TRANSPORT PROBLEMS 2023 Volume 18 Issue 1
PROBLEMY TRANSPORTU DOI: 10.20858/tp.2023.18.1.16

Keywords: social marketing; attitude; behavior; road traffic

Ngo Thi Hong NHUNG[1], Do Huu HAI[2]*, Vu Tri DUNG[3], Le Ngoc THONG[4], Pham Quang TRUNG[5], Nguyen Hung CUONG[6]

EFFECTS OF SOCIAL MARKETING ON ATTITUDES AND BEHAVIOR RELATED TO ROAD TRAFFIC IN HANOI CITY

Summary. Dangerous and risky actions while traveling on traffic routes that threaten the health, spirit and life of vehicle drivers and others. However, to raise community awareness, make them care about traffic safety behavior takes time and influence attitudes to create behavior change in a sustainable way. Research based on Ajzen's theory of planned behavior [1, 2] and the theory of social marketing was conducted to identify the factors influencing the road traffic attitudes and behaviors of people in Hanoi and the degrees of their influence. The results show that road traffic attitudes are affected, in descending order, by partnership, resources, distribution, promotion, price, product, and public. The road traffic behavior of people is determined, in descending order, by age, moderator variables (the law and the validity of the law and weather), attitude, and education level. Based on the results, several recommendations to government officials and policymakers have been made.

1. INTRODUCTION

1.1. Overview

Traffic accidents attract the attention of society because they are directly related to people's lives and property. According to a report from the General Statistics Office in 2019 [19], the country of Vietnam had 17,626 traffic accidents, of which 9,229 were less serious to become and 9,021 were crashes, resulting in 7,458 deaths and 5,054 injuries. In 2019, on average, the country had 48 traffic accidents per day, causing 21 deaths, 37 injuries, and 23 minor injuries. On the other hand, the increased use of motor vehicles in Vietnam's cities has resulted in severe traffic congestion and environmental pollution, which profoundly affect urban residents' lives and health. Improving traffic infrastructure will contribute to reducing traffic congestion, but it is unlikely to create standard traffic

[1] Vietnam Women's Academy; No.68, Nguyen Chi Thanh Street, Dong Da District, Hanoi, Vietnam; e-mail: nhungnth@vwa.edu.vn; orcid.org/0000-0003-4983-3479
[2] Ho Chi Minh City University of Food Industry; 140 Le Trong Tan Str., Tan Phu Dist, Ho Chi Minh City, Vietnam; e-mail: haidh1975@gmail.com; orcid.org/0000-0001-5811-7154
[3] National Economics University; 207 Giai Phong Road, Hai Ba Trung District, Hanoi, Vietnam; e-mail: vtdung23@gmail.com; orcid.org/0000-0003-0348-8315
[4] National Economics University; 207 Giai Phong Road, Hai Ba Trung District, Hanoi, Vietnam; e-mail: thongleh@yahoo.com; orcid.org/0000-0001-5209-2654
[5] National Academy of Education Management, 31 Phan Dinh Giot Road, Thanh Xuan District, Hanoi, Vietnam; e-mail: trung2012neu@gmail.com; orcid.org/0000-0003-1802-5997
[6] Vietnam Women's Academy; No.68, Nguyen Chi Thanh Street, Dong Da District, Hanoi, Vietnam; e-mail: cuongndh@vwa.edu.vn; orcid.org/0000-0002-0597-7510
* Corresponding author. E-mail: haidh1975@gmail.com

behaviors and culture. One of the main causes of traffic accidents is the human factor, and drivers are a major contributor to road accidents.

The challenge of the whole society is how to make road traffic safe? managers are also aware of the importance of social measures: "Renovating the content and form of propaganda, popularizing the law education on public security. Promote the propagation of the law on traffic order and safety on the mass media and visual propaganda to raise the self-awareness of people in traffic, especially promoting propaganda to basis. Pay attention to propagating and disseminating specific regulations and sanctions to handle violations of regulations on traffic safety and urban order for everyone to know and self-enforce" [16]. However, it is crucial to ensure that the above solutions are truly effective.

