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Acceptance of self-driving cars among the university community: Effects of gender, previous experience, technology adoption propensity, and attitudes toward autonomous vehicles

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ABSTRACT

This article investigates the acceptance of autonomous cars based on the role of attitudes toward autonomous vehicles, acceptance of technology, previous experiences, and gender. Using an online survey, which includes the Acceptance of Autonomous Vehicles (AVAS) and Technology Adoption Propensity scale (TAP), a sample of 1273 members of a university community was collected. Acceptance of using autonomous cars in a test drive and ordinary, real traffic scenarios, as well as the intention to buy one were measured via self-administered items. We used conditional process modeling to get a more detailed insight into the connections among these factors. The findings revealed that all four factors of attitudes towards autonomous vehicles (benefits in usefulness, benefits in situations, commonalities concerns, system concerns) but only the optimism factor of technology adaption propensity affected the acceptance. Dependency seemed to affect benefits in usefulness and the two concern variables. Gender differences are almost entirely explained away by the effects of attitudes. Previous experience had no significant effect in the model.

1. Introduction

Concerns about autonomous vehicles (AVs) are one of the major challenges of the present and future technological developments. There are increasing expectations that AVs will help solve safety issues in traffic, transportation problems of the elderly, and will enhance the quality of public transport. On the other hand, there are serious concerns about information and software safety, legal aspects, and economic consequences, as well.

Attitudes regarding AVs and the willingness to use self-driving cars are the focus of this current research. Researchers are often interested in individuals' acceptance of AVs, willingness to use and intention to buy them. Behavioral intention, generally, can be predicted by attitudes, which was proven in AV research. Respondents with positive *attitudes* to AVs are more willing to use them (e.g., Dai et al., 2021; Payre et al., 2014).

Studies on *gender differences* regarding intention to use and attitudes often focus on self-driving cars, not on AVs generally. Abraham et al. (2017) showed that a higher level of comfort of in-vehicle automation was observed in the answers of male respondents compared

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to females, in general. Males are usually more likely to use and buy self-driving cars and have more positive attitudes compared to females (e.g., Charness et al., 2018; Hand & Lee, 2018;Hohenberger, et al., 2016; König & Neumayr, 2017; Kyriakidis et al., 2015; Payre et al., 2014; Qu et al., 2019). The difference also holds in the acceptance of automated public transport (Bernhard et al., 2020). Males also would pay more for automation (Kyriakidis et al., 2015). If we consider the different levels of automation, we can see that men prefer non-autonomous vehicles or fully autonomous ones while women prefer a medium level of automation (advanced driver assistance systems) (Rödel et al., 2014).

Age also seems to have an effect. Younger respondents have more positive attitudes, fewer concerns, fewer worries (König & Neumayr, 2017), and higher acceptance (e.g. Deb et al., 2017; Hulse et al., 2018) regarding AVs. Consequently, the elderly prefer conventional vehicles (Wicki, 2021). Though, another study concluded, that older drivers have fewer concerns about AVs (Qu et al., 2019).

Our (economic) decision-making is affected by *familiarity*, not simply the experience, but rather the objective information we can gain (LaRiviere et al., 2014). Familiarity with AVs can reduce worries and have a positive effect on attitudes toward them, as shown in some studies (e.g. Dai et al., 2021). Drivers with prior knowledge of AVs are less concerned with AVs and more willing to relinquish driving control (Charness et al., 2018). Nees (2016) concluded that respondents who are familiar with self-driving technology and are exposed to articles on the topic had a greater acceptance of self-driving cars. However, Wicki (2021) found no effect of familiarity on acceptance or concerns in their research.

A few studies have investigated the relationship between technology adoption and attitudes toward advanced driving assistance systems and AVs. Rahman et al. (2017) found that perceived usefulness showed a stronger effect on the intention to use advanced driving assistance systems than perceived ease of use. According to Koul and Eydgahi (2018), there are significant positive relationships between perceived usefulness and perceived ease of use of autonomous car technology and intention to use driverless cars. Müller (2019) investigated the acceptance of autonomous vehicles and found that perceived usefulness and perceived ease of use are positive predictors of the intention to use these vehicles. Positive attitudes towards new technology were positively correlated with attitudes to AVs in a study in 11 countries (Tennant et al., 2019), and also in Hungary (Kovács & Lukovics, 2022). Generally, males tend to think that technology is favorable (Amin et al., 2015; Cai et al., 2017; Park et al., 2019; Venkatesh et al., 2003). Ratchford and Barnhart (2012) introduced a conceptual model of *Technology Adoption Propensity* (TAP) according to which the use of technology can be described by two supportive and two inhibitory factors. Optimism and proficiency are positive predictors of technology use, while dependence and vulnerability are rather negative predictors. Martos et al. (2019) found gender differences in proficiency; males had higher values than females. Their findings also show that men have more positive attitudes to technology than women.

