spend most of their daily lives in big cities with high numbers of population usually depend on public transportations, cycling, and walking on foot. However, nowadays there are a lot of individuals who own personal cars and thus, resulting in car dependency.

Kodukula (2010) also noted some risks and loss an individual and society may suffer due to the increment of car dependency, such as: 1) More cases of traffic jam and occupied parking area; 2) Increasing fee on infrastructure budget, such as highways and parking areas; 3) Inflation caused by the rising on transportation fee make low-income household to suffer due to its lack of monetary capability to afford their prime and secondary needs; 4) More cases on traffic accidents; 5) Higher risks for pedestrians and bike-users; 6) Strongly reduce the mobility of individuals who do not own personal cars, which later promote more social gap between them; 7) The increment on oil import fee and fuel consumption; 8) Escalate the amount of air pollution and greenhouse effect; 9) Reserved sites used for parking incur somekind of

inconvenience and disturbance on other people's daily lives, especially accessibility issues; 10) Weakening one's own fitness and physical health.

In Indonesia, many of our big cities, such as Jakarta, Bandung, Surabaya, Medan, Denpasar, and Jogjakarta have been degraded because of car dependence and low numbers on public transport availability and usage. Statistics data shows that the usage on four-wheeled car had been growing rapidly from year to year, which was only 1,170,103 units on 1987 has become into 10,432,259 units on 2012, and so does motorbike, which was 5,554,305 units on 1987 turn into 76,381,183 units on 2012 (Indonesia Central Bureau of Statistics, 2012).

It is a well-renowned fact that what Kodokula (2010) mentioned is the phenomenon that actually happens in Jakarta and other cities in Indonesia. Furthermore, financial loss due to car dependence as one of its main factors has been incurred ever since then. The issues range from National Oil Prices to higher expenditure to accommodate government's subsidiary fee due to air pollution causing harm to humans' body. A household spend around 5 to 10 percents of their income for transportation fee, while at least US\$ 100 million is needed to cure respiratory infection, reproduction disorders, cancer, lung diseases and genetic related diseases through cell mutation caused by gas emission. Social loss caused by high fuel-oil consumption and air pollution solely in Jakarta reach up to 68 trillion rupiahs every year, i.e. 186 billion rupiahs every day. This phenomenon does not only occur in Jakarta, but also in other cities, such as Bandung. Bandung, in 2012, incurs financial losses due to traffic jam up to 5 trillion rupiahs every year, i.e. 14 billion rupiahs a day. (Detik Finance, December 18, 2012). Furthermore, traffic accidents due to high amount of personal cars also often occur. Ditlantas Polda Metro Jaya, an institution which regulates traffic in Indonesia, stated that 668 people died in an accident out of 6,360 traffic accidents. Moreover, there are 28 people died, 82 people heavily injured, and 201 people lightly injured out of 183 accidents occur within two weeks, from November 28th to December 11th 2013 (Berita Satu, December 27, 2013).

Kay, et al. (2010) stated that car dependence has been causing disturbance in the social stratification so far that it seems unfair to some class within the society, such as infants and children, elderly, and proletarians. One of the main reasons being that free sites turned into construction site to accommodate the facility for personal car uses, such as parking area, highway, and other infrastructure which in turn reducing the numbers of public places and recreation areas, such as parks and sports fields. Parapari (2010) found the correlation between the fuel-oil consumption, reluctance to walk on foot and the increment of people who own personal car predict urban individuals' low resilience. Negative correlation between the numbers of personal car uses and resilience seems to be possible and plausible because the less often an individual uses his/her own car will reduce fuel-oil consumption and air pollution, which eventually increase individuals' resilience, for they are more often to walk around on foot.

Traffic jam and financial losses which has been emerging in the last few decades are a few of important issues that has become the homework of any government, be it developing countries or first-rate countries. Indeed, there are some assumptions and arguments saying that there are

correlations between high numbers of personal cars and a country's economic growth, which is indicated by the increment of Gross Domestic Product (GDP) cannot be taken into account since each individual's personal consumption in a first-rate country is around 10 percents. Increasing rate on one's own productivity and accessibility that can reduce transportation fee and other miscellaneous fee is not high enough in comparison to the financial loss caused by traffic jam, traffic breakdown and destruction of infrastructures due to traffic accident, obstruction on export and import trading, gas emission which reduces one's own productivity, and the amount of investment needed to build more roads and infrastructures which caused by the increment of personal car uses (Kodokula, 2010; Litman, 2002).

