Factors influencing internet users' intention to sign e-petitions

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Abstract

Purpose – This study aims to identify factors behind the intention to sign e-petitions, focusing on three aspects, i.e. information (argument quality), the source of information (source credibility) and personal perspective (personal relevance and altruism).

Design/methodology/approach – Data collection is done by using a quantitative approach through an online questionnaire. This study involved 211 respondents who were internet users in Indonesia who had signed an e-petition. The data were analyzed using structural equation modeling approach with IBM Amos version 22.0.

Findings – The findings revealed that there are three factors shaping internet users' attitudes toward e-petitions, namely, altruism, AQ and personal relevance, of which altruism was the strongest factor. Those who have a positive attitude toward e-petitions seemed to have higher intention to sign e-petitions. Additionally, we discovered that internet users believe credible e-petition initiators deliver better arguments, which drive them to sign e-petitions.

Research limitations/implications – The finding related to elaboration likelihood model has revealed that not only the dual processing of central routes and peripheral routes but also the possibility of peripheral routes influencing the factors in the central route. Hence, future studies need to include the examination of this relation. Finally, altruism is identified as the major factor that influences people to sign e-petitions. Therefore, people should be aware of this factor while examining the environment that likely has voluntary aspects.

Practical implications – To improve the adoption of the e-petition system, it is important for the e-petition websites to maintain attitude factors to achieve the e-petition goals. It is also important that e-petition websites provide credibility information of the e-petition initiators and make it visible to everyone. The e-petition sites must be able to be personalized so that users can be categorized based on their profiles or interests. Finally, as altruism is the most influencing factor in shaping internet users' attitude toward e-petitions, e-petition initiators need to write a persuasive and arousing information and images for their e-petition. Some templates, tips or even online training to persuasive public petitions also need to be provided.

Originality/value – This study attempts to fill the research gap by examining factors from three domains, i.e. information source (the e-petitioners), information/AQ and personal perspective (personal motivation) of the e-petition signers. The authors enrich the research model with altruism factors that

influence attitude in signing petitions. This study illustrates the characteristic of Indonesian internet user's and provides important implications for how the e-petitions site should improve the functionality of the sites.

1. Introduction

The utilization of e-petition systems has been increased in the past decade. E-petition system uses online platforms that generally have common functionality for petitioners to freely register, create and/or sign petitions on a range of political and non-political matters. Some platforms are established by governments and legislatures with binding political agenda effects (Halpin *et al.*, 2018). People use this way of political participation to represent their powerlessness to the government or to seek remedies for the social injustice they may encounter (Alathur *et al.*, 2012). The citizens in developed countries already have formal systems to which their aspiration is submitted in the form of a petition. Some examples are "We the People" in the USA, "the Bundestag" in Germany, and "petitions" for the UK Government and Parliament. Nowadays, the petitions are not only aimed at the government but also aimed at individuals, private parties and other relevant parties. The other petition sites are commercial in nature while a third form is run by not-for-profits or campaigning groups (Halpin *et al.*, 2018).

Change.org is one of the popular commercial online petition platforms that has been used in 196 countries, including Indonesia. This site can connect citizens with decision-makers and various organizations. Based on data from House of Infographics (Change.org, 2017) the number of users who have signed petitions on the Change.org site in Indonesia has reached more than 4 million people, which has increased by 1 million users compared to the previous year. Among the hundreds of petitions submitted during 2017, the most popular category is related to issues of human rights, consumer rights, animal protection, anti-corruption and the environment. The e-petition platform has been able to capture millions of signatures of support from the citizen that were previously difficult to obtain with traditional petition methods. The amount of public interest in participating in e-petition in Indonesia raises the question of why they are willing to sign the e-petition. Therefore, this study aims to identify factors that influence internet users in Indonesia to sign online petitions on the Change.org site.

In prior studies about e-petition, the descriptive result indicated democratic experience, personal income, age and education are factors that influence citizens to sign e-petition (Stockmer, 2014). Furthermore, Vicente and Novo (2014) added digital skills as another highly contributed factor. Another study about e-petition discovered that self-efficacy (political efficacy and computer literacy), prosocial behavior/altruism and lurking activities are factors that influence the citizens to sign e-petition (Cruickshank *et al.*, 2010). However, there is a knowledge gap in which the impact of information and source of information on internet users' intention influencing their intention to sign have not yet investigated. Thus, this study attempts to fill the gap by examining those factors.

In this study, three domains are to be identified, i.e. information source (the e-petitioners), information/argument quality (AQ) and personal perspective (personal motivation) of the signers. The studies of e-petition were mostly conducted in developed countries. In the meantime, studies have not been carried out in Indonesia, the biggest democratic nation with growing numbers of e-petition users. Through this research, we adopted the use of the

elaboration likelihood model (ELM) by Petty and Cacioppo (1986) and the theory of planned behavior (TPB) by Ajzen (1985) to predict the factors influencing internet users' attitude toward e-petition, which later affects their intention to sign. ELM was adopted to identify the change of internet users' attitude after receiving a persuasive message (petition) both from the central route (AQ) and peripheral route (source credibility (SC) and personal relevance). Meanwhile, TPB was featured to capture the connection between internet users' attitude and their intention to sign the e-petition. However, in our preliminary research, we found that people signed e-petition because they wanted to help the e-petition's initiator to solve their problem. This finding was also supported by Cruickshank et al. (2010). Thus, we extended our model with altruism in the personal perspective domain to accommodate the finding.