Internationally, the use of social marketing in the transport sector has shown the need to incorporate law enforcement to influence behavior. Because social marketing creates voluntary and sustainable behavior change in road safety campaigns. It is important to identify the specific target audience for which campaigns can increase the barriers to risky behaviors. This study aims to determine the influence of elements of social marketing on road users' attitudes and behaviors in Hanoi.

1.2. Study area

This study focuses on the Hanoi area for a number of reasons. First, Hanoi, which has a population of 7.65 million and covers an area of 3,324 square kilometers, is Vietnam's cultural, political, and economic center. It is also one of Vietnam's two largest cities and has the highest population density. Hanoi has a population density of 2,390 persons per km^2, which is four times greater than the national average. The economic growth rate is at 7.5%, which is higher than the overall countrywide economic growth rate of 6.8%. Hanoi's GDP per person is approximately 105 million VND (equivalent to 4,375 USD per capita). Hanoi's population is expected to reach 9.13 million by 2030, 9.93 million by 2040, and 10.73 million by 2050.

Second, the demand for personal vehicles in Hanoi has increased rapidly. According to the Registry Department, currently, Hanoi has nearly 6 million registered motorbikes and 787,000 registered cars. The average growth rates of motorbikes and cars were 6.7% and 10.67%, respectively, in the period from 2011-2016. There are 20 vehicles per 1,000 people and 470 motorcycles per 1,000 people [21].

Third, according to the WHO [24], Vietnam has the second-most road crash deaths in Southeast Asia, with a rate of 26.1/100,000. The government is concerned about infrastructure overload, traffic congestion, and environmental problems.

2. RESEARCH CONTEXT

2.1. Social marketing mix

Product: This element deals with the ideas, behaviors, and services that motivate the target audience. Social products include real or core products related to behavior change, and complementary products include tangible objects and services that facilitate changes in behavior [6, 18].

Price: Price factors are barriers that the target audience must overcome to accept and maintain a given social product. This factor may include time, effort, inconvenience, opportunity costs, or losses suffered [15, 17].

Distribution: This factor relates to the location where the target audience performs the proposed behavior. Therefore, social marketers may target a location that is nearer, more accessible, and more attractive to the target audience [4, 13].

Promotion: This element describes the target audience's exposure to the social product. Advertising, public relations, audience targeting, education, counseling, and community involvement are all examples of promotion [15, 17]. The question posed by marketers is which supporting tools should be used to propagate and stimulate the public to change its behavior.

Partner: A partner is an agency or organization targeting the same target audience that the implementing entity can cooperate with to improve the effectiveness of social marketing programs [8, 9, 24].

Public: With the characteristics of influencing and changing social behavior, social marketing programs often involve many different audiences, and it is necessary to participate and coordinate with those groups. Entities involved in a social program can be divided into two groups. The first group is the internal public, which includes individuals involved in the implementation of the program. The second group is the external public, which includes the targeted public, influencers, and state policy-making agencies [3, 14].

Resources: Most organizations conduct social marketing through funding from associations, philanthropists, or the government. Finding a budget for a program is an inevitable step in launching social marketing policies that must be taken into account. The sustainability of a social marketing program is heavily influenced by policy [14].

2.2. Attitude towards behavior in road traffic

The degree to which a behavior is judged favorably or unfavorably depends on one's attitude toward it. The value-expect model states that the whole set of behavioral beliefs that link an action to various outcomes and other qualities define one's attitude toward a behavior [1].

People are more likely to choose, buy, utilize, and keep a product when they have a positive mindset. A negative attitude, on the other hand, will restrict the purchase or usage of goods. Attitudes towards road traffic safety behavior are based on perceptions of the products, as well as the benefits of road traffic safety behavior, the costs, distribution, promotion, partners, public and resource implementation measures, programs, and projects related to road traffic.

2.3. Moderator variable

The link between attitudes and behaviors is influenced by the moderator variables of law and weather [7, 12]. In addition to individual knowledge and skill, the environment and other factors (e.g., road design and layout, vehicles, weather, and laws) may affect drivers' behaviors [25]. Therefore, this research considers the law and weather as moderator variables.

