Institute of Policy Studies

Report on IPS Symposium on Media and Internet Use During General Election 2015

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After Singaporeans went to the polls on 11 September 2015, the Institute of Policy Studies (IPS) conducted an online survey of 2,000 respondents to examine voter use of media and its impact on voting behaviour. The main results of the survey were presented at the Post-Election Conference 2015. On 27 January 2016, IPS organised a symposium that offered a more detailed and academic look at the subject. Close to 50 participants, from the public and private sector as well academics attended the symposium.

Tan Tarn How and Dr Carol Soon, Senior Research Fellows from the Arts, Culture and Media cluster at IPS, chaired the symposium. There were five presentations, with the first four drawing on the survey findings, while the last analysed political

blogs using human and computer text analysis. The presenters, who had also collaborated with IPS on the survey, were:

1. Dr Natalie Pang
   Assistant Professor, Wee Kim Wee School of Communication and Information
   Nanyang Technological University

2. Dr Debbie Goh
   Assistant Professor, Wee Kim Wee School of Communication and Information
   Nanyang Technological University

3. Dr Elmie Nekmat
   Assistant Professor, Department of Communications and New Media
   National University of Singapore

4. Associate Professor Zhang Weiyu
   Department of Communications and New Media
   National University of Singapore

5. Professor Lim Ee-Peng
   Director, Living Analytics Research Centre
   Singapore Management University

Opening Remarks by Tan Tarn How

Mr Tan thanked the presenters, as well as Professor Ang Peng Hwa from the Wee Kim Wee School of Communication and Information at NTU and Associate Professor Marko Skoric from the City University of Hong Kong, for contributing their time and expertise to the survey. He said that the five presentations were a work in progress, and requested that the audience raise questions and provide comments during the discussion.

Presentation by Dr Natalie Pang, "Explicating Social Media Use: How Expressive, Informational and Relational Uses of Social Media Shape Participation"

First to present was Dr Pang. Her presentation focused on the different types of social media use and its impact on political participation.

She focused on three types of social media use: 1) informational use, where users used social media platforms to consume information and to seek, gather and follow information; 2) expressive use, where users accessed different social media platforms to express opinions and ideas; and 3) relational use, where social media

platforms were used to maintain or strengthen relationships with friends, colleagues or fellow Singaporeans and to connect with new people.

The findings showed that during GE2015, respondents were using social media more frequently for relational use, followed by informational use and lastly expressive use.

Breaking down the findings by demographics, respondents aged 65–69 were more likely to engage in informational use, while younger respondents were more likely to engage in relational use. Male respondents were more likely to engage in expressive and informational use, while both male and female respondents were equally likely to engage in relational use. The analysis on social media use by education type showed that respondents with primary and lower secondary qualifications were more likely to engage in expressive and informational use.

Older and less educated respondents were more likely to engage in expressive use as compared to respondents who were younger and less educated. Respondents who were more engaged in expressive and informational use were also more likely to engage in relational use, more specifically, they use social networking sites such as Facebook, Twitter and Instagram to learn more about Singaporeans' views on the election.

The intensity of use (measured by how frequent respondents engaged in expressive use across all social media platforms) however, was low. For expressive use, only 8% of respondents engaged at high intensity. For relational use, it was 19% of respondents. Despite this, respondents who engaged in average to higher intensity of expressive or informational use were more likely to attend rallies. The same could not be said for relational use.

Dr Pang concluded that it was the findings on the type of use of social media that told a richer story, rather than focusing solely on frequency of use.

Presentation by Dr Debbie Goh, "Posted and Shared: Personalised Communication and Knowledge Gap in Singapore's General Election 2015"

Dr Goh's earlier study on General Election 2011 showed that Internet use narrowed the knowledge gap between groups with different socio-economic status. For GE2015, she looked at whether personalised communication via social media had the same effect.

Personalised communication was defined as the production and distribution of political content relevant to a person's personal values on social media platforms such as Instant Messaging (IM) platforms, social networking sites, online forums, blogs and YouTube sites. This was measured by asking respondents how often they took part in online activities such as writing a post or making a video expressing their

opinions on a candidate, political party, the election and/or issue or liking a page or a post about a candidate, political party, the election and/or issue

The findings showed that 69% of the respondents produced or consumed content, 27% only consumed content (i.e., they consumed but did not generate content) while 4% (mainly older respondents aged 50 and above) were "off the grid", meaning they did not consume or produce any content.

As for their intensity of use of personalised communication: 31% were non-users (did not engage in personalised communication); 37% were below-average users; and 32% were above-average users. When it came to gender, males were more likely to have higher intensity of use than females. Comparing by race, Chinese respondents were fairly equally divided in their intensity of use of personal communication. Respondents from the "Others" racial category had the highest percentage of non-users (42%) while Malays and Indians had the largest group of below-average use (44% and 50%, respectively). University degree holders were equally distributed in the above- and below-average use group. Diploma holders had an almost equal distribution of non-users (35%), above (38%) and below (39%) average use. Those with secondary and below education had the largest group of non-users (42%). By income, the lower-income and lower middle-income groups had larger proportions of non-users (38% and 35%, respectively) compared to the upper middle- and high-income groups (24% and 25%, respectively).

