

**Luc Chia-Shin Lin**

<https://orcid.org/0000-0001-7105-3140>

luc48kimo@gmail.com

Shih Hsin University

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## Same-sex marriage referendum: What factors cause people to stop the circulation of negative messages on smartphones?

**Abstract**

In 2018, Taiwan held a referendum on same-sex marriage issues. Since it was the first time the public had an opportunity to make a decision on such issues, it became a battleground for conflicting ideologies, in which false messages were employed to influence voters. The current study focuses on the factors that might help people to stop the circulation of false messages. Social capital, political efficacy, and the theory of planned behavior have been integrated to develop a theoretical framework. The current study employs a 2x2 experimental design with partial least squares structural modelling to examine the hypotheses. The results demonstrated that people rarely follow rational routes to make voting decision on such issues. Voters are not concerned with the truthfulness of the messages but their stance. However, people might conceal their stance when facing weak ties of their social relations.

**Keywords**

Same-sex marriage, referendum, social capital, political efficacy, Taiwan.

### 1. Introduction

At the end of 2018, Taiwan held a referendum for the first time on same-sex marriage issues along with its municipal elections. Different advocacy groups proposed five ballot questions consisting of three against same-sex marriage (Nos. 10, 11, 12) and two supporting (Nos. 14, 15), and the voter turnout was 55% (eleven million out of nineteen million eligible voters). The results showed that 72.48% (7,658,008) of voters cast their ballots against same-sex marriage, while 27.52% favored the issue (Central Election Commission, 2018).

Relevant academic research on same-sex marriage referenda is limited. Among these limited papers, scholars examined the relationship between voter turnout and the likelihood of banning same-sex marriage (Simon, Matland, Wendell & Tatalovich, 2018), the role of a certain appealing strategy in discussing the issue (O'Connor, 2017) and factors that shape voters' decision-making (Binelli, 2018; Burnett & McCubbins, 2014; Fisher, 2017). Previous findings show that voters are unable to judge same-sex marriage issues in the same way that they typically choose election candidates, that is, through information shortcuts such as party identification (Burnett & McCubbins, 2014). Instead, they rely almost entirely on information, framing, and cues from advocacy groups (Fisher, 2017). With the development and proliferation of smartphones, negative word-of-mouth messages and disinformation have spread more effectively than ever on applications such as Line and Facebook. This indicates

that information circulated on smartphones is crucial to voters when making decisions, because their information shortcuts do not exist in such cases.

Aware of this, advocacy groups in Taiwan, both those for and against same-sex marriage, employed election campaigning tactics to distribute information to influence voters. Negative campaigning, even with scholars posing dichotomizing attitudes toward it (e.g., Ansolabehere & Iyengar, 1994; Martin, 2004; Mayer, 1996; Min, 2004), is embraced by most candidates in most elections around the world. By the same token, Taiwanese politicians are accustomed to attacking their opponents rather than promoting themselves, and voters accept this as normal in political activities (Sullivan & Sapir, 2012). Since the political culture in Taiwan provides a fertile ground for negative campaigning, it seems fair to utilize it in canvassing on same-sex marriage issues.

Furthermore, discussion of the issues raised during the same-sex marriage referendum not only utilized negative messages but also circulated them through online social networks. Marks, Manning and Ajzen (2012) found that negative campaigning messages are not centrally processed, which indicates people do not meticulously consider the content of negative messages. Based on this, it is highly possible that people rarely discern the validity of negative messages relevant to same-sex marriage before they share them on Facebook or Line; this tendency facilitates the spread of negative messages. People who manufacture negative messages usually employ misinformation to confuse recipients, and such an approach can misguide people regarding important issues such as global warming (Lutzke, Drummond, Slovic & Árvai, 2019). When it comes to making democratic decisions, negative messages could generate a threat to democracy (Lee, 2019). Actually, due to the negative messages circulated during the referendum in Taiwan, many LGBTs (Lesbian, Gay, Bisexual and Transgender) suffered from poor mental health (Chen *et al.*, 2021) and increase suicide attempts (Wang, Chang & Miao, 2022). Hence, stopping the circulation of such messages is crucial. Meanwhile, Zhao, Yin and Song (2016) found that there is little relevant research into the factors that influence people to refute misinformation, yet the possibility for people to fight against rumors remains positive. The current study therefore proposes the following research questions:

- What factors motivate people to discern the content of negative messages regarding same-sex marriage referendum on their mobile apps?
- Will they stop the circulation of negative messages if they are able to discern the content of these messages?
- Are people motivated to stop the circulation when they know a message is true?

