

UDC 334

ENVIRONMENTAL ATTITUDE AND INDIVIDUALISM INTERACTION TO INVESTIGATE SWITCH INTENTION TO PUBLIC TRANSPORT

Aslamia Rosa*, Taufiq Marwa, Zakaria Wahab
University of Sriwijaya, Indonesia

Saggaff Shihab Muchsin
University of Bakrie, Jakarta Indonesia

*E-mail: aslamiarosa06@gmail.com

ABSTRACT

This study aims to see how the culture of individualism interacts with the intention to switch to public transportation. The number of respondents was 360 from the state civil servants in the Palembang municipal government, where the sample was taken by a simple random sampling method. The analysis technique used is moderation regression. The results show that only environmental attitudes that do not significantly influence switch intention, whereas horizontal individualism, vertical individualism, horizontal individualism interaction, and vertical individualism interaction significantly affect switch intention. However, only the influence of horizontal individualism and vertical individualism interaction supports the hypothesis. Furthermore, the results of this study can be concluded that it is necessary to increase the awareness of respondents that using public transportation can improve environmental conditions that have been polluted by motor vehicle exhaust gas, then there is an increase in behavior that concerns the individual interests of the respondents related to vehicle use so that respondents prefer using the car than public transport. Therefore, it is needed government policies that can stimulate people to switch to public transportation and increase environmental awareness.

KEY WORDS

Horizontal individualism, vertical individualism, environmental attitude, and switch intention.

In the last ten years, many people of Palembang City left public transportation and switched to using private vehicles, both cars and motorcycles. Cars that take up more space cause most traffic. It is important for the public to use the car not only because they get comfort and privacy but they can be independent and tasks from the office can be completed quickly. So that it can be seen that there is a conflict of individual interests with environmental concerns. The increase of using the car has stimulated the increase of vehicle which can create emissions that contribute to air pollution, and even the economical side is negatively affected by the many uses of the vehicle (Armah, Yawson, & Pappoe, 2010) and (Quarterly, 2013). The city of Palembang in South Sumatera is feared to experience this phenomenon given that nowadays cars always experience the increase indicated by the congestion that always occurs every day. Therefore, as the initial step of the government of Palembang appealed to civil servants in his ward to leave his car and use public transportation at least once a month, hopefully this behavior could affect the community. Therefore, the Government of Palembang is trying to make the people want to leave their cars and switch to public transportation.

According to (Van Vugt, Van Lange, & Meertens, 1996; Van Vugt, Meertens, & Van Lange, 1995) the impacts can be a dilemma between social interests and personal interests. According to (Tonne, Beevers, Armstrong, Kelly, & Wilkinson, 2008) from the social aspect of air pollution is one of the losses experienced by other people in society because others will inhale the exhaust gas of vehicles. For car users are gaining comfort, privacy is even spared from air pollution, for companies that market cars is an increase in acceptance and profitability, comfort and customer satisfaction. In these conditions, a car using reduction was

needed to reduce negative impacts (Bamberg, Fujii, Friman, & Gärling, 2011). It takes public awareness of the negative impact on the environment (Loukopoulos, Jakobsson, Gärling, Schneider, & Fujii, 2005), and the social inflicted by the sheer use of motorized vehicles according to (Nguyen, Lobo, & Greenland, 2017; (Leonidou, Leonidou, & Kvasova, 2010) the behavior is said to be an attitude that is oriented to the good environment (environmental attitude).

There are some research in the field of user behavior of private vehicles as well as public transport, including by (Chen & Chao, 2011; Bamberg, Ajzen, & Schmidt, 2010) who uses a planned behavioral approach (TPB), but has not used environmental or social approaches, but research by (Heath & Gifford, 2002) that the expanded TPB has begun to offend the concern for air pollution due to car use.

Various considerations by people to travel using public transportation in addition to environmental and social concerns, namely the consideration of imagery, interests, and beliefs of individuals, norms in society and resources. But the contradiction of value used in the community that is considered to weaken the interest to use public transportation is the assumption or perception in the community that those who use public transport means less community able in economic terms so as not to afford to buy a car. As said by (Ajzen, 1985) that there is a perception that is the pressure of a society to do or not to do a behavior.