Online petitions are one of the most popular forms of political participation in the current era of open government that has great potential to influence the decision-making process. Therefore, knowing the factors that influence internet users in supporting online petitions can be useful for various parties. For academics, this research is expected to be used as a basis for further research. The results of this study also illustrate the characteristics of Indonesian internet users who signed an online petition on the Change.org Indonesia site. This description can be used as a reference by site managers and petitioners in strategies to increase the number of members and signatures on the Change.org Indonesia site.

This paper is organized as follows: Section 2 provides a literature reviews related to ELM, TPB and altruism. Section 3 discusses the research model and hypotheses while Section 4 explains the research methodology. In Section 5, we report the findings based on the questionnaires that were used to investigate the extent to which the research model can explain the intention to sign e-petition. Finally, the conclusions of this study are provided in Section 6.

2. Literature review

2.1 Elaboration likelihood model

The ELM by Petty and Cacioppo (1986) consists of two main routes, central route and peripheral route. According to Bhattacherjee and Sanford (2006), there are three different aspects of those routes. Firstly, each route deals with different information. While the central route examines message-related arguments, the peripheral route focus on cues. Secondly, the level of cognitive effort. As the central route demands ruminative thinking from the receivers to analyze and evaluate the quality of the presented argument, it requires extensive cognition. On the other hand, the peripheral route is less demanding for the receiver decision based on simple cues (Angst and Agarwal, 2009). Finally, the change induced by central route lasts longer and more consistent, as it generated by thoughtful consideration. Conversely, the change obtained by peripheral route inducement is less predictive, less persistent, and more vulnerable to counter-influence for long-term behavior.

The crucial aspects of ELM are motivation and ability of individuals to process information (Yang et al., 2006). When they have a motivation, such as personal relevance or personal responsibility, and capability (prior knowledge, less distraction and message comprehensibility) to process incoming information, they will respond with a certain attitude through central route. Otherwise, receivers tend to look for alluring cues (SC or the number of arguments) to drive their peripheral attitude shifts.

ELM theory has been studied in various issues such as online reviews and recommendations (Zhang et al., 2018; Filieri et al., 2018), health (Nour et al., 2018) and fintech adoption (Allison et al., 2017; Han et al., 2018). Despite the popularity of ELM, there are also several critics of this theory: the descriptive nature of the model, continuum questions, the

issue of multi-channel processing, and the analysis of the different variables, which mediate elaboration likelihood (Kitchen *et al.*, 2014). In the context of e-petition signing, the central route, which focuses on AQ(i.e. informativeness and persuasiveness), may refer to the detailed information about the case that provided by e-petition's initiator. On the other hand, the peripheral route is related to simple cues such as how credible the e-petition initiator is and how related the case of the e-petition to the signers. Hence, we constructed SC and personal relevance as the variables that influence attitude in our research model (Figure 1).

2.2 Theory of planned behavior

TPB (Ajzen, 1985) is an extended model of theory reasoned action by Fishbein and Ajzen (1975) with the addition of perceived behavioral control to deal with behaviors over which people have incomplete volitional control (Ajzen, 1991). This theory has been used in e-government (Batara *et al.*, 2017; Saxena, 2017), social media (Sun *et al.*, 2017; Kim *et al.*, 2016) and education (Passaro *et al.*, 2017). The relation of perceived behavioral control to behavioral intention is based on the rationale that the easier a behavior is, the more likely one will intend to perform it. Meanwhile, the inclusion of perceived behavioral control as a predictor of behavior based on the assumption if someone has greater perceived control over
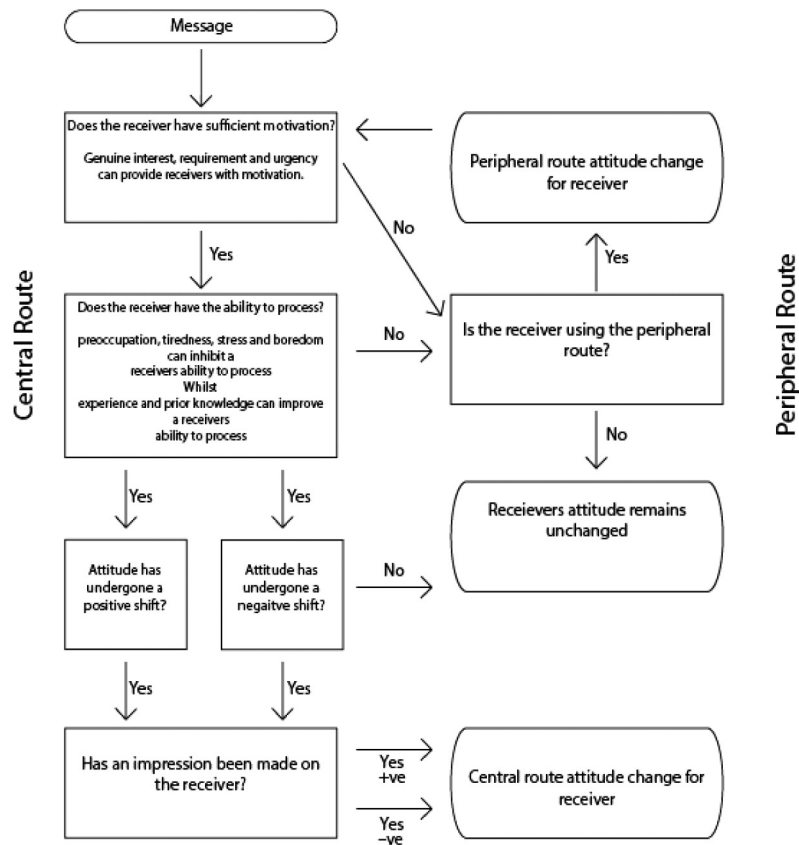