## 2. Literature Review

### 2.1. Same-Sex Marriage Referendum and Negative Campaigning in Taiwan

Due to the referendum held in 2018 in Taiwan, LGBT advocacy groups and conservative advocacy groups, mainly Christian groups, organized campaigns to refute opposing proposals. Both sides employed negative campaigning skills to achieve their goals. The definition of negative campaigning messages varies among scholars. Broadly speaking, most scholars agree that negative campaigning involves attacking opponents (Gross & Johnson, 2016; Walter, 2014) and the targets of attacks include the mistakes the opponents have made, the flaws in their performance, their personal traits and so on (Mayer, 1996; Surlin & Gordon, 1977). However, the definition does not specify the truthfulness of negative messages. Kimmel (1999) views that negative messages lead to misleading or inaccurate outcomes, meanwhile, Momoc (2010) notes that distorted information is one of the tools used in negative campaigning. In other words, negative campaigning messages can be false messages. The current study defines negative messages here as attack messages containing disinformation or false information, because the truthfulness of messages represents a key factor in the

research questions. The discernment of the validity of negative messages determines whether individuals stop the circulation.

Information sharing has become one of the main motivations for people to engage with social media (Quinn, 2016) and instant messaging apps (Gan & Wang, 2015; Sánchez-Moya & Cruz-Moya, 2015). However, information sharing may cause damage to our society if users, through mobile apps, distribute misinformation and proliferate such misinformation more effectively than traditional mass media (Castillo, Mendoza & Poblete, 2013; Tanaka, Sakamoto & Matsuka, 2013; Tripathy, Bagchi & Mehta, 2010). Alexander (2014) argued that knowledgeable users should be able to identify false information and stop the circulation. However, most studies that are relevant to the sharing of information or news focused on the motivations behind sharing behavior (Syn & Oh, 2015; Zhao, Tang, Liu & Liu, 2016). Little literature examines the verification and discernment processes of users or the motivations that propel users to identify false information. In addition, studies investigating same-sex marriage referendums mostly focused on the personality traits and attitudes toward same-sex marriage (Lin *et al.*, 2021; Wang, Lin, Weng & Chang, 2020), people's unfavorable attitudes (Ko *et al.*, 2020), how people express proactive opinions on social media (Wu, 2021) and the framing of same-sex marriage during referendums (Wang, 2020). Few paid attention to the circulation of negative messages.

The current study focuses on the role of receivers and their antecedents and consequences because the antecedents of the receivers refer to the consumption process of received information, while the consequences of the receivers refer to the willingness to forward the information. The research questions in the current study aim to explore the motivations for people to identify the truthfulness of negative messages, which is located on the continuum between the antecedents and consequences of the receivers.

## 2.2. *The Theory of Planned Behavior*

The decision-making process of voters in referendums differs from the process in candidate-centered elections, and political party identification no longer serves as an information shortcut (Burnett & McCubbins, 2014). Burnett (2019) found that, specifically regarding referendum issues, endorsements show the most impact on voter decisions, and voters tend to have insufficient knowledge of the facts. Based on this, the sharing process tends to be heuristic, and identification of truthfulness requires rational processing, which indicates the significance of motivations.

The current study employs the theory of planned behavior (TPB) to examine the rational part of human intervention in identifying the truthfulness of negative messages. TPB explains that human behavior consists of attitude toward behavior, subjective norms, perceived behavioral control, and behavioral intention (Ajzen, 1991). In TPB, attitude, behavioral control, and subjective norms positively affect behavioral intention and then determine the adoption of behavior.

Leading up to the 2018 referendum, same-sex marriage issues were widely discussed by mass media, and voters were supposed to form certain attitudes toward it. Based on TPB, a person's attitude toward same-sex marriage ought to influence their intention to judge the content of negative messages. Subjective norms, also known as social pressure, refer to how an individual perceives other people's reactions and then responds accordingly (Zhao *et al.*, 2016). In other words, subjective norms represent social pressure; when people make decisions, they tend to take others' opinions into consideration. Hence, subjective norms ought to influence the intention to judge the content of negative messages. Perceived behavioral control is the perceived ease of performing a certain behavior, and it depends on past experience and anticipated obstacles (Cheung & To, 2017). For individuals who receive negative messages, the perceived ease ought to be the factor that shapes their intention to judge the content of the messages.

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- H1. Participants' attitude positively influences the intention to discern the content of negative messages.
- H2. Subjective norms positively influence participants' intention to discern the content of negative messages.
- H3. Participants' perceived behavioral control positively influences the intention to discern the content of negative messages.
- H8. Participants' intention to discern the content of negative messages positively influences their actual behavior.

### **2.3. Social Capital**

Camarero and San José (2011) proposed the concept of viral dynamics to explain the individual's processing of WOM information and found that social capital and prior attitudes play a significant role in the process. Social capital refers to "the sum of the resources, actual or virtual, that accrue to an individual or a group by virtue of possessing a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu & Wacquant, 1992, p. 14). Putnam (2000) differentiates between bridging and bonding social capital. Bridging capital refers to weak ties who are likely to be acquaintances, whereas bonding capital refers to strong ties who are close friends and family members. Based on social orientation, subjective norms ought to interact with social capital because social capital represents a person's relationships with others, and the relationships can be employed to acquire economic and non-economic benefits (Aharony, 2015). This kind of social consideration ought to play an influential role in determining users' discernment intention. When an individual receives a message through a smartphone app, he or she can choose either to forward it or to ignore it. The previous hypothesis assumes subjective norms influence this process of decision-making; social capital, which refers to social ties, ought to influence subjective norms.

