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ABSTRACT

This study collected data before and after the 2012 Taiwanese presidential election to examine active and passive Facebook (FB) participation on subsequent attitudinal and behavioral outcomes. Based on the differential gains model, the results showed that active engagement in FB political activities before the election directly affected offline political participation after the election. However, this direct effect occurred for first-time voters (20–24 years old) but not for the 25 and older generation. Passive exposure to politically related FB activities before the election indirectly affected offline political participation after the election and voting behavior through perceptions of FB use on political engagement. These indirect effects occurred in both first-time voters and in the rest of the voters. The results extend the differential gains model to social network sites (SNSs) and suggest that FB participation is another form of political participation among the younger generation that may serve as a gateway to motivate first-time voters to become more engaged in political participation. In addition to active discussion, passive exposure to politically related activities within FB networks indirectly contributes to voting and offline participation, expanding the current differential gains model.

The role of social network sites (SNSs) in presidential elections has received increasing attention in recent years. SNSs have become one of the dominant tools for political campaigns and for the online presence of candidates worldwide (Fernandes, Giurcanu, Bowers, & Neely, 2010; Harlow, 2011; Vitak et al., 2011; Woolley, Limperos, & Oliver, 2010). Previous research has explored whether SNSs may contribute to engaging voters to pay more attention to politically related activities or mobilizing users for increased online and offline political participation. Conclusions based on previous studies have varied regarding the engaging aspects of SNSs on users' political participation (Kushin & Yamamoto, 2010; Strandberg, 2013; Vitak et al., 2011; Zhang, Johnson, Seltzer, & Bichard, 2010). Nevertheless, most studies have suggested a positive correlation between political participation in SNSs and users' political interests.

One limitation of the existing literature is the correlational conclusions derived from cross-sectional survey methods and qualitative interviews. Few studies (Ekström & Östman, 2015) have employed a longitudinal approach to examine the effects of online information on political participation, and those studies did not focus on SNS activity. Furthermore, no previous study has included actual voting behavior as an outcome of users' participation in various political activities via SNSs[1]. Very limited attention has been paid to the Asian population in terms of the political usage of SNSs and its effects on voters' offline political participation and voting turnout.

Moreover, the scope of previous studies was limited to comparing SNS participation to other media with respect to users' political participation. In contrast, this study examines active versus passive political participation in an SNS on users' online and offline political participation. In addition, this study examines potential differences between first-time and experienced voters. Grounded in the differential gains model, this study examines differences between first-time and experienced voters through active versus passive FB use and addresses the limitations of the existing literature in investigating the role of SNSs in presidential elections using a two-wave panel survey conducted before and after the 2012 Taiwanese presidential election.

The Taiwanese context

The 2012 Taiwanese presidential election was the first time in Taiwan's history that voters elected both the president and the legislators at the same time. This strategy was employed to encourage and attract more people to vote. Past elections in Taiwan have shown that the voting turnout falls between 75% and 82% (Central Election Commission Election Database). However, according to a report from the National Youth Counsel (1998), only 18.3% of young registered voters aged 20–24 years old voted in the 1995 legislators' election, and only 32.1% voted in the 1996 Taiwanese presidential election. Recently, a survey showed that only 54% of first-time voters aged 20–23 voted in the 2008 presidential election, which was significantly lower than the 78–90% voting turnout among other ages (TVBS Poll Center, 2008). Compared to the other age groups, which had a voting turnout of 78–90%, young and first-time registered voters had significantly lower voting participation.

A magazine article (Chang & Lin, 2003, January) presented interviews with scholars who indicated that the young generation was indifferent toward politics. Image and charisma have become the salient characteristics that attract these young voters to support a candidate. The use of the Internet for campaigns has become a trend to promote and manage a candidate's image to influence these young voters. An online presence is not enough; candidates have begun to utilize online tools to provide channels for users to interact directly with the candidates, allowing candidates to create meaningful conversation while publicly displaying a tech-savvy image.

A growing body of literature in Taiwan has investigated how the Internet and various online communication tools affect users' civic participation, political participation, and voting behavior. Wang (2006) found a positive association between online political activities and offline political participation. Using data from the 2004 Taiwan Election and Democratization Study (TEDS), the author found that after controlling for demographic information and interpersonal communication variables, traditional media consumption, rather than Internet usage, significantly predicted users' voting behavior. However,

participation in online political activities, such as reading online political news, had a positive relationship with political participation, including joining protests, promoting activities, and donating to candidates.

Similarly, Wang (2010) examined the effects of audiences' Internet and traditional media use on perceptions and evaluations of candidates' images. The results of an analysis of the 2006 election indicated that after considering demographic variables, traditional media use had significantly positive associations with audiences' perceptions and evaluations of the candidates. Internet usage did not significantly predict any dependent variables. The author suggested that voters had not established the media habits necessary to obtain election information from the Internet in 2006; therefore, the use of the Internet to manage online impressions had not yet achieved maturity.

More recently, Su and Chang (2010) examined the role of Weblogs (blogs) in the 2008 Taiwanese presidential election and found that blogs had become a tool for political candidates to supplement their campaigns. The use of SNSs in Taiwan emerged during the 2010 Taiwanese city mayoral election. Kao (2011) conducted a case study of a FB fan page for one of the candidates (Chu Chen). The results indicated a positive relationship between fans' perceived image and their feedback. In addition, people's psychological identity mediated the effect of FB fan page participation on their voting intention. This research showed that FB has begun to be utilized as a tool for political campaigns and 'fan management' in Taiwan.

