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RESEARCH ARTICLE

The Influence of Demographic Matters and Interest on Passenger's Switching Intention: Evidence of Travelers in the Developing Country Indonesia

Icuk Rangga Bawono^{1,*}, Ratno Purnomo¹, Cris Kuntadi² and Apriani Kartika Rahayu¹

¹Economic and Business Faculty, Jenderal Soedirman University Purwokerto, North Purwokerto, Banyumas, Indonesia

²Indonesian Railway Company, University of Mercu Buana, Jakarta, Indonesia

Abstract:

Background:

After the official operation of the Jakarta-Cikampek elevated highway, a socio-demographic picture of Indonesian travel passengers, as well as their interest in switching transportation preferences was provided. This elevated highway shortened travel time and discouraged users from changing to other transportation modes. This study is likely to become a future research foundation for the switching behavior of passengers.

Objective:

This study aims to analyze demographic factors and interests on passenger's switching of transportation preference.

Methods:

A total of 720 questionnaires were distributed to land transportation passengers at concentrated points with a response rate of 89.17% and 642 valid answers. The obtained data were analyzed using quantitative descriptive techniques with cross tab methods.

Results:

The results showed that age, education level, and type of work influenced the desire of passengers to switch transportation modes, as opposed to gender. Most of the passengers interested in using land modes, such as the highway, were dominated by intercity between provinces travel buses and refused to change to other means of transportation. Meanwhile, passengers that used rented cars tended to switch to other forms of transportation.

Conclusion:

This research is useful and acts as a reference for managers of each transportation mode to set high priorities for particular consumers based on detailed socio-demographics to retain or attract new potential customers.

JEL Classification Code:

D12, L92, R41.

Keywords: Importance-performance analysis, Land transportation, Socio-demographic, Switching behavior, Transportation, Traveler interest.

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1. INTRODUCTION

The need for humans to travel from one place to another is presently unavoidable. Over time, infrastructural developments of transportation modes have enhanced the ease of traveling. Subsequently, the World Bank database recorded 1.56 Billion

trips around the world in 2018 [1]. This high frequency also occurred in Indonesia, as the Central Statistics Agency had recorded 303.3 million trips in 2018 [2]. However, more than 80% of the people that traveled in 2018 preferred land transportation modes, such as private or rental vehicles, buses, and trains. Besides, private and rental vehicles are the most popular means of transportation in Indonesia, while rail transportation has the lowest proportion among the others because not all regions in the country have railway networks.

* Address correspondence to this author at the Economic and Business Faculty, Jenderal Soedirman University Purwokerto, Boenyamin Street No.708, North Purwokerto, Banyumas, Indonesia; Tel: +628122677447; E-mail: cukycutes@yahoo.com

The various forms of transportation have diverse advantages and disadvantages, and in addition, people also have the right to travel with their preferred means of transportation. Companies engaged in the transportation sector need to be able to offer superior services to consumers to maintain passenger loyalty. Recently, State-Owned Enterprise. Jasa Marga Company budgeted Rp 16.23 trillion (the US \$ 1.15 billion) for the construction of a 36.4-kilometer Jakarta-Cikampek elevated highway road, which was inaugurated in November 2019 [3]. Moreover, this elevated highway adds to the capacity of the lower counterpart by reducing traffic as well as shortening the distance from Jakarta to Bandung significantly. Therefore, this elevated highway reduces the travel time to 2.5 hours or even less. It is also a known fact that the highway is presently free from traffics and only used by 4 or more wheeled vehicles. It is different from the common road, which has numerous obstacles.

Several studies have been carried out on people's travel behavior [4 - 8], however, this becomes a complex issue when focusing on developing countries [8], especially Indonesia. Consequently, this situation is different from developed countries due to differences in the socio-demographic characteristics of the passengers. In Indonesia, studies carried out on people's travel behavior concentrate on the analysis of passenger characteristics [9 - 11], and these are closely related to the desire to switch to other preferences [12 - 15]. Consumer interest is described as the tendency to continuously utilize a particular brand, such that switching to a different one becomes irrelevant [16]. Low passenger interest in a particular mode of transportation causes them to switch to other types of vehicles.