- H4. Bonding capital positively influences subjective norms.
- H5. Bridging capital positively influences subjective norms.

### **2.4. Political Efficacy**

Burnett (2019) found that voters with higher levels of education and political knowledge had a better understanding of policy specifics and of relevant endorsements of referendum issues. The link between an individual's education level, political knowledge, and political efficacy has been confirmed by Reichert (2016), who found political knowledge indeed translates into internal political efficacy. Political efficacy was first introduced by A. Campbell, Gurin and Miller (1954, p. 187), who defined it as "the feeling that the individual political action does have, or can have, an impact upon the political process." The current study views the action to stop the circulation of negative messages through mobile apps as a sort of political participation because active participation is required to judge the content of messages relevant to same-sex marriage. Regarding political participation, perceived behavioral control is akin to political efficacy (Ajzen, Joyce, Sheikh & Cote, 2011). Scholars found that political efficacy positively affects voting intention (Reichert, 2016), and it is fair to assume that political efficacy also affects discernment intention.

However, the current study argues that a nuance exists between perceived behavioral control and political efficacy. Perceived behavioral control refers to a specific situation or issue, while political efficacy refers to a general situation, hence the following hypotheses:

- H6. Political efficacy positively influences perceived behavioral control.
- H6-1. Political efficacy positively influences intention to discern the content of messages.

## 2.5. Source Credibility

Flanagin and Metzger (2008) noted that digital media shifted the burden of information evaluation from professional gatekeepers to individual consumers, which means individuals are required to judge the messages by themselves. Source credibility seems relevant to help individuals judge messages relevant to same-sex marriage sent by their social connections. Campbell, Mohr and Verlegh (2013) investigated whether revealing information about the author influences the effect of covert persuasion. In addition, Munzel (2016) found that disclosure of an author's identity plays a significant role in helping people to discern false reviews from true reviews. The disclosure of the source idea also appears in research on negative campaigning. For instance, Wu and Dahmen (2010) examined negative campaigning and found that source credibility plays a decisive role in shaping recipients' perception of campaigning messages. Zhang, Zhao, Cheung and Lee (2014) found that source credibility has a direct impact on purchase intention. Source credibility is a key component of persuasion, and persuasion further shapes individuals' decision-making. Based on this, the current study infers that when an individual receives messages about same-sex marriage, he or she would ascertain who sent the message. The person may be an acquaintance, close friend, or family member. The individual's motivation to discern the validity of a message would depend on who sent the message. Therefore, the hypothesis is as follows:

- H7. Source credibility negatively influences an individual's intention to discern the content of negative messages.

## 3. Methods

The current study aims to explore the factors that motivate people to discern the content of negative messages and explore the possibility of stopping circulation of these messages. The current study employs a quasi-experimental design and it involves a two-by-two factorial experiment which is divided into two factors, positive messages and negative messages, and two levels, for and against same-sex marriage. The collected data was analyzed by SPSS and SmartPLS to answer the research questions and address the hypotheses.

### 3.1. Stimuli

According to the experimental setting, the current study selected negative and positive messages made by both LGBT and Christian groups as stimuli. After participants answer questions regarding constructs of social capital and political efficacy, they were required to read the stimuli in a random order (one format out of four) and then continue to answer the remaining questions. The stimulus of format A, which presents a negative message made by Christian groups, shows the map of Taiwan containing the colors of the rainbow flag, with the inscription "the first country in Asia allowing same-sex marriage" on the left side of the page. However, it exhibits a flowchart saying "legalizing same-sex marriage means lifting the ban on AIDS patients visiting Taiwan, the health care insurance of Taiwan providing free treatment for AIDS, these patients acquiring citizenship through same-sex marriage, the total number of AIDS patients surging in Taiwan and all people facing the risk of getting AIDS" on the right side. The stimulus of format B, which presents a positive message made by Christian groups, shows three columns of ballot questions, No.10, No.11, and No.12, and asks people to support them by voting agree. At the bottom of the picture, it says, "Vote for our next generation." The stimulus of format C, which presents a negative messages made by LGBT groups, shows an image of Buddha on the right side, and the title states, "Voting in favor of pro-family referenda means converting to Christianity, and this is the conspiracy of churches;" "The first step is to stop same-sex marriage, and the next step is to stop people from worshipping their ancestors;" and "Vote disagree on No.10, No.11, and No.12." The stimulus of format D, which presents a positive message made by LGBT groups, explains the true meaning of referendum questions No.10, No.11, and No.12 by employing a question and answer

format. The wording was as follows: “Question No.10 means same sex couples are excluded from marriage; No.12 means a special law for same sex couples, not the civil law; and No.11 means LGBT-relevant material should be removed from elementary and secondary school education.”