The objective of this paper was to investigate the effects of attitudes toward AVs and technology adoption propensity on the acceptance of autonomous cars. Technology adoption propensity is considered as an attitude connected to the attitudes toward AVs, but is broader and more general. We also examined gender differences and previous experience (or knowledge) of AVs. Based on previous results we anticipated that men rather than women would be more positive towards self-driving cars, more apt to adopt new technology, and also have stronger intentions to use a self-driving car. We hypothesized that the attitudes toward self-driving vehicles, previous experience with them, and the acceptance of technology generally help predict acceptance. Furthermore, we wanted to investigate if attitude towards self-driving vehicles is able to mediate between acceptance of new technology and acceptance of self-driving cars, and if gender moderates these relationships. We expected that positive attitudes towards new technology and self-driving vehicles, and previous experience predict a higher level of acceptance of self-driving cars; these effects were expected to be lower in case of females. To be able to test mediator as well as moderator effects besides the main effects, we used conditional process modeling (Hayes, 2018), which is a statistical model used in several areas to study mediator and moderator effects (e.g. Gully et al., 2013; Levant et al., 2015). The conceptual diagram of the hypothesized relationships is shown in Fig. 1. When conceptualizing attitudes towards self-driving vehicles, we used the four-factor concept of Qu et al. (2019) in which benefits and concerns are distinguished, so it would give a

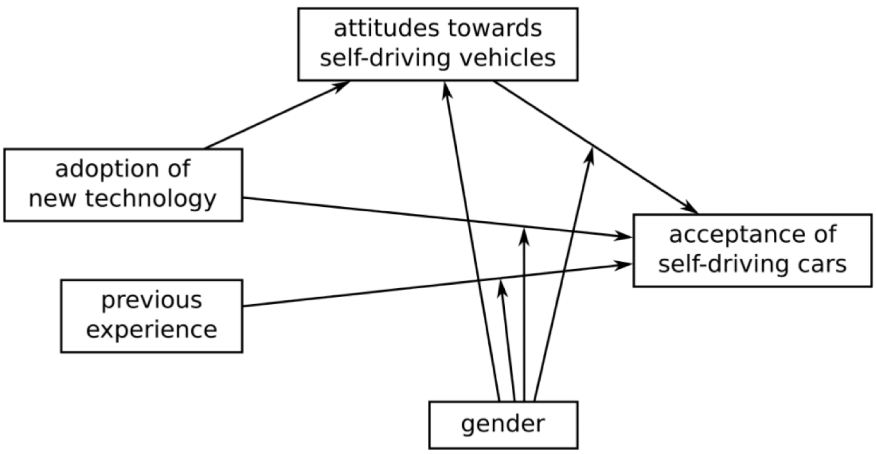


Fig. 1. Conceptual diagram of the effects tested in the current study.

more detailed picture of the attitudes examined.

2. Methodology

2.1. Participants

Mainly the communities of the University of Debrecen and Széchenyi István University in Győr participated in the study. The call for participation was shared on Facebook sites of the universities and the universities' online educational platforms. Respondents could sign up for a raffle in which one person would win a book purchase voucher worth 20,000 HUF. Convenience sampling was used.

There were 1350 participants in total. We discarded n = 35 participants because of inconsistent answers or because they were below 18 years of age. An additional 42 participants didn't have a driving license–we decided to omit them during the analysis. The final sample size was $N = 1273$.

There were n = 490 (38.5%) females and n = 783 (61.5%) males in the sample. The age ranged from 18 to 74 years and the majority of the sample was young adults ($M = 27.2$, $SD = 9.15$). Most of the respondents were students of a university (59.7%), or members of non-teaching staff at the university (29.3%). A minority of the sample was members of the teaching staff (0.4%). Some of the participants reported a job status that may be, but is not necessarily, related to the university (11%). A participant could be assigned one or several of the above statuses based on his/her answer to an open-ended question.