In this case, one of the solution available to reduce traffic jam and air pollution while reducing financial loss on individuals, society and government is by significantly limiting personal car uses and direct them to utilize public transportation, despite its mediocre service. In order to reduce personal car uses, it is necessary to understand the reasons and factors that influence to individuals' car dependence.

At this moment, there are a few suggestions, recommendations and strategies applied to reduce citizen's car dependence, for instance: 1) Urban planning and city restructuring by building the city that one can reach from one point to another through walking distance so that it will reduce individuals' car dependence (Newman & Kenworthy, 1999; 2000; 2006); 2) Travel Demand Management (TDM), which is also well-known as transport system management or transportation control measures, transportation system management, transportation demand management, and mobility management (Loukopoulos, 2005); 3) Increasing quality of public service to satisfy public transport users (Friman & Felleson, 2009).

Furthermore, there are also some factors that is deemed to be able to reduce individuals' car dependence, such as applying higher cost on designated parking area, establishing higher tax for personal cars, set a high price on fuel-oil consumption for personal cars uses, applying fines on personal cars that involve and contribute to traffic jam (Eno Transportation Foundation, 2001), reforming the current policy (Kodokula, 2010), balanced transportation system (Litman, 2002), and urban planning (Southworth, 1997). According to Newman and Kenworthy (2006), factors like culture, climate, politic, income, price, and educational background cannot clearly explain individuals' car dependence. Furthermore, Newman and Kenworthy (2000) denied popular beliefs that causes car dependence, such as one's wealth and prosperity, climate, outdoor places, modern era, social and health problem, appeal of living on city's peripheral, smooth roads and streets, fulfilling the infrastructure builders and developers' interest, manipulation on transportation planning process, traffic engineering and urban planning, by calling them as groundless myth. This conclusion is supported by secondary data analysis, which makes their argument to be deemed valid and reliable.

Based on this fact (Newman & Kenworthy, 2000; 2006), we are interested to explain this phenomenon from the psychosocial point of view. In this case, according to the preliminary study conducted by Hutapea (in press) on 56 individuals who often commute by personal car, roles of one's values and personality seems to be two of the redeeming factors that drive one's

intention to ride on public transportations in Jakarta. In this study, Hutapea (in press) mentioned that wealth and accomplishment value have negative correlation with intention while preserving living environment has positive correlation toward one's intention to ride on public transportations. Hutapea (2012) study regarding pro-environmental behavior on youngsters in metropolitan cities like Jakarta and Denpasar picked up an interesting finding such that one of the pro-environmental behaviors that is strongly unsupported by the respondents is the intention of not using personal car as an effort to preserve environment through reducing air pollution and fuel-oil/energy consumption. There is even more interesting fact because 'resistance' on supporting pro-environmental behavior in form of reducing car dependence contradicts with participants' mindset, which is strongly supporting the actions on preserving living environment.

This finding is supported by the statements of some experts. Collins and Chamber (2005) once stated that one's decision to drive apparently driven by practical reasons, while combined with psychological reasons, such as values, community, and social situations and conditions. Therefore, in order to reduce individuals' car dependence, it is needed to put practical reasons and emotional factors into consideration (Graham-Rowe, et al., 2011; Marshall & Banister, 2000). In other words, the best strategy to reduce one's car dependence, it necessary to find a method that exceeds economic factors that involve *per se*.

In this occasion, since there are some interesting findings found from a couple of previous studies, we are interested to further advance and bring these facts into the next step by getting general explanation within the framework of psychosocial behavior to predict individual's car dependence over public transportation uses, especially within urban individuals. Factors involved in this study is the intention to reduce personal car uses, the meaning of personal car uses, individual awareness in its relation to personal car uses, psychological factors that restricting the usage of public transportation, and demographic characteristics.

