[LOG 22] FACTORS INFLUENCING PASSENGERS' INTENTION TO USE ETS TRAIN IN MALAYSIA

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ABSTRACT

The number of private vehicle in Malaysia has increased every year, it cause air quality of Malaysia became unhealthy due to the increasing of vehicle emission. The increasing of private vehicle with the limited road space in Malaysia will cause congestion especially during public holidays and peak hours. Government of Malaysia are encourage the citizens to use the public transport. We believe that the increasing the use of public transport and reduction of private vehicle use in Malaysia will improve the air quality in Malaysia. The research examined the factors that influences passenger' intention to use ETS train in Malaysia. The factors are service quality, satisfaction, and switching cost. Approximately 400 rail transport passengers in Malaysia are chosen to complete the questionnaire provided. The results of this research are used to develop awareness among citizens Malaysia and encourage them to use the rail transport in Malaysia.

Keywords: *private vehicle, public transport, ETS train, intention, service quality, satisfaction, switching*

INTRODUCTION

Nowadays, logistics has a negative influence towards the environment. According to report by Road Transport Department (RTD), the number of vehicle registered in Malaysia increased to 101226 vehicles in June 2016 from 86681 vehicle in May 2016. The increasing of transportation volumes causes traffic congestion and air pollution (Gross, Hayden, & Butz, 2012). Besides that, private vehicle brings a lot of disadvantages such as traffic congestion, more land needed for roads and parking spaces is at high cost, high public cost for hospital and accident, noise pollution and so on (Taylor, 2009). According to Litman (2015), public transport involves in various type of services that provide mobility to transfer from a place to another place to the general public in shared vehicles. For examples, shuttle vans, local and intercity buses, and passenger rail. In the research by Litman (2010), he mentioned that public transports can directly reduce traffic congestion, directly reduce per capita traffic crash rates, and directly reduce pollution emission. The increase in use of public transport will decrease the use of private vehicle. (Cobx, P, 2010). Hence, it can improve the air quality and made a green environment in Malaysia. One of the important public transport which is rail transportation plays an important role in reduce the use of private vehicle and directly reduce traffic congestion and vehicle emission in Malaysia. Recently, rail

transportation in Malaysia was developed very well. The KTMB service was monopolized in the area of public transport in Malaysia. Even though, the passenger' intention to use the rail transportation are very low compared to the uses of private vehicles in Malaysia. Therefore, this study attempts to examine the factors that influences passenger' intention to use ETS train in Malaysia.

PROBLEM STATEMENT

Traffic congestion and air pollution are normally problem can be found in the most world country includes Malaysia. The increasing number of private vehicle in use is the main reason that causes the traffic congestion became more serious and lead to air pollution in a country. (Sui, 2016). In order to improve the quality of life in a country, private vehicle use should be reduction and encourage the people to use public transport more. Public transport is a shared vehicle that can move a lot of passenger and travel together. The common example of public transport are buses, train, taxi, and others. Public transport have the benefits to reduce the number of private vehicle on road and reduce the traffic congestion happen. The less of the emission of vehicle in the cities will reduce air pollution and improve the air quality in the cities. Society of Malaysia should be encouraged to use public transport in order to reduce the number of vehicle on the road. In Malaysia, rail transport was monopolized in the area of public transport. However, the passengers' intention to use rail transportation are very low compared to the uses of private vehicles. Therefore, this study will to examine the factor influencing passengers' intention to use ETS train in Malaysia. The factors are service quality, satisfaction, and switching cost.

RESEARCH QUESTION

This research addresses the following research question:
RQ1:   Does service quality influence passengers' intention to use ETS train in Malaysia?
RQ2:   Does satisfaction influence passengers' intention to use ETS train in Malaysia?
RQ3:   Does switching cost influence passengers' intention to use ETS train in Malaysia?

RESEARCH OBJECTIVE

The research objective aim to examine the factors that influences the passengers' intention to use ETS train in Malaysia. This research had study three factors which are service quality, satisfaction, and switching cost. The study has the following specific research objective:

RO1:   To examine the relationship between service quality and passengers' intention to use ETS train in Malaysia.
RO2:   To examine the relationship between satisfaction and passengers' intention to use ETS train in Malaysia.
RO3:   To examine the relationship between switching cost and passengers' intention to use ETS train in Malaysia.