This research was carried out based on a survey of land transportation users that use the new elevated highway linking 2 large cities, namely Jakarta-Cikampek and Bandung, in Indonesia. In addition, certain potential changes were discovered in the behavioral trends of individuals who use the Jakarta-Cikampek elevated highway, as well as those who use non-highway and railway, given the advantages offered to passengers. Based on the potential changes in travel trends, a survey was carried out to examine the correlation between passengers' interests and desires to switch transportation modes. Furthermore, socio-demographic analysis was also conducted to acquire a comprehensive explanation. Therefore, this study provides an overview of changes in people's preferences of transportation modes while seeming interested in the new infrastructure, namely the elevated highway Jakarta-Cikampek that is officially operated.

2. MATERIALS AND METHODS

2.1. Passenger Socio-Demographics Characteristic

Although land transportation in Indonesia, especially the Jakarta-Bandung route, consists of roads, and rail, this research is focused on examining the use of highways to travel to other destinations. Subsequently, the passenger characteristics in this study describe the socio-demographic factors that consist of gender, age, occupation, and level of education. These factors, along with household sizes were reconfirmed with a survey to seek people's preferences in respect to using their vehicles across 5 countries in the Nordic area [17]. The social aspect

becomes extremely important immediately, thereby, linking each competitive entity. Meanwhile, obtaining information concerning the socio-demographics element gives a better analysis of historical and future trend transition pathways. First, gender is one of the determinants that affect passengers' preferences. According to the preliminary studies, women and men have different mobility dimensions [18]. Men are considered to possess more physical energy than women; therefore, they tend to travel frequently. Conversely, women are less likely to change decisions than men because they are more anxious regarding comfort [15]. However, women are usually loyal to a comfortable means of transportation once it is found. Meanwhile, men are more likely to try new things to make a better choice. Subsequently, education is also another demographic characteristic that influences people's choice as reported in several studies [17 - 19]. Irrespective of the fact that it was set on a control variable by Hazen, the result stated that men with high educational qualifications are prone to traveling [13]. Besides, highly educated people possess more complex thoughts. The consideration in respect to the selection of transportation modes is integrated with other aspects. Apart from gender, certain body conditions caused by age tend to make the preference of a passenger different from another. An online survey carried out in Nordic Countries, discovered that both young and older people rarely travel, specifically households with children [17]. Moreover, the elderly prefer the most convenient transportation that does not cause them to exhaust their energy while traveling. They have a higher possibility or tendency to become picky with transportation modes [20]. Besides, older people > 65 years are less likely to change their decisions, unlike the middle-aged, those between 35 to 65 years [21]. Occupation is likely one of the passenger's preference considerations. Unemployment does not collaborate with carbon emissions regardless of location [22]. This is because unemployed people prefer to use public transportation rather than private vehicles to travel from one place to another [23]. Furthermore, people that are gainfully employed or in highly placed positions tend to switch transportation mode preferences unlike those that engage in menial jobs, such as laborers and common employees [20]. The income generated from these jobs is not necessarily the same. Moreover, a large income provides a greater opportunity for one to select the desired vehicle according to personal preference. Therefore, age, gender, and education have significant effects on the intention of individuals to switch preferences [13]. In this study, it was argued that socioeconomic factors such as gender, age, occupation, and level of education have a significant effect on passengers' interest in particular land transportation.

2.2. Passenger Interests and Preferences

Interest is described as the tendency or desires of a respondent additionally, it is one of the psychological aspects that has a significant influence on behavior, as well as a source of motivation [24]. Customer's interest is the tendency to continuously use a particular brand, such that it becomes irrelevant switching to another [16]. Therefore, interests have certain characteristics including a personalized or individualistic nature as it varies from one entity to another. It also has a discriminatory effect and is closely related to motivation.

Subsequently, it is not innate and tends to change depending on one's needs, experiences, and modes. Interest is described as a person's condition before taking certain actions and this serves as a basis for predicting behavior. Interest does not automatically or abruptly emerge in someone [25]. It best to study peoples' minds to acquire adequate information and ensure they understand the five stages of purchase namely need, recognition, search, evaluation, and decision [26]. Interest is related to a passenger's plan to use a particular travel mode within a certain period. Also, an individual's interest in utilizing particular transportation is a mental statement that reflects the consumer's plan.