### 3.2. Measurement

Measurement scales were adopted from existing scales and then modified to meet the research purpose of the current study (see appendix 1). TPB measurement scales include constructs such as subjective norms, perceived behavioral control, intention to judge and actual behavior. The original theory was developed by Ajzen (1991); however, the measurement scales have been modified by scholars. Therefore, the current study adopts these measurement scales (Ajzen, 1991; Han, 2015; Taneja, Vitrano & Gengo, 2014; Zhao *et al.*, 2016) and then revises them in order to satisfy the research objectives. Subjective norms (SN) are measured by a three-item scale that aims to explore participants' perception of norms in their social networks. Perceived behavioral control (PC) is measured by a three-item scale, and it reflects how participants perceive their ability to control different situations. Behavioral intention (BI) is measured by a three-item scale, and it aims to explore participants' intention to discern the content of negative messages. In addition, actual behavior (AB) is adopted from Oh *et al.* (2013), and it is measured by a three-item scale that aims to identify the sharing behavior.

The construct of political efficacy aims to explore the participants' perception of their understanding and confidence in politics. The measurement items of political efficacy are based on the scale used by Craig, Niemi and Silver (1990). Since their scale was designed to measure internal political efficacy, the four items on the scale were not changed for this study. The construct of source credibility is based on the work of Flanagin and Metzger (2008), and it is developed on a four-item scale. It aims to reflect how participants perceive the trustworthiness and expertise of the source. When measuring this construct, previous studies usually asked participants to evaluate a person or institution; however, the current study provides a negative message to evaluate. In order to precisely reflect the situation, before answering the questions of this construct, each participant will be required to imagine a person (friend or family member) who often shares messages with the participant. Additionally, the constructs of bonding and bridging capital are adopted from Williams (2006), and both constructs contain 10 items. However, to prevent fatigue among participants when answering the questionnaire, the current study reduced the number of questions. Some of the items represent similar ideas with minor differences, so the current study selects only one of them. Bonding capital and bridging capital are each measured on a five-item scale. All the constructs are measured with a five-point Likert scale from “strongly disagree” to “strongly agree.” In order to comply with the purpose of the current study, the phrasing has been modified, and backward translations were employed from English to Chinese.

### 3.3. Data Collection

The circulation of the questionnaire and collection of samples were through an online process. By employing Google Forms, prospective participants were allowed to read the stimuli and fill in the questionnaire using their smartphones, tablets, and personal computers. The current study presented two filter questions before the participants started filling out questionnaires, which were “Are you aware of same-sex marriage-relevant questions in the 2018 municipal election?” and “Did you cast a vote on the referendum of same-sex marriage questions?” Filter questions helped the researcher to eliminate participants who failed to meet the purpose of the current study and increased the research quality. The survey was conducted between the eighteenth of December and the 28<sup>th</sup> of December 2018. The total number of participants was 1,174, and 518 (44.2%) of them were eliminated from the poll by failing to answer either filter question one or two in the affirmative. The number of valid

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participants was 656 (valid rate 55.8%); these were divided into four groups, with 157 participants in group A, 162 in group B, 180 in group C, and 157 in group D. In terms of gender, 34.5% (N = 226) were male, and 65.5% (N = 430) were female. In terms of participants' ages, 37% (N = 243) were between 18 and 20, 21.8% (N = 143) were between 21 and 30, 10.1% (N = 66) were between 31 and 40, 13% (N = 85) were between 41 and 50, 12.2% (N = 80) were between 51 and 60, and 5.9% (N = 39) were over 61. In terms of monthly income, 47.7% (N = 313) earned below 20,000 NT dollars, 20.3% (N = 133) earned between 20,000 and 39,999 NT dollars, 15.5% (N = 102) earned between 40,000 and 59,999 NT dollars, and 16.5% (N = 108) earned more than 60,000 NT dollars.

## 4. Findings

### 4.1. Reliability and Validity

An exploratory factor analysis was performed using SmartPLS, and the validity and reliability is shown in Table 1. Generally, scholars suggest that loadings at or above 0.5 exhibit adequate item reliability. The average variance extracted (AVE) was higher than 0.50, and composite reliabilities (CR) and Cronbach's  $\alpha$  values were greater than 0.70, indicating that the reliability and validity are acceptable (Fornell & Larcker, 1981). The factor analysis found that the construct of actual behavior failed to pass the test. Therefore, questions in this construct, including "I chose to transmit negative-campaigning-relevant information on mobile social media apps (AB1)" and "I only transmitted negative campaigning relevant information with external source interlinkage on mobile social media apps (AB2)," were removed from the construct.

As shown in Table 1, the values of loadings were all higher than 0.7, the values of CR for each construct were all higher than 0.9, and the values of AVE were all higher than 0.7. These readings demonstrate that the reliability and validity are acceptable. In addition, whether the constructs could best reflect their concept was a crucial issue in the current study, and an evaluation of discriminant validity was performed in order to confirm this. The construct discriminant validity is shown in Table 2, and all constructs could be best reflected to their meaning.

