

# Innovation resistance of political websites and blogs among Internet users in Singapore<sup>1</sup>

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## Abstract

Internet has become an influential platform to disseminate diverse political perspectives and promoting democracy. With prevalent use of Internet, Singapore is a unique context to examine if its people resist online political information in a socio-political situation that politics is considered as a sensitive domain and content regulation is imposed on mainstream media. The study integrates the concept of innovation resistance and the ideas derived from the Technology Acceptance Model to explore the reasons why Singaporeans resist political websites and blogs. After a focus group discussion, a web survey by Nielsen of 607 respondents using a sampling frame to ensure representativeness of Singapore's Internet users found that more than 40% of them had never visited even one political website or blog. The data analysis reveals five main factors cause the innovation resistance: perceived usefulness/image barrier, realization, perceived ease of use, peer influence and habitual conflict. Except perceived ease of use, the rest are found to affect users' intention for future adoption.

Keywords: political websites, blogs, innovation resistance, Technology Acceptance Model, Internet

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## **Introduction**

As the Internet becomes a mass medium, it is being used in ways that resemble the media. Among which is its use for political information. According to a Pew Internet & American Life Project survey, 74% of Internet users representing 55% of the American adult population went online in 2008 to involve in the political activities or gathered information about the election (Smith, 2009). It was the first time that more than half of the voting-age population used the Internet to engage in the politics during an election year. The growing online political participation activities also occur in Europe and Asia.

The popularity of political websites and blogs has grown exponentially. Compared with mass media, online political information is likely to have more unfiltered discussions but less credible information. The size of the online political news consumers in America had grown from 18% of adult population in 2000 to 44% in 2008 (Smith, 2009). There has been a salient increase of political blog readers since the 2004 US election campaigns (J. K. Lee, 2006). Social networking sites (SNS) arose as a form of virtual civic engagement in 2008 elections. The Pew study in September 2009 revealed that American bloggers and SNS users engaged in civic activities more actively than others, and thus the two new media could alter the long-existing pattern that well-off and well-educated tend to participate in online activities (Smith, Schlozman, Verba and Brady, 2009). The flourishing political blogs and SNSs in the West show the increasing significance of the Internet as a tool in political communication.

Similarly, the Internet is a boon to campaign strategists in spreading political information in some Asia countries. In Taiwan for example, all candidates in the 1996 first-ever direct presidential election had their own official websites (Hong and Chang, 2002). And in the local elections of 2009, nearly 80% of the candidates utilized Facebook in their campaigns, over half made use of Plurk, and several also uploaded campaign videos on YouTube (Hong, 2010). In Korea, the remarkably active use of the Internet for political campaigns had a significant impact in its 2002 presidential and 2004 parliamentary elections (Ducke and Tkach-Kawasaki, 2004). Does political cyber-campaigning have similar significant impacts on Internet advanced nations?

This study aims to examine how Singapore, the 3<sup>rd</sup> highest Internet penetration country in Asia (Internet World Stat, 2010) and the global pioneer in e-government services (Ke and Wei, 2004), is affected by the usage of political websites, blogs, and SNSs.

Since 1995, when access became widely available in Singapore, the Internet has emerged as a platform for the general public, opposition parties and individual activists to produce and distribute alternative content on politics in Singapore that otherwise would not be available because of the censorship of local mainstream media. The 2006 Singapore General Election (GE) even gave rise to a new constituency: Cyberspace. As Singaporeans began posting reports, photographs and videos of opposition rallies on blogs and YouTube, the government had to make an effort to better engage its citizens. It is obvious that in Singapore, the Internet has also become another platform in which parties compete with each other no less fiercely than they do in other forms of mass media. But ironically, while the new campaigning tool has become popular with political parties in Singapore, it still has little impact on elections, not being as widely embraced by voters as expected. Major opposition parties claimed that the Internet boosted membership and support as well as forced local media to cover their activities occasionally; however, it did not translated those effects into gaining parliamentary seats in the 2001 and 2006 General Elections (Gomez, 2008) and did not even have significant impact on the 2010 General election (Chang, 2011).

Why? Why does the evident fervor of online campaigning in Singapore and the opposition parties' enthusiasm for online campaigning not translate into success in the ballot box? The aim of this paper is to uncover the reason behind Singaporean's resistance to the political related websites. Some researchers attribute that to Singapore's particular political culture, the online campaigns could not have an impact on election outcomes on, but none have paid attention to the feedback of Internet users.