Similar to the US situation, Taiwanese candidates in the 2012 presidential election continued the trend of adopting various online communication tools for political campaigns, including the Internet (Hsieh, 2011), blogs (Su & Chang, 2010), and social networking sites (Kao, 2011). Among all of the popular SNSs in Taiwan, FB has become the primary tool for political campaigns. Presidential candidates establish fan pages, and fans actively establish clubs to organize various forms of political actions.

SNSs have also become one of the most important online activities for Taiwanese users. One survey conducted by InsightXplorer (2011) showed that 95.98% of Taiwanese Internet users have visited SNSs. In addition, Taiwanese users spent one-third of their online time on SNSs. Among these SNSs, FB use was greater than the use of other sites, and FB has remained the site on which users spend the most time (an average of 7.9 hours per month in 2011). FB (Statistic Brain, 2014) has reported that the number of active FB users in Taiwan has reached 15 million (65% of Taiwan's total population), the highest rate in the world. Therefore, it is important for researchers to explore and investigate the role of FB in the 2012 presidential election, specifically in the Asian context.

The differential gains model of FB use: active participation versus passive exposure

Prior research has indicated that political campaigns may not have a significant influence on voters who have demographic predispositions to and prior opinions of an existing candidate's party affiliation and administration (Holbrook, 2006). Therefore, political campaigns in Taiwan may have a greater influence on younger voters and on those who have not made predetermined decisions about the election (Chang & Lin, 2003). To reach these populations, candidates have increased their online presence and campaigns to gain more exposure to the online population.

Despite the debates over whether online political campaigns have negative or positive effects on democracy and political participation (Bimber, 2000; Han, 2008; Krueger, 2002), recent research has begun to focus on more nuanced ways to investigate the context in which users participate via SNSs. FB has received increased attention worldwide among communication researchers because of its popularity and its unique composition of personal social ties. Emerging research from the 2008 US presidential election has shown that popular SNSs, particularly FB, have a positive influence on college students' political participation and political interest (Baxter & Marcella, 2012; Vitak et al., 2011). However, Zhang et al. (2010) found that among the population of the southwestern USA, reliance on SNSs had a significantly positive correlation with civic participation but not with political participation.

With respect to political participation, in the past, the two-step flow model (Katz & Lazarsfeld, 1955) acknowledged the mediating effect of information from the mass media shared by opinion leaders with friends and opinion followers. Recent literature has noted that interpersonal conversation and discussion of news and political information moderate the effects of political news on audiences' political participation (Scheufele, 2002). Previous studies have tested this differential gains model to explain the complexity of political engagement in face-to-face conversation (Hardy & Scheufele, 2005), traditional mass media (Scheufele, 2002), and online interactions (Hardy & Scheufele, 2005). Research results have indicated that offline and computer-mediated interpersonal communication, such as online chat, moderates the effects of political news on political participation. The effect of online news information seeking on political participation is greater for those who engage more in politically related interpersonal conversation, regardless of the medium or context. More recently, Yamamoto, Kushin, and Dalisay (2015) examined the differential gains model in the context of traditional offline media, traditional online media, SNSs, and mobile applications. According to their results, online political expression moderates the effect of attention to the above-mentioned contexts on college students' political participation.

The differential gains model illustrates the central role of interpersonal interactions in political engagement, and existing studies have examined interpersonal expression from the perspective of active use (Hardy & Scheufele, 2005; Yamamoto et al., 2015). In other words, previous examinations of interpersonal expression have focused on users' purposeful conversations or active expression related to politics. However, when researchers examine interpersonal communication within SNSs, one salient characteristic that must be considered is that users can easily be exposed to online interpersonal conversations in SNSs, either intentionally or accidentally. Those who are interested in politics can actively express their thoughts about politics or share political news on FB, and those who are inactive in politics can accidentally be exposed to information through their newsfeeds and personal networks.

Facebook provides ways for users to quickly access a variety of information through transparent social networks that are mapped online (Donath & boyd, 2004; Luarn, Yang, & Chiu, 2014). Sharing and curating functions allow users to diffuse information rapidly. If this information is popular, then it may unexpectedly become viral and traverse diverse networks. Users can share political information by updating their personal status or by editing their personal profiles; by engaging in multimedia activities, such as re-sharing a video news clip from other online media or uploading photos; by using

applications, such as taking a political quiz or playing a game; or by participating in fan groups or specific clubs. FB's newsfeed function can present such information to others in a timely manner. Reacting to this information by 'liking' a post, writing a comment, or re-sharing automatically extends to different user networks, thereby diffusing this information (Zube, Lampe, & Lin, 2009).

This study is grounded in the differential gains model and extends that model to SNS conversation and information diffusion. This study argues that in addition to active participation, passive exposure to political information on FB can help to mobilize information gathering and further increase users' interest in politics and participation. Most politically indifferent or inactive users do not actively seek or purposefully filter political information from mass media or online channels. However, information naturally 'penetrates' these users' newsfeeds, and awareness can be raised effortlessly through strong or weak ties. For example, users maintain close interactions via bonding social capital and are naturally exposed to political information or conversations that are posted or shared through their strong ties during frequent interactions with close friends and family (Ellison, Steinfield, & Lampe, 2007). In users' bridging social networks, users may encounter political information or thoughts based on diverse or opposite perspectives shared through weak or bridging ties (Gil de Zúñiga, Jung, & Valenzuela, 2012).