Figure 1.
Elaboration likelihood model by Petty and Cacioppo (1986)

the issue, it will increase the likelihood that enactment of the behavior (Armitage and Christian, 2004).

Other exogenous variables, attitude and subjective norm, which included in the prior model are determinants for behavioral intention. Ajzen (1991) stated attitude as any personal factors of an individual's positive or negative evaluation of performing the behavior. Subjective norm, otherwise, is described as the person's perception of the social pressures that put on him to perform or not perform the behavior in question. The model of Theory of Planned Behavior (1985) is presented in Figure 2. However, in this study, we only explored the relation of attitude and behavioral intention that combined with the ELM by Petty and Cacioppo (1986) to recognize factors constructed attitude of internet users toward e-petitions, which later influences them to sign the e-petition.

2.3 Altruism

Batson (2011) defined altruism as the desire to benefit others instead of his own. Indeed, any altruism action, even the small ones require a tiny expenditure such as time and energy and might risk the actor (Wilson, 2015). A study conducted by Surma (2016) pinpointed online helping activities via social networking sites are increasing because the strength of communication can be maximized while the cost of communication remains low. This finding is supported by Diep, Cocquyt *et al.* (2016), which concluded altruism people would like to contribute when the advantages are greater than the risks. In the context of the e-petition, Cruickshank *et al.* (2010) identified altruism as one of personal characteristics of e-petition signers. Thus, we include altruism in our study.

2.4 Previous studies

Research on e-petition has been carried out in various previous studies. Research by Lindner and Riehm (2011) was conducted to compare e-petition vs traditional petition. The results indicate that users of the e-petition system are younger, dominated by men, and have higher levels of formal education than traditional petitioners. This research also shows that e-petitions can reduce inequalities in participation patterns and are quite successful in attracting or representing underrepresented societal groups. Berg (2017) found that people were more likely to sign e-petitions anonymously if the e-petition initiator was anonymous. This suggests that the anonymity of the sense of the citizens to follow the initiative of the initiator and remain anonymous themselves. This research shows that people are fit to fit into the social norm. Other studies by Böhle and Riehm (2013) analyze the challenges and opportunities of e-petition systems in Europe. The e-petition systems improve the involvement of the public. This happens because e-petition systems are more open, transparent, accountable, effective and responsive through the involvement of the public. This study also shows that, however, e-petition does not help so far to overcome the political participation divide based on socio-demographic characteristics. Wright (2016) conducted a
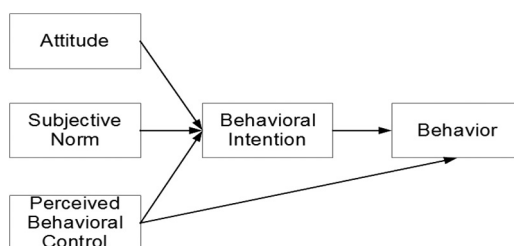

Figure 2.
Theory of planned
behavior by
Ajzen (1985)

study to find out various ways in which participants felt the "success" of their petitions and how the government communicated with participants. The study found that people felt the various benefits of their e-petition and that they had a definition of success that was somewhat different from traditional steps. This finding has important implications for how online democracy innovation is designed and institutionalized.

In prior studies about e-petition, the descriptive result indicated democratic experience, personal income, age and education are factors that influence citizens to sign e-petition (Stockmer, 2014). Furthermore, Vicente and Novo (2014) added digital skills as another highly contributed factor. Another study about e-petition discovered that self-efficacy (political efficacy and computer literacy), prosocial behavior/altruism and lurking activities are factors that influence the citizens to sign e-petition (Cruickshank *et al.*, 2010).

3. Research model and hypothesis development

As explained in the previous section, we adopted the ELM by Petty and Cacioppo (1986) that focus in attitude changing behavior through central route (AQ) and peripheral route (SC and personal relevance). We also featured the TPB by Ajzen (1985), which accommodated the relation between attitude to intention to sign e-petitions. Moreover, during the inquiry process, we found that altruism affects internet users to sign e-petitions. Thus, all of the above-mentioned attributes are included in our research model.

3.1 Attitude toward intention to sign

The most popular theory developed to examine the relationship between attitude and intention is TPB by Ajzen (1985). Several studies, which were adopted TPB theory suggested that if users have a positive attitude of the given conditions, they will have conducive intention to do favorable actions (Bhattacherjee and Sanford, 2006; Wang *et al.*, 2014; Lee *et al.*, 2017; Shome *et al.*, 2018). We suggested that internet users will have intention to sign e-petition if they have a positive attitude toward the e-petitions. Thus, we propose the following hypotheses:

H1. Attitude of internet users toward e-petitions positively affects their intention to sign.