2.4. Control variable

The effects of social demographic variables, such as age and education level, on driving behavior have been extensively studied in high-income countries. Studies show that in low-income countries, gender and age affect attitudes and behavior. Consequently, these studies have successfully demonstrated which relevant demographic variables of driver attitudes and risk-taking behavior are related to road safety.

Psychological studies have shown a strong relationship between driving behavior and demographic factors such as the driver's age and education level, as individual factors play an important role in driving behavior [12]. For instance, 18- to 25-year-olds are especially prone to accidents. The findings also indicate that young people are the least dedicated to following traffic laws, particularly those related to speeding, running red lights, and using cell phones. Age and educational attainment were added to the control factors in the present study as additional variables.

2.5. Behavior in road traffic

Behavioral purpose is based on one's attitudes toward a behavior (a subjective criterion) and the management of observed behavior, according to the theory of planned behavior (TPB). Behavioral intent is defined as an essential premise for performing a behavior. The strength of intent determines how intensely a person tries to carry out a behavior. Understanding behavioral purpose enables the accurate forecasting of certain behaviors [1, 2]. The relationships between beliefs, attitudes, behavioral

intentions, and actual behavior in the context of road traffic have been studied using the theory of planned behavior. Through the inclusion of moderator variables in the research model, the present study explores the relationship between attitudes and behaviors.

3. RESEARCH MODEL, OBJECTIVES, AND HYPOTHESES

The main goal of this study is to pinpoint the degree of impact of the social marketing mix on the attitudes and behaviors of Hanoi residents when participating in road traffic.

A special research model is proposed to investigate the elements of social marketing influencing attitudes and behavior related to road traffic in Vietnam by using the social marketing theory and the theory of planned behavior. to study the real circumstances in Hanoi city. When examining the road traffic behavior in Hanoi, the authors added moderator variables to regulate attitudes and behaviors, as well as a control variable for behavior in road traffic.

The study model has been validated using exploratory factor analysis (EFA). Road traffic behavior is affected by several factors: attitudes towards road traffic behavior, moderator variables (the law and the validity of the law and weather), and control variables (age and academic level). Attitudes toward road traffic behavior are influenced by seven factors: product, price, distribution, promotion, partner, public, and resources.

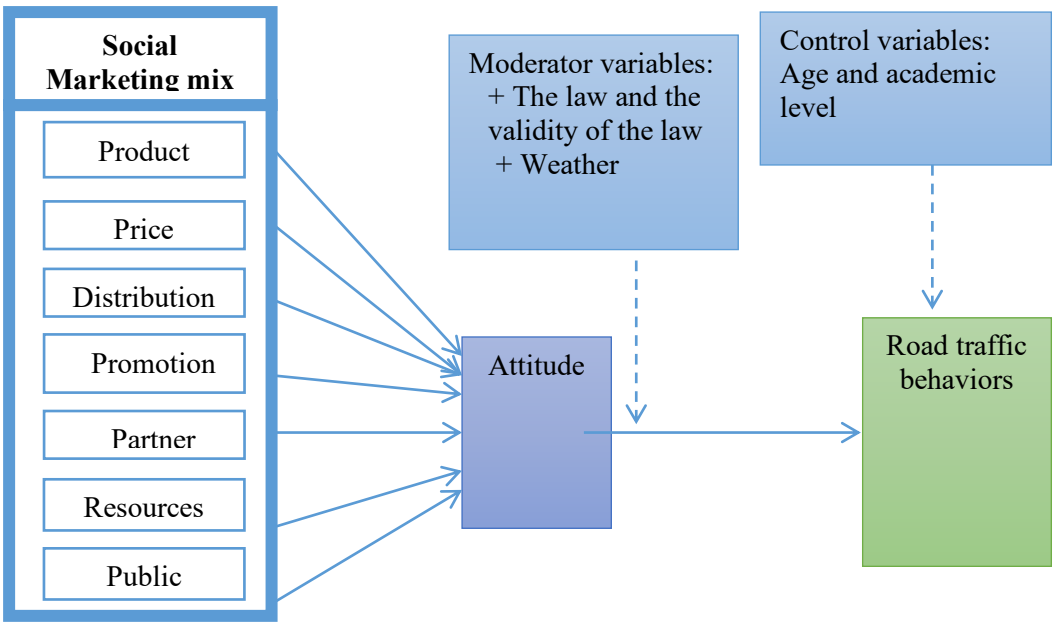

Fig. 1. Research model and hypotheses

4. DISCOURSE ON THE METHOD

4.1. Research design

This research follows a two-step method. The first step is primary research, which applies table research methods; the second step is discovery research, which applies qualitative and quantitative research methods.