In early 2000s, confidence in using the Internet as a means of bringing greater political power to Singaporeans was low among Internet users (13.6%) and nonusers (14.4%). In addition, some people attributed the low impact of online campaigns on

Singapore's election outcomes to its controlled political and media context. However, none of the prior studies examines the relation of Singapore's Internet users' perceptions of web campaigns and online political information with the Internet impacts of on political engagement or elections. Nowadays, Singapore has 82% households with Internet access at home and 91% Singaporean are Internet users (aged 7 years and above) (Infocomm Development Authority, 2011). When public Internet access becomes prevalent in Singapore, opposition parties and activists see Internet with light touch content regulation as a crucial platform to disseminate their alternative political perspectives (Gomez, 2008). The ruling party that has frequent exposure in mainstream news realizes the significance of communicating political and party information online and tries to harnesses the Internet to secure its leading position.

After almost one decade when the first political website was shown in Singapore, will the increasing Internet penetration and blooming blogging and SNSs cause more adoption of web campaigns and online political information and thus strengthen the shaping power of Internet to Singapore's political engagement or elections? This survey study investigates above issues and examines factors that may predict users' intention to use similar Internet technologies for political purposes in the future.

## **Literature Review**

### **Cyber-campaigning in the West**

The Web has demonstrated itself as an effective way for the public to stay informed about political issues (Serva, 2004). Websites are less expensive than the mass media, with the similar capability to disseminate textual, audio and visual information. Also, the net is seen as a more direct, personal and interactive way of communicating messages to receivers. Website information can be continually updated to let visitors keep up with the political status (Benoit and Benoit, 2005).

The adoption of the Internet as a campaign weapon has escalated since its first tentative use in the 1992 US presidential election (Lusoli, 2005), even before the Internet was available to the general public. In the 2000 US state-level races, more than 90% of the major parties' candidates owned personal websites (Kamarck, 2003).

In the 2004 presidential election, George Bush and John Kerry both used the web as an important campaigning tool. Blogs also emerged as an online campaigning tool then, with candidates relying on them to discuss issues, recruit volunteers, raise funds, and communicate with the voters (Williams, *et al.*, 2005). McKenna and Pole (2004) felt cautiously optimistic about the positive impact of blogging on politics as their study suggested that weblogs, as a form of political participation, encouraged political discourses, empowered general Internet users to voice out, and thus strengthened democracy in America. They found weblogs facilitated political participation by providing two-way communication (i.e. comments) and building communities via links and blogrolls. Adamic and Glance (2005) further analyzed the posts of 40 “A-list” political blogs prior to the 2004 Presidential election to examine the frequently discussed issues and actors in both liberal and conservative bloggers.

Cyber-campaigning has also been adopted in Europe. In the 1998 German national election, political parties used the Internet to increase voter turnout (Schweitzer, 2005). Then, parties used websites as a one-way electronic brochure only (Kamarck, 1998). As the younger generation spends a considerable amount of time online, websites (often from offline organizations) attempted to engage them socially and politically (Ward, 2005). The revolution of cyber-campaigning in Europe took place in Germany during the 2005 election. Using websites, candidates were able to respond to public opinions rapidly, to criticize the opponents’ political agendas, and to raise funds (Guldenzopf and Voigt, 2006). In the 2007 French presidential election, the two candidates Nicolas Sarkozy and Ségolène Royal used the Internet in their campaigns more sophisticatedly. Sarkozy’s website had some 200 videos to allow voters to follow his campaign daily. Royal built a social-networking-like site to have dialogues with the public and established personal pro-Royal blogs to form a network for “participatory democracy” (Melillo, 2007). As for UK, Ferguson and Griffiths (2006) argued that its sluggish growth of a political blogging network might not radically transform British politics as its blogging aped traditional politics in the early adoption stage. However, they also found blogging’s positive impact in refreshing debates about the influence of information and communication technology (ICT) on British politics and political engagement.

In 2008 US Presidential elections, the Internet played a significant role. Internet users went online to get campaign and candidate information, listen to speeches and watch videos, donate money, or simply share political content with peers (Smith, 2009). The Internet allowed Obama to bypass the traditional filters of TV producers and newspaper editors and speak directly to voters (Barron, 2008). Using the Internet, Obama reached out to the younger generation and garnered their support. Obama supporters were generally more engaged in the online political process than online McCain supporters (Smith, Schlozman, Verba and Brady, 2009). Having campaign speeches available online, his website provided personalized webpages and added interactive features, such as text messaging and phone tools (Talbot, 2008). His campaign used blogs, SNSs and even Twitter to keep visitors updated on his progress in the elections. Obama's facebook groups built the online supporting network at a low cost (Anstead and Chadwick, 2008) and his SNS, MyBO, successfully garnered donations and even sorted volunteers geographically for assigning them suitable tasks (Talbot, 2008). Among Internet users, Obama voters were more likely to share online political content with others and posting their own original political content online, like Obama's Youtube music videos (Smith, Schlozman, Verba and Brady, 2009).