3.2 Argument quality toward attitude

The relationship between AQ and attitude has been obviously recognized for ages. It is believed that when people receive a persuasive message with a high-level quality of argument their attitude will be affected (Petty and Cacioppo, 1986). Earlier studies indicated that motivation and ability of certain individuals are important in information processing (Zhou, 2012; Li, 2015). Furthermore, a study conducted by Bhattacherjee and Sanford (2006) indicates AQ(i.e. communicating a useful argument and well-articulated message) has a significant impact toward attitude changing. In the context of e-petition, the e-petition initiators deliver convincing argument to gather signature from internet users. Therefore, we propose the following hypotheses:

H2. Perceived of AQ positively affects the of internet users' attitude toward the e-petitions.

3.3 Personal relevance toward attitude

Petty and Cacioppo (1986) including personal relevance as one of the reasons behind people's motivation in ELM theory. Bhattacherjee and Sanford (2006) revealed that personal relevance positively moderating both of central route and peripheral route in attitude shifts. This finding is supported by Pang and Goh (2016), which suggested people are likely to disseminate information of protest on their social networking sites when the issue is personally relevant to them. E-petitions' signers might also have personal relevance to the issue of the e-petitions they were signing. For those reasons, we propose the hypotheses:

H3. Personal relevance towards the issue positively affects the attitude of internet users.

3.4 Altruism toward attitude

Altruism in online helping behavior has been supported by a number of studies (Ma and Chan, 2014; Wallace *et al.*, 2017; Xiang *et al.*, 2018). Moreover, a study conducted by Cruickshank *et al.* (2010), which focuses on the personal characteristic of e-petition signers has reinforced that altruism is one of the major factors that influence them to sign e-petitions. Hence, we propose this following hypothesis:

H4. Altruism of internet users positively affects the attitude of suggested e-petitions.

3.5 Source credibility toward argument quality

Prior studies have verified SC as the major cause of attitude-behavior changing. People who were less motivated to elaborate are more likely to take a peripheral route when they encounter persuasive messages (Angst and Agarwal, 2009). This finding is supported by Li (2015), who suggested expertise or experienced professionals, the ones who are seen as credible and trustworthy to convince people with lower-level elaboration. Furthermore, a study conducted by Rollins and Bhutada (2014) revealed that consumers paid more notable attention toward a well-known source of information for they considered credible persons. Zhang *et al.* (2014) also suggested that the more credible the source, the better argument they made. In fact, in the process of collecting our preliminary facts, we found that many e-petitions, which initiated by prominent figures could satisfy public and obtain thousands of signatures. Thus, we propose the following hypotheses:

H5. Perceived of SC positively affects internet users' perceived of AQ.

Bhattacherjee and Sanford (2006) classified four indicators of SC as knowledgeable, trustworthy, credible and expert. Furthermore, Wang *et al.* (2007) detailed trustworthiness into reliable, sincere and trustworthy, and expertise into experienced, knowledgeable and qualified. Thus, we constructed trustworthiness and expertise as the first-order of SC. The study of Bhattacherjee and Sanford (2006) also consisted AQ of informative, helpful, valuable and persuasive. Meanwhile, Zhang *et al.* (2014) arranged perceived informativeness (relevant, complete and timely) and perceived persuasiveness (convincing, persuasive, strong and good) as the first-order of AQ. Therefore, in our research model, informativeness and persuasiveness are the first-order variables to AQ as presented in Figure 3.
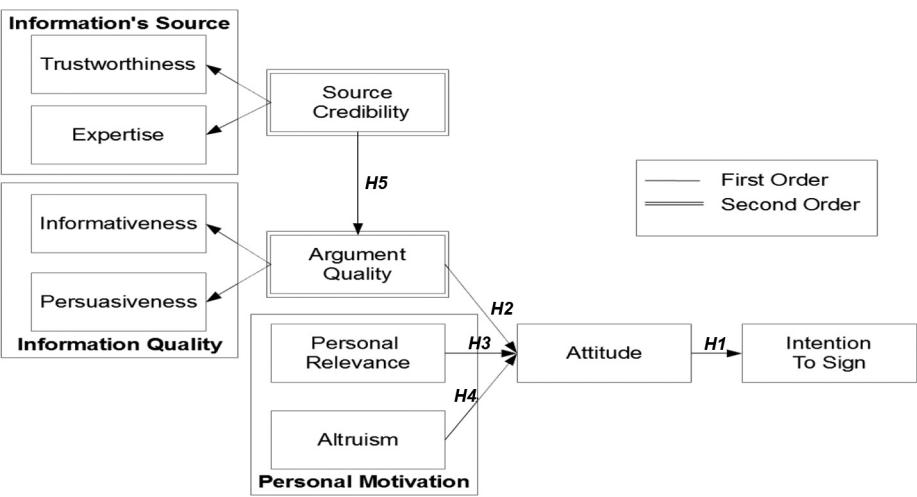
Figure 3.
Research model

4. Research methodology

4.1 Data collection

E-petition probably is the easiest way for Indonesia internet users to express their opinion. Since 2012, the number of Change.org Indonesia users has been multiplied to 4,000,000. The cases that have been submitted to the website are spreading from human rights, environments, to public policy. We extracted the list of participant candidates by entering the keyword "paraf petisi" on twitter's search box. The keyword was the part of social media link, which is generated when the twitter users sign an e-petition on: www.change.org/id. The candidates were approached to fill the questionnaire and to send their colleagues who have ever signed e-petition on the Web invitation to participate in the research while the link to the online survey, hosted by Google Form, was provided. The participants received no remuneration.