Qualitative research techniques are used in exploratory research. In-depth interviews with a focus on group interviewing techniques were employed to acquire the data. Qualitative research is exploratory research that is initially carried out to acquire basic data in order to pinpoint the variables most pertinent to the research setting and better comprehend the possible repercussions of these

variables (These variables have an impact on driving attitudes and behaviors). Additionally, this exploratory study confirmed that the primary response variable to be investigated during the second survey phase is driving behavior.

Table 1

Factors and hypotheses

Factor	Expected relations
Product	*Hypothesis 1:* Perceptions about the benefits of road traffic safety behavior positively affect the attitudes of road users.
Price	*Hypothesis 2:* The costs of road traffic violations positively affect the attitudes of road users.
Distribution	*Hypothesis 3:* The location of the posts and the activities of traffic regulation support teams positively impact the attitudes of road users.
Promotion	*Hypothesis 4:* Communication activities positively affect the attitudes of road users.
Partner	*Hypothesis 5:* The organizations and unions that propagate and educate people about law observance and traffic culture have a positive impact on the attitude of road users.
Public	*Hypothesis 6:* The impact of the same direction of people participating in road traffic together.
Resources	*Hypothesis 7:* Regular and diversified funding activities for propaganda and education on road traffic law observance and cultural have an impact on road users' attitudes.
Attitude	*Hypothesis 8:* The positive attitude of road users has a positive impact on the behavior of participating in road traffic.
Moderator variables	*Hypothesis 9:* Law factors and the validity of the law have a positive impact on the behavior of participating in road traffic.
	Hypothesis 10: Favorable weather factors have a positive impact on the behavior of participating in road traffic.
Control variables	*Hypothesis 11:* Age affects the road traffic behaviors of different groups of subjects.
	Hypothesis 12: Educational level affects the road traffic behaviors of different groups of subjects.

People's psychological traits help them behave safely on the road. Interviews were conducted by experts, including road users, managers, and planners, as well as policymakers who are directly responsible for gathering and interpreting data about the road transport industry. Before a thorough interview was conducted, focus groups were interviewed. Data were gathered from Hanoi drivers. The group interviews were highly beneficial in fully comprehending consumer perspectives, attitudes, and vehicle usage, which improved the accuracy of the identified study problem.

We created a scale of variables for each component with the aid of focus groups and in-depth interviews. Semi-structured interview questions allowed for a more in-depth discussion and a better comprehension of specific material.

EFA was used as a qualitative tool to ascertain the variables influencing people's attitudes and behaviors related to traffic in Hanoi.

4.2. Questionnaire design

The questionnaire had four main parts.

Part 1: Learning general information about road users.

Part 2: Understanding the perceptions, beliefs, attitudes, subjective standards, levels of awareness of controlling behavior, and road traffic behaviors of respondents. In this section, the impacts of the

factors affecting road traffic behaviors were determined and evaluated through statements corresponding to 10 groups of factors and 35 observed variables based on a 5-point Likert scale. Respondents expressed their agreement (or disagreement) with statements by choosing a number from 1-5, where 1 expresses strong disagreement and 5 expresses strong agreement.

Part 3: Obtaining information about road traffic behavior.

Part 4: Gathering socio-demographic information from road users. In this section, the socio-demographic information of the respondents, including their age, gender, and occupation level, was collected.

4.3. Data collection

Due to time and money constraints, a thorough survey of every individual regarding road traffic in Hanoi could not be conducted in this study. As a result, the authors conducted three advance surveys (one each in the central district, the suburban district, and the district between the center and suburbs) between June and August 2020. Areas where road users were to be interviewed (including areas near offices, hospitals, schools, and other facilities) were randomly selected.