### **Cyber-campaigning in Singapore**

In Singapore, major political parties, such as the ruling party People's Action Party (PAP), opposition Singapore Democratic Party (SDP), Singapore People's Party (SPP) and Worker's Party (WP) had websites by 2001, using them as a platform to showcase their manifestos and candidates' profiles. With an Internet penetration rate of 36% then, the impact of the web campaigns on the 2001 elections was insignificant; the mass media remained the main sources of electorates and political information. However, over the years, political parties have developed more sophisticated ways to engage and interact with the public. For example, the Young PAP website has been revamped to include a forum for Internet-savvy youngsters to discuss election issues (Rahim, 2006). The first podcast, RadioSDP, was produced in 2005 by the opposition SDP in order to bypass the state-controlled media (Paulo, 2005).

As Singaporeans' Internet access has arisen to 61% in 2005 (M. C. Lee, 2006),

the blogging culture emerged to provide alternative voices for political matters. The 2006 elections showed a proliferation of political online content, especially in blogging, pod- and vod-casting (Gomez, 2006). New online politics-related genres provided staple sources for alternative information, with studies reporting nearly 200 articles daily during the nine-day campaigning period (Rahim, 2006). Several opposition politicians' blogs surfaced, with notable bloggers to discuss elections, bread-and-butter issues, or criticisms of opponents. Independent blogs also covered election matters, such as Mrbrown's "persistently non-political podcast" series, an almost daily series aired during the election period. The blogs even influenced mainstream media coverage of the elections. For instance, photos of sizeable crowds at opposition rallies were shown on blogs, like SGrally, which forced the mainstream media to run similar photos. After the 2006 elections, blogging has become the most salient on-line genre for alternative voices regarding political information. A small number of websites and blogs, like Mrbrown.com, and [yawningbread.org](http://yawningbread.org), have routinely provided alternative perspectives about Singapore's social and political issues through commentaries, multimedia efforts and podcasts.

On the other hand, the rise of blogging and other on-line politics-related genres prompted the government to remind the general public of laws regarding cyber campaigning and online political content. A political website is defined as one that "engages in providing any programme for the propagation, promotion or discussion of political or religious issues relating to Singapore on the World Wide Web through the Internet" (MDA, 2001). Singapore's Parliamentary Elections Act (PEA) requires all political websites, including blogs, to be registered with the Media Development Authority (MDA) (2001). It also prohibits anyone, except election candidates, political parties and election agents, from doing any form of "election advertising." Minister of State for Information, Communication and the Arts, Balaji Sadasivan, announced in February 2006: "In a free-for-all Internet environment, where there are no rules, political debate could easily degenerate into an unhealthy, unreliable and dangerous discourse, flush with rumors and distortions to mislead and confuse the public (Reuters, 2006)." Despite the registered political website rule, online political content has grown in quantity, quality, and in sophistication of presentation after 2006.

Due to the grey zone in definitions, some websites and blogs that contain political information and opinions indirectly might not be registered as political websites.

Studies suggest that Internet users may resist adopting the new innovation of campaigning tool-- political websites because of unappealing content (Hong, 2008). In the case of Singapore where has stricter administration on politics and online content than most of the countries, this study raises the research questions of whether Singaporeans tend not to adopt the use of online political information and cyber campaigns and why.

**Q1: Do Internet users resist (i.e., not use) political websites and blogs in Singapore<sup>1</sup>?**

**Q2: What are the reasons behind Singaporeans' resistance in using political related websites and blogs?**

In the following session, this study will provide the theoretical foundation to understand people's behavior of the innovation resistance and propose several hypotheses based on previous studies.

## **Theoretical Framework**

### **Innovation Resistance**

Early communication studies focused on the successful adoption and diffusion of innovations, ignoring the study of resistance. Ram (1987) has proposed the concept of innovation resistance because innovation brings change and resistance to change should be an expected reaction. It is more typical for most people to stick to their old habits.

According to Sheth (1981), risk awareness and habit conflicts are the reasons behind rejection of changes. Risk awareness includes awareness of economic risk and functional risk, and habit conflicts refer to a form of "cognitive resistance" (Ram, 1989). In addition, Ram (1987) pointed out those three sets of factors that might explain why consumers may resist innovation: Perceived Innovation Characteristics, Consumer Characteristics, and Characteristics of Propagation Mechanisms. The first set of characteristics covers relative advantage, compatibility, complexity and perceived risk; the second set includes psychological variables (e.g. perception,



motivation) and demographic variables; the third set touches on credibility and informativeness.

It has been suggested that when confronted with new products, consumers face two types of barriers that constrain them from purchase: functional and psychological. Functional barriers include product usage patterns, product value, and risks arising from product use; when adoption conflicts with consumers' past habits or does not provide stronger values (i.e. clear advantages) compared with other choices, and when consumers are uncertain of the product, innovation resistance will arise. Psychological barriers refer to traditions and perceived product image: when consumers have a bad impression of the innovation and when it is a mismatch with consumers' traditions (Ram and Sheth, 1989).