4.2 Research instrument

The research instrument encompassed 29 items. Chang (1994) discovered that the six-point Likert scale added more to the systematic method variance. Therefore, each item took the form of a six-point Likert scale (strongly disagree, disagree, slightly disagree, slightly agree, agree and strongly agree). The questionnaire was in Bahasa Indonesia and has been read to eliminate ambiguity by 12 people (2 experts and 10 people from various backgrounds) before it was distributed to ensure the accuracy and to minimize misinterpretation of each question. The research instrument is presented in Table I. During the questionnaire development, there were some improvements made. For example, to broaden the view of the perceived informativeness, we added accurate and understandable from the theory of information quality by Lucey (2005). Another change was made to make a clear understanding of the items. One of the items of perceived persuasiveness from Zhang et al. (2014) was the arguments were good. As good could be interpreted in many ways various things, we decided to detail the term into logical and based on accurate data.

Construct	Code	Items	References
Perceived informant trustworthiness	TRST1	The person who started the e-petition is reliable	Bhattacherjee and Sanford (2006) and Zhang *et al.* (2014)
	TRST2	The person who started the e-petition is sincere	
	TRST3	The person who is trustworthy	
Perceived informant expertise	EXPT1	The person who started the e-petition is experienced	Bhattacherjee and Sanford (2006) and Zhang *et al.* (2014)
	EXPT2	The person who started the e-petition is knowledgeable	
	EXPT3	The person who started the e-petition is qualified	
Perceived informativeness	INFO1	The information provided by the person who started the e-petition is relevant	Zhang *et al.* (2014)
	INFO2	The information provided by the person who started the e-petition is complete	
	INFO3	The information provided by the person who started the e-petition is accurate	Lucey (2005)
	INFO4	The information provided by the person who started the e-petition is understandable	
	INFO5	The information provided by the person who started the e-petition is up to date	Zhang *et al.* (2014)
Perceived persuasiveness	PERS1	The arguments of these reviews were convincing	Zhang *et al.* (2014)
	PERS2	The arguments of these reviews were persuasive	
	PERS3	The arguments of these reviews were strong	
	PERS4	The arguments of these reviews were logical	Improvement from Zhang *et al.* (2014)
	PERS5	The arguments of these reviews were based on accurate data	
Personal relevance	RELV1	The problem of the e-petition is important	Bhattacherjee and Sanford (2006)
	RELV2	The problem of the e-petition is relevant for me	
	RELV3	The problem of the e-petition is personally important for me	
Altruism	ALT1	I like helping others	Ma and Chan (2014)
	ALT2	I think signing e-petition can help others	
	ALT3	I enjoy helping others by signing an e-petition	
Attitude	ATT1	Signing e-petition is a good idea	Bhattacherjee and Sanford (2006) and Campbell and Wright (2008)
	ATT2	Signing e-petition is a wise idea	
	ATT3	Signing e-petition is a pleasant idea	
	ATT4	Overall, I like signing e-petition in Change.org Indonesia	
Intention	INT1	I intend to sign the e-petition on Change.org Indonesia in the future	Zhang *et al.* (2014)
	INT2	I am willing to influence others to sign the e-petition that I have signed	Park *et al.* (2014)
	INT3	I plan to continue signing the e-petition on Change.org Indonesia	Zhang *et al.* (2014)

Table I.
Research instrument

5. Result and discussion
Kline (2011) stated typically the minimum number of the sample used in published research of structural equation modeling (SEM) is around 200 samples. The online questionnaires were filled by 211 participants, which were satisfied with the minimum requirement. The first step was to transform the answer of six-point Likert scale into integer. Strongly disagree was set as 1, and so forth until strongly agree is set into 6. The next step was converting the integers into intervals by using Stat97.exa, add-in on microsoft excel, so the data could be processed in IBM SPSS and IBM Amos version 22.0. Validity and reliability testing were conducted to assess the quality of constructs, while confirmatory factor analysis was performed to examine the good-fit model.

5.1 Socio-demographic characteristic
Demographics distribution of our 211 samples is presented in Table II. The number of male respondents was slightly larger than the female respondent. The majority were between 20 and 29 years of age, representing 71.56 per cent of the entire sample. Most of the respondents were graduates (64.93 per cent bachelors', 9.95 per cent masters' and 0.95 per cent doctorates'), who works for private company. In terms of digital literacy, 88.63 per cent of our respondents had been using internet for more than 6 years, 63.51 per cent of all had signed 1-5 e-petitions within the past 12 months. Largely, the information about e-petitions they received from social media (i.e. facebook, twitter, path, etc.). Overall, our respondents were young and well-educated Indonesians with relatively high digital literacy.

5.2 Results
The evaluation of the research model using CB-SEM consists of two distinct steps, as the model has first- and second-order variables (Hox, 2002). The first step is the assessment of the outer model as, which deals with the characteristic evaluation of the constructs and indicators that represent them. The second step includes the assessment of the second-order variables and evaluation of the relationships between the constructs as specified by the research model.