**Table 1.** Measures of construct reliability and validity.

	items	loadings	Cronbach's $\alpha$	rho_A	CR	AVE
Actual behaviour (AB)	AB3	1	1	1	1	1
Attitude (AT)	AT1	0.976	0.969	0.972	0.980	0.942
	AT2	0.974				
	AT3	0.962				
Bonding (BO)	BO1	0.861	0.854	0.858	0.896	0.634
	BO2	0.852				
	BO3	0.808				
	BO4	0.746				
	BO5	0.703				
Bridging (BR)	BR1	0.824	0.875	0.887	0.908	0.664
	BR2	0.806				
	BR3	0.816				
	BR4	0.774				
	BR5	0.854				
Intention (IN)	IN1	0.845	0.746	0.774	0.853	0.660
	IN2	0.729				
	IN3	0.858				

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Source credibility (SC)	SC1	0.961	0.972	0.972	0.979	0.923
	SC2	0.962				
	SC3	0.961				
	SC4	0.957				
Subjective Norm (SN)	SN1	0.861	0.858	0.872	0.913	0.779
	SN2	0.873				
	SN3	0.912				
Perceived behavioural control (PC)	PC1	0.884	0.88	0.884	0.926	0.807
	PC2	0.922				
	PC3	0.888				
Political efficacy (PE)	PE1	0.871	0.859	0.876	0.904	0.703
	PE2	0.877				
	PE3	0.791				
	PE4	0.812				

Source: Own elaboration.

**Table 2.** Construct discriminant validity.

	AB	AT	BO	BR	IN	SC	SN	PC	PE
AB	1								
AT	0.107	0.971							
BO	0.11	0.132	0.796						
BR	0.168	0.051	0.522	0.815					
IN	0.498	0.224	0.249	0.310	0.813				
SC	-0.005	-0.354	0.035	0.072	-0.145	0.96			
SN	0.294	0.008	0.223	0.276	0.451	0.048	0.882		
PC	0.340	0.243	0.299	0.304	0.598	-0.094	0.334	0.898	
PE	0.234	0.128	0.206	0.293	0.261	0.052	0.079	0.364	0.838

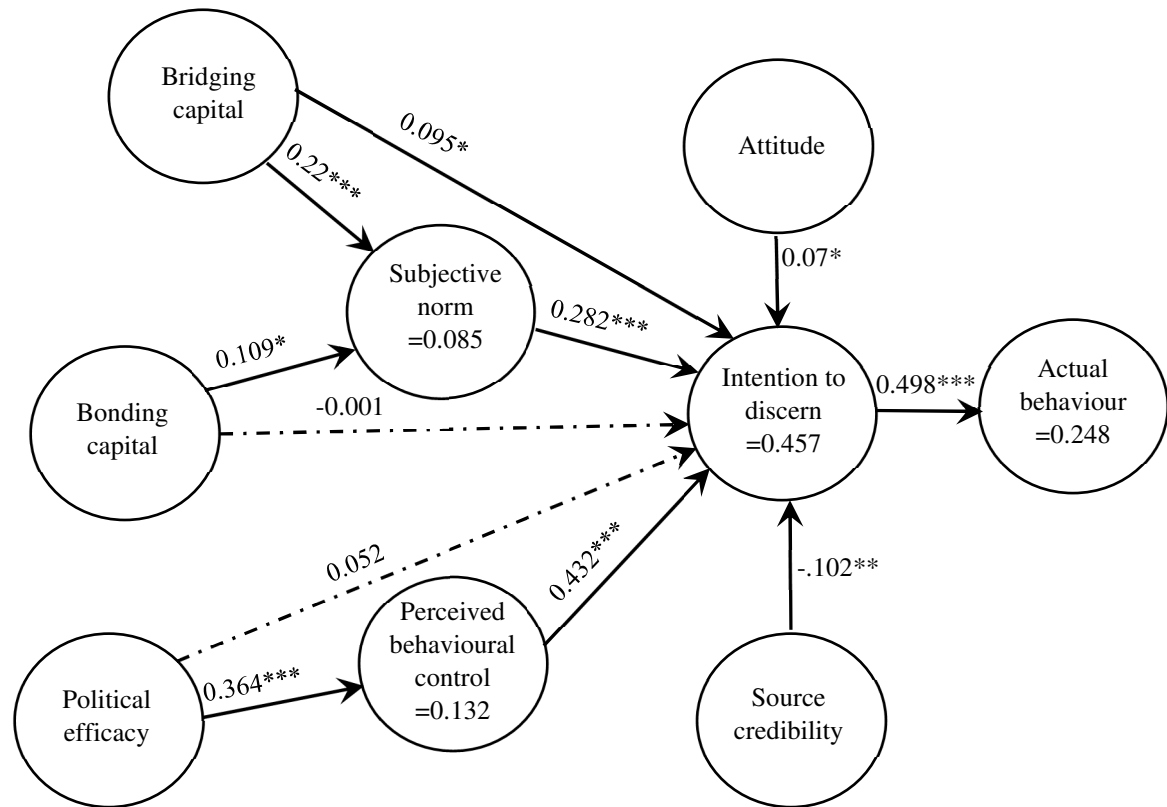
Source: Own elaboration.