2.3. Passenger Intention to Change Mode of Transportation Preferences

The changes in consumer preferences are expected in the business world and are psychological processes to recognize and identify the necessary measures to solve these issues through purchasing decisions [27]. These changes concerning the use of transportation modes are extremely important to realize the trends in people's travel behavior, as well as the focus of passenger segmentation. The concept of business marketing is inseparable from the analysis of changes that trigger switching behaviors because companies tend to evaluate their advantages and disadvantages to attract new consumers [28, 29]. The existence of the Jakarta-Cikampek elevated highway road has significantly reduced the travel time from Jakarta to Bandung and is also faster than the train transportation mode. Some critical aspects regarding the choice of transportation mode include the demographic factors and the interest of passengers. Previous studies have attempted to understand the switching behaviors of consumers regarding a particular product or service. In addition, some even tried to comprehend the relationship among the factors that influence this behavior [28, 30, 31]. Customers tend to be attracted to other transportation services because personal characteristics are not caused by emotional responses to the current circumstance [28]. However, positive emotions need to be triggered by the manager to reduce rivalry [31]. Furthermore, maintenance needs to be carried out regularly in accordance with customer surveys. This form of marketing effort helps a firm strengthen long-term relationships as well as avoid switching preference [30]. One of the internal factors that encourage consumers to switch preferences is the change in product or service [32]. Based on different perspectives, some studies focus on the process of changing behavior during decision-making and outlined the reasons for switching to other products or services [29, 33]. It was discovered that those customers that switch to other firms have different cultures and expectations [29].

2.4. Data Sampling and Procedures

The main data were obtained by carrying out a survey on the respondents using a structured questionnaire. One reason, this method is the best match for a market research design like this study is to obtain a better understanding of consumer interest [34]. To identify the factors that trigger switching intention, socio-demographic characteristics, often used by previous studies, were adopted [7, 14, 17 - 22]. These include

gender, age, occupation, and level of education. The questionnaire consists of several sections for acquiring specific respondent demographic information, Likert scale from strongly, uninterested to strong interest choice, was utilized. Furthermore, another Likert scale from a strong desire not to switch to a strong desire to switch modes of transportation was also adopted. The questionnaire was pre-tested by industry and supply chain experts that examined the validity of the measures adopted. Subsequently, a survey method was used to collect data directly obtained from the respondents. This was realized by simultaneously distributing questionnaires at the targeted site, and then collecting the results of the studied objects after 20 minutes. Meanwhile, purposive sampling was used to determine the research sample.

This survey was carried out in 2019. In addition, it was conducted at every station on the Jakarta-Bandung route that had concentrated passengers. The target population was land transportation passengers as the Central Statistics Agency data in 2019 stated that over 80% of the travelers in Indonesia preferred to use this mode. This includes railway, road, or highway. The vehicles that ply the highway were analyzed as well as 120 respondents were selected randomly at a total of 6-point stops. Therefore, the total sample used was $120 \times 6 = 720$ respondents (Table 1).

Table 1. Operational definition of variables and indicators.

Variables	Operational Definition	Indicators
Demographic aspects	The factors inherent in the train transportation respondents	- Gender - Age - Occupation - Educational Level
Interest in using railway transportation	A statement that reflects the plan to use railway transportation	Likert 1 to 5 Scale
The potential for switching modes of transportation	The respondent's statement reflects the plan to switch the mode of transportation	Likert 1 to 5 Scale

2.5. Data Analysis Technique

This descriptive quantitative research uses primary data as the main source. It is a collection of information relating to the socio-demographic characteristics, interests, and intentions of passengers to change their preferences to land transportation using the Jakarta-Cikampek elevated highway. The information obtained is further inputted into the coding stage before being examined by employing a crosstab with help frequency analyses to assess the relationship between demographic variables and passenger interests in switching preferences. It is a known fact, that some previous studies adopted a more robust statistical approach, such as multivariate analysis, multinomial and mixed logit, as well as partial least square to identify the underlying constructs that explain an aspect of the demographic associations and passengers interest [19, 28], [35]. However, this study uses the cross-tabulation test to discover evident influences between the demographic variables (e.g., gender, age, occupation, education) and passengers' interest in switching preference. However, rather than only "back fit" these results, this study stated its data both in quantitative and qualitative (narrative) form. This research use

chi-square analysis to detect the significant relations between the 2 variables. This method was adopted from a previous study that analyses the effect of demographics characteristics on passengers' preference [17]. The criteria for the accepted hypothesis were $\chi^2 > \chi^2_{table}$ and $significance < .05$.