### **Technology Acceptance Model (TAM)**

The Technology Acceptance Model (TAM) can be applied to understand resistant behavior. Davis (1986) pointed out that the acceptance of information technology depends on two factors: perceived ease of use (PEOU), and perceived usefulness (PU), both of which affect attitudes and ensuing behaviors (Davis, 1989).

TAM has been found to be a useful explanatory model in many areas (Yang and Lee, 2008) such as the adoption of e-mails and voice-mail technology (Adams, Nelson and Todd, 1992), Internet shopping channels (Yang, Park and Park, 2007) and virtual stores (Chen and Tan, 2004). The Model has also been integrated with Innovation Diffusion Theory (IDT) to propose a new theoretical model to explain the behavior of Internet adoption where PEOU (Perceived Ease of Use) and PU (Perceived Usefulness) were the dominant determinants affecting consumer attitude and behavioral intention (Chen and Tan, 2004).

The concept of PU in TAM is similar to value barrier in innovation resistance (Ram and Sheth, 1989). Value barrier disappears when there is a relative advantage of the innovation. In other words, where an innovation provides a better value, it will be perceived to be useful and thus adopted. PU is therefore correlated to perceived relative advantage. In addition, perceived ease of use (PEOU) in TAM is similar to the concept of complexity in Ram's (1987) hypothesis of innovation resistance.

Integrating the assumptions in innovation resistance theory and TAM, the study proposes the following hypotheses.

### **Hypotheses**

According to Ram (1987), “the lower the realization of an innovation is, the higher the innovation resistance will be.” That is, people are more likely to adopt an innovation when they understand it better (Ram and Sheth, 1989). Thus, the first step to adopt an innovation is to reduce its uncertainty. The more knowledge potential users have, the greater the possibility of its adoption. In other words, while people have more understanding of the new campaigning tools-- political websites and blogs, the new innovation will be more likely to be adopted. This leads to the hypothesis:

**H1: Higher levels of realization will be positively related to higher levels of intention to use political websites and blogs in the future.**

PEOU was a significant predictor of citizens’ usage intention of electronic government services (Carter and Belanger, 2005). The greater the complexity of an innovation, the more likely innovation resistance is to occur. In the US, it affected the willingness to use e-voting (Schaupp and Carter, 2005). We therefore generate the next hypothesis:

**H2: Higher levels of perceived complexity will be positively related to lower levels of intention to use political websites and blogs.**

Resistance occurs when an innovation conflicts with consumers’ prior experiences or existing habits because consumers refuse to change entrenched habits (Sheth, 1981; Ram and Sheth, 1989). In a study of resistance to candidate’s websites, Hong (2008) found that the more a voter was accustomed to obtaining political information from traditional media as opposed to the Internet, the lower his or her intention to the future use of candidates’ websites. Thus, the proposed Hypothesis 3 is as follows:

**H3: Higher levels of perceived incompatibility will be positively related to lower levels of intention to use political websites and blogs in the future.**

Ram (1987) said that “the lower the perceived relative advantage is, the higher the innovation resistance will be.” When the information provided by websites and blogs is judged not useful compared with that provided by traditional media, or when the information obtained from traditional media is of good quality and newsworthy enough, users would be less likely to adopt online news or information. Thus, when there is a “value barrier” such that the new product is unable to offer a stronger value compared with its substitutes, innovation resistance occurs (Ram and Sheth, 1989). Thus, the Hypothesis 4 is:

**H4: Higher levels of perceived relative advantage will be positively related to higher levels of intention to use political websites and blogs in the future.**

The perception of a product will influence its adoption; so voters who hold a negative image of candidates websites and blogs (such as when they perceived that the information provided by the sites is not credible or complete) will be less likely to use the new technology (Hong, 2008). Unlike mainstream media, which is under stricter content regulation, political websites’ are less regulated and are more controlled by the political parties, candidates, or bloggers (Wells, Moriarty and Burnett, 2006). This opens them up to accusations of bias. Online content that is not objective, credible, or without alternative perspectives will blunt its use. Thus Hypothesis 5 is:

**H5: Higher levels of perceived negative image will be positively related to lower levels of intention to use political websites and blogs in the future.**

In addition, peer influence could be a possible factor behind people’s use or not use political websites and blogs (Chou, 2005). According to a survey in Taiwan

(InsightXplorer Limited, 2007), the major reason for Internet users to use some particular blogs is because their friends also use them.