5.2.1 Measurement model. The evaluation of an outer model conducted by examining the reliability and validity of the measures that represent each construct (Chin, 2010). The reliability of the research model assessed by evaluating Cronbach's alpha and composite reliability (CR), while the validity assessed by using average variance extracted (AVE). The final results of the reliability and validity testing are presented in Table III.

First, factor loading analysis was conducted repeatedly until it met the standard of validity and reliability. Kline (2011) stated that minimum valid factor loading accepted is higher than 0.50, while the well-supported factor is greater than 0.70. Two variables, PERS2 and ALT1 were dropped because they were below the minimum standard of 0.5. For assessing the reliability of the model we used three methods, namely, CR, AVE and Cronbach's alpha. The minimum cut-off limits of those methods, 0.7, 0.5 and 0.7 respectively, were adopted from Hair *et al.* (2009). Three variables, INFO1, INFO5 and INT2 were also removed from the model because the AVE of INFO and INT were lower than 0.5 and those variables had the minimum factor loadings of their constructs.

The second step is the evaluation of the second-order variables that construct the research model. In this step, the assessment also includes validity and reliability testing. The minimum thresholds are 0.7 for CR, 0.5 for AVE and 0.7 for Cronbach's alpha

Demographic items	Frequency	(%)
Gender		
Male	115	54.50
Female	96	45.50
Age		
Less than 20	10	4.74
20-29	151	71.56
30-39	38	18.01
40-49	8	3.79
More than 50	4	1.90
Education		
High school	37	17.54
Diploma	14	6.64
Bachelor's degree	137	64.93
Master's degree	21	9.95
Doctorate's degree	2	0.95
Occupation		
Student	49	23.22
Private company's employee	105	49.76
Government employee	10	4.74
Self-employed	23	10.90
Others	24	11.37
Internet usage		
Less than one year	5	2.37
1-6 years	19	9.00
More than 6 years	187	88.63
Number of e-petition signed in past 12 months		
0	15	7.11
1-5	134	63.51
6-10	28	13.27
More than 10	34	16.11
Source of information		
Social media (facebook, twitter, path, etc.)	160	
Newspaper/news portal	60	
Family/colleagues	59	
Seminar/campaign	16	
Others	4	

Table II.
Respondents'
demographic

(Hair *et al.*, 2009). As presented in Table IV, the factor loadings of first-order variables (TRST and EXPT) are higher than 0.5 as required by Kline (2011). It means that trustworthiness and expertise are significant in determining the second-order variable of SC. The results also show that factor loadings of other two first-order variables (INFO and PERS) satisfied the minimum requirement of 0.5. It indicates that informativeness and persuasiveness are major variables in constructing AQ.

In CB-SEM, Hancock and Mueller (2013) suggest to use multifaceted goodness of fit (GFI) approaches based on the integration of variety of different indices, detailed evaluations of the actual parameter estimates in relation to theory, *a priori* predictions, common sense, and comparison of viable alternative models specifically designed to evaluate the GFI to address

Variables	Factor loadings	CR	AVE	Cronbach's alpha
TRST1	0.871	0.8292	0.619	0.83
TRST2	0.702			
TRST3	0.780			
EXPT1	0.778	0.81	0.58	0.80
EXPT2	0.854			
EXPT3	0.635			
INFO2	0.773	0.78	0.55	0.77
INFO3	0.824			
INFO4	0.600			
PERS1	0.685	0.82	0.53	0.81
PERS3	0.793			
PERS4	0.704			
PERS5	0.725			
RELV1	0.588	0.75	0.61	0.71
RELV2	0.934			
ALT2	0.811	0.82	0.70	0.76
ALT3	0.859			
ATT1	0.745	0.81	0.51	0.86
ATT2	0.797			
ATT3	0.634			
ATT4	0.675			
INT1	0.717	0.68	0.52	0.74
INT3	0.726			

Table III.
Reliability and validity testing results

Variables	Factor loadings	CR	AVE	Cronbach's alpha
TRST → SC	0.89	0.84	0.724	0.853
EXPT → SC	0.81			
INFO → AQ	0.88	0.88	0.783	0.868
PERS → AQ	0.89			

Table IV.
Reliability and validity testing of second-order variables

the limitation of each index. Therefore, the indices applied were the χ^2 statistic (C_{min}/df), the root means a square error of approximation (RMSEA), the GFI, the normed fit index (NFI) and the comparative fit index (CFI). The suggested values of those indices were adopted from Brown (2006) and Kline (2011). RELV3 was the last variable discarded to satisfy the good-fit model indices, as it had the lowest factor loading. The final good model fit indices are presented in Table V.

Fit indices	Results	Recommended values
C_{min}/df	1.225688	<5
RMSEA	0.033099	<0.06
GFI	0.903947	≥0.90
NFI	0.923088	≥0.90
CFI	0.980571	≥0.90

Table V.
Final result of good-fit model

5.2.2 Hypotheses testing results. The next step was examining the significance and strength of each hypothesis. This analysis was done by using IBM AMOS CB-SEM analysis. Results of the analysis include standardized path coefficients, path significance, critical ratio (CR) and variance explained (R^2 values) for each dependent variable. In hypothesis testing, the CR values of standardized estimate factor loadings need to be >1.645 to any factor to be accepted (Tavakoli, 2013). Kline (2011) said whether the convention of α (p-values) = 0.05 is not a golden rule to accept any hypothesis, the number is ideal to be considered. Thus, we use the CR and p-values = 0.05 to test our hypotheses.