Active versus passive political participation in SNSs can therefore be defined as the activities in which users are engaged, depending on whether they actively initiate an activity or passively or accidentally encounter information or conversation through SNS newsfeeds. For example, active participation includes posting political text updates or photos, engaging in political clubs, taking related quizzes or tests, or holding related events. Passive exposure focuses on the information and activities that users see in their newsfeeds. Recent studies have found evidence of the effects of passive exposure on online resources. A recent meta-analysis (Boulianne, 2009) of US research data sets indicated that exposure to online informational content is positively associated with political participation. More recent empirical studies have also shown that in the contexts of Chile and the Netherlands, exposure to news sites and related news on SNSs is linked to political and civic participation (Bakker & de Vreese, 2011; Valenzuela, Arriagada, & Scherman, 2012).

Although the existing literature has primarily focused on the association between online or SNS 'news' and users' political participation, this study focuses on active participation in and passive exposure to political activities on FB that potentially convey political information. Previous research has found that normal interactions (e.g. not politically related interactions) on SNSs do not directly predict democratic participation by youth, but online political interactions intervene in these normal interactions (Ekström & Östman, 2015). Based on the differential gains model, in addition to the moderating role, exposure to interpersonal conversation increases an individual's interest in political information and political participation behavior.

First-time voters and FB political activities

As described previously, young voters, especially those who are first-time voters, have significantly lower voting turnout compared with other age groups. Politicians use SNSs and

online campaigns to demonstrate their personal charisma and to attract these inexperienced voters. A 2012 representative sample in Taiwan (Taiwan Communication Survey, 2012) showed that individuals aged 20–24 spend significantly more time on SNSs (1,075 minutes per week) and report a higher friend count (492 friends) than those who are 25 years and older (630.17 minutes per week and 284 friends). This use pattern may indicate that individuals who are 24 and under are digital natives (Bennett, Maton, & Kervin, 2008; Prensky, 2001); they interact with technology differently than non-natives do. A 2013 survey (Audience Research in the Digital Age, 2013) conducted among 938 college students at four major universities in Taiwan showed that 98.3% of students aged 24 and under visit SNSs when using the Internet, and these students visit SNSs an average of 6.51 (SD = 1.09) days per week. On average, students use FB 6.38 (SD = 1.31) days per week and spend 3.74 (SD = 2.52) hours per day using FB. The data indicate that Taiwanese college students spend a significant portion of their time on FB every day. Accordingly, SNSs are an important channel through which political candidates can connect with young voters.

Despite the low voting turnout among young voters in past elections, recent findings in the literature have shown that young voters take a different approach to participating in politics than the second- or third-time voters do. For example, the younger generation exhibits greater SNS participation (Raninie, Smith, Schlozman, Brady, & Verba, 2012) and is more likely than the older generation to perceive FB as a place to discuss politics (Vitak et al., 2011). Therefore, this study explores whether the online (FB) and offline political engagement of first-time voters (20–24 years) differs significantly from that of other voters (aged 25 and over). As described earlier, following the government classification, individuals who are 'first-time' voters range in age from 20 to 24.[2] In addition, these digital natives might utilize social media differently from others for political participation. Therefore, the first research question explored the differences between these two groups of voters.

RQ1: How do first-time Taiwanese voters' perceptions of and engagement in political activities on Facebook and offline differ from those of other voters?

In addition to perceptions and attitudes toward political use on FB, this study explores whether active SNS participation and exposure to political activities on SNSs have different influences on political participation behavior (Hardy & Scheufele, 2005; Yamamoto et al., 2015) among first-time and experienced voters. Pre-existing political interest, political knowledge, and political efficacy are important factors that predict individuals' political participation and are therefore controlled in this study. In addition, in a longitudinal study, offline political participation is controlled to examine the effect of FB on offline political participation after the election.

RQ2: How does the active use of Facebook and passive exposure to political activities on Facebook before a presidential election influence offline political participation after the election among (a) first-time voters and (b) experienced voters after controlling for political interest, knowledge, efficacy, and offline political participation before the election?

Voting behavior has rarely been examined in previous studies. This study explores whether active use and passive exposure to political activities on FB influence voting behavior.

RQ3: How does the active use of Facebook and passive exposure to political activities on FB before a presidential election influence voting behavior among (a) first-time voters and (b) experienced voters after controlling for the effect of pre-existing political interest, knowledge, and efficacy?

Mechanisms of different types of FB use on voting behavior and offline participation

According to the differential gains model, interpersonal communication and online inter-action moderate the effects of political information on users' political participation. For example, inexperienced voters may be motivated to become aware of politics through interpersonal conversations on SNSs (Yamamoto et al., 2015). Specifically, passive exposure may serve as a gateway for these inexperienced voters to begin to understand political issues and to become more politically active when reading other people's com-ments, shared posts, and created content in SNSs. The existing literature has also shown that political use of FB encourages university students to be more interested in the election, provides them with updated election information, and makes them more willing to express their thoughts and more willing to vote (Vitak et al., 2011). The growing evidence linking the use of SNSs with civic participation or political interest (Baxter & Marcella, 2012; Vitak et al., 2011) supports the differential gains perspective on the political use of SNSs to improve users' perceptions of their political engagement. Perception as a mediator directly indicates the effects of FB activities (active or passive) on users' psychological mechanisms, which further leads to offline behavior. In other words, the mediator explicitly shows the direction from FB activities to users' perceptions, which further lead to users' offline voting behavior. Therefore, active use or exposure to the information on SNSs may increase positive perceptions of SNSs regarding users' pol-itical engagement and may lead to actual voting behavior and higher offline political participation.