**4.2. The Structural Model**

A bootstrapping procedure with 5,000 samples was performed to test the significance of the path efficiency, and it was based on the suggestion that the sample size ought to be at least 500 (Wetzels, Odekerken-Schroder & van Oppen, 2009). It helps to generate path estimates and t-statistics in determining the hypothesized relationships (see Figure 1).



**Figure 1.** The result of structure model.



$p < 0.1$ ,  $p < 0.05^*$ ,  $p < 0.01^{**}$ ,  $p < 0.001^{***}$

Source: Own elaboration.

According to the results, not all hypotheses are supported (see Table 3). H1 suggests a positive relationship between attitude and the intention to discern the validity of negative messages (abbreviated to intention hereafter), and the results ( $\beta = 0.07$ ;  $t\text{-stat} = 2.015$ ) support the hypothesis. H2 suggests a positive relationship between subjective norms and intention, and support was found for this relationship ( $\beta = 0.282$ ;  $t\text{-stat} = 8.105$ ). H3 suggests a positive relationship between perceived behavioral control and intention; this is a valid hypothesis ( $\beta = 0.432$ ;  $t\text{-stat} = 11.015$ ). H4 suggests a positive relationship between bridging capital and subjective norms, and the evidence supports this ( $\beta = 0.22$ ;  $t\text{-stat} = 4.399$ ). H4-1 suggests a positive relationship between bridging capital and the intention; this is supported by the evidence ( $\beta = 0.095$ ;  $t\text{-stat} = 2.58$ ). H5 suggests a positive relationship between bonding capital and subjective norms, and this is supported ( $\beta = 0.109$ ;  $t\text{-stat} = 2.227$ ). H5-1 refers to a positive relationship between bonding capital and intention, which is rejected by the evidence ( $\beta = -0.01$ ;  $t\text{-stat} = 0.27$ ). H6 suggests a positive relationship between political efficacy and perceived behavioral control, and the results support this ( $\beta = 0.364$ ;  $t\text{-stat} = 10.184$ ). H6-1 suggests a positive relationship between political efficacy and intention; this is rejected ( $\beta = 0.052$ ;  $t\text{-stat} = 1.48$ ). H7 suggests a positive relationship between source credibility and intention, and support was found ( $\beta = -0.102$ ;  $t\text{-stat} = 3.092$ ). H8 suggests a positive relationship between intention and actual behavior to stop the circulation of these messages, and the evidence supports this ( $\beta = 0.498$ ;  $t\text{-stat} = 12.873$ ).

**Table 3.** Summary of path estimates and hypotheses findings.

Hypothesis	Path	$\beta$	SE	t-statistic	P value	Support?
H1	AT→IN	0.07	0.035	2.015	0.044*	Yes
H2	SN→IN	0.282	0.035	8.105	0***	Yes
H3	PC→IN	0.432	0.039	11.015	0***	Yes
H4	BR→SN	0.22	0.05	4.399	0***	Yes
H4-1	BR→IN	0.095	0.037	2.58	0.01*	Yes
H5	BO→SN	0.109	0.049	2.227	0.026*	Yes
H5-1	BO→IN	-0.01	0.036	0.27	0.787	No
H6	PE→PC	0.364	0.036	10.184	0***	Yes
H6-1	PE→IN	0.052	0.035	1.48	0.139	No
H7	SC→IN	-0.102	0.033	3.092	0.002**	Yes
H8	IN→AB	0.498	0.039	12.873	0***	Yes

$p < 0.1$ ,  $p < 0.05^*$ ,  $p < 0.01^{**}$ ,  $p < 0.001^{***}$

Source: Own elaboration.

The current study performed a multi-group analysis to examine whether the stimuli affected participants' responses. The PLS-MGA bootstrapping method was applied to examine the differences between groups. The sample size was 157 in group A, 162 in group B, 180 in group C, and 157 in group D. According to Hair, Hult, Ringle and Sarstedt (2017), when the  $p$ -value is either higher than 0.95 or lower than 0.05 in PLS-MGA, it indicates that a significant difference exists at a 5% error level between groups regarding a specific PLS path coefficient. Specifically, a  $p$ -value below 0.05 indicates that the bootstrapping results of group 1 are higher than group 2, whereas above 0.95 means the opposite. The results are reported in Table 4.

The path from attitude to intention was significantly different between group A and group B ( $p$ -value = 0.98), between group A and group C ( $p$ -value = 0.992), and between group C and group D ( $p$ -value = 0.043). The relationship was stronger for group B and group C when compared with group A. At the same time, group C was stronger than group D. The path from subjective norm to intention was significantly different between group A and group B ( $p$ -value = 0.028).