The first examined path was the effect of the attitude of internet users toward the e-petitions on their intention to sign the e-petitions (*H1*). This path is adopted from TPB by Ajzen (1985). As shown in Figure 4, attitude had a strong and significant effect (β = 0.82; p-value < 0.001; and CR = 8.421) on intention to sign e-petition, thus, *H1* is supported. It indicates that people who reckon e-petition signing is a righteous thing will intend to sign e-petitions. The result has been supported by Bhattacherjee and Sanford (2006) and Wang *et al.* (2014).

Our research model also adopted the ELM by Petty and Cacioppo (1986). This theory represented in path *H2*, *H4* and *H5*. Internet users' perceived AQ of the e-petitions positively influences the internet users' attitude toward the e-petitions (*H2*) is the central route of ELM in our research model. The results indicate that *H2* is supported (β = 0.50; p-value < 0.001; and CR = 7.126). Peripheral route of ELM in our model is defined in *H4* and *H5*. Although internet users' personal relevance to the e-petitions positively influence their attitude toward the e-petitions, *H4* is the weakest path in our model because the p-value shows the higher risk of incorrectness and value of β and CR are relatively smaller than other paths (β = 0.23; p-values = 0.01; and CR = 2.590), this path is confirmed as significant and strong, as it satisfied the minimum criteria. It means when people are personally related to the problem they will have a more positive attitude or otherwise. The result has been supported by Campbell and Wright (2008). Another peripheral route path, the effect of internet users' perceived SC (petition
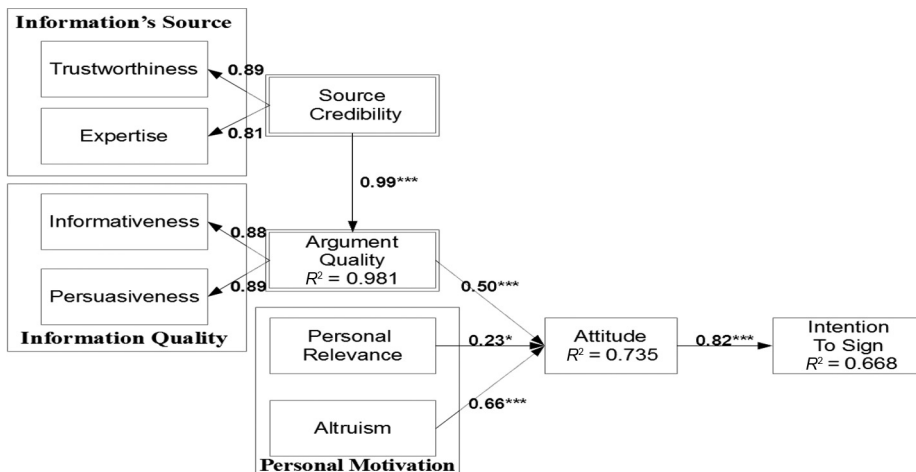

Note: Path significance: ***p-values < 0.001, *p-values = 0.01

Figure 4.
Results of coefficient analysis

initiator) on their perceived AQ of the e-petitions (*H5*) is highly supported (β = 0.99; *p*-values < 0.001; and CR = 9.417). Internet users considered that if the one who starts the e-petitions was seen as a credible person, the better argument they delivered. This path has already been supported by Zhang *et al.* (2014).

The path of internet users' altruism to their attitude toward e-petition (*H3*), which is our addition to TPB and ELM was also examined. The results as presented in Table VI shows this path is significant and strong (β = 0.66; *p*-values < 0.001; and CR = 8.653) that make *H3* is supported. It means that altruists have positive thoughts toward e-petition. They think it is one of the ways to help others. The result has been supported by Wang *et al.* (2014).

To examine the predictive power of our research model, variance explained (R^2) of the endogenous constructs is used (Chin, 2010). Bollen and Curran (2006) stated that $R^2 \geq 0.7$ means that strong linear trends while < 0.7 is moderate. As shown in Figure 4, R^2 of (SC → AQ), (AQ, personal relevance and altruism → attitude) and (attitude → intention to sign), respectively, 0.981, 0.735 and 0.668. It indicates that the model is highly predictive and capable to explain endogenous construct.

5.3 Discussion and implications

E-petition systems have been widely used all over the world. Some prior studies about e-petitions have discovered democratic experience, personal income, age, education, and digital skill as the factors that influence citizens to sign e-petitions (Stockmer, 2014; Vicente and Novo, 2014). Another study that focused on the personal characteristic of e-petition signers revealed that self-efficacy (political efficacy and computer literacy), prosocial behavior/altruism, and lurking activities contribute their intention to sign. This study has explored other factors that influence internet users' intention to sign e-petitions, namely, e-petition initiators' credibility (SC), information/AQ and the signers' personal motivation perspective (personal relevance and altruism).