This study is focusing on four-wheeled car, instead of other types of personal transportation, since Kodukula (2010) mentioned that higher financial loss caused by personal four-wheeled cars instead of motorcycles, especially if we consider the necessity for a larger parking area, larger roads due to bigger car size, fuel-oil consumption, etc. This study also puts young professionals as subject since there are many people in this genre that own a personal car as a part of urban lifestyle. Moreover, the correlation between organization, including workplace, and pro-environmental behavior and commuting behavior is still yet explored, especially behavior analysis at individual level. Likewise, there are some previous studies regarding the correlation between organization and its main environment is focusing on the implication of external determinant toward the survival of living environment, *per contra* to the numbers of empirical study that discusses the correlation between workers individually and one's own behavior in relation to living environment, which is almost non-existent (Lo, van Braukelen, Peters & Kok, 2013).

METHODS

The participant of this study is the car owner and/or users in three big cities in Indonesia, namely Jakarta, Yogyakarta, and Surabaya. We decide to choose these three cities due to consideration that the phenomenon above are most likely found in urban cities, since this study is all about the rising number of individuals who own or use personal cars and its implication on urban life. We also decide to use purposive and convenience sampling for our study.

Judging operationally, car dependence is a phenomenon that is caused by behaviors and affects toward personal car uses, as follows: 1) Frequency of commuting using personal car within one week, and its purpose; 2) Evaluation toward personal car uses, such as life-style related to personal car uses, the necessity to consider other option to commute between places, and likeliness to change. This measurement mixing objective and subjective aspect just as what Zao (2011) suggested. An individual's intention to reduce personal car uses is perceived to be serious, and one's own interest to reduce car dependence (Zao, 2011). The meaning of personal car uses is perceived to be values given by each respective individual, such as symbolic meaning, instrumental meaning, and affective meaning (Steg, 2005). One's own awareness about the problem of personal car uses is perceived to be general knowledge, understanding, acknowledgement that personal car uses causes serious implications on global environment, general environment, local environment, local economic issues, and urban issues (Heath & Gifford, 2002). Psychological barrier on public transportation uses is perceived as a set of psychological attributes that influence the reluctancy of using public transportation found in Study 1 (through interview, open questionnaire, and focused group discussion), such as perception, attribution, salience, and affordance. On the other hand, demographic factors are personal characteristics, sch as age, sex, educational level, socio-economic status, marital status, number of children, amount of income, distance on commuting to and from work, etc, which is acquired through demographic data filled by the respondent himself/herself.

Meanwhile, measurement instruments used in this study is an adaptation of the existing measurements, which are described as follows: 1) *Dependency Scale*, an instrument which is compiled of indicators from Study 1 and comparison result with *London Lifestyle and Car Dependence Survey*; 2) Scale that measures one's own intention to reduce personal car uses; 3) Scale that measures value of an individual put on personal car uses; 4) Scale that measures individual awareness in regards to the implication of personal car uses; 5) Two-open question-scale that reveal psychological related problems, such as perception, belief, attribution, salience, and affordance toward choices and public transport uses or equivalent; and 6) General questionnaire that contain individual's personal data and demographic that may be relevant in this study, such as age, sex, educational background, socio-economic status, marital status, amount of income, address, and ethnic background.

RESULTS AND DISCUSSION

There are 114 participants in this study, whose age ranged between 18 to 52 years old ($M=28.7$; $SD = 8.22$). Majority of the participants are male (69.3%), more than half of the participants are an undergraduates (55.3%), while the rest are high-school graduates, 3-year-non-degree-graduates, and postgraduates. Furthermore, most participants are single (86.8%), while majority of the participants are Javanese ethnic background (70.2%). Concerning the participants' address location, 45.6% of them live in the centre of the city, followed by those who live by the city peripheral (37.7%), and nearest satellite cities (16.7%).