**Table 4.** Results of PLS-MGA across stimuli groups.

Paths	Path Coefficients Differences						$p$ -values					
	A vs B	A vs C	A vs D	B vs C	B vs D	C vs D	A vs B	A vs C	A vs D	B vs C	B vs D	C vs D
AT→IN	0.192	0.208	0.045	0.015	0.147	0.163	<b>0.98</b>	<b>0.992</b>	0.684	0.569	0.074	<b>0.043</b>
SN→IN	0.177	0.026	0.127	0.151	0.05	0.101	<b>0.028</b>	0.384	0.113	0.948	0.679	0.167
PC→IN	0.224	0.019	0.177	0.206	0.047	0.159	<b>0.976</b>	0.582	<b>0.961</b>	<b>0.035</b>	0.346	0.943
BR→SN	0.09	0.24	0.128	0.33	0.038	0.368	0.253	<b>0.978</b>	0.185	<b>0.995</b>	0.403	<b>0.003</b>
BR→IN	0.101	0.021	0.12	0.08	0.018	0.098	0.158	0.408	0.116	0.788	0.436	0.161
BO→SN	0.167	0.123	0.066	0.29	0.101	0.189	0.888	0.161	0.68	<b>0.011</b>	0.236	0.928
BO→IN	0.062	0.037	0.023	0.024	0.039	0.014	0.25	0.344	0.413	0.602	0.648	0.556
PE→PC	0.045	0.006	0.028	0.051	0.073	0.022	0.669	0.471	0.391	0.306	0.255	0.414
PE→IN	0.217	0.106	0.2	0.11	0.016	0.094	<b>0.02</b>	0.11	<b>0.012</b>	0.857	0.566	0.14
SC→IN	0.029	0.018	0.015	0.012	0.014	0.002	0.629	0.583	0.53	0.444	0.424	0.462
IN→AB	0.268	0.036	0.015	0.232	0.253	0.021	<b>0.998</b>	0.619	0.549	<b>0.008</b>	<b>0.003</b>	0.426

Source: Own elaboration.

The relationship was stronger for the group A, which is a negative message against same-sex marriage stimulus. The path from perceived behavioral control to intention was significantly different between group A and group B ( $p$ -value = 0.976), group A and group D ( $p$ -value = 0.961), and group B and group C ( $p$ -value = 0.035). The relationship was stronger for group B and D when compared with group A, whereas the relationship was stronger for group B when compared with group C. The path from bridging capital to subjective norm was significantly different between group A and group C ( $p$ -value = 0.978), group B and group C ( $p$ -value = 0.995), and between group C and group D ( $p$ -value = 0.003). The relationship was stronger for group C when compared with groups A and B. Furthermore, the relationship was stronger for group C when compared with group D. The path from bonding capital to subjective norm was significantly different between group B and group C ( $p$ -value = 0.011). The relationship was stronger for group B when compared with group C. The path from political efficacy to intention was significantly different between group A and group B ( $p$ -value = 0.002) and between group A and group D ( $p$ -value = 0.012). The relationship was stronger for group A when compared with groups B and D. The path from intention to actual behavior was significantly different between group A and group B ( $p$ -value = 0.998), group B and group C ( $p$ -value = 0.08), and group B and group D ( $p$ -value = 0.03). The relationship was stronger for group B when compared with groups A and C. At the same time, group B is stronger than group D.

## 5. Discussions

The current study argues that the sharing of negative messages tends to be heuristic, whereas refuting misinformation relies on rational processes, and the empirical results supported this argument. Referring to the research questions, factors that motivate intention to discern messages are mostly relevant to social relationships, such as subjective norms, perceived behavioral control, and bridging capital. This seems to be in accordance with previous research (L. Zhao *et al.*, 2016; X. Zhao *et al.*, 2016). However, if we view the results from the perspective of Fisher (2017), an alternative interpretation appears. Fisher (2017) found that voters heavily rely on information from advocacy groups during same-sex marriage referenda as an information shortcut, and this indicates that people do not follow rational processes to judge in such issues. In addition, Burnett (2019) noted that endorsements dominate the decision-making process regarding referendum issues. Scholars imply that rational processes can be replaced when voters face messages from groups they approve of. Therefore, it becomes crucial for researchers to examine the groups of messages (groups A, B, C and D). The current study provided stimuli for participants to randomly confront different situations. The results from different groups further indicate that the stance of individuals plays a more important role than their reasoning in stopping the circulation of misinformation. This is to say that the case of the same-sex marriage referendum in Taiwan exhibited a situation where people rarely made decisions rationally.

### 5.1. The Irrelevance of Truthfulness

The irrationality of voters' behavior can be exemplified by the relationship between political efficacy and the intention to discern the content of messages. Political efficacy is viewed as a significant factor in shaping voting intention (Reichert, 2016). Alexander (2014) viewed that knowledgeable individuals are able to stop the circulation of false information. Their findings mostly rely on the rationality of individuals, especially in employing political efficacy to actively judge, yet the empirical results of the current study report differently. Political efficacy refers to individuals' political knowledge and experience (Campbell *et al.*, 1954), and the intention to discern the content of messages relies on individuals' awareness and consciousness. The flow from political efficacy to intention means that individuals employ their experience and knowledge in decision-making, which is purely rational. However, in the case of the same-sex marriage referendum in Taiwan, people chose to follow an irrational

route in making decisions; based on the results of the multi-group analysis, the stance held by individuals tended to be more influential.