According to Comrey and Lee's (1992) rule, the chosen sample size of 450 is excellent. It also ensures the study's dependability in accordance with Bollen's minimum sample size rule (multiply 5: 35 observed variables x 5 = 175 < 550) [5, 10, 22, 24]. To ensure the validity of the investigation, the authors suggest a pattern size of 450 samples.

Between June 2020 and August 2020, a total of 377 surveys with complete data were gathered. Over 80% of the survey questions received a response. Additionally, 377 survey forms were enough to complete the EFA. [11] determined that a sample size of 100 is required for an EFA.

4.4. Data analysis

The study's data analysis process consists of five steps, which were carried out using the SPSS and AMOS software packages. To identify significant variations in driving behavior and attitudes among various road user groups, one must (i) describe statistics, (ii) analyze reliability using Cronbach's Alpha and the EFA test, (iii) perform a model fitness test, (iv) conduct an analysis using a structural equation model, and (v) conduct an analysis of variance (ANOVA) with a t-test.

The four steps of the EFA are outlined in Fig. 2 below.

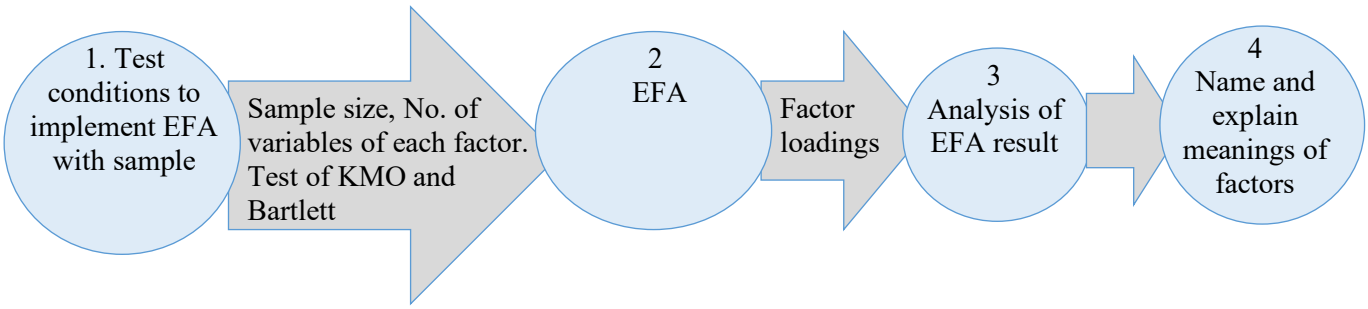

Fig. 2. The four steps of the EFA

5. SURVEY RESULTS AND DISCUSSION

5.1. Survey statistics

Gender and age: Of the 377 respondents, 44.8% were male and 55.2% were female. Respondents aged 17 to 35 years made up the largest group, accounting for 46.7% of the sample, followed by those aged between 36 and 55 (25.7%). Respondents aged 13 to 16 accounted for 23.3% of the sample, and finally, 4.2% of the sample was over 55 years old.

Education level: High school graduates made up the majority of respondents (61.3%), followed by those with postgraduate degrees (22.8%) and finally, 15.9% of participants were college or university students.

Average value of road traffic behavior: The group of product factors was rated the highest, with an average score of 4.3277, followed by the group of attitude factors (4.2395), the group of legal factors (3.8576), the price factor group (3.8022), the public factor group (3.7767), the distribution factor group (3.7541), the promotion factor group (3.7512), the group of partners (3.5825), the resource factor group (3.3944), and the weather factor group (3.2039).

5.2. Factors affecting attitude and behavior in road traffic

The results of the Cronbach's Alpha (> 0.6), KMO, and Barlett tests in SPSS indicate that 35 variables or scales are significant (Table 1). A major constituent analysis with varimax rotation was utilized to identify groups of social marketing factors affecting road traffic attitudes and behaviors. The results of the EFA show 35 variables or scales divided into 10 groups of factors. Of these, attitudes toward road traffic behavior are influenced by seven groups: product, price, distribution, promotion, partners, public, and resources. Meanwhile, road traffic behavior is influenced by three groups of factors: attitude towards road traffic behavior, the regulatory variables (the law and the validity of the law and weather), and the control variables (age and education level) (Fig. 1).