Before we test our hypothesis, we take a look at the data of descriptive analysis, which is useful to see the general guideline of research data, such as minimum score, maximum score, mean, and standard deviation (SD). The result is provided on Table 1:

Table 1. Statistics descriptive data of variables

	Mean	Std. Deviation	Min	Max	Interval
Car dependence	2.754	.616	1.33	4.00	1-5
Intention to reduce car use	3.338	.771	1.50	5.00	1-2
Meaning of car use (MCU)	3.161	.421	2.27	4.40	1-5
MCU Instrumental	3.582	.544	2.20	5.00	1-5
MCU Symbolic	2.563	.704	1.00	4.40	1-5
MCU affective	3.335	.724	1.40	4.80	1-5
Car-use problem awareness (CUPA)	3.844	.586	2.00	5.00	1-5
CUPA world environment	3.570	.728	1.50	5.00	1-5
CUPA general environment	3.825	.790	2.00	5.00	1-5
CUPA local environment	3.535	.827	1.00	5.00	1-5
CUPA local economic problem	4.272	.701	1.00	5.00	1-5
CUPA local urban problem	4.175	.875	1.00	5.00	1-5

According to the Table 1, if we take a look on car dependence variable, it is apparent that the respondents have variation in score for each orientation, which is located on middle category. In general, the participants of this study believe that having a personal car accommodates their expectation and life-style, since they do not need to think more about how to commute. It is the participants habit to use personal car to commute, thus there is no adequate reason for them to switch to other transportations. This fact is very understandable given that the participants have dependency on their own personal cars.

Meanwhile, according to the result of the measurement of intention to reduce car use variable, participants' score in this study is categorized to be average. In other words, the participants admitted that they do not consider reducing their frequency of car use. Furthermore, the participants do not really interested to consider other alternatives for commuting.

Regarding the measurement of meaning of car use (MCU) variable, the participants in this study admitted that they look over the existence of their personal car as its function. The participants have some kind of ties to their personal car; nevertheless, that does not make them prioritize the existence of their personal car as a representation of their own personality.

Measurement of car-use problem awareness (CUPA) variable is intended to know the problem emerged from personal car use. The result on Table 1 shows that participants generally know, understand, and aware that personal car has some serious impact be it on local environment or global environment, influence economic growth of a nation whether in local scale or larger scale, and aware of the implication that make urban issues worse. As an addition, we provide the matrix of inter-correlation variable that can be seen at Table 2.

Table 2. Matrix of variable inter-correlation

No		1	2	3	4
1	Car dependence	1			
2	Intention to reduce car use	-.203*	1		
3	Meaning of car use (MCU)	.044	-.131	1	
4	Car-use problem awareness (CUPA)	.047	.342**	.081	1

*p<.05; **p<.01

From the table 2, we can see that there are a few important points to note, as follows: 1) The intention to reduce car uses tend to be on slight negative correlation with car dependence ($r = -.203$; $p < .05$). It tells us that if the participants really intend to reduce their personal car uses, it will be followed with less car dependence, and *vice versa*; 2) There is no correlation between

meaning of car use (MCU) with car dependence ($p > .05$). This fact shows that any evaluation a participant gives regarding the existence of personal car is not correlated to one's car dependence; 3) It is found that there is a mild, decent positive correlation between participants' intention to reduce car uses and car-use problem awareness (CUPA) ($r = .342$; $p > .01$); 4) There is no correlation between participants' meaning of car use (MCU) with participants' car-use problem awareness (CUPA) ($p > .05$). On further assessment based on Table 2, we statistically analyze using double-regression analysis through moderation to test the role of each variable, which is available on Table 3.

Table 3. Regression analysis toward personal car uses

Step		B	β	R ²	ΔR^2	DV	F Sig
1	(Constant)	2.943					
	CUPA	-.049	-.047	.002	-.007	CD	.623
2	(Constant)	1.606					
	CUPA	.451	.342	.117	.109	ITRCU	.000
3	(Constant)	3.214					
	CUPA	.027	.026	.042	.024	CD	.035
	ITRCU	-.169	-.211				

If we take a look at Table 3, we can see that when car-use problem awareness is inserted into the first model, this variable does not significantly play any role toward car dependence. On the other hand when this variable is inserted into the second model, it is apparent that this variable influence one's intention of personal car uses. Furthermore, when this variable is inserted into the third model, intention of personal car uses become a moderator between car-use problem awareness and car dependence. In other words, the awareness role regarding car-use problem awareness toward car dependence is an indirect relationship, in which intention to reduce car uses variable. Furthermore, from the T-Test analysis and Anova, the differences of dependence on personal car uses only significant if we take the participants' gender into account.