Looking further into the multi-group analysis provides some interesting insights. When facing false messages shared by Christian groups, the path from political efficacy to intention is confirmed. In other stimuli situations, the results refuted the hypothesis. Only a specific situation where false messages shared by Christian groups motivated people to judge, and they tended to reject the messages. In other words, the truthfulness of the messages per se becomes less relevant because people do not react to false information shared by LGBT groups in the same way as they do for Christian groups. The stance of individuals, therefore, plays a significant role in this case.

People's failure to follow a rational process to make decisions can be further verified by viewing the path from perceived behavioral control to intention. Although perceived behavioral control is expected to have a positive influence on the intention to discern the messages (Ajzen, 1991), the multi-group analysis shows an intriguing situation. Groups B and D, which refer to positive messages from Christian and LGBT groups, had a stronger influence than negative messages from Christian groups. Meanwhile, group B was stronger than group C (false messages from LGBT). This is to say that when facing positive messages, whether they are for or against same-sex marriage, people who held a higher level of perceived behavioral control tended to discern the messages. However, when facing negative messages, perceived behavioral control tends not to motivate people to discern the veracity of the messages. When people are being reasonable, they should be more alert to false information, but here they react strongly to positive messages. Perceived behavioral control refers to individuals' perception of their own ability and the anticipation of obstacles (Cheung & To, 2017). When individuals held a solid stance toward an issue, they tended to ignore the truthfulness of messages. Therefore, the perceived behavioral control became less effective in motivating their intention to discern.

## 5.2. Social Relations Matters

Regarding social relations, the results of the multi-group analysis between subjective norms and intention yielded an expected situation. When facing messages from Christian groups, both false and true messages, the path from subjective norms to the intention to discern the messages exhibits some differences. False messages are more effective in evoking the intention than positive messages. However, the path from bridging capital to subjective norms and the path from bonding capital to subjective norms represent opposite indications. In the scenario of the path from bridging capital to subjective norms, false messages from LGBT groups have a stronger influence than positive messages from LGBT groups and both positive and negative messages from Christian groups. Bridging capital refers to weak ties (Aharony, 2015), and this multi-group result indicates that when facing acquaintances, people tend to hesitate to exhibit their stance. In the other scenario, where the path was from bonding capital to subjective norm, positive messages from Christian groups had a stronger influence than false messages from LGBT groups. Bonding capital refers to strong ties (Aharony, 2015), and this result indicates that when facing close friends, people naturally reveal their stance. In other words, the stance of individuals dominates their behavior unless they face a less comfortable social network situation.

A person's attitude toward same-sex marriage has a positive influence on their intention to discern the content of messages, and this is consistent with previous studies (Munzel, 2016). However, the results of multi-group analysis yield some insights to further understand the relationships. Positive messages from Christian groups and false messages from LGBT groups have a stronger effect than false messages from Christian groups. Meanwhile, false messages from LGBT groups have a stronger effect than positive messages from LGBT groups. Intention to discern the validity of messages ought to be higher for messages that are more positive

toward same-sex marriage; however, this intention only occurs when people face positive messages made by Christian groups and false messages made by LGBT groups. When facing false messages made by Christian groups, the attitude toward same-sex marriage becomes less influential. People who have a positive attitude toward same-sex marriage should be more alert to false messages made by opposing groups. This raises two possible scenarios. First, the message supporting same-sex marriage by showing false information prompts people who are against same-sex marriage to raise their intention to discern the content. Second, people who possess a positive attitude toward same-sex marriage do not raise their intention to discern when facing false messages from Christian groups. The latter situation implies that people may not be able to identify the truthfulness of the messages so that they view the false messages as reasonable. Based on the results of the same-sex marriage referendum, people who held positive attitude toward same-sex marriage did fail to identify the false messages from Christian groups. Therefore, it is reasonable.

The current study confirmed that irrationality plays a significant role in the people's decision-making processes in same-sex marriage referenda. The truthfulness of messages per se is irrelevant, while the stance possessed by individuals becomes crucial. In addition, social networks influence individuals' responses based on their stance. These findings further help us to gain a better understanding about relevant issues.

## 6. Conclusion

The current study confirms that people rarely follow rational routes to make voting decision in same-sex marriage referendums. As the findings of previous studies, political affiliation is weak in guiding voters in such issues. Meanwhile, voters are not concerned with the truthfulness of the messages but rather their stance. However, people might conceal their stance when facing weak ties of their social relations, therefore, social relations might be a way to stop the circulation of negative messages.

### 6.1. Limitations and Future Research

Some limitations exist in the current study. First, the sampling process relies on convenience samples whereby participants fill in the questionnaire through an online approach. Although the current study set up two filter questions to eliminate irrelevant samples, to put participants in a lab setting would be a better way than merely relying on an online approach. In addition, the online approach indicates that participants can pay less attention to the stimuli, and they are able to fill in the questionnaire. This should be improved in further studies.

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