**H6: Peer influence is correlated to people’s intention to use political websites and blogs in the future.**

The availability and credibility of information may be affected by the external environment, which in Singapore includes censorship. In the 1950s, inappropriate news had caused racial riots and bloodshed, which is beyond the scope of this paper to detail. Several legislative measures by the Singapore government exist to control the mainstream media reports in order to ensure national society and societal harmony. During electioneering, the Parliamentary Elections Act restricts election advertising and other content political parties may put out.

Realizing the difficulty in monitoring abundant decentralized Internet content, the MDA imposes the “light-touch” regulatory framework, the Class Licence Scheme, for Internet content producers (ICPs) and service providers (ISPs) to be automatically licensed. However, their licenses will be revoked when people report the ICPs or ISPs break content rules and the investigations have proved their misconducts (Lin, 2009). Nevertheless, political websites which are regulated under a stricter rule must register with the MDA. Under this situation, even though online political contents are less regulated comparing to the mainstream media’s news reports, people may still perceive the new media is under government’s control and thus resist using political websites and blogs. Hence, we propose the following hypothesis:

**H7: Higher levels of perceived government’s censorship will be positively related to lower levels of intention to use political websites and blogs in the future.**

### **Research Method**

A focus group discussion was conducted before the formal survey. The objective of

the focus group discussion was to explore the possible reasons behind people's resistance in using political websites and blogs. Then, based on the results of the focus group discussion and the suggestions of the prior literature, the questionnaire for the formal survey was constructed.

The Nielsen Company (Singapore) Pte Ltd was commissioned to conduct the formal online survey, which used the Nielsen's online panel consisting of Singapore adults spanning a wide range of demographic segments. A broadcast email with the direct URL link to the survey questionnaire was sent to the target respondents (aged 21 yrs and older). The email served as an invitation letter describing the objective of the study, the study length and the incentive (if any) to be provided for participation. The URL would prevent unauthorized access and any person from completing the survey more than once, thereby ensuring data quality. Importantly, respondent quotas were set on key demographic variables (gender, age and race) to ensure that the sample represents Singapore Internet users.

## **Measurement**

### **Independent Variables**

#### ***Realization***

To measure this variable, respondents were asked to rank their agreement (on a 5-point Likert scale where 1 was "strongly disagree" and 5 was "strongly agree") with two items developed based on the hypotheses of Ram (1987) and Chia, *et al.* (2006): (1) I have no idea of what kind of contents will be provided by the above websites or blogs, so I never use them. (2) I do not have any knowledge about the political sites or blogs, so I never use them. (Cronbach's alpha =.91).

#### ***Complexity/Perceived Ease of Use***

Respondents were asked to rate on a Likert scale of 1 to 5, with 1 being "strongly disagree" and 5 being "strongly agree," the two statements adapted from Carter and Belanger (2005): (1) It might be very troublesome to use the related sites or blogs (e.g. user unfriendly), so I never use them. (2) I might have some technological difficulties in using the related sites or blogs, so I never use them. (Cronbach's alpha =.76).

#### ***Habitual Conflict/Compatibility***

Respondents were asked to rate on a Likert scale of 1 to 5, with 1 being “strongly disagree” and 5 being “strongly agree,” the two statements developed by Schaupp and Carter (2005): (1) I did not have the habit to use the Internet to search for political information, so I didn’t use related websites or blogs. (2) I was used to getting political information from traditional media (e.g. TV or NP), so I never used the related websites or blogs. (Cronbach’s alpha =.62).

#### ***Value Barrier/Perceived Usefulness***

This variable was operationalized by two items from Carter and Belanger (2005). Respondents were asked to rate on a scale of 1 to 5 the two statements: (1) I believe that the political information I got from traditional media was substantial enough, so I never use the political websites or blogs. (2). I believed that the political information provided by related websites and blogs was not better than the information provided by traditional media, so I never use them. (Cronbach’s alpha =.70).

#### ***Image Barrier/Negative Image***

Based on Cho and Cheon’s suggestions (2004), this variable was measured by asking the respondents if they agreed with the following statements on a 5-point scale: (1) I believe that the information provided by the related websites or blogs might be not credible, so I never use them. (2) I believe that the related websites or blogs might not be able to provide objective political information, so I never use them. (Cronbach’s alpha = .82).

#### ***Peer Influence***

Respondents were asked to rank their agreement with two statements derived from Chou (2005) (on a 5-point Likert scale where 1 was “strongly disagree” and 5 was “strongly agree”): (1) Because my friends and classmates never recommend the political websites or blogs, I never use them. (2) Because my friends and classmates never use the political websites or blogs, I never use them. (Cronbach’s alpha =.81).

#### ***Perceived Government’s Censorship***

This variable was measured by the following question based on Hong’s study (1996): “Because I believe that government censors the political information from the Internet, I never use them.” The 5-point scale was also used, where 1 was “strongly disagree” and 5 “strongly agree.”