SEM analysis demonstrates that the research model is suitable for the survey data. The results of estimating the weights in Table 2 have signs (+) and statistical significance ($p \leq 0.05$), demonstrating that the concepts of product, price, distribution, promotion, partners, resources, and public have the same impact on attitudes and behaviors, even when considering the moderator variables (the law and the validity of the law and weather). This demonstrates that each measure is related to the theoretical scales as expected. That is, the scales of the concepts in the model reach the standard of theoretical relational values.

In addition, standardized estimation results when there are more moderator variables and control variables. Table 2 shows that Factor Attitude is affected by factors, in decreasing order of magnitude: Partners (0.186), Resources (0.167), Distribution (0.111), Promotion (0.1), Price (0.095), Product (0.077) and Public (0.049). The normalization coefficients of these factors are all positive, so these factors positively affect the attitude factor (consistent with the model's hypothesis). Behavioral factor in road traffic is affected. of factors, in decreasing order of age factor (0.212), moderator variable (law and weather effect) (0.177), education level (0.135) and attitude (0.112) (Fig. 3).

The ANOVA test results show differences in road traffic attitudes and behaviors based on age and educational level.

5.3. Main findings and implications

This study aimed to establish a research model to examine the effects of the mixed marketing factors of social marketing on people's road traffic attitudes and behaviors. The enumeration consists of 10 elements with 35 observed variables. Specifically, the road traffic behavior of the people is affected by three factors: attitude, regulatory variables (the law and validity of the law and weather), and control variables (age and education level). The ergonomics factor is influenced by seven constituent factors: product, price, distribution, promotion, partners, public, and resources.

The results of this field survey in Hanoi show that the factors that affect people's road traffic behavior, in decreasing order, are age, regulatory variables (the law and validity of law and weather), attitude, and education level.

The demographic factors of age and education level statistically significantly affect road users' road traffic behavior.

The findings of the study can be used to make some legislative and regulatory recommendations for improving road safety behavior and creating a culture of safe driving in Vietnam.

Future research should expand this model to examine more prospective aspects; incorporate more scales; and include more cities, regions, and provinces.

Table 2

Standardized coefficients in SEM

			Unstandardized coefficient	Standardized coefficient	Standard error	Critical Ratios C.R.	p-value
TD	<---	SP	0.074	0.077	0.023	3,332	***
TD	<---	GC	0.040	0.095	0.021	4,498	***
TD	<---	PP	-0.004	0.111	0.024	4,669	***
TD	<---	TT	0.026	0.100	0.025	3,963	***
TD	<---	DT	0.109	0.186	0.027	6,995	***
TD	<---	NL	-0.021	0.167	0.024	7,053	***
TD	<---	CC	-0.032	0.049	0.022	2,245	0.025
HV	<---	TD	0.721	0.112	0.029	3,821	***
HV	<---	MT	0.152	0.177	0.028	6,276	***
HV	<---	Tuoi	-0.038	0.212	0.032	6,716	***
HV	<---	TDHV	0.022	0.135	0.025	5,447	***