The proposed mechanism hypothesizes that SNS users improve their perceptions of their political engagement through different types of participation on SNSs. Exposure to (e.g. passive activities) and participation in (e.g. active participation) politically related information and activities on FB allow users to compensate for their lack of interest or failure to seek related knowledge and increase their interest and engagement in political information, even when such information is presented in an entertainment format. In addition, the perceived increase in political engagement on FB may lead to offline political participation. Taiwan's younger generation engages more actively in SNSs compared to the older generation. Therefore, in addition to exploring the potential indirect mediating effect of these types of FB activities on voting behavior and offline political participation, this study considers voting experiences to examine how active versus passive FB activity affects voting behavior and offline participation.

RQ4: Are there differences between first-time voters and other voters with respect to the pro-posed indirect mediating effects of active versus passive use of Facebook (Time 1, T1) on voting behavior (Time 2, T2) through perceptions of Facebook engagement (T1) after con-trolling for participants' pre-existing political interest?

RQ5: Are there differences between first-time voters and other voters with respect to the pro-posed indirect mediating effects of active versus passive use of Facebook (T1) on offline

political participation (T2) through perceptions of Facebook engagement after controlling for participants' pre-existing political interest?

Method

Procedure

Two waves of an online survey were conducted in Taiwan through multiple online recruitment channels, including recruiting emails and daily announcements to all students at some universities in Taiwan, boards on the most popular BBS site in Taiwan (i.e. ppt), and major FB fan groups for the candidates. The invitation for the first wave was sent one month before the 2012 Taiwan presidential election, and the invitation for the second wave was sent the day after the presidential election. A total of 1,036 responses were obtained after cleaning the data for the first wave. Among these 1,036 participants, 523 (510 of whom were eligible to vote) participated in the second wave, generating a 50.48% retention rate. In this study, only those who were eligible to vote were included in the analyses for the panel data. The demographics of these two waves were very similar, as shown in Table 1. A total of 1,200 gift certificates worth $100 Taiwanese dollars each (i.e. $3.3 US dollars) were provided as incentives for the drawing.

Measurement

Facebook activities. Politically related activities on FB consist of five major categories: (1) personal updates, (2) multimedia activities, (3) apps, (4) fan groups or club participation, and (5) newsfeed use. These categories were derived from previous literature regarding forms of political participation on SNSs (Zube et al., 2009; Kao, 2011). Participants were asked to check any activity in which they had participated in the previous week for each item. Each item was assigned a score of 1 (indicating participation) or 0. Each

Table 1. Demographics of participants in two waves.

	First wave ($N = 780$ eligible to vote)	Second wave ($N = 510$ eligible to vote)	National data (as in 2012 January–March, N for 18 and older = 18.79 millions)
Age			
20–24	63.7%	65.9%	11.98%
25–31	30%	28%	13.70%
32–38	5.3%	5.3%	14.40%
39–45	0.5%	0.2%	13.65%
≥46	0.5%	0.6%	46.27%
Male	62.9%	59.2%	50.12%
Marital status			
Single	96%	96.3%	34.88% (≥15 years old)
Married	3.8%	3.5%	51.42%
Separated	0.3%	0.2%	7.52%
Students	77%	76.7%	
Education			
High school graduate	74.3%	77.1%	31.33%
Bachelor's degree	15.9%	13.3%	22.27%
Master's degree	9.9%	8.8%	5.52% (including master's and Ph.D.)
PhD degree	0.8%	0.8%	

subcategory included the total sum of the activities. Table 2 lists all *M*s and SDs for each subcategory.

The *personal update* category included six items: 'posted politically related information on a personal wall', 'posted politically related news on a personal wall', 'wrote a politically related blog post', 'added or deleted politically related information in the 'about me' section', 'discussed politically related information through an instant messaging feature', and 'liked a text post/update'.

The *multimedia activities* category contained seven items: 'posted a politically related photo', 'posted a photo of me or others participating in a politically related activity', 'tagged a politically related photo of me or others', 'watched a politically related video', 'posted or shared a politically related video', and 'liked a politically related photo/video' (two separate questions).

The *app activities* category included six items: 'added a politically related app, such as a quiz', 'participated in a politically related test', 'posted or shared a politically related link for an app', 'checked in at a place when participating in an offline political event', 'purchased a candidate's products through a FB online store', and 'created a politically related badge using PicBadges'.

The *fan group or club activities* category included eight items that focused on activities related to a presidential candidate's fan group or club. These items included 'joined a politically related club', 'became a fan of a presidential candidate', 'signed up to participate in a political event', 'commented on a political issue in a fan group or a club', 'subscribed to a candidate's news update', and 'liked 1) new updates, 2) photos, 3) videos from a fan group or a club' (three separate items).

The *newsfeed* category contained 14 items focusing on politically related activities that the participants had seen in their newsfeed in the previous week, such as 'text updates related to politics', 'someone posted a politically related photo', 'someone became a candidate's fan', and 'a photo featuring someone participating in a politically related event' (the complete scale is available upon request from the author).

Table 2. Means and standard deviations for each subcategory before and after the election (panel data).