The sample was diverse in terms of how many years ago they acquired their driving license (range: *0–47 years*, $M = 8.3$, $SD = 8.35$). There also was a large variability in the amount of weekly driving–38% (n = 488) of the sample was driving up to 50 km per week, 27% (n = 345) 51 to 150 km, and 35% (n = 440) more than 200 km per week.

3. Materials and methods

We used a battery of questionnaires and psychological scales through Google Forms. The battery of questionnaires consisted of a custom-made questionnaire that included the Hungarian adaptation of the Autonomous Vehicle Acceptability Scale (AVAS; Qu et al., 2019), the Hungarian adaptation of the Technology Adoption Propensity scale (TAP; Ratchford & Barnhart, 2012) and other scales measuring some driving-related behavioral tendencies and personality traits that we ignored in the present study.

In our custom questionnaire, respondents provided basic demographic information (gender, age, current job status), some driving-related experience (what kind of driving licenses they have, how long ago they have had their driving license, how much do they drive regularly, how many [if any] traffic accidents they been in), the knowledge of and type of experience with self-driving cars, and the intention of trying out or buying a self-driving car. The latter was measured with three questions, each of which could be answered on a seven-point Likert scale ranging from 1 ("I certainly don't") to 7 ("I certainly do"). The questions were about trying out a self-driving car (driving during a test drive or in ordinary traffic) and buying a self-driving car if financial conditions weren't a concern. These questions were used to measure the acceptance of self-driving cars.

Attitudes to AVs were measured using the *Autonomous Vehicle Acceptability Scale* (Qu et al., 2019). The original scale consists of 18 items in 4 factors. In the Hungarian adaptation, there are 15 items in 4 factors (Kurucz et al., 2022). Each of the items is judged on a seven-point Likert scale ranging from 1 ("I totally disagree"/"I don't worry at all") to 7 ("I totally agree"/"I'm very worried"). The scale has two beneficial factors, benefits in usefulness (BiU) and benefits in situations (BiS), and two anxious factors, commonalities concerns (CoC) and system concerns (SyC).

The general acceptance of technological innovations was measured using the *Technology Adoption Propensity* scale (Ratchford & Barnhart, 2012), adapted to Hungarian by Martos et al. (2019). The Hungarian adaptation of the scale contains three factors, namely proficiency, dependency, and optimism. All items were rated on a seven-point Likert scale ranging from 1 ("I totally disagree") to 7 ("I totally agree").

4. Results

We checked participants' answers for inconsistencies and out-of-the-ordinary answers to exclude those which potentially compromise the quality of our data. One participant reported having 1000 accidents, and another 9 participants reported previously having a traffic accident, but later on, mentioned having 0 accidents. 25 participants stated that they obtained their driving license before the age of 16, which contradicts Hungarian regulations. One of the participants also reported to be below 18 years old. In sum, 35 participants were excluded from the analysis because of the above reasons. Another 42 participants were excluded because they didn't have a driving license at the time of the survey.

We checked the adequacy of the questionnaires' factor structure using polychoric correlations, as these are better suited to the ordinal nature of the answers, according to Li (2016), Yang-Wallentin, Jöreskog, and Lou (2010). In confirmatory factor analysis (CFA) we used the robust diagonally weighted least squares (WLSMV) method for estimation, using the R lavaan package (Rosseel, 2012). In the case of TAP, we found a marginally acceptable fit of the proposed factor model by Martos et al. (2019), $X^2(51) = 532.9$, $p < .001$ $CFI = 0.91$, $TLI = 0.88$, $RMSEA = 0.086$ *(90% CI[0.080-0.093])*. In the case of the Hungarian version of AVAS a good fit to the data was found, $X^2(98) = 317.41$, $p < .001$, $CFI = 0.98$, $TLI = 0.98$, $RMSEA = 0.047$ *(90% CI[0.041-0.052])*.

When conducting a principal components analysis on the three items measuring acceptance of self-driving cars, the first component exhibited a high variance, in contrast to the remaining components. This initial component explained a substantial 74% of the variance in the input variables. We viewed this as strong evidence for the aggregation of the answers to these questions on a single scale.

We used the average of the answers to calculate the scores of the subscales of the questionnaires AVAS and TAP and the acceptance of self-driving cars scale. Descriptive statistics, reliability measures, as well as inter-scale correlations are shown in Table 1. With one exception (system concerns), the scales show acceptable or good internal consistency according to Cronbach's α measure of reliability. All positive aspects of attitudes toward AVs, dependency, and proficiency showed a positive correlation, whereas negative aspects of attitudes toward AVs showed negative correlations with acceptance of AVs.