Table 4. T-Test result on car dependence

	Group	N	M	SD	t	MD
Gender	Female	79	2.831	.619		.250

Male	35	2.581	.579	2.028
				*

*p<.05; **p<.01

Table 4 shows us that there are significant differences on car dependence between males and females. In this regard, it shows that males have stronger car dependence than females.

This study found that car dependence on the participants is categorized to be average. This fact can be interpreted as participant's personal car whereabouts and participants' tendency to reduce the frequency of using personal cars. There are a few arguments that can explain this phenomenon, as follows: 1) We found that majority of the participants have personal transportation, such as motorcycle, which can be used as an alternative to commute should driving a car puts extra burden due to traffic jam. It is also found that only a few participants who admit that they do not have or do not intend to use other transportation aside from car; 2) Condition of traffic is getting worse day by day. Majority of the participants stated that one of the main reasons that make them do not want to drive a personal car is traffic jam, especially on participants who live in Jakarta and its peripheral (Jabodetabek region), such as Bekasi, Bogor, and Tangerang. It is difficult to predict the time used for commuting in Jabodetabek force the participants to choose other option to commute to and from work; 3) Transportation service, such as *Gojek* and *Grabbike* has become more popular in the recent years. *Gojek* and *Grabbike* are public transportation owned by each respective company which uses motorcycle to commute and can be reserved online with a fixed and cheaper rate than other transportation in general. A good service and cheaper price than other transportation attracts individuals to take this kind of transportation; 4) For some participants, intensive personal car uses usually for recreational and social needs instead of personal needs. This fact has some similarity with the findings in India (Verma, 2014).

In this study, participants' understanding toward implications caused by personal car uses is on high category, even though it does not have any correlation with car dependence. The result of this study is different from Chang and Lai (2013) who mention that on certain threshold, the awareness to protect the environment, especially the ones that caused by personal car uses hold significant impact toward the less numbers of car and motorcycles use to commute. One of the reasons that can explain this discrepancy is the awareness regarding the problems and implications caused by personal car uses is categorized to be normal, in which there is no situational factor that contribute like the one in Chang and Lai (2013) study, which was conducted during or not long after the rising fuel-oil consumption price in Taiwan. In contrast, this study was conducted when the national government lowers the price of fuel-oil consumption, as an implication of the global oil was going down in price.

Meanwhile, efficient and practical has become a stronger reason to motivate personal car uses, such as time efficiency, security reasons and convenience. After all, even though the participants fully understand the implication of personal car uses toward global environment that does not weaken ones' willingness to use personal car, as the participants have answered

on the open questionnaire, especially, the necessity to fulfill their psychological needs, such as security and convenience reasons. In the end, these findings have similarity from previous study (Verma, 2014), especially regarding time, cost, and security that have turned into dominant factors that make the participants in India depend on personal car uses.

Nevertheless, this study has found some strong correlation between individuals' understanding and awareness caused by personal car uses and individuals' intention to reduce personal car uses. This is very understandable knowing that majority of the participants are young professionals, who are assumed to have vast, sophisticated knowledge and experiences communicating with their colleagues, aside from where they have at least high-school and bachelor degrees, so that we can literally assume they have adequate knowledge regarding environmental issues, urban issues, and transportation.

This study also found that intention to mediate awareness role regarding personal car use and car dependence related issues. This fact is consistent with the above statement that awareness does not directly influence independency toward personal car uses, but it strengthen the participants' willingness not to utilize personal car uses. This fact is also consistent with the framework or theory regarding the correlation between affect and behavior (A-B Link), such as Theory of Planned Behavior, which stated that affect (including knowledge, awareness, and belief) as a social-cognitive variable as one of the intention determinant, which later in turn it will influence individual behavior (Ajzen, 1991; Gardner & Abraham, 2008)

In this regard, even though the meaning of car uses might not predict participants' car dependence, it showed that the participants give some meaning to its utility and inexplicable ties that is fairly strong toward their own personal car, but it does not place their own personal car to represent their own personality and identity. This is fairly understandable since personal car used by participants is meant to make their life more efficient through commuting in their own convenience, safety reasons and time efficiency. Otherwise, majority of the participants also stated their own cars' type and brand they drive and is not categorized as luxury car that shows the owner's status and power. Choocharukul, Van, and Fujii (2006) stated that car's luxury, design, and price are a few of the symbolic meanings in affective manner of their own personal car. Furthermore, by placing safety reasons as one of the important reasons in car uses makes its meaning to be orderliness, instead of prestige.