Source: Research results from the authors

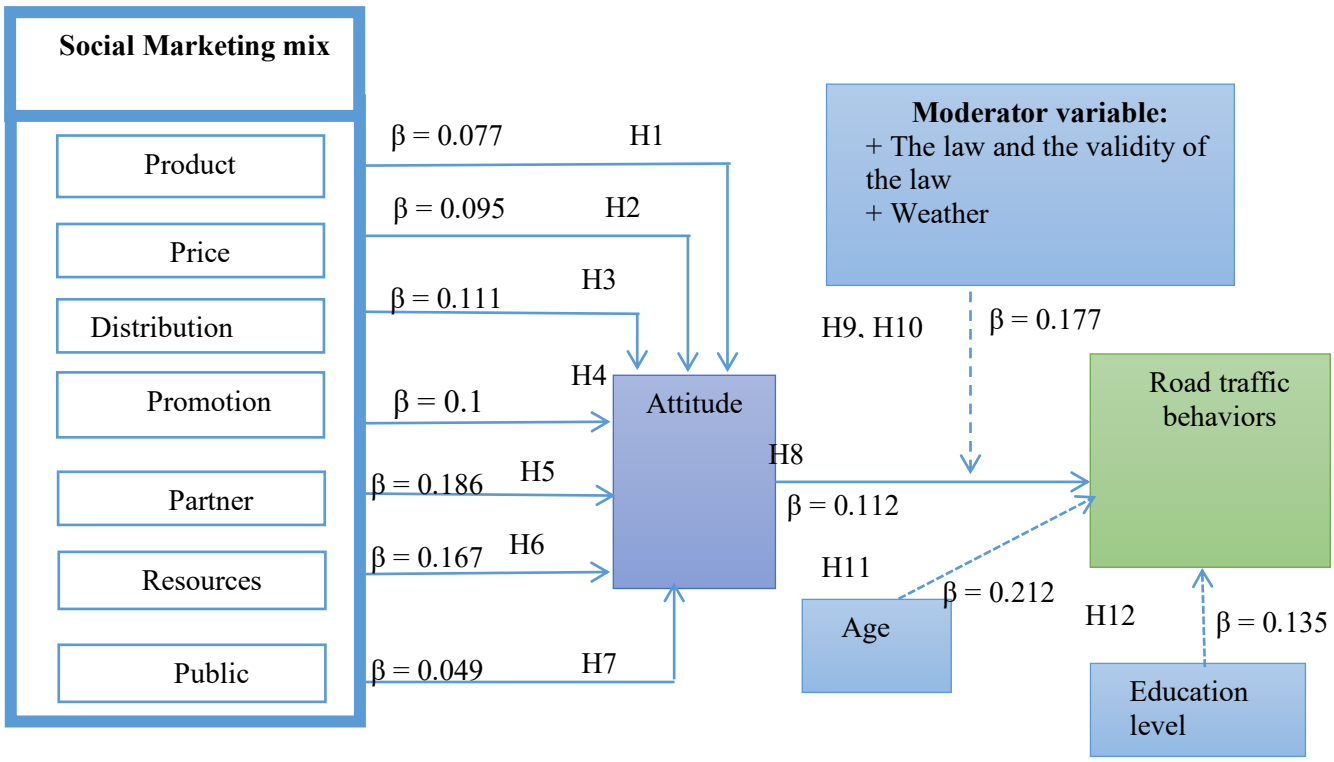

Fig. 3. Factors influencing Hanoi high school students' intentions to utilize E2Ws

6. CONCLUSIONS

Most traffic accidents are caused by human errors, and changing the behaviors of road users should be prioritized. Therefore, measures are being taken to convince and encourage the target audience to (i) raise awareness to accept a new standard behavior, (ii) abandon potentially inappropriate actions, (iii) change current perceptions, and (iv) discontinue old behaviors. To achieve these aims, managers and policymakers implementing projects and programs to alter road traffic attitudes and behaviors

need to (i) comprehend the needs and wants of people, (ii) enhance traffic infrastructure, (iii) effectively manage and provide legal protection for the transportation sector, and (iv) alter people's traffic behavior in a positive direction. As the value of coordination is confirmed, solutions must be put into place to generate a sense of resonance in order to influence people's behaviors and promote cultural norms when driving.

Research on social marketing's effect on road users' attitudes and behaviors based on their thoughts, feelings, and perceptions towards social measures. Research comprehensively assessing the factors affecting people's road traffic attitudes contributes to positive and sustainable behavioral changes among road users, thereby solving critical traffic problems and aiding sustainable road traffic development.

The findings of this study may also assist authorities and policymakers in better understanding how road users, particularly young people, behave, thus allowing them to better manage and control road traffic, which is a major mode of personal transportation in Vietnam's urban areas.

Acknowledgment

This work has been sponsored and funded by Ho Chi Minh City University of Food Industry under Contract No. 149/ HD-DCT. Furthermore, this research was funded by National Economics University, Hanoi, Vietnam. This research has also been sponsored and funded by Vietnam Women's Academy.