## **Dependent Variable**

### ***Intention to Use Political Websites and Blogs in the Future***

The dependent variable of this study was measured with a 5-point scale using the following question: “Do you have any intention to use the political websites or blogs in the future?”

## **Control Variables**

In this study, the following variables were controlled: demographics (age, gender and education), Internet use, political interest and interpersonal communication.

According to Leung and Wei (1998), young and well-educated male respondents were more likely to be the early adopters. Elsewhere, it has been found that there is a negative correlation between “age” and PEOU; and education significantly influences frequency of use and attitude towards use (Hubona and Geitz, 1997). Internet use can predict the adoption of online service and online banking (Eastin, 2002) and may have an impact on people’s intention to use candidate websites and blogs (Hong, 2008). Thus, “Internet use” was another external variable controlled.

In Europe, individuals who engaged in more discussions with relatives and friends were more inclined to care about politics (Esser and De Vreese, 2007). In fact, political information from the party websites is likely to be diffused between friends, neighbors and colleagues via interpersonal communication (Norris and Curtice, 2007). Hence, the variable of “interpersonal communication” was also controlled in this study.

Kaye and Johnson (2002) found that Internet users tended to be more interested in politics, because the Internet provides an opportunity to reach politicians and to communicate with other users with high political involvement. Thus, “political interest” is another control variable.

### ***Demographic Variables***

Respondents were asked to indicate their “gender,” “age,” the “highest education level,” and their monthly household “income.”

### ***Internet Use***

The “Internet use” variable was developed based on Ko, *et al.*’s (2005) study of the experience or frequency of accessing online political news: How often do you access political news on the Internet? A 5-point scale was used.

### ***Political Interest***

Political interest was assessed by 5-point scale for the question from Avery’s study (2009): How closely do you follow news about government and public affairs?

### ***Interpersonal Communication***

This was measured by 5-point scale for the questions from Hong’s research (2009): (1) How often do you discuss public affairs or political events with friends or relatives online? (2) How often do you discuss public affairs or political events with friends or relatives offline?

## **Results**

The online survey targeting at Internet users aged 21 years and above. A total of 1,743 email invites were sent out to Nielsen’s online panelists along with one email reminder. A final sample size of 607 (35% response rate) was obtained.

### **Descriptive**

The Stratified Proportional Random Sampling method was used. Quotas were set on key demographic variables e.g. gender and age to ensure that the sample was representative of the Singapore Internet population. Out of the valid sample of 607, more than 40% (266) of the respondents had never used political related web sites or blogs. There were 55.4% were male and 44.6% were female. In terms of age distribution, 10.4% of the sample was aged 21-24, 16.6% was aged 25-29, 16.6% was aged 30-34, 13.8% was aged 35-39, 14.7% was aged 40-44, 9.9% was aged 45-49, 11.2% was aged 50-54 and 6.8% was aged 55 and up.

### **Results for Research Question 1 and 2**

In answering research question 1, the results show that 44 % of the Singaporean respondents said they had never used political websites or blogs. And in answering



the research question 2, factor analysis was applied, using principal component analysis with promax rotation to evaluate construct validity. Table 1 shows five factors with Eigen values larger than one: Perceived Usefulness/Image Barrier, Realization, Perceived Ease of Use (Complexity), Peer Influence, and Habitual Conflict (Compatibility). The five factors explain 71.22% of variability. The results also mean that censorship was not a reason for people’s resistance, but the above five factors were the reasons behind people’s resistance to use the political related sites or blogs, though.

**Table 1 Eigen Values, Explained Variability % and Cronbach’s Alpha Value**

	Eigen Values	Explained Variability	Cumulated Variability	Cronbach’s alpha
Factor 1 Perceived Usefulness / Image Barrier	4.79	31.95%	31.95%	.79
Factor 2 Realization	2.29	15.28%	47.23%	.91
Factor 3 Perceived Ease of Use (Complexity)	1.35	9.02%	56.25%	.76
Factor 4 Peer Influence	1.21	8.09%	64.34%	.81
Factor 5 Habitual Conflict (Compatibility)	1.03	6.89%	71.22%	.62

### **Results to Hypothesis Testing**

Table 2 showed that demographic characteristics were not good predictors of respondents’ intention of the future use of political websites and blogs, accounting for a non-significant .6% of the variance in the dependent variable.

“Political interest” was a highly significant predictor of the dependent variable

(Beta = .361,  $p < .001$ ). While respondents with greater political interest were more likely to have a higher intention to use related technology in the future.

“Internet use” also had a significant impact on the dependent variable (Beta = .147,  $p < .05$ ): the more often people access online political news, the higher the intention to use political websites and blogs in the future.