In this study, we mentioned some demographic characteristics, such as age, domicile, educational background, work status, ethnic, or marital status whether it will influence individuals' car dependence. Among them, it seems only gender has some kind of influence toward individuals' car dependence. On the contrary, Dickinson, et al. (2003;2013) study found that females do not really like to travel to faraway place using their own personal cars in comparison to males and limited access within the city so that it does not place personal cars as main transportation. However, at the same time, there are also some similarities with Dickinson, et al. (2003; 2013) findings. Moreover, our study are supported by Moya and Palomares (2012) findings, mentioning that in Madrid, females are less likely to travel using their personal cars, especially when they are alone without any accompaniment, such as family,

spouse or friends. Females tend to show interest in shopping and recreation, instead of driving to campus.

On the downside, this study has some notable limitations that need to be considered. Firstly, we conducted this study using convenience sampling technique in small numbers in comparison to the number of people who have personal cars in Jakarta, Jogjakarta, and Surabaya. In other words, the numbers of sample taken might not be adequate enough to represent the population. Therefore, this study cannot be generalized, but is valid enough to represent the participants in this study. Secondly, the majority of the participants are young professionals whose income within the range between 5 to 15 million rupiahs a month, which can be regarded as average group of people. Thus, this study cannot be generalized and compared to other urban individuals with different background. Thirdly, this study does not consider the role of personal and non-personal factors that may be deemed relevant in relation to politic intolerant, just as we have discussed above. Consequently, this study allows other fellow researchers to advance this study by considering some relevant personal and non-personal factors, be it internal or external, especially from demographic data.

For the future research and practical reasons, this study should be considered as suggestions to fully utilize the effectiveness of organizational intervention, to gain the understanding of the relation of occupation type with commuting behavior. One of the benefits of understanding various behaviors would be the relative potential to undergo changes by maintaining the organizational context constantly, while organizational behavior in individual levels is still possible through involving non-organizational personal variable. In this case, car dependence in commuting behavior context, including commuting stress contributes toward organizational behavior, such as work life quality.

Furthermore, this study contributes to the psychology framework that explains organizational behavior. Most recent studies regarding organizational behavior framework on individuals level did not involve commuting experience, especially car dependence, as the determinant of behavioral outcome, such as work performance, work commitment, work stress, work life quality, etc that often related to time efficiency, time reduction and time loss that can be considered within organizational, such as work time flexibility.

Our study findings encourage other future researchers to consider some psychological and non-psychological factors toward individuals' car dependence. Land use, public transport availability, perception toward domicile area density, domicile choices, distance of domicile to and from workplace (Therese, et al., 2010), and morale responsibility that related to personal car uses reduction (Choocharukul, Van, & Fujii, 2006).

We hope that future studies will apply alternative approach just as Lee (2003) stated, which is Cognitive Dissonance Theory, which allow the researchers to evaluate variables that are focusing on affect and behavior consistency, which often found in car users and other behaviors related to environment and urban life.

CONCLUDING REMARKS

Variables involved in this study have not been done in Indonesia, thus this study is supposed to be regarded as pilot study, which can be extended into extended research since the repertoire of psychology regarding car dependence in Indonesia is still few, especially the ones that discuss young professionals. Regardless of the limitations, this study contribute toward the understanding and elucidation of individuals' car dependence from psychosocial perspective, especially the ones that process development and urban environmental setup that hopefully useful in both theory and practice for future extended researches.

The result of data analysis showed that intention to reduce personal car uses plays a role toward car dependence, while individuals' awareness caused by personal car uses plays a significant role toward individuals' *tendency to reduce personal car uses*. As a result, this will have some implications on the following subjects: a) The necessity to encourage personal car users' awareness concerning the problems that may happen due to personal car uses, such as economic, politic, safety, social, and psychological issues in urban lifestyle and perseverance of living environment; b) The necessity to strengthen the intention of individuals to reduce personal car uses through awareness regarding serious issue caused by personal car uses.

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