3. RESULTS

The 36.84-kilometer elevated highway is located in the center of the Jakarta-Cikampek road and crosses Bekasi City, as well as Karawang Regency in West Java, Indonesia. Therefore, this study focuses on the socio-demographic factors, interests, and desires of passengers to change vehicle mode of preferences for individuals that travel through the highway. Conversely, for better specific information, this study provides an APPENDIX that explains the data related to the kind of transportation and set of priorities. Subsequently, out of the 720 questionnaires redistributed, the number of returned questionnaires with valid answers was 89.17% or 642. This is caused by the incomplete answers produced by the respondent. The following result that was obtained include:

3.1. The Influence of Gender on Changes in Passenger Transportation Mode Preferences

Table 2 shows the crosstab results of the influence of age and intention variables on changes in transportation mode preferences. Generally, the male and female passengers are 371 and 271 respectively. Besides, 245 passengers were hesitant to switch to the rail transportation modes although, the majority of the men were doubtful. However, relatively 209 respondents wished to change modes of transportation, while 169 had no intention to switch. Furthermore, 16 passengers dominated by women certainly did not want to alter their modes of transportation. On the contrary, 3 passengers, mostly men, really wished to change. Subsequently, passengers tend to select one of the transportation modes based on 3 main priorities namely cost, convenience, and destination suitability. In accordance with the majority of the passengers' perspective, vehicles are the ideal solution to this issue. This implies that most of them travel in vehicles to other destinations.

Table 2. Crosstab of gender and passenger desires to change mode of transportation.

Answer		Desire to Switch					Total
		1	2	3	4	5	
Sex	Male	7	107	145	110	2	371
	Female	9	62	100	99	1	271
Total		16	169	245	209	3	642

Source: processed with SPSS 25, 2020.

Meanwhile, the chi table results show an insignificant relationship between gender and changes in passengers' preferences on land transportation mode using vehicles, and its effect (Table 3). Although this is in accordance with a relationship of .201 which is greater than the .050 significance level, and $5,979 < 9,488$ (χ^2_{table} DF: 4 and sig .05), the results proved that gender is not the basis for justifying changes in passengers' transportation mode preferences.

3.2. The Influence of Age on Passenger Desire to Change Mode of Transportation

The crosstab results of age and intention variables in changing transportation mode preferences are shown in Table 4. The doubts experienced were mostly dominated by those within the ages of 26 to 35 years and this amounted to a total of 113 passengers, besides, majority of them travelled in private vehicles. Subsequently, based on the summary of the data on the APPENDIX, the priorities that affect the selection of these modes include travel time, comfort, and driving convenience. This was followed by the desire to remain unchanged, however, as many as 82 passengers, dominated by those within the ages of 26 to 35 years, preferred to travel in private vehicles. Furthermore, passengers between the ages of 15 to 26 years had the desire to change. Meanwhile, the elderly, mostly those that are 66 and above, desperately wanted to change from their current means of transportation to another.

Table 3. Chi-square test of gender and passenger desires to change mode of transportation.

-	Value	DF	Asymptotic significance (2-sided)
Pearson Chi-Square	5.979a.	4	.201
Likelihood Ratio	5.970	4	.201
Linear-by-Linear Association	2.054	1	.152
N of Valid Cases	642	-	-

^a. 2 cells (20.0%) have an expected count less than 5. The minimum expected count is 1.27.

Source: processed with SPSS 25, 2020.

Moreover, a significant relationship was discovered between age demographic factors and changes in passengers' preference of vehicles as shown in Table 5. Furthermore, the relationship was .000 less than the .050 level of significance, and $81.992 > 31.410$ (χ^2_{table} DF: 20 and sig .05). This shows that age is one of the characteristics that made passengers change their preferred mode of transportation.

Table 4. Crosstab of age and passenger desire to change mode of transportation.

Answer		Desire to Switch					Total
		1	2	3	4	5	
Ages	15-25	5	34	71	72	1	183
	26-35	2	82	113	51	0	248
	36-45	8	39	35	49	1	132
	46-55	1	11	17	23	0	52
	56-65	0	3	6	11	0	20
	=>66	0	0	3	3	1	7
Total		16	169	245	209	3	642

Source: processed with SPSS 25, 2020.