Activities	Age = 20–24		Age ≥ 25		Minimum	Maximum	Total items
	M	SD	*M*	SD			
Before the election							
Personal update	.57	1.03	.51	.92	0	5	6
Multimedia	.58	1.08	.47	.83	0	7	7
App	.17	.55	.18	.44	0	4	6
Fan group or club	.35	.94	.37	.86	0	7	8
Newsfeed	2.41	2.80	2.41	2.48	0	13	13
Offline political participation	.78	.75	.90	.67	$t = -1.88$		
After the election							
Personal update	1.05	1.30	1.0	1.29	0	7	7
Multimedia	1.04	1.43	1.09	1.38	0	7	7
App	.24	.59	.29	.64	0	4	6
Fan group or club	.69*	1.26	.91*	1.55	0	7	8
Newsfeed	4.03	3.21	3.64	3.13	0	14	14
Offline political participation	.77*	.74	.93*	.94	$t = -2.43*$		

*$p < .05$.

'Active political participation' ($\alpha = .851$) on FB consisted of the first four subcategories, including personal updates, multimedia activities, app activities, and fan groups or club activities. These categories require users to actively participate in activities. In contrast, 'passive exposure to politically related FB activities' ($\alpha = .80$) contained the newsfeed category, which includes all types of information shared or posted by others.

Facebook-related variables. This study asked participants to indicate the number of connections they had on their FB accounts. The FB Intensity Scale (Ellison et al., 2007) and FB Habit Scale (Verplanken & Orbell, 2003) were also measured (see Table 3).

Perception of FB use on political engagement (Time 1). This scale ($M = 2.17$, SD $= 1.22$, $\alpha = .95$) was adopted from Vitak et al. (2011) and consisted of nine items. It was mainly employed in the first wave of data collection. Participants rated statements such as 'FB makes me more interested in the 2012 presidential election', 'The information or the activities I engage in on FB make me more willing to vote', 'I am more willing to express my thoughts on politics because of FB', and 'FB provides a means to help me decide whom to vote for' on a seven-point Likert scale ranging from 1 (completely disagree) to 7 (completely agree).

Offline political participation (Times 1 & 2). Participants were asked to rate whether they had completed the indicated activity in the previous year (with 0 representing no and 1 representing yes) for 10 statements, such as 'watched a debate on TV', 'wrote a letter to the government', 'signed a paper petition', 'volunteered to help at a political event', and 'hosted a political event'. See Table 3 for more details.

Voting (Time 2). Participants indicated whether they had voted in the 2012 presidential election by answering yes or no.

Politically related variables (Time 1). Pre-existing political interest ($M = 2.9$, SD $= 1.63$) was a single question, 'I am interested in political issues', with a seven-point Likert scale anchored by 1 (completely disagree) and 7 (completely agree). Political knowledge ($M = 3.23$, SD $= 2.13$) included seven open-ended questions specifically

Table 3. *T*-test results between the first-time voters and the experienced voters regarding political activities (first wave).

Activities and attitudes	Age 20–24 (N = 497)		Age ≥ 25 (N = 291)		T
	M	SD	M	SD	
Number of FB friends	339.67	200.72	203.06	167.76	9.72***
FB intensity (α = .90, 5 items)	4.36	1.41	3.54	1.48	7.60***
FB habit (α = .97, 10 items)	4.64	1.58	3.71	1.59	7.89***
Perception of FB use on political engagement (α = .95, 9 items)	2.20	1.25	2.00	1.15	2.18*
Use FB to persuade my friends to vote	1.85	1.36	1.72	1.25	1.26
Use FB to persuade my friends to vote for my candidate	1.69	1.20	1.56	1.03	1.65
Use FB to share political info	1.90	1.35	1.68	1.15	2.47*
Use FB to get political info (α = .92, 4-item)	2.21	1.36	2.02	1.21	1.98
Political info on FB is credible (α = .86, 2-item)	2.45	1.30	2.17	1.22	3.01***
Offline political participation	.81	.85	.93	.73	−2.12*
Political interest	2.94	1.61	2.82	1.62	1.02
Political knowledge	3.59	1.85	3.92	1.91	−2.39*
Political efficacy for local government	2.22	1.28	1.93	1.20	3.09**
Political efficacy for national government	2.02	1.26	1.76	1.06	2.96**

*$p < .05$.
**$p < .01$.
***$p < .005$.

designed to fit the Taiwanese context. Participants provided responses to the open-ended questions. Questions included 'Who is the current legislative speaker in Taiwan?', 'How many candidates are there in this presidential election?', and 'Which political party proposed the cross-strait peace agreement?' The author coded the answers by giving one point for each correct answer and no points for incorrect answers and then totaled the scores for the final score of this construct. Regarding political efficacy for local government ($M = 2.10$, SD = 1.26) and for national government ($M = 1.89$, SD = 1.16), the participants used a seven-point scale anchored by 1 (no influence) and 7 (very influential) to rate two separate statements: 'How much influence do you think you have on the 1) local and 2) national government?' This study also measured several attitudinal variables and questions regarding perspectives on political use on FB from Vitak et al. (2011), including using FB to persuade friends to vote, using FB to persuade friends to vote for certain candidates, using FB to obtain political information, receiving the latest information on the FB newsfeed and ticker, using FB to share political information, and perceiving information on FB as credible (see Table 3).

Results

RQ1 explored differences between first-time voters (age 20–24) and other voters (age 25 and above) regarding their political activities on FB and offline. A series of t-tests were conducted to explore the differences using the data collected in the panel data. Tables 2 and 3 list the results.