In area of entrepreneurial research conducted by (Petrović, Vukotić, Aničić, & Zakić, 2015) revealed that collectivism has positive interaction on the relation of entrepreneurial orientation and perceived business performance. Indonesian people who are known for their cultural culture are prioritizing harmony with their fellow communities so that actions or behaviors taken are always considered to maintain harmony and common interest, this is known with the cultural values of collectivism (Supriyono, 2003; Sihombing & Pongtuluran D., 2000). However, the culture of individualism is concerned with the individual's behavior to act independently, pursuing their achievements or outcomes and the individual independence of the community prefer to use a private vehicle (Tertoolen, Van Kreveld, & Verstraten, 1998; Ashmore, Pojani, Thoreau, Christie, & Tyler, 2019).

Based on the explanation, the purpose of this research is to see how the environmental attitude and cultural which is individualism horizontally and vertically affect the switch intention to public transport, also the interaction of horizontal (horizontal individualism interaction/HII) and vertical individualism (vertical individualism interaction/VII) on the influence of environmental attitude to the switch intention. This research can also be an input for the government institutions that are related to making a policy against your transport in Palembang City which is environmentally oriented, and public transport user satisfaction.

LITERATURE REVIEW

The planned behavioral theory (TPB) explains that one's behavior is influenced by interest, while interests are influenced by attitudes, subjective norms and Perceived Behavior Control (PBC) (Ajzen, 1985). Information received by consumers forms the Attitude Toward Behavior is the attitude of a consumer to a behavior. That attitude is the extent of judgment by someone on beneficial or unprofitable conduct (Ajzen, 1985; Ajzen, 1991).

The research conducted by (Hoang-Tung, Kojima, & Kubota, 2015) found that the social concern of public and private transport users positively affects their interest in using public transportation, realizing the impact of especially users of private vehicles should start thinking about reducing the impact by switching to public transport (Maichum, Parichatnon, & Peng, 2016). The implementation of TPB to see the interest in buying environmentally friendly cars conducted by (Xu, Prybutok, & Blankson, 2018) found that the attitude concerned the environment and the perception of control of responsible behavior to the environment can positively affect the purchase interest.

Culture is the mental framework and meaning that most people have in social groups (Peter & Olson, 2010), in the sense of cultural breadth is a common perspective, typical cognition, and affective reactions, as well as patterns of behavioral characteristics (Peter & Olson, 2010). Hofstede (1980) defines culture as mental programming derived from a

collective level that makes people different from other non-collective members (Syam, Reeves, & Khan, 2011). Hofstede's 1980 culture consists of four dimensions: Power Distance, Individualism-Collectivism, Masculinity-Feminity and Uncertainty Avoidance (Minkov & Hofstede, 2011; Beugelsdijk, Maseland, & van Hoorn, 2015), in 1991 the dimension of Culture added another Long-Term Orientation (Minkov & Hofstede, 2011). In 2007 new dimensions were added again i.e. Indulgence-Restraint which was the last dimension discovered by Minkov in 2007 (Beugelsdijk et al., 2015). It can be concluded that culture is a value that is embraced both physical (symbolic) and mental in force in a group or community. Research conducted by (Conner et al., 2010; Cho, Thyroff, Rapert, Park, & Lee, 2013; Leonidou et al., 2010) stated that the cultural value of collectivism can act as a precedent of planned purchase behavior against environmentally friendly products, thus logically it can be predicted that individualism is thus otherwise impact.

(Triandis & Gelfand, 1998) and (Triandis, 2001) separating cultural values of individualism into horizontal individualism and vertical individualism that horizontal individualism means people do not want to depend on others in their group and do not prioritize status. But vertical individualism people want to be the best in the group and pursue status. Still relating to individualism it is known that research conducted by (Cho et al., 2013) reveals that horizontal individualism positively influences attitudes towards the environment. Meanwhile (Cho et al., 2013) suggests that the value of the horizontal culture of Individualism is an antecedent of a caring attitude to the environment.