THEORY OF PLANNED BEHAVIOR

The Theory of Planned Behavior (TPB) is commonly used to apply and explain the theories of behavioral. In TPB, the intention is defined as maximum level of a person willing to try and the maximum level of effort that one's plans to exert in conducting a given behavior (Ajzen, 1991). TPB is the extension of the theory of reasoned action (TRA) where it is based on the assumptions that ones will usually behave in a sensible manner through considering the implication of the actions (Ajzen, 1985). According to Ajzen & Madden, (1986) TRA defined intention as the antecedent of any behavior to be carried out which is fundamentally motivational in nature. It is said that the stronger one's intention, the greater the likely that the behavior will be carried out.

There are only two independent factors used to determine intention under TRA. These are subjective norm and attitude. TRA is found not to be adequate and had several limitations. This is because TRA only works correctly under individuals' volitional control. Thus, TPB was developed by adding third element which is perceived behavioral control in dealing with behaviors over the people have incomplete volitional control (Ajzen, 1991). On the basis of TPB, intention to perform a behavior is affected by three factors. Which are psychological concept that independent to each other. It includes attitude toward the behavior, subjective norm and perceived behavior control. These three elements in TPB control account for substantial variance in intentions and shows the significant relationship with intention through meta-analysis reviews (Ajzen, 1991; Godin & Kok, 1996; Sheppard, Hartwick & Warshaw, 1988; Armitage & Conner, 2001; Sheeran & Taylor, 1999).

Passengers' intention to use ETS train in Malaysia

Intent is "a state of mind that leading a man's attention towards a particular item or way to accomplish something (Vesalainen & Pihkala, 1999). The favourable of intention will lead to the higher the probability of one to take part in that behaviour. Generally, the model of behavioral intention is derived from social psychology in the theory of reasoned action (TRA). TRA proposes that an individual''s behaviour is driven by his or her intention which thusly will be control by his or her attitude toward the behaviour and subjective norms (Fishbein & Ajzen, 1975).

In this research, customer is referring to existing KTMB customers where they are the respondent for this research. The repurchase intention is refer to the intention of customer to use either in the short term (if they intended to use in the foreseeable future) and their intention to visit in the long term (in the event that they needed to use at some later, unspecified date).

Service quality

Service quality is a measure of how well the service level that is delivered matches customer expectations, while a firm delivering quality service means conforming to customer expectations on a consistent basis. Service quality is the comparison by customers between the quality of service that thy want to receive and what they actually get. Service quality is form of relationship between consumer attitude and the services performances (Sumaedi et al., 2012, Hoffman and Bateson, 2006). According to Lai and Chen (2011), service quality only involve customer appraisal and it is about the services performance level to fulfill customer needs. Parasuraman et al. (1985) found that service quality consists of ten dimensions, which are reliability, responsiveness,

competence, access, courtesey, communication, credibility, security, understand consumer, and tangibles.

Customers satisfaction
According to Kamaruddin, Osman and Che Pei (2012), satisfaction is the important criteria to measure the success of any public transport services. Customer satisfaction is considered a proxy for organizational performance of a public transport service provider. Moreover, the study of Ghorban (2012) stated that there is a positive influence of customer satisfaction on building positive brand attitude, which would be positively related to purchase intentions. The satisfaction is merely connected to the customer's decision on choosing the public transport service provider in the future. The experience of the customers on the service whether the service has met their expectations and fulfilled their wants will determine their intention to use the service by the provider.

Switching cost
Switching costs are used to explain why customers have an intention to stay in a relationship with public transport service provider. Switching costs involve time, cost and effort that passengers face when switching from one public transport service provider to another. Switching cost also includes financial burden. Thus, as the meaning of switching costs varies, customers with identical satisfaction levels in switching costs may present different intention levels to use the transport service. Besides, attractiveness of alternatives on cost relates to customers awareness and knowledge of alternatives while compared with the current relationship. Theoretically founded on the Social Exchange Theory 2 (Thibaut & Kelley, 1959), the underlying assumption is that people stay in relationships if there is a valued expected return contingent upon it (Emerson, 1976).