We tested the differences between men and women in their attitudes toward AVs, the acceptance of technology in general, and the acceptance of self-driving cars. We used Mann-Whitney *U* test because we found significant deviations from the normal distributions in the case of every variable under consideration among both men and women.

Regarding the attitudes toward AVs, men seemed to respect somewhat more the benefits of self-driving vehicles and showed less concern than women (see Fig. 2.*a*). Men also judged themselves as more proficient in using modern technology and were more optimistic about it than women (see Fig. 2.*b*). However, the differences are mostly modest and are remarkable only in the case of commonalities concerns and proficiency. Also, men showed higher acceptance of self-driving cars ($M = 5.41, SD = 1.52$) than women ($M = 4.87, SD = 1.47$) with the difference being significant (*Mann-Whitney* $U = 235760, p < .001$).

A significant difference in acceptance of self-driving cars was found between those with and without previous experience with self-driving vehicles (*Mann-Whitney* $U = 1619732, p < .001$). Respondents with previous experience showed somewhat higher acceptance ($M = 5.65, SD = 1.48$) than respondents without such experiences ($M = 5.14, SD = 1.52$).

We used conditional process modeling–coined by Andrew Hayes in the first edition of Hayes (2018)–to test the independent effects of the attitudes toward AVs on the acceptance of self-driving cars, and the mediating role of attitudes toward AVs between the adoption of technology and the acceptance of self-driving cars. We also tested the moderating effect of gender and the effect of previous experience with self-driving cars. We used a modified version of model 15 proposed by Hayes (2018), which is suitable for testing the direct effect of the predictor variable as well as the mediating effect of several mediator variables and the moderating effect of one additional variable. For the analysis, we used version 4.1 of the R script provided on https://www.processmacro.org. We used the TAP scales as predictor variables. Since the model allows only one predictor variable, we fitted the model to each scale of the questionnaire separately–the other scales of the questionnaire were included in the model as covariates. We also used gender and previous experience as covariates. The mediator variables were the four scales of the AVAS questionnaire. To investigate the potential moderator effects of previous experience, TAP and AVAS scales on the acceptance of self-driving cars, we utilized gender as a moderator variable.

Before fitting the models, the gender and previous experience variables were dummy coded and the attitude scales were centralized. In the regression models, heteroscedasticity consistent standard errors (HC3) were used, as proposed by Hayes and Cai (2007). 50,000 bootstrap samples were used to estimate the standard errors and confidence intervals of the indirect effects. To acquire the bootstrap samples, the same random seed was used across all models. The parameters and model fit measures are shown in Table 2.

For an overview of the significant effects in the model, see Fig. 3. In terms of direct effects, we found that attitudes toward autonomous vehicles significantly influenced acceptance, with beneficial factors (BiU, BiS) showing positive, and anxious factors (CoC, SyC) showing negative effects. Apart from these, only optimism regarding technological innovations had a significant impact, with a strength similar to the previous effects. The only moderating effect of gender was for the CoC scale where women's concerns about public transport issues were a stronger predictor of the acceptance of self-driving cars than men's. Neither gender nor previous experience with self-driving cars was found to have a significant direct effect on the acceptance of self-driving cars.

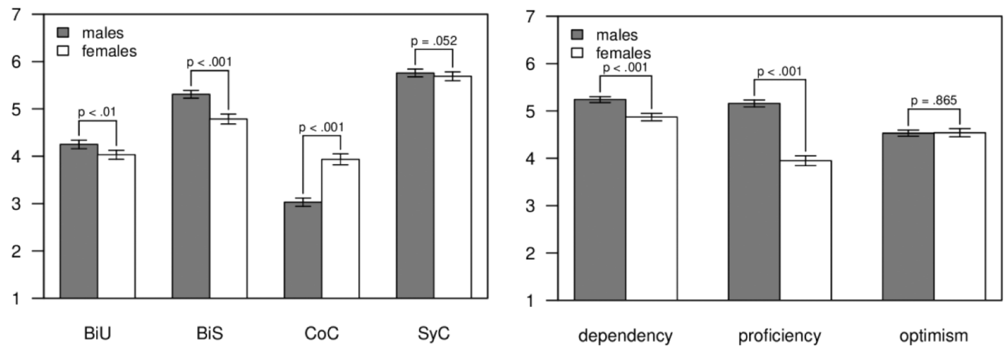
We found multiple indirect effects of the adoption of technology on the acceptance of self-driving cars, several of which included a moderating effect of gender (see Table 3). We found a significant indirect effect of optimism, mainly through the beneficial factors of attitudes toward self-driving vehicles (BiU and BiS), and through CoC–in the latter case, the effect was found to be slightly stronger for women than for men. Dependency was related to acceptance of self-driving cars mainly through the anxious factors of AVAS, and additionally through BiU. Among these effects, we also found a moderating effect of gender on the effect of CoC–the effect was stronger for women than men. The direction of the indirect effects corresponds to the direction of the direct effects of TAP scales. We found no significant indirect effects of previous experience with self-driving cars for either men or women.