In the fourth stage, “interpersonal communication” was entered in the regression model. Only the variable “discuss public affairs or political events with friends or relatives offline” was significant: respondents with more interpersonal communication on politics offline were more likely to use the related websites and blogs in the future.

Furthermore, to find out whether resistance to political websites and blogs had a significant impact on respondents’ intention to use the new technology in the future, all of the possible factors behind user resistance (Perceived Usefulness / Image Barrier, the second Realization, the third Perceived Ease of Use (Complexity), the fourth Peer Influence, and the last Habitual Conflict (Compatibility) were entered in the fifth stage of the hierarchical regression. As the five possible factors (independent variables) are significantly correlated (as shown in the correlation analysis), multicollinearity may be a problem, the factors were all entered in Block 5 separately and run in different regression models.

After controlling for the demographics, political interest, Internet use and interpersonal communication variables, the result showed that realization had a significant impact on respondents’ intention to use the political websites and blogs in the future. When respondents had more knowledge about the political websites and blogs, the intention of innovation adoption in the future was high (Beta = .125\*,  $p < .05$ ). Hypothesis 1 was supported.

However, perceived ease of use (complexity) did not have a significant impact on respondents’ intention to use the new technology in the future (Beta = -.020,  $p > .10$ ). Hypothesis 2 was not supported.

The more respondents thought that political information obtained from traditional media was sufficient and the credibility related websites and blogs might be low, the higher the intention of innovation resistance in the future (Beta = -.207\*\*,  $p < .01$ ). Hypotheses 4 and 5 were supported.

Respondents who were not in the habit of using the Internet to obtain political information but were used to obtaining it from traditional media (e.g., television and newspapers) have low intention to use political websites and blogs in the future (Beta= -.208\*\*,  $p < .01$ ). Hypothesis 3 was supported.

Finally, the more respondents agreed that their non-adoption of the political websites or blogs resulted from no recommendations or no use from their friends and classmates, the higher the intention of innovation resistance (Beta= -.111#,  $p < .10$ ). Hypothesis 6 was marginally supported<sup>2</sup>.

**Table 2 Hierarchical Regression Analysis of Respondents' Intention to Use Candidate Websites and Blogs in the Future**

Independent Variable	$\beta$	R <sup>2</sup>	Adjusted R <sup>2</sup>	R <sup>2</sup> Change
Block 1 <b>Demographics</b>		.006	-.02	
Gender	-.046			
Age	-.010			
Education	.050			
Income	-.014			
Block 2 <b>Political Interest</b>	.361***		.103***	.117***
Block 3 <b>Internet Use</b>				
Access Internet Political News	.147*		.140*	.017*
Block 4 <b>Interpersonal Communication</b>			.162*	.022*
<Online>	.016			
<Offline>	.175*			
Block 5 <b>Realization</b>	.125*		.142*	.014*
Block 5 <b>PEOU (Complexity)</b>	-.020		.128	.001
Block 5 <b>PU/ Image Barrier</b>	-.207**		.170**	.040**
Block 5 <b>Habitual Conflict/Compatibility</b>	-.208**		.169**	.039**
Block 5 <b>Peer Influence</b>	-.111#		.140#	.011#

Note: \*\* $p < .01$ , \* $p < .05$ , # $p < .10$

## **Discussion and Conclusion**

In the beginning, we believed that Singapore's strict control on politics and online content might discourage its people to use online political information and be exposed to cyber campaigns. However, the results showed that merely less than 50% of the Singaporean Internet respondents had never used political websites or blogs before. Two possible reasons might support the results above. First, it might be because of Singapore's high Internet penetration rate (72.4%) (Internet World Stats, 2010a). Second, it could be that the Internet with its alternative perspectives and freedom for online political discussions attracts Singaporeans to seek online political information which is not available in the mainstream media. Censorship of the mainstream media is thus might be a stimulus, not an inhibitor, for people to use political websites and blogs.

The study also found that Perceived Usefulness/Image Barrier, Realization, Habitual Conflict (Compatibility), Peer Influence and Perceived Ease of Use (Complexity) were the factors behind people's resistance to use political websites and blogs. In addition, after controlling the variables of demographics, political interest, Internet use and interpersonal communication, all the above four factors were found to have a significant impact on the intention to use political websites and blogs in the future.

In addition, the results suggest that the more people know about political websites and blogs, the more likely they are to use the related technology in the future. This finding confirms Ram's thesis (1987) that the higher the level of knowledge of an innovation, the lower the innovation resistance. The study also found some inertia: that those who were more accustomed to obtaining political information from traditional media as opposed to the Internet, tended not to want to use the political websites and blogs in the future. This study thus supports the thesis that when Internet users refuse to change the status quo or alter their long established habits, innovation resistance occurs (e.g., Sheth, 1981; Ram, 1989).