RESEARCH METHODOLOGY

In this research paper, quantitative study will be applied in this research by answering four hypotheses through distribute questionnaire which the data will collect and prepared for statistical analysis.
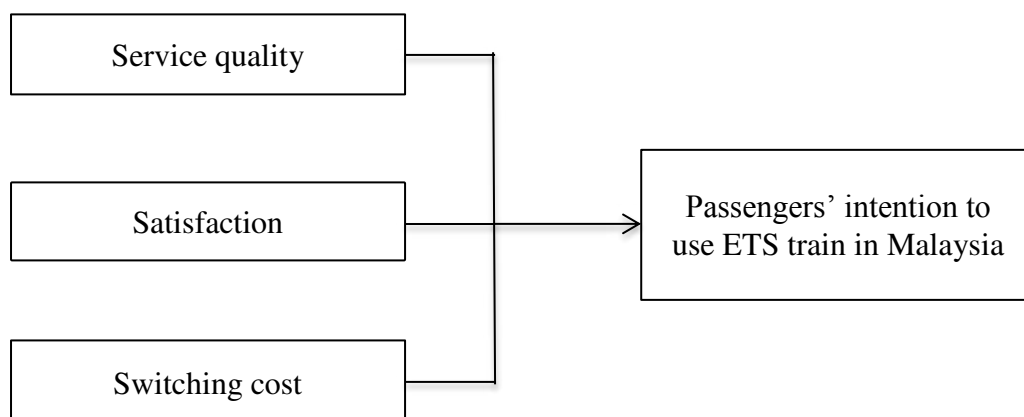
Research framework

Figure 1
Conceptual framework

Research hypothesis

The hypotheses were as follow:

H_a1: There is a significant relationship between service quality and passengers' intention to use ETS train in Malaysia.

H_a2: There is a significant relationship between passenger satisfaction and passengers' intention to use ETS train in Malaysia.

H_a3: There is a significant relationship between switching cost and passengers' intention to use ETS train in Malaysia.

Data collection

In this research, construct validity will adopt 15 items for measures the factors are taken from the previous research. There are total fifteen items contained in the personal administered questionnaires and electronic questionnaire which is closed questions for asking respondents to make choices on the set of statements given through five-point Likert Scale as 1 denoted strongly disagree and 5 denoted strongly agree with all positive words. A total number of 400 respondents are participate in answering personal administered questionnaires and electronic questionnaires via "Google Forms" in online. 200 respondents are take part in answering electronic questionnaires while 200 respondents are provided information through personal administered questionnaires.

Measurement

Validity testing indicated Cronbach's alpha score for the entire instrument is 0.891 which is very good score according to Sekaran and Bougie (2013).

Table 1
Cronbach's alpha scores for variables

Variable	N of Item	Cronbach's Alpha Value
Service Quality	5	0.836
Satisfaction	3	0.792
Switching Cost	3	0.803
Intention	4	0.809

There are four variable which are service quality, satisfaction, switching cost, and intention. The four variable Cronbach's Alpha value are very good as the value (Sekaran & Bougie, 2013).

Descriptive analysis

There were 194 people or 48.5% are male student whereas female student consists of 206 people or 51.5% are participate in this study. Most of the respondents are Chinese which accounted for 217 people or 53.4% and followed by Malay that take up 118 people or 29.1% and 65 people or 17.5% are Indian. The respondents between age 21 and 30 are the majority with 228 people or 56.2% in this study and followed by age 41 to 50 that take up 68 people or 16.7% and 51 people or 14.1% are age 31 to 40. The respondents with monthly salary of RM 1000 and below are the majority with 210 people or 51.7% in this study and followed by monthly salary of RM3001 to RM4000 that take up 75 people or 18.5%. Most of the respondents not owning private vehicle which accounted for 252 people or 62% and 148 people or 62% are owning private vehicle.

RESULT AND DISCUSSION

Table 2
Correlation analysis result

		Passengers' Intention to Use ETS Train
Service Quality	Pearson Correlation, r	0.443
	Significant, (p ≤ 0.01)	0.000
Satisfaction	Pearson Correlation, r	0.249
	Significant, (p ≤ 0.01)	0.000
Switching Cost	Pearson Correlation, r	0.253
	Significant, (p ≤ 0.01)	0.000

Limitation and suggestion for future research
There are several limitations have been found in the research. The limitation in the study is the time frame. The researchers only have three months period to conduct the research paper which it is not enough of time for conducting a research paper. Besides that, this research is using convenience sampling method. This means that the findings of the research are unable to be generalizable for the whole population. The researcher also facing geographic bias which the respondents in the study that involved only focusing on West Malaysia. Therefore, the study is not representing all the passengers in Malaysia. In addition, the different levels of knowledge and information about ETS train services from the respondents in the study may affect the ability in contributing to the study.