Based on the introduction and literature review we construct a model as Figure 1.

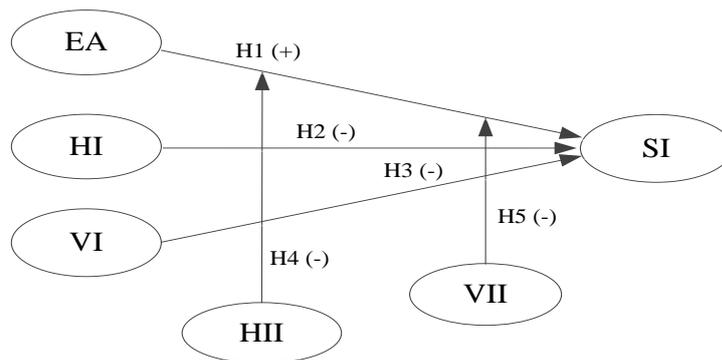


Figure 1 – The conceptual framework

METHODS OF RESEARCH

The population is the civil servants within the scope of the Municipality of Palembang who use car to and from work, respondents are determined as many as 360 people using the Roscoe formula (Sekaran & Bougie, 2016). Table 1 shows the respondent profile, the most respondents' gender is female with proportion 53,3%, most respondents's age at range 30-39 years with proportion 39,4%, and the biggest proportion of employment status is permanent employee with proportion 82,5%.

Table 1 – Respondent profile

Demography type	Profile	Percentage
Gender	Woman	53,3
Age range	30-39	39,4
Employment status	Permanent employee	82,5

The questionnaire used has 7-point bipolar ranging from 1 (strongly disagree) to 7 (strongly agree). The horizontal and vertical individualism scale (HI and VI) used is adapted from (Triandis & Gelfand, 1998) items which each has many as 4 items and 2 item, environmental attitude (EA) adapted from the items by (Nguyen et al., 2017) with 3 items,

and switch intention (SI) scale used is adapted from (Lin & Wang, 2017) which has 7 items. Meanwhile, HII (horizontal individualism interaction) and VII (vertical individualism interaction) are interactions between each HI and VI with EA, mathematically, HII is multiplication between HI and EA, as well as VII.

RESULTS AND DISCUSSION

Table 2 shows the results of the validity of the items test, where the entire item is valid as having a correlation value greater than the R table value.

Table 2 – Results of the instruments validity test

Questions items	Pearson correlation	R table value	Remarks
HI 1-4	0.627 – 0.752	0.095	Valid
VI 1-2	0.707 all	0.095	Valid
EA 1-3	0.599 – 0.701	0.095	Valid
SI 1-7	0.693 – 0.816	0.095	Valid

Table 3 indicates that the entire variable used is reliable as the Cronbach alpha value is greater than 0.60.

Table 3 – Results of the instruments reliability test

Variable	Cronbach's alpha	Remarks
HI	0.860	Reliable
VI	0.827	Reliable
EA	0.783	Reliable
SI	0.923	Reliable

Table 4 – Results of one-sample Kolmogorov-Smirnov test

		Unstandardized Residual
N		360
Normal Parameters	Mean	0E-7
	Std. Deviation	6.19563216
Most Extreme Differences	Absolute	.066
	Positive	.029
	Negative	-.066
Kolmogorov-Smirnov Z		1.254
Asymp. Sig. (2-tailed)		.086

The model's Kolmogorov-Smirnov value is 1.254 with unstandardized residual is 0.086 which means all the data used are in the normal distribution as it is not significant at 0.05 level. After the data is confirmed to be normally distributed then a regression test can be performed to see the relationship between the independent and dependent variables, as well as the effect of the individual interactions on switching intentions. Figure 2 is the result of the data test which is an influence among the variables.