Table 1

Descriptive statistics, internal consistency measures (Cronbach-α) of the scales, and correlation between scales (Pearson-correlation coefficients).

						inter-scale correlations						
	min	max	*M*	*SD*	*α*	2.	3.	4.	5.	6.	7.	8.
AVAS												
1. benefits in usefulness (BiU)	1	7	4.17	1.45	0.85	0.37***	−0.33***	−0.11**	0.23***	0.13***	−0.02	0.36***
2. benefits in situations (BiS)	1	7	5.11	1.42	0.76		−0.37***	0.02	0.35***	0.20***	0.07*	0.36***
3. commonalities concerns (CoC)	1	7	3.38	1.58	0.89			0.21***	−0.18***	−0.19***	0.19***	-0.43***
4. system concerns (SyC)	1	7	5.73	1.33	0.61				0.05	0.02	0.24***	−0.22***
TAP												
5. dependency	1	7	5.1	1.07	0.78					0.47***	0.20***	0.33***
6. proficiency	1	7	4.69	1.42	0.83						0.14***	0.24***
7. optimism	1	7	4.53	1.12	0.70							−0.05
8. acceptance of AVs	1	7	5.2	1.52	0.81							

Note. * p <.05; ** p <.01; *** p <.001.



a. AVAS b. TAP

Fig. 2. Means of attitudes toward AVs and acceptance of technology by gender. Error bars represent 95% confidence intervals around means, p values show the results of Mann-Whitney U tests.

5. Discussion

The aim of this study was to investigate how gender, previous experience, attitudes toward autonomous vehicles (AVs), and technology adoption propensity affect the acceptance and use of self-driving cars.

Consistent with previous studies, we found significant differences between men and women in their willingness to use autonomous vehicles and attitudes toward them. Males reported a higher level of willingness to use self-driving cars (consistent with e.g Hand & Lee, 2018; Hohenberger et al., 2016; Payre et al., 2014) and tended to respect the benefits of self-driving vehicles more and show fewer concerns than females. However, differences were remarkable only in the case of commonalities concerns, while Qu et al. (2019) found significant differences only in the factor benefits in usefulness. While several studies showed gender differences in both perceived usefulness and concerns, as well (e.g.Acheampong & Cugurullo, 2019; Hilgarter & Granig 2020). Similarly, males tended to judge themselves as more proficient in using modern technology and were more optimistic about this than women. This is consistent with the findings on attitudes towards technology (e.g. Amin et al., 2015; Cai et al., 2017; Park et al. 2019; Venkatesh et al. 2003), and is partly consistent with Martos et al. (2019), who reported gender differences only in proficiency.

We also found small but significant differences in the acceptance of self-driving between those with and without previous experience with autonomous vehicles, which was also shown by Charness et al. (2018); Nees (2016); Pakusch & Bossauer (2017); Wang et al. (2020).

However, based on the analysis of the mediation and moderation effects between the variables in question, we can conclude that the differences between men and women in this acceptance can be fully explained by the differences in the attitudes toward AVs and technological innovations. Contrary to previous findings, we found no direct effect of gender nor previous experience on the intention to use self-driving cars. Wicki (2021) also found similar results investigating the effect of familiarity. Attitudes toward AVs proved to be effective predictors of intention, concerns had a negative effect, and benefits had a positive effect. Only one aspect of technology acceptance propensity was an effective predictor, namely the factor of optimism, which had a direct effect on acceptance, and also an indirect effect through benefits and commonalities concerns. The factor dependency had an indirect effect through benefits in usefulness and concern variables. Gender affected benefits in usefulness (men see more benefits) and commonalities concerns (women show a higher level of worry) and also moderates the effect of commonalities concerns on acceptance (the effect is more negative in the case of women). Previous experience with AVs didn't seem to have any effect in this complex model of relationships.