The study also suggests that when the information provided by websites and blogs is judged as "not superior" to traditional media, or when information obtained

from traditional media is viewed as good and substantial enough, people tend to reject the new technology. The finding therefore supports Ram and Sheth's (1989) thesis that the lower the perceived relative advantage, the higher the innovation resistance. Besides, when users did not hold a positive image of political websites and blogs, the intention to use them would be low. This finding supports Ram's hypothesis (1987, p.211) that "the higher the credibility of the propagation mechanism, the lower the innovation resistance."

The results also showed that adoption or rejection of a blog was influenced by the users' peers. The more people agreed that their resistance of the political websites or blogs resulted from no recommendations from their friends, the higher the intention of innovation resistance. The result is also consistent with Chou's argument (2005) that peer influence could be a possible factor behind people's intention to use or not to use political websites and blogs.

Among the factors being studied, only Perceived Ease of Use (Complexity) did not show a significant impact. According to International Telecommunication Union (Internet world stats, 2010b), 77.8% of the Singapore population used the Internet. The prevalence of Internet usage and the user-friendly websites and blogs allow the digital savvy Singaporeans to use the political web services and information easily. Hence, Perceived Ease of Use is not considered as a hurdle to influence their future adoption.

Further, the results showed that those with higher political interest, more frequent access online political news and more offline interpersonal communication on politics tended to adopt political websites and blogs in the future. The finding reinforced the conclusions of Bucy, D'Angelo, and Newhagen (1999) that political interest may influence media use. Those with a high interest in politics will try to find more relevant information from the media. If people care about politics, they are more likely to use political websites and blogs in the future. The above finding supports Esser and De Vreese's theory (2007) that individuals who engage in more discussions with relatives and friends were more inclined to participate in politics. However, it is not evident why discussing political affairs "offline," instead of "online," would have a significant influence on people's intention to use the political websites in the future.

The reasons behind this result need to be further explored.

Following from the above, we would conclude that the most significant contribution of this study lies in verifying for the first time the various hypotheses of innovation resistance and Technology Acceptance Model with respect to the situation in Singapore. For example, it was found for the first time that peer influence is a major factor in determining people's use of political websites and blogs. However, contradictory to our original assumption, it was also revealed that Perceived Ease of Use (Complexity) and perceived government's censorship cannot account for resistance of political websites. The former is possibly due to Singapore's high level of technology literacy, and one explanation of the latter may be the general belief among Singaporeans that the government is less strict in its regulation of online content. While censorship of traditional media is a well known fact in Singapore, the government's lighter touch with online media means that Singaporeans may feel more confident in the freedom of the information they are able to obtain online and are consequently not as affected by perceived censorship in their attitude towards political websites. This demonstrates the effect that different sociopolitical environments and cultures may have on verifications of the same hypotheses.

Below we will acknowledge the limitation of this study. Though our sample was drawn from Nielsen's Singapore Cyber Panel database, a credible database in Singapore that covers a wide spectrum of professions and age groups; it is not a probability sample of all Internet users. It raises the issue of the representative sampling and generalization. Although this is a common problem with web surveys (Schillewaert, Langerak and Duhamel, 1998), future research still needs to figure out a better way to overcome this weakness.

### **Suggestions for Further Research**

The study has opened up several possible lines for further inquiry. First, a survey during the election campaign period can be conducted to ask the respondents about their reasons why not using certain party's or candidate's websites, instead of asking why they were not looking at political websites in general. Second, since a lot of new campaign tools such as YouTube, Facebook, MySpace, Twitter and Plurk came into

the political arena—for instance, more than half of the members of parliament (MPs) had Facebook accounts to communicate with citizens in 2010 General Elections in Singapore (Hussain 2010), researchers have many opportunities to test the concept of innovation resistance and the hypotheses of the Technology Acceptance Model on various new media. Further research might thus find out new reasons for people's adoptive or resistant behaviour. The above results also are able to offer the parties and candidates some ideas of creating better campaigning tools to build good relations with the voters and thus to increase voters' political participation.

### **Notes**

1. In the focus group discussion, the authors found that people were unable to differentiate the political websites from the political weblogs, thus, we asked the respondents "if they have ever used the political related websites or blogs" in the formal survey. In this study, the political (or socio-political) websites and blogs include 1) blogs: The Yawning Bread, Talking Cock.Com, and [mrbrown.com](http://mrbrown.com) and ; 2) party's websites: the PAP website or SDP website; and political-related citizen journalism sites: The Online Citizen, The definitions and examples were presented in the beginning of the questionnaire.
2. According to Iyengar (1991), if the  $p < .10$ , the hypothesis also can be supported. And the authors believed that if the sample size was slightly bigger than the one used now, the hypothesis could be strongly supported.

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