3.3. The Influence of Educational Level on Passenger Desire to Switch Mode of Transportation

Table 6 showed the crosstab results of the educational level variable and the intention to change the transportation mode preference. The desire to switch preferences was mostly dominated by those with lesser educational qualifications or equivalent to senior high school. Likewise, the majority of the passengers in this group experienced doubts and had no

intention to switch from the current mode of transportation. This was reasonable considering that the proportion of passengers with educational qualifications lower than or similar to senior high school accounted for relatively half of the respondents that preferred land transportation. Similarly, groups that had no intention to switch modes of transportation were dominated by high school graduates. On the contrary, none of those in the group that was eager to switch to another mode of transportation had attained high school education. The majority of those with not more than high school educations chose to use the intercity between provinces bus. This type of vehicle was preferred due to cost, comfort, and practicality considerations. Meanwhile, diploma holders preferred to use private vehicles, while undergraduates and postgraduates used the travel modes.

Table 5. Chi-square test of age and passenger desire to switch mode of transportation.

-	Value	DF	Asymptotic Significance (2-sided)
Pearson Chi-Square	81.992a	20	.000
Likelihood Ratio	62.790	20	.000
Linear-by-Linear Association	1.306	1	.253
N of Valid Cases	642		

^a 14 cells (46.7%) have an expected count less than 5. The minimum expected count is .03.

Source: processed with SPSS 25, 2020.

Table 6. Crosstab of education level and passenger desire to switch mode of transportation.

Answer	Education Level	Desire to Switch					Total
		1	2	3	4	5	
	=<High School	10	98	118	122	0	348
	Diploma	2	33	30	34	1	100
	Undergraduate	3	34	86	46	2	171
	=>Graduate	1	4	11	7	0	23
Total		16	169	245	209	3	642

Source: processed with SPSS 25, 2020.

However, a significant relationship was discovered between the educational level and changes in passengers' preferences of land transportation mode. Table 7 showed the relationship .023 to be less than .050 with a significance level, of 23.666 > 21.206 (chi table DF: 12 and sig .05). Therefore, the level of education was proven to be one of the demographic characteristics that made passengers change their transportation mode preferences.

Table 7. Chi-square test of educational level and passenger desire to switch mode of transportation.

-	Value	DF	Asymptotic Significance (2-sided)
Pearson Chi-Square	23.666a	12	.023
Likelihood Ratio	24.551	12	.017
Linear-by-Linear Association	.285	1	.593
N of Valid Cases	642		

^a 7 cells (35.0%) have an expected count less than 5. The minimum expected count is .11.

Source: processed with SPSS 25, 2020.

3.4. The Influence of Passenger Job Type on Desires to Change Mode of Transportation

Table 8 showed the crosstab results of the work type variable and the intention to change the preferred mode of transportation. A total of 92 respondents were doubtful about switching modes of transportation, while 63 people were interested in switching, in addition, both groups were dominated by private employees. On the contrary, most entrepreneurs approximately 61 respondents had no intention to switch from the current transportation. Meanwhile, it was natural for private employees to dominate some of the answer choices because they constituted the highest number of respondents compared to the others. The passengers were mostly those that worked with private firms and the choice was motivated by considerations of cost, comfort, and suitability of their destinations.

Table 8. Crosstab of type of work and passenger desires to change mode of transportation.

Answer	Types of Occupation	Desire to Switch					Total
		1	2	3	4	5	
	Civil Servant/Military/Police	2	5	15	5	0	27
	Non-Govt. Employee	10	31	92	63	1	197
	Central/Local Government Companies	1	11	23	8	1	44
	Entrepreneur	0	61	62	51	0	174
	Students	3	33	26	35	1	98
	Others	0	28	27	47	0	102
Total		16	169	245	209	3	642

Source: processed with SPSS 25, 2020.

There was a significant relationship between occupational demographic factors and changes in passengers' preference of land transportation mode. As shown in Table 9, the relationship .000 was less than .050 significance level, and 62.847 > 31.410 (chi table DF: 20 and sig .05). This result shows that the passengers' occupation was one of the demographic characteristics that made them change their preferred modes of transportation.

Table 9. Chi-square test of job types and passenger desire to change mode of transportation.

-	Value	DF	Asymptotic Significance (2-sided)
Pearson Chi-Square	62.847a	20	.000
Likelihood Ratio	68.483	20	.000
Linear-by-Linear Association	.721	1	.396
N of Valid Cases	642		

^a 12 cells (40.0%) have expected counts less than 5. The minimum expected count is .13.

Source: processed with SPSS 25, 2020.