As shown in Table 3 (first-wave data), first-time voters had significantly more connections on FB, spent more time on FB, and indicated a higher degree of FB habits than the older population. In addition, first-time voters' engagement differed from that of other voters in several aspects. In terms of attitudinal perspectives, first-time voters were more likely than other voters to feel that FB had increased their engagement in politics and made them more interested in the 2012 election. From a behavioral perspective, first-time voters viewed information on FB as more credible than other voters did. Regarding political efficacy, first-time voters rated themselves as having more efficacy than experienced voters. In addition, first-time voters scored significantly lower on political knowledge than other voters did. In the first-wave data, first-time voters engaged in fewer offline political activities than other voters did.

Regarding political activities on FB (Table 2), no differences were found between first-time voters and other voters before the presidential election. However, after the election, first-time voters reported significantly fewer activities through fan groups or clubs than other voters did. Regarding offline political participation, experienced voters engaged more often in offline political activities than the first-time voter population did after the election.

RQ2 examined the direct effects of active use and passive exposure to FB political activities at Time 1 on offline political participation at Time 2. Hierarchical multiple regressions were employed with pre-existing political interest, political knowledge, and political efficacy entered in the first step, offline political participation at Time 1 entered in the second step, and active and passive exposure to FB activities entered in the third step. The results (shown in Table 4) indicate that Time 1 offline political participation was a significant covariate in both models (first-time and experienced voters). Among first-time voters, after

Table 4. Standardized regression coefficients of active versus passive use of FB (Time 1) on offline political participation (Time 2).

	20–24 year old offline participation	Collinearity test		25 and older year old offline partcipation	Collinearity test	
		Tolerance	VIF		Tolerance	VIF
Step 1						
Political interest	.24***	.78	1.28	.09	.85	1.18
Political knowledge	.16**	.85	1.18	.24**	.87	1.15
Efficacy for local government	.04	.21	4.67	−.14	.30	3.38
Efficacy for national government	.04	.21	4.89	.24	.30	3.38
R^2	.12***			.11***		
Step 2						
Political interest	.13*	.74	1.34	.01	.83	1.21
Political knowledge	.08	.83	1.21	.18*	.86	1.17
Efficacy for local government	−.001	.21	4.68	−.14	.30	3.38
Efficacy for national government	.05	.20	4.89	.19	.30	3.40
Offline political participation (Time 1)	.49***	.89	1.12	.46***	.91	1.10
R^2	.34***			.30***		
Step 3						
Political interest	.08	.67	1.50	.01	.82	1.21
Political knowledge	.06	.81	1.23	.17	.81	1.24
Efficacy for local government	−.01	.21	4.68	−.14	.30	3.82
Efficacy for national government	.05	.20	4.90	.19	.29	3.40
Offline political participation (Time 1)	.47***	.85	1.18	.45***	.89	1.13
Active	.12*	.55	1.82	.03	.80	1.26
Passive	.03	.58	1.72	.01	.85	1.18
R^2	.36*			.30		

Note: VIF = variance inflation factor. These regressions were analyzed using the panel data.
*$p < .05$.
**$p < .01$.
***$p < .001$.

controlling for all covariates, active use of FB at Time 1 significantly predicted offline political participation at Time 2. However, passive exposure to FB activities only marginally predicted offline political participation ($p = .058$). Among experienced voters, after controlling for all covariates, neither active use nor passive exposure was a significant predictor.

Similar to RQ2, RQ3 examined both active use and passive exposure to FB activities at Time 1 on actual voting behavior at Time 2. Binary logistic regression was employed to examine this hypothesis. The results showed that after controlling for all covariates, neither active use nor passive exposure were significant predictors of actual voting behavior among both types of voters.

RQ4 explored the proposed indirect effect of two types of FB activities (i.e. active and passive) on voting behavior through perceptions of FB use on political engagement and the intention to vote between first-time and experienced voters. The proposed indirect effects were examined through bootstrapped indirect analyses using an SPSS macro, PROCESS (Hayes, 2013), which allowed the researcher to test the indirect effect between multiple constructs. The author employed MODEL 6 in PROCESS and conducted two separate groups of analyses focusing on the roles of (a) active politically related information engagement and (b) exposure to politically related information among (c) first-time and (d) experienced voters after controlling for individuals' pre-existing political interest.

The results of 5,000 bootstrapped resamples showed different mediation effects between active and passive use of politically related information on FB, as shown in

Table 5. Mediational indirect effect of active versus passive activities on FB on voting behavior between first-time and experienced voters controlling for political interest.

20–24-year-old population	B	Boot SE	Boot LCI–UCI
Active participation on FB			
Active (T1)→FB perception(T1)→Voting (T2)	.04	.02	−.003–.09
Active (T1)→FB perception(T1)→offline political participation (T2)	.01	.008	−.002–.03
Exposure to FB activities			
Exposure (T1)→FB perception(T1)→Voting(T2)	.03	.02	.004–.08*
Exposure(T1)→FB perception(T1)→offline political participation (T2)	.01	.006	.01–.03*
25 and older population			
Active participation on FB			
Active (T1)→FB perception (T1)→Voting (T2)	.04	.02	−.004–.09
Active (T1)→FB perception (T1)→offline political participation (T2)	.01	.008	−.002–.03
Exposure to FB activities			
Exposure (T1)→FB perception(T1)→Voting (T2)	.03	.02	.007–.08*
Exposure(T1)→FB perception(T1)→offline political participation (T2)	.01	.006	.002–.03*

Note: **B** = effect size; Boot SE = bootstrapped standard error; Boot LCI–UCI = bootstrapped lower confidence interval to upper confidence interval. Political interest is a covariate.
*Statistically significant.