Results suggest that males tend to be more willing to use self-driving cars because they worry less about commonalities issues and see more benefits of AVs. Technology adoption propensity, namely optimism, and dependency seem to influence attitudes to AVs. Optimism can directly affect the acceptance of self-driving cars. Attitudes both on general (toward technological innovations) and specific (toward AVs) levels may influence the willingness to use self-driving cars.

6. Conclusions

This study is, to our knowledge, the first to examine the effect of attitudes toward self-driving vehicles, previous experience with them, and the acceptance of technology generally to predict acceptance, while considering the mediator effect of attitudes towards self-driving vehicles (as a specific level of attitudes), between acceptance of new technology (as a general level of attitudes) and acceptance of self-driving cars, and also considering the moderator effect of gender. Measuring the attitudes both generally and specifically can be beneficial in understanding the phenomenon of accepting autonomous cars since attitudes (both to AVs and technological innovations) seem to have a larger impact than previous experience with them. Moreover, using a multivariate design, we might present a more accurate picture of contributing factors. Our results can be informative for a better understanding of why people accept or do not accept self-driving cars, and how acceptance can be enhanced through attitude change. Industries and governments can gain a detailed, gender-specific, understanding of perceived benefits and concerns toward self-driving vehicles, and how

Table 2
Parameters and fit measures of the fitted regression models.

	Dependent variables									
	acceptance of AVs		BiU		BiS		CoC		SyC	
independent variable	Coeff	SE[a]	Coeff	SE[a]	Coeff	SE[a]	Coeff	SE[a]	Coeff	SE[a]
gender[b]	−0.004	0.083	−0.066	0.087	−0.369***	0.088	0.727***	0.096	−0.105	0.087
prev. experience[c]	0.209	0.119	0.089	0.140	0.033	0.115	−0.136	0.136	−0.004	0.117
dependency	−0.086	0.047	−0.084*	0.039	0.015	0.035	0.326***	0.038	0.285***	0.037
proficiency	0.057	0.047	0.023	0.034	−0.008	0.035	−0.062	0.038	−0.032	0.034
optimism	0.225***	0.058	0.307***	0.045	0.430***	0.044	.−0.228***	0.047	0.017	0.041
BiU	0.162***	0.038	–	–	–	–	–	–	–	–
BiS	0.177***	0.046	–	–	–	–	–	–	–	–
CoC	−0.176***	0.038	–	–	–	–	–	–	–	–
SyC	−0.220***	0.038	–	–	–	–	–	–	–	–
*gender*previous experience*	−0.010	0.253	–	–	–	–	–	–	–	–
*gender * dependency*	0.135	0.069	–	–	–	–	–	–	–	–
*gender * proficiency*	0.012	0.064	–	–	–	–	–	–	–	–
*gender * optimism*	0.060	0.087	–	–	–	–	–	–	–	–
*gender * BiU*	0.048	0.059	–	–	–	–	–	–	–	–
*gender * BiS*	−0.070	0.062	–	–	–	–	–	–	–	–
*gender * CoC*	−0.131*	0.056	–	–	–	–	–	–	–	–
*gender * SyC*	0.077	0.061	–	–	–	–	–	–	–	–
Constant	5.209***	0.055	0.016	0.057	0.138**	0.053	−0.265***	0.056	0.041	0.054
	R^2 = 0.337F (5,1267) = 41.036***		R^2 = 0.06F (5,1267) = 14.134***		R^2 = 0.135F (5,1267) = 38.652***		R^2 = 0.147F (5,1267) = 46.93***		R^2 = 0.058F (5,1267) = 12.878***	

Note. [a] heteroscedasticity consistent standard errors; [b] coded as: 0 = male, 1 = female; [c] coded as: 0 = no experience, 1 = some experience; * p <.05; ** p <.01; *** p <.001.