3.5. The Influence of Current Interest in the Mode of Transportation on Passenger Desires to Change

Table 10 showed the crosstab results of the variables of work and the intention to change the transportation mode preferences. Most of the passengers, particularly 501 respondents, expressed their interest in using land transportation modes that ply on the highways such as intercity

and between cities buses, private cars, rentals, etc. Despite the high interest of passengers in the recent modes of transportation, many expressed doubts and wanted to switch to other means such as railways. However, approximately 141 interested passengers did not want to switch and 11 of them were uncertain about changing to other modes of transportation. Nevertheless, the interested and unwilling ones or those that had no intention to switch were dominated by intercity and between cities travel and bus passengers, while the private vehicle users were dominated by those interested although hesitant to change. Meanwhile, those interested and willing to switch to other modes of transportation were dominated by rental car passengers. This was understandable since they are hesitant to switch considering the rental, fuel, and other costs such as highway fees.

Table 10. Crosstab of passenger interest and passenger desire to change mode of transportation.

Answer		Desire to Switch					Total
		1	2	3	4	5	
Non-railway Interest	Very Disinterested	0	0	1	1	0	2
	Not interested	0	7	7	4	1	19
	Doubtful	1	4	24	23	0	52
	Interested	11	141	190	157	2	501
	Very Interested	4	17	23	24	0	68
Total		16	169	245	209	3	642

Source: processed with SPSS 25, 2020.

Meanwhile, a significant relationship exists between occupational demographic factors and changes in passengers' preferences of land transportation mode. According to Table 11, the relationship .000 tends to be less than the .050 significance level, and 27,550 > 26,296 (chi table DF: 16 and sig .050). This proves that passengers' interest influences the desire to switch to other transportation modes.

Table 11. Chi-square test of passenger interests and passenger desires to change mode of transportation.

-	Value	DF	Asymptotic significance (2-sided)
Pearson Chi-Square	27.550a.	16	.036
Likelihood Ratio	24.367	16	.082
Linear-by-Linear Association	2.245	1	.134
N of Valid Cases	642		

a. 12 cells (48.0%) have an expected count less than 5. The minimum expected count is .01.

Source: processed with SPSS 25, 2020.

4. DISCUSSION

Based on the result section, males within the ages of 26 to 35, with educational qualifications equivalent to high school, non-government employee, and interested in the current mode dominate land transportation. Demographic factors such as age, level of education, type of work, and interest in using highways influence passengers to switch modes of transportation. Meanwhile, gender is less likely to influence passengers' desires to switch.

This factor is not considered as a predictor of switching

decisions concerning transportation mode. There is only a slight difference between hesitant and the desire to switch in each of the 2 gender groups in respect to those that prefer using the highway while traveling. This result is inconsistent with another study [12], which stated that gender is related to a person's switching decisions. Women are less likely to change their decisions because they get more anxious in terms of comfort [15]. However, they remain loyal to a particular mode of transportation once they discover it is comfortable. Irrespective of the fact, that the passengers are dominated by the male, they do not show a strong desire to switch preferences within a short period. Conversely, almost all of them are hesitant to switch. However, a few of them want to try switching their transportation preference. This tendency is related to the research [12], which stated that men are likely to try new things to discover a better choice.

The age of a passenger tends to have an impact on switching decisions. These results are consistent with the study [13], which stated that it is one of the factors that have a significant effect on the intention to change passengers' preferences. The older a person gets, the higher the possibility to become picky in terms of transportation modes [20]. Therefore, this study is inconsistent with the research carried out by Kissler, which stated that middle-aged people between the ages of 35 to 65 years often change their decisions. Although, older people > 65 years are unlikely to change their decisions [21]. The passengers that have the desire to switch transportation mode preferences are dominated by those between the ages of 15 to 25 years. This is because they have an unstable income; therefore, these individuals tend to use the most economical mode of transportation among the available options. They have a bigger tendency to switch to another cheaper cost of transportation.

Besides, passengers that possess educational qualifications equivalent to a high school degree constitute the majority of the respondents. In addition, the number of undergraduates including those with diploma, and postgraduates' degrees that desire to switch to another transportation mode are greater than those that do not have the intention to switch. This is evident in the result section. Educational level is one of the factors that have a significant effect on the passengers' intentions to change preferences [13]. Those that are highly educated tend to possess more complex thoughts than those that are not. Moreover, highly educated people always have the potentials to travel [13]. The consideration to select transportation modes comprises the integration of other aspects. However, the tendency to consider other modes of transportation emerges, assuming one of the prioritized aspects becomes weak.