Table 5. The indirect effect of active information engagement on voting behavior through perceptions of FB use on political engagement and through voting intention was not significant among either first-time or experienced voters. However, the indirect effect of exposure to information on FB on voting behavior through perceptions of FB use on political engagement was significant among first-time ($B = .03$, SE = .02, [95% CI = .004, .08]) and experienced voters ($B = .03$, SE = .02, [95% CI = .007, .08]). The 95% CI did not contain zero, indicating a significant point estimate for the population. That is, passive exposure to politically related information on FB led to a higher degree of perceptions of political engagement due to FB use at Time 1, which further led to actual voting behavior.

RQ5 explored the proposed indirect effect of two types of FB activities at Time 1 on offline political participation at Time 2 through perceptions of FB use on political engagement between first-time and experienced voters. Similar to the patterns found for voting behavior, only passive exposure to FB activities had an indirect effect on offline political participation through perceptions of FB use on political engagement among first-time voters ($B = .01$, SE = .006, [95% CI = .01, .03]) and experienced voters ($B = .01$, SE = .006, [95% CI = .002, .03]).

Discussion

With the worldwide increase in the popularity of social media such as FB, countries are increasingly employing social media as one of the primary online tools for political campaigns and online presence management. The existing literature has provided cross-sectional evidence regarding the mobilization effect of online and offline political participation. Despite differing approaches and varying sample characteristics (Parisopoulos, Tambouris, & Tarabanis, 2012; Strandberg, 2013; Wills & Reeves, 2009), most studies have suggested that FB increases users' interest in politics and presidential elections (Zhang et al., 2010). Some studies have found positive correlations between political activities on FB and other offline and online political participation (Vitak et al., 2011). In addition, the research suggests that FB may be able to mobilize indifferent young voters

to actually vote (Vitak et al., 2011). However, no studies have previously adopted a panel approach to directly study this relationship or have measured voting turnout resulting from the proposed effect of FB participation.

This study collected panel data among the same participants before and after the 2012 Taiwan presidential election. In addition, this study included voting behavior and offline political participation as behavioral indicators to investigate the mobilization effect suggested in the current literature. The panel data allowed the researcher to examine the causal inference between FB activities and subsequent political behavioral outcomes.

This study drew upon the spirit of the differential gains model (Scheufele, 2002; Hardy & Scheufele, 2005) in the political literature and extended it to the SNS context. The model hypothesized that interpersonal communication would enhance the effect of information seeking on political participation. Based on this hypothesis, this study further argued that in an SNS environment, interpersonal political conversations are varied in form and are able to traverse users' bonding, bridging, and latent networks (Zube et al., 2009). The features of SNSs such as FB allow users to actively express their thoughts or share related information among their networks and to further engage in interpersonal or group discussions about politics (Vesnic-Alujevic, 2012). In addition, users can accidentally encounter politically related activities through others via the stream of information and activities broadcast on SNSs. These types of SNS activities can be defined as either active or passive participation. Following this argument, this study distinguished active engagement in political FB activities from mere exposure to political information or activities shared by others on FB to investigate how different types of FB participation affect users' attitudinal and behavioral outcomes toward politics.

This study examined both offline political participation and voting as behavioral participation. With regard to offline political participation, the panel data show that active engagement via FB activities at T1 directly predicted offline political participation at T2 when controlling for the effect of pre-existing political interest. That is, participating in political activities on FB, including personal text updates, multimedia information, app activities, and fan group or club participation, had the positive effect of a greater degree of offline political participation. This model provides causal evidence for the differential gains theoretical approach, according to which political activities on FB are positively associated with better behavioral outcomes. However, this direct effect was found only among young and first-time voters, not in other voters.

The differences identified between first-time and experienced voters may be explained by these users' different attitudes and usage of FB for political purposes. Existing studies have indicated that the younger generation has positive attitudes toward SNSs as tools for political campaigns and participation (Velasquez & LaRose, 2015; Vitak et al., 2011). In this study's comparison of first-time voters (age 20–24) and experienced voters (a relatively older generation, 25 and older), first-time voters were found to have more positive attitudes toward FB as a place to share political information. In addition, the first-time voter population showed greater interest in politics after using FB than did the other voters. The younger generation also believed that FB engaged them in a greater variety of political activities. Moreover, the young population perceived the information on FB as more credible than the other voters did.

Previous findings have suggested that people who are already active in politics tend to engage in more online conversations and activities (Hardy & Scheufele, 2005; Skoric &

Poor, 2013; Yamamoto et al., 2015). Results in this study indicate that engaging in and presenting politically related activities on FB enhance first-time voters' offline political participation after an election.

In contrast to active use, passive exposure to FB did not have a direct effect on offline political participation among the two types of voters. Despite the lack of a direct effect, passive exposure to FB activities had an indirect effect on offline political participation through the perception of FB use on political engagement, and this pattern was present among both first-time and experienced voters.

The results indicate that active or passive SNS activities can qualify as SNS political participation. In traditional offline political participation, individuals explicitly express their thoughts via mass media channels, such as publishing essays in newspapers (Skoric & Poor, 2013), engaging in protest behavior, or participating in assemblies. In contrast, SNS political participation can be as simple as signaling others regarding one's political disposition, posting photos of oneself at a political gathering, or merely 'liking' another person's political discussion. SNS political participation also differs from other forms of online political participation in which individuals actively seek online news, express opinions in discussion forums, or create videos on YouTube. Passive exposure to these signals and activities enables users to encounter information that they would avoid in other outlets and creates opportunities for inactive users to become curious about the status of politics or campaigns. Interpersonal conversation ranges from a relaxed, humorous, or creative 'personal' tone to actual information, and the connections of 'personal ties' among users create a dynamic environment with abundant opportunities for users to engage in various levels of political participation on SNSs. The results of this study extend the differential gains model to SNS activities and suggest that mere exposure to activities in which others engage can have a gateway effect for both first-time and experienced voters to become more interested and to even engage in politics offline.