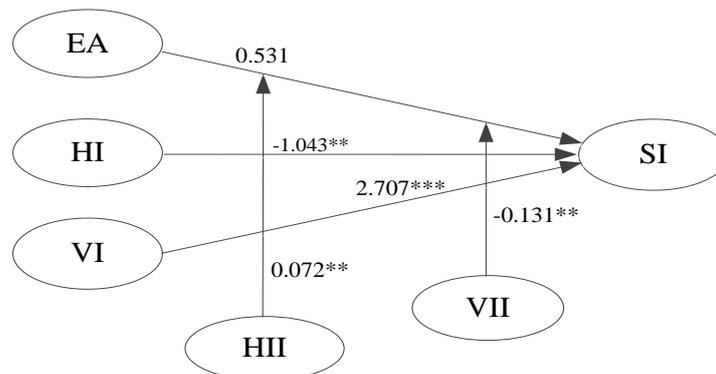


Figure 2 – The model testing result

For more complete results can be seen in table 5 below:

Table 5 – Results of regression test

Model	Unstandardized Coefficients		Sig.
	B	Std Error	
1			
(Constant)	15.170	7.460	0.043
EA	0.531	0.549	0.335
HI	-1.043	0.426	0.015
VI	2.707	0.850	0.002
HII	0.072	0.029	0.012
VII	-0.131	0.059	0.026

The result of the regression calculation is known that only EA does not significantly influence SI, therefore H1 is not supported. HI is able to affect SI negatively and significant then H2 is supported, meanwhile VI is able to influence SI positively and significantly but not H3 supported. HI's interaction with EA is able to influence SI positively and significantly but this does not support H4, the last interaction VI with EA was able to influence Si negatively and significant hence H5 was supported.

The idea to consider the influence of individualism is considered important at this time for the car user community in the city of Palembang. It is feared that there will be a shift in society becoming more individual as more and more people prefer to use cars rather than public transportation. Thus it becomes a thought to what extent the community's concern for environmental quality is diminished, whether that attitude influences its intention to switch back to public transportation. However, the contradiction is that the higher individual horizontal and vertical behavior of individual society is expected to reduce the intention to switch to public transportation.

It was found that EA was not able to influence the intention to switch to public transportation then it did not support H1. Meanwhile, the influence of HI on SI supports H2, so the respondent's behavior that prioritizes independence and uniqueness has reduced his intention to switch to public transportation, respondents of car users feel to be independent, arrive at the office faster or on time so they can complete their office tasks with both by his very small intention to switch to public transportation. Meanwhile, VI influences SI significantly but in the same direction which means it does not support H3.

The moderation role of HI and VI is by looking at its interaction with EA. The results show that HII positively influences EA on SI meaning it does not support H4, while VII can weaken the influence of EA on SI and it means that H5 is supported. These results explain that the stronger the interaction of VII with EA the stronger the influence of EA on SI.

In general, it can be said that respondents understand the negative impact of the number of vehicles on the streets in this city (considering all respondents are educated people), but that attitude is less powerful than their individualistic culture. It implies that perhaps now there has been a shift in the cultural value of individualism which is becoming larger. The comfort and privacy of using their vehicle is considered better than meeting many people in public transportation. The important input that can be given to the government that it needs to pay attention to the expectation of the community, namely providing safe and comfortable public transportation. It is also necessary to approach the community to be more aware of the importance of a healthy environment so that health is also good, as well as caring for others. This action is expected to increase the interest of the public wanting to switch to public transportation.

The weakness of this study firstly, it employs only four variables it is felt to be unable to fully explain the existing phenomenon. Therefore, it is the task in the next research to add other variables that are expected to provide a better explanation. Secondly the respondent who are only civil servants in the scope of the Palembang municipality are not able to explain the overall behavior of the people of Palembang.

CONCLUSION

In conclusion, it is known that environmental attitude cannot influence switch intention but horizontal individualism can, while vertical individualism interaction can weaken the influence of environmental attitude on switch intention after interacting with environmental attitude, so the vertical individualism interaction in this case is a moderator. Horizontal individualism which negatively influences switch intention implies the people need to be provided safe transport, comfortable and fast travel time. By meeting the expectations of the community, it is expected that two things will be obtained by them, namely the balance of individualism-collectivism, increasing of environmental awareness and the improvement of public transportation services.

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