CONCLUSION

In this research, the study determined passengers' intention to use ETS train in Malaysia based on TPB approach. Service quality, customer satisfaction and switching cost are significantly the three factors that influence passengers' intention. Hence, this research had achieved its purpose to examine the relationship between independent variables and dependent variable. However, the researcher also faced some limitations while conducting the research paper. Therefore, the researchers have suggested some recommendations regarding the limitations that faced in the study.

REFERENCES

Ajzen, I. (1985). From intentions to actions: A theory of planned behavior. In J. K. (eds), Action Control (pp. 11-39). Springer Berlin Heidelberg.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.

Babbie, E. R. (1990). Survey Research Methods (2nd ed.). Belmont, California: Wadsworth Publishing Company.

Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: populations and samples. *Industrial Psychiatry Journal, 19*(1), 60-65.

Cobx, P. (2010), Moving People, Sustainable Transport Development, UCT Press, Cape Town.

Dado, J., Petrovicova, J. T., Cusovic, S., & Rajic, T. (2012). An empirical examination of the relationships between service quality, satisfaction and behavioral intentions in higher education setting. *Serbian Journal of Management, 7*(2), 203-218.

De Vaus, D. A. (2001). Research Design in Social Research. London: SAGE Publications.

Egboro, F.O. (2015). The implications of parametric and non-parametric statistics in data analysis in marketing research. *International Journal of Humanities and Social Science, 5*(6), 74-83.

Fishbein, M., & Ajzen, I. (1975), Belief, Attitude, Intention, and Behavior: an Introduction to Theory and Research, Addison-Wesley, Reading, MA.

Gross, W. F., Hayden, C., & Butz, C. (2012, March 23). About the impact of rising oil price on logistics networks and transportation greenhouse gas emission. Retrieved from http://download.springer.com/static/pdf/747/art%253A10.1007%252Fs1215900722.pdf?originUrl=http%3A%2F%2Flink.springer.com%2Farticle%2F10.

Halilah Harun. (2013). Investigating Structural Relationship between Passenger Satisfaction and its Antecedents towards Passenger Loyalty for Rail Transportation: Evidence from KTMB Komuter.

Hoffman, K.D., & Bateson, J.E.G. (2006). Services Marketing: Concepts, Strategies, and Cases, Thomson South-Western, Mason, OH.

Jani, D., & Han, H. (2011). Investigating the key factors affecting behavioral intentions: Evidence from a full-service restaurant setting. *International Journal of Contemporary Hospitality Management, 23*(7), 1000-1018.

Kamaruddin, R., Osman, I., & Che Pei, C. A. (2012). Customer Expectations and its Relationship towards Public Transport in Klang Valley. *Journal of Asian Behavioural Studies, 2*(5), 29-38.

Lai, W. T., & Chen, C. F. (2011). Behavioral intentions of public transit passengers-The roles of service quality, perceived value, satisfaction and involvement. *Transport Policy, 18*(2), 318–325.

Lam, S.Y., Venkatesh, S., Erramilli, K.M., & Bvsan, M. (2004). Customer Value, Satisfaction, Loyalty, and Switching Costs: An Illustration From A Business-to-Business Service Context, *Journal of the Academy of Marketing Science, 32*(3), 293-311.

Moran, R. (2004). Anscombe on 'Practical Knowledge'. In J. H. (eds.), Royal Institute of Philosophy Supplement (pp. 43-68). Cambridge University Press.

Olsen, C., George, D. M. M. St. (2004). Cross-Sectional Study Design and Data Analysis. College Entrance Examination Board.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1988). SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Park, S.Y., & Petrick, J.F. (2009). Conceptualizing intention to take a vacation form to understand non-customers. *Journal of Travel & Tourism Marketing*, 264-283.

Prasad, M.D., & Shekar, B.R. (2011). Impact of service quality management (SQM) practices on railways: A study of south central railways. *International Journal of Business and Management, 5*(9), 139-146.

Rodrigue, J. P., & Slack. B. (2016). Rail Transportation and Pipelines. Retrieved on 9 September 2016, from https://people.hofstra.edu/geotrans/eng/ch3en/conc3en/ch3c3en.html.

Rokeach, M. (1968). A Theory of Organization and Change within Value-Attitude Systems. *Journal of Social Issues, 24*(1), 13-33.

Saleem, A., Shabana, T. S. Z., & Sadik, M. B. (2014). Holistic approach of research work. *International Journal of Scientific and Research Publications, 4*(7).

Schiffman, L.G., Kanuk, L.L., & Hansen, H. (2012), Consumer Behaviour: A European Outlook, 2nd ed., Pearson Education Ltd, Harlow.