References

1. Ajzen, I. *Attitude, personality and behavior*. 2nd Edition, England: Berkshire. 2005.
2. Ajzen, I. *The Theory of Planned Behavior*. 2016. Available at https://people.umass.edu/aizen/pdf.html.
3. Andreasen, A.R. Social marketing: its definition and domain. *Journal of Public Policy and Marketing.* 1994. Vol. 3(1). P. 108-114.
4. Bloom, P.N. & Novelli, W.D. Problems and challenges in social marketing. *Journal of Marketing.* 1981. No. 45. P. 79-88.
5. Bollen, K.A. *Wiley series in probability and mathematical statistics. Applied probability and statistics section. Structural equations with latent variables.* John Wiley & Sons. 1989. Available at: https://doi.org/10.1002/9781118619179.
6. Dat, T.C. *Consumer behavior and marketing - mix strategy of mobile communication businesses in Vietnam.* PhD thesis. National Economic University. 2014.
7. Deery, H.A. *Hazard and risk perception among young novice drivers. Journal of Safety Research*. 1999. Vol. 30(4). P. 225-236. Available at: DOI: http://dx.doi.org/10.1016/S0022-4375(99)00018-3.
8. Donovan, R. & Henley, N. *Principles and practice of social marketing: An international perspective.* Cambridge, England: Cambridge University Press. 2010.
9. Gordon, R. & et al. The effectiveness of social marketing interventions for health improvement: What's the evidence? *Public Health*. 2006. No. 120. P. 1133-1139.
10. Hai, H.D. & Ngoc, S.H. *Statistical Probability and Quantitative Methods in Economics*. Labor Publishing House, Hanoi. 2018.
11. Hair, J.F. & Black, W.C. & Babin, B.J. & Anderson, R.E. & Tatham, R.L. *Multivariate data analysis*. 6th ed, Upper Saddle River NJ, Prentice - Hall. 2006.
12. Iversen, H.H. & Rundmo, T. Attitudes towards traffic safety, driving behaviour and accident involvement among the Norwegian public. *Ergonomics*. 2004. Vol. 47(5). P. 555-572. DOI: http://dx.doi.org/10.1080/00140130410001658709.
13. Kotler, P. & Lee, N.R. *Social marketing: Influencing behaviors for good*. Thousand Oaks, CA: Sage. 2008.

14. Kotler, P. & Lee, N.R. *Up and out of poverty: The social marketing solutions*. Upper Saddle, NJ: Prentice Hall. 2009.
15. Kotler, P. & Zaltman, G. Social Marketing: An Approach to Planned Social Change. *Journal of Marketing*. 1971. No. 35. P. 3-12.
16. Phuc, X.N. *Online conference on the implementation of Resolution No. 16/NQ-CP on step by step overcoming traffic congestion in Hanoi and Ho Chi Minh City*. 2013.
17. Smith, W.A. & Strand, J. *Social marketing: A resource guide for social change professionals*. Washington, DC: Academy for Educational Development. 2008.
18. Smith A.E. Machine mapping of document collections: the Leximancer system. *Proceedings of the 5th Australasian document computing symposium, Sunshine Coast: Australia.* 2000.
19. *Statistic Office of Hanoi*. Available at: http://thongkehanoi.gov.vn/. 2020.
20. Stead, M. & Gordon, R. & Angus, K. & McDermott, L. A systematic review of social marketing effectiveness. *Health Education*. 2007. No. 107. P. 126-191.
21. Tam, M.N. *Planning Orientation of Hanoi's Urban Railway System to 2030 and Vision to 2050*. International workshop report, Hanoi Planning and Architecture Department. 2017.
22. Tho, D.N. & Trang T.M.N. *Scientific research in Business Administration*. Hanoi Statistical Publishing House. 2009.
23. Trong, H. & Ngoc, N.M.C. *Data Analysis with SPSS*. Hong Duc Publishing House, Ho Chi Minh City. 2008.
24. *World report on road traffic injury prevention: summary*. WHO 2004. Available at: https://www.who.int/publications/i/item/world-report-on-road-traffic-injury-prevention.
25. Yagil, D. Gender and age-related differences in attitudes toward traffic laws and traffic violations. *Transportation Research Part F: Traffic Psychology and Behaviour*. 1998. Vol. 1(2). P. 123-135. DOI: http://dx.doi.org/10.1016/S1369-8478(98)00010-2.

Received 11.10.2021; accepted in revised form 08.03.2023