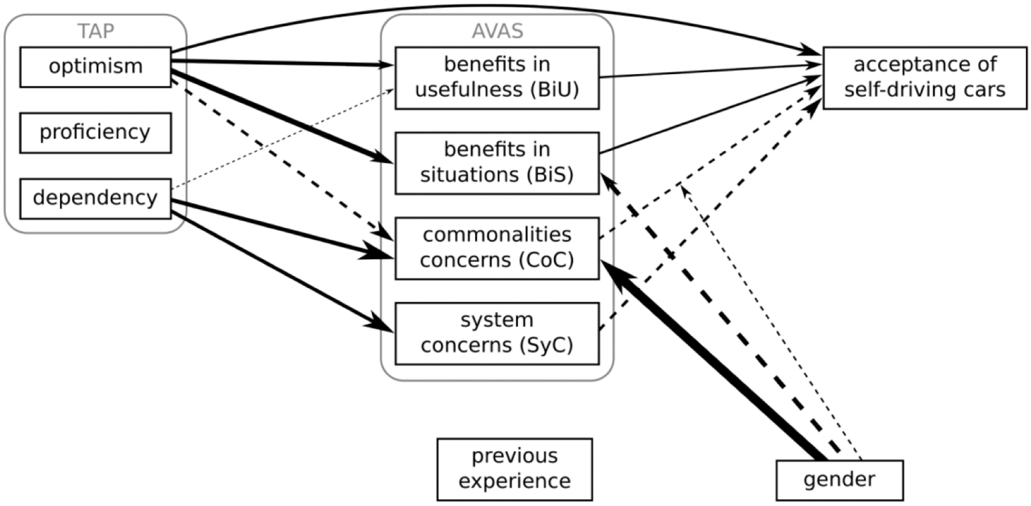


Fig. 3. Diagram of significant effects found with conditional process modeling (solid lines represent positive, dashed lines represent negative effects; line width is proportional to effect size.

Table 3
Estimated indirect effects of TAP scales (with 95% bootstrap confidence intervals inside parentheses).

Independent variables	Mediator variables	Indirect effects		Index of moderated mediation
		Males	Females	
prev. experience	*BiU*	0.014 (−0.031; 0.062)	0.019 (−0.040; 0.080)	0.004 (−0.016; 0.033)
	BiS	0.006 (−0.037; 0.046)	0.004 (−0.023; 0.031)	0.002 (−0.026; 0.020)
	CoC	0.024 (−0.024; 0.074)	0.042 (−0.040; 0.125)	0.018 (−0.018; 0.065)
	SyC	0.001 (−0.034; 0.037)	0.001 (−0.048; 0.055)	0.000 (−0.026; 0.023)
dependency	*BiU*	−0.014* (−0.029; −0.001	0.018* (0.037; −0.001)	0.004 (−0.017; 0.006)
	BiS	0.003 (−0.010; 0.016)	0.002 (−0.006; 0.011)	−0.001 (−0.009; 0.006)
	CoC	−0.057* (−0.085; −0.031)	−0.100* (−0.136; −0.069)	−0.043* (−0.081; −0.008)
	SyC	−0.063* (−0.090; −0.039)	−0.041* (−0.071; −0.014)	0.022 (−0.011; 0.058)
proficiency	*BiU*	0.004 (−0.007; 0.016)	0.005 (−0.009; 0.021)	0.001 (−0.004; 0.009)
	BiS	−0.001 (−0.015; 0.011)	−0.001 (−0.009; 0.007)	0.001 (−0.005; 0.009)
	CoC	0.011 (−0.002; 0.026)	0.019 (−0.004; 0.044)	0.008 (−0.002; 0.023)
	SyC	0.007 (−0.007; 0.022)	0.005 (−0.005; 0.016)	−0.002 (−0.012; 0.004)
optimism	*BiU*	0.050* (0.026; 0.079)	0.065* (0.034; 0.100)	0.015 (−0.020; 0.051)
	BiS	0.076* (0.036; 0.120)	0.046* (0.010; 0.084)	−0.030 (−0.085; 0.021)
	CoC	0.040* (0.019; 0.066)	0.070* (0.039; 0.106)	0.030* (0.005; 0.060)
	SyC	−0.004 (−0.023; 0.014)	−0.002 (−0.016; 0.010)	0.001 (−0.006; 0.012)

Note: * effects significantly different from 0, based on 95% confidence interval.

they affect acceptance.

6.1. Limitations

An important limitation of the study is the confined nature of the sample, as it contains only members of the university community, mainly young students. A more heterogeneous sample might help to provide a more detailed pattern of attitudes among potential AV users and owners.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

https://osf.io/kq7f5/?view_only=421edb20fa4f499abd6385f1b1389d0b.

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