Our statistical results indicate that internet users' attitude toward e-petitions signing significantly influence their intention to sign e-petitions. This finding is consistent with TPB by Ajzen (1991) Indeed, a study by Bhattacherjee and Sanford (2006) pinpointed that positive attitude toward the system supports their willingness to use the system. We used several attitude indicators such as good, wise, pleasant and liking in our measurement. Hence, it is important for the e-petition websites to maintain those factors by helping e-petition initiators in their online and offline activities to achieve the e-petition goals. Internet users will see positively the supportive actions taken by the websites as an accelerator to win the case. We also suggest that the websites secure their users' personal data and will not use misuse of the data, as the users might find it as an unpleasant and unwise experience to join the websites.

Hypothesis	Path	Weight	|C.R.|	*p*-value	Results
1	ATT → INT	0.82	8.421	***	Accepted
2	AQ → ATT	0.50	7.126	***	Accepted
3	ALT → ATT	0.66	8.653	***	Accepted
4	RELV → ATT	0.23	2.590	0.01	Accepted
5	SC → AQ	0.99	9.417	***	Accepted

Table VI.
Hypotheses testing result

Our finding also reinforces the dual processing of the central route and peripheral route by the ELM by Petty and Cacioppo (1986). Bhattacherjee and Sanford (2006) have mentioned this finding in their study, which revealed AQ (central route) and SC (peripheral route) influence users' intention to use the system. In fact, we have found that internet users' perceived credibility of the e-petition initiators significantly influences their perception toward the quality of presented argument. Thus, we recommend e-petition websites to provide credibility rank feature on their website and make it visible to everyone. This feature has been pertinent in e-recommendation websites (i.e. tripadvisor.com and goodreads.com). On the other hand, the action that can be taken by anyone who wants to start an e-petition gathers support from public figures (i.e. celebrities, activists and politicians) as also suggested by Le *et al.* (2018). They will easily attract media and internet users to know more about the case of the e-petition that later increases their probability to sign the e-petition. However, this finding contrasts with the findings of Berg (2017), which states that anonymity increases the amount of participation in e-petitions. This shows that in Indonesia, public figures are still very influential in building community opinion.

Finally, an interesting discovery in this study is altruism as the most influencing factor in shaping internet users' attitudes toward e-petitions. This finding strengthens the study by Cruickshank *et al.* (2010), which examined the personal characteristic of e-petition signers. In fact, altruism has been identified as a dominant factor in the online environment when the actor gains little or no personal benefits (Ma and Chan, 2014; Wang *et al.*, 2014). Therefore, we suggest people who want to start an e-petition need to write a persuasive and arousing information and images for their e-petition. This will hopefully attract altruistic side of internet users. Furthermore, they could ask support from different kinds of voluntary groups as the people who join the groups are known as altruistic.

This study provides a significant implication both theoretically and practically. Theoretically, the finding of this study enriches understanding of the attitude factor. This study shows that the attitude of e-petition users is influenced by four factors, namely, SC, AQ, personal relevance and altruism. The research findings reinforce the technique acceptance model and theory of reasoned action/TPB, which shows that a positive attitude will encourage someone to act. As for the practical implications of the research are as follows:

- SC is the most significant factor in encouraging users to sign an e-petition. Therefore, to attract as much public participation as possible, the e-petition sites should add features that show the credibility of the petition maker.

- To ensure good AQ in every petition, e-petitions sites should provide templates, tips or even online training for petitioners to make interesting and persuasive public petitions.

- The e-petition sites must be able to be personalized so that users can be categorized based on their profiles, interests or hobbies. Furthermore, the e-petition site can suggest petitions based on appropriate categories with internet users.

- Furthermore, e-petition sites could ask support from different kinds of voluntary groups on appropriate interests as the people who join the groups are known as altruistic.

6. Conclusions

This study aims to identify factors that influence internet users' intention to sign e-petitions focusing in the source of information (petition initiators), quality of information/argument

and personal motivation (personal relevance and altruism) perspective. We adopted the ELM by Petty and Cacioppo (1986) and TPB by Ajzen (1991) and adding altruism to our model. The results indicate that there are three factors shaping internet users' attitude of e-petitions signing, namely, altruism, AQ and personal relevance. The positive attitude will likely influence them to sign e-petitions. Another finding is the dual processing of ELM routes, central route (AQ) and peripheral route (perceived SC and personal relevance) existed in the context of e-petitions signing. Furthermore, we have revealed the possibility of peripheral route (perceived SC) influence central route (AQ) as internet users think the argument of the e-petition that started by a credible person is relatively believable. This study shows that internet users in Indonesia are still influenced by public figures in their opinion.

In the model of TPB, we limited our scope in one of the three paths, namely, attitude toward behavioral intentions. Thus, in the context of e-petitions study, it is interesting to expand the research area in all of the mentioned paths (attitude, subjective norms and perceived behavioral controls) in TPB and examine, which one has the greatest influence to the e-petition signers. On the other hand, our finding that related to ELM has revealed not only the dual processing of the central route and peripheral route but also the possibility peripheral route influence the factor in central route. Hence, we recommend for anyone who wants to adopt ELM to include the examination of this relation in their study. Finally, altruism is identified as the major factor that influences people to sign e-petitions. Indeed, e-petitions signing is one of the voluntary actions that the signers receive a little or no personal benefits. Therefore, people should aware of this factor while examining the environment that likely has voluntary aspect.

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