Various jobs yield different salaries. Besides, not all passengers of land transportation have homogenous kinds of jobs. Therefore, based on the result section, occupation is one of the factors that influence the switching intention of passengers. This result is consistent with the research [20], which stated that people with established jobs or positions tend to prefer certain modes of transportation to those with menial sources of income. Every job of course, yields an income, although they are not always the same. Additionally, large income provides a greater opportunity to select the desired vehicle according to personal preference. The passengers were

mostly those employed in private firms, and their choice was motivated by considerations of cost, comfort, and suitability of their destinations. Conversely, people with established occupations or positions tend to switch transportation mode preferences than those that engage in menial jobs such as laborers and common employee [20].

Irrespective of the fact that the passengers' interests are less important than the demographic factors, it also needs to be discussed. In accordance with the result section, it shows that passengers' interest is also one significant predictor of switching intention. One of the internal factors that encourage consumers to switch preferences is the change in product or service [32]. Interest does not automatically or abruptly emerge in someone [25]. Regarding the use of specific transportation, it is related to the passenger's plan to frequently use a particular mode within a certain period. The majority of the passengers interested in the current transportation hesitate to switch to other modes. It is a sign that some realities and expectations of passengers are not satisfied at some point.

CONCLUSION

Based on the results and discussion, demographic factors such as age, level of education, type of work, and interest in using highways influence passengers' intention to switch to other modes of transportation. Meanwhile, gender was insignificant in influencing passengers' desires to switch.

This study mainly focuses on describing socio-demographic factors, passengers' interests, and the switching intention of railway users. The majority of the male passengers have the following characteristics in common they are between the ages of 15 to 25, with high school educational levels, as well as work in private companies with the desire to switch modes of transportation. Meanwhile, women aged between 36 to 45 years had no desire to switch. Travel vehicle was the most preferred means. The passengers tend to select suitable transportation modes that meet their priority needs. The choice of the majority depends on their need in respect to travel time,

convenience, and practicality. However, to ensure passengers are loyal to a particular mode of transportation in the future, their positive emotions need to be satisfied to avoid competing with other types such as trains or airplanes [31]. Consequently, the findings of this study serve as useful references for management companies to set priorities based on socio-demographic factors to retain and attract new consumers.

However, this study has certain limitations as it covers only one of the many routes in Indonesia, and therefore need not be generalized literally without considering the characteristics and research situations. Future research is expected to develop concepts for other variables with different analytical methods as well as cover broader routes, including other transportation modes.

CONSENT FOR PUBLICATION

Not applicable.

AVAILABILITY OF DATA AND MATERIALS

Not applicable.

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CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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APPENDIX

Appendix Table 1. Crosstab between sex and vehicle type.

Count		Vehicle Type					Total
		*Intercity between Provinces Bus	Travel	Private Car	Rental Car	Others	
Sex	Male	83	138	97	51	2	371
	Female	73	123	37	38	0	271
Total		156	261	134	89	2	642

Appendix Table 2. Crosstab between age and vehicle type.

Count		Vehicle Type					Total
		* Intercity and between Cities Bus	Travel	Private Car	Rental Car	Others	
Age	15-25	46	114	7	16	0	183
	26-35	65	69	80	34	0	248
	36-45	23	31	42	34	2	132
	46-55	17	25	5	5	0	52
	56-65	4	16	0	0	0	20
	=>66	1	6	0	0	0	7
Total		156	261	134	89	2	642

Appendix Table 3. Crosstab between education level and vehicle type.

Count		Vehicle Type					Total
		* Intercity and between Cities	Travel	Private Car	Rental Car	Others	
Educational Level	=<High School	122	87	68	69	2	348
	Diploma	25	25	41	9	0	100
	Undergraduate	8	127	25	11	0	171
	=>Graduate	1	22	0	0	0	23
Total		156	261	134	89	2	642

Appendix Table 4. Crosstab between occupation and vehicle type.

Count		Vehicle Type					Total
		* Intercity and between Cities Bus	Travel	Private Car	Rental Car	Others	
Occupation Type	Civil Servant/Military/Police	1	21	4	1	0	27
	Non-Govt. Employee	61	84	21	31	0	197
	**Central/local Government Companies	4	14	24	0	2	44
	Entrepreneur	32	37	63	42	0	174
	Students	21	63	11	3	0	98
	Others	37	42	11	12	0	102
Total		156	261	134	89	2	642

Appendix Table 5. Crosstab between passengers interest and vehicle types.