Regarding voting behavior, although neither active nor passive types of FB use had a direct effect on actual voting behavior, indirect effects of exposure to politically related FB activities on voting through perceptions of FB use on political engagement were found among both first-time and experienced voters. This finding suggests that the power of the network allows politically related information to penetrate 'walls', creating a dynamic environment for voters to become immersed in information and actions and serving as a gateway to encourage election awareness among FB users, leading to their actual voting behavior. The indirect effects of the passive use of FB on voting and offline political participation showed that through casual browsing of the information diffused on FB and/or active engagement on FB, this platform may provide a transitional tool for voters to seek information or become interested in an election.

The analyses highlighted the boundary effect for the active participation in FB by which the two generations engaged in politics in this presidential election. Active engagement in social media had a direct effect on first-time voters' offline political participation after the election but did not have this effect for experienced voters. On the contrary, passive exposure to FB activities had indirect effects on offline political participation among both types of voters and supported the differential gains from interpersonal communication on SNSs regardless of voters' age or experience.

These results indicate promising applications for government and society to encourage political participation or concern among individuals who do not actively participate in

politics. As shown in the data, despite first-time voters' positive attitudes toward FB as a tool to access political information and activities, these voters did not engage in more political FB activities, such as text updates or fan group participation, than other voters. Several participants who provided open-ended comments at the end of the questionnaire stated, for example, 'I don't disclose my political partisanship or thoughts on FB because I don't want other people to label me or think of me differently'. This trend reflects Taiwanese culture, in which people avoid discussing politics: 'I usually don't discuss politics with friends because I hate arguing with them'. These comments indicate that regardless of experience or age, some Taiwanese users are concerned about discussing their political orientation publicly on FB. These findings also indicate an interesting cultural difference between Taiwanese users and Western users (Gustafsson, 2012; Vitak et al., 2011): Taiwanese users avoid sharing their thoughts about politics before they are aware of appropriate 'norms' on FB. In addition, a spiral of silence remains prevalent in Taiwanese online realms (Huang, 2005). We can expect that different cultural views regarding online self-image management and self-disclosure strategies may moderate self-expression on FB. Future studies should consider this issue when examining political participation on FB to further test the boundary of the differential gains model in SNSs. However, as shown in this study, through passive exposure to the abundant politically related activities displayed within the interpersonal networks on FB, it increased users' offline political participation and voting behavior because of FB. This indicated that, being immersed in such an environment could also encourage non-activists to be more interested in politics and election information.

The contributions of this study are threefold. First, panel data obtained before and after the election allowed the researcher to test the proposed causal inferences of the theoretical models proposed in this study. The findings support the effect of differential gains of active FB participation and exposure to FB on offline political participation. The study also found that a direct effect on political participation after the election had different patterns among first-time voters and experienced voters, suggesting that being a digital native may be an important moderator of the effects of active SNS political participation on attitudes and behavior. Second, this study extended the differential gains model to SNSs and examined the differences between passive exposure and active engagement in activities on SNSs. Unintentional exposure to other people's interpersonal conversations and activities also increased users' interest in and behavior (both participation and voting) regarding politics, suggesting that SNS activities qualify as another type of online political participation. Third, this study included 'voting turnout', which is an important consequence of the effects of political participation on FB in studies of presidential elections.

However, some limitations of this study should be considered when interpreting the data. This sample is not random because random samples are difficult to obtain with limited resources. Compared with the national population distribution described in Table 1, the young generation was overrepresented in this study's sample, which consisted of relatively young online users. This sample is appropriate for this study's focus and differs from Taiwan's general population. The results should not be generalized to people who do not use SNSs. The social media usage pattern also differs between first-time voters and experienced voters; thus, readers should interpret the data with this comparison in mind. The results can only be generalized to university students and those who actively use SNSs and online discussion forums because the sample was recruited heavily

from these two venues. Second, data were collected one month before the election, which may be considered part of the election period. Future studies could address this limitation by collecting data six months or a year before the election to explore 'normal-time' political participation among users. However, there would be a trade-off in such an approach because the follow-up questionnaire may have a low response rate due to the long time between investigations. Moreover, online surveys may influence the accuracy of the results pertaining to political knowledge because users may search for answers online while completing the online questionnaire. Therefore, caution must be exercised when interpreting the finding indicating that the younger population reported higher levels of political knowledge than the older population did. Finally, although the results showed a differential gains effect in this sample, readers should note that the overall interest in politics remains relatively low. More studies are needed to further investigate this issue.

The results of this study suggest that society and governments could use FB to establish an environment that encourages the casual exposure of young users to political information and news and for activists to express their thoughts or organize online/offline events for active participation. Educators and candidates could also employ FB as a gateway tool to engage indifferent users in their initial political participation, even on FB itself.

Notes

1. Previous research (Han, 2008) on voting turnout mainly employed cross-sectional data, such as the General Social Survey, and did not examine the issue in the context of social media participation. No study was found for 2012.
2. The presidential election is held every four years. The qualifying age to vote is 20, and the presidential election was held in 2012. Therefore, the data considered participants aged 20–24 to be first-time voters, or those who first had the opportunity to consider voting.

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Notes on contributor

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