Count		Vehicle Type					Total
		* Intercity and between Cities Bus	Travel	Private Car	Rental Car	Others	
Non-railway Interest	Very Disinterested	1	1	0	0	0	2
	Not interested	4	7	8	0	0	19
	Doubtful	8	39	0	5	0	52
	Interested	125	185	114	75	2	501
	Very Interested	18	29	12	9	0	68
Total		156	261	134	89	2	642

Appendix Table 6. Passengers 1st priority select transportation.

		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Cost	134	20.5	20.5	20.5
	Travel time	175	26.7	26.7	47.2
	Comfort	83	12.7	12.7	59.8
	Safety	18	2.7	2.7	62.6
	Practicality	107	16.3	16.3	78.9
	Destination Location Suitability	61	9.3	9.3	88.2
	Schedule Compliance	28	4.3	4.3	92.5
	Facility	3	.5	.5	93.0
	Flexibility	45	6.9	6.9	99.8
	Cost	1	.2	.2	100.0
	Total	655	100.0	100.0	

Appendix Table 7. Passengers 2nd priority select transportation.

	-	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Cost	67	10.2	10.2	10.2
	Travel time	93	14.2	14.2	24.4
	Comfort	143	21.8	21.8	46.3
	Safety	43	6.6	6.6	52.8
	Practicality	124	18.9	18.9	71.8
	Destination Location Suitability	115	17.6	17.6	89.3
	Schedule Compliance	28	4.3	4.3	93.6
	Facility	10	1.5	1.5	95.1
	Flexibility	32	4.9	4.9	100.0
	Total	655	100.0	100.0	

Appendix Table 8. Passengers 3rd priority select transportation.

	-	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Cost	71	10.8	10.8	10.8
	Travel time	53	8.1	8.1	18.9
	Comfort	75	11.5	11.5	30.4
	Safety	81	12.4	12.4	42.7
	Practicality	122	18.6	18.6	61.4
	Destination Location Suitability	103	15.7	15.7	77.1
	Schedule Compliance	70	10.7	10.7	87.8
	Facility	21	3.2	3.2	91.0
	Flexibility	59	9.0	9.0	100.0
	Total	655	100.0	100.0	

Appendix Table 9. Priority 1 * vehicle type crosstabulation.

	Count	Type of Vehicle					Total
		Intercity between Provinces Bus	Travel	Private Car	Rental Car	Others	
Priority 1	Cost	44	60	14	15	1	134
	Travel time	39	58	50	27	0	174
	Comfort	25	36	15	6	0	82
	Safety	3	13	2	0	0	18
	Practicality	15	36	27	26	0	104
	Destination Location Suitability	11	33	9	8	0	61
	Schedule Compliance	9	12	4	0	1	26
	Facility	0	2	1	0	0	3
	Flexibility	10	11	12	7	0	40
Total	156	261	134	89	2	642	

Appendix Table 10. Priority 2 * vehicle type crosstabulation.

Count	Type of Vehicle					Total	
	Intercity between Provinces Bus	Travel	Private Car	Rental Car	Others		
Priority 2	Cost	16	34	6	11	0	67
	Travel time	15	30	23	25	0	93
	Comfort	40	58	32	11	0	141
	Safety	6	23	9	3	2	43
	Practicality	32	43	25	22	0	122
	Destination Location Suitability	30	46	22	10	0	108
	Schedule Compliance	7	17	4	0	0	28
	Facility	0	2	4	4	0	10
	Flexibility	10	8	9	3	0	30
	Total	156	261	134	89	2	642

Appendix Table 11. Priority 3 * vehicle type crosstabulation.

Count	Type of Vehicle					Total	
	Intercity between Provinces Bus	Travel	Private Car	Rental Car	Others		
Priority 3	Cost	13	38	11	8	1	71
	Travel time	14	15	10	11	0	50
	Comfort	10	24	22	17	1	74
	Safety	24	36	13	8	0	81
	Practicality	29	41	24	22	0	116
	Destination Location Suitability	24	50	17	9	0	100
	Schedule Compliance	21	24	23	2	0	70
	Facility	0	14	2	5	0	21
	Flexibility	21	19	12	7	0	59
	Total	156	261	134	89	2	642

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