Generally, intense use of personalised communication did not result in higher political knowledge scores. Political knowledge was measured by asking respondents to identify which party these four political candidates were from — Chee Soon Juan, Kenneth Jeyaretnam, Teo Chee Hean, and Lee Li Lian; which party used the campaign slogan "Your Voice in Parliament"; what percentage of votes were cast for the PAP in GE2011; and "What does 'your vote is secret' means according to the law?" Seniors, respondents from the lowest educated group, and respondents from lower-income and higher-income groups did not benefit from intense use of personalised communication. For Indian respondents, those with higher intensity of use saw a decline in their political knowledge, as compared to those who engaged moderately.

Groups whose intense use of personalised communication did lead to an increase in their political knowledge scores were those in the 40–49 age group, male, university degree holders, and those from the middle-income group. Though the "Others" racial category had the highest percentage of non-users, those who did use personalised communication at high intensity saw an increase in their political knowledge scores.

Predicting respondents' political knowledge by other factors such as age, income, gender, education, political interest and media consumption revealed expected

findings. For instance, seniors, those from the higher income group and university graduates were more likely to be more knowledgeable about election issues.

Whether or not personalised communication narrowed the knowledge gap during GE2015 thus depended on the profile of the user. And despite the amount of content that was generated during the election, users may not be engaging in content that benefitted them.

Presentation by Dr Elmie Nekmat, "Multiple Opinion Climate Indicators: Significance of Offline-Online Opinion Climate Perceptions on Engagement and Voting Behaviour"

The third presentation was by Dr Elmie. He said that every individual had a "quasi-statistical sense", which is defined as one's sense of the majority's opinion that is usually exercised when making a decision. For instance, when deciding on whom to vote for during GE2015, a person would take into consideration what the majority thinks. People can turn to mass media sources, public opinion polls, reference groups such as their friends and family, and their networks on social media to sense how others feel about issues.

The survey measured their personal opinions and three other levels of opinion climates pertaining to the government's handling of issues on population, transport and housing. The first opinion climate was how satisfied they thought the majority of Singaporeans felt; second was how satisfied they thought people on their open-group social medial platforms (social networking sites such as Facebook, Twitter or Instagram) felt on the way the government handled these three issues; and the third was how satisfied they thought people on their closed-group social media platforms (instant messaging platforms such as WhatsApp, Viber or Facebook Messenger) felt. The level of satisfaction was ranked from 1 ("very dissatisfied") to 5 ("very satisfied").

The findings suggested that overall, opinion climates were least critical towards housing issues, and most critical (i.e., felt negatively) towards population issues. Personally, respondents were least critical and felt that the government was handing the three issues well. Perceived public opinion was most critical on open-group social media platforms. However, these opinions did not influence respondent's voting behaviour as they were perceived to be most distant from respondent's own opinion. Opinions from respondents' closed-group social media platforms did show a relationship with voting behaviour. Dr Elmie suggested that this could be due to these platforms comprising of closer-tied networks and allowing for greater levels of involvement in the discussions. What influenced the respondents' voting behaviours most were their personal opinions. The more satisfied the respondents were of how the government was handling the three issues, the more likely they would vote for the incumbent party.

Other factors that influenced voting behaviours were gender and respondents' perceived self-efficacy (measured by the question: "How much do you agree with the statement 'I have a pretty good understanding of political issues in Singapore'"). Perceived self-efficacy had a positive relationship with political knowledge but a negative relationship with voting behaviour. This means that the more a respondent felt that they understood political issues in Singapore, the more they thought they knew about election issues, and the more likely they were to vote for the opposition.

Presentation by Associate Professor Zhang Weiyu, "Swing Voters vs Non-swing Voters: Comparing their Demographic, Political Attributes and Media Usage Patterns"

Before starting her presentation, Associate Professor (A/P) Zhang stated two caveats: 1) the findings were based on self-reported measures and 2) the figures used in the analysis were small as half the respondents did not answer the question "Which party did you vote for in GE2011". Of those who revealed whom they voted for in GE2011 and GE2015, 87.1% were non-swing voters.

Of those who swung from one party to the other, 4.7% swung from People's Action Party (PAP) to the opposition in 2015 ("Type 1"), and 8.2% swung from the opposition to PAP in 2015 ("Type 2"). The number of respondents within each type was low. Out of the 2,000 survey respondents, only 44 were Type 1 and 78 Type 2.

Comparing the demographics among the three groups — non-swing voters, Type 1s and Type 2s — the study showed that there was no significant statistical difference in terms of age but there were significant differences in terms of gender, ethnicity and housing type. When it came to non-swing voters, there was an almost equal divide between males (50.4%) and females (49.6%). Type 1s had more females (70.5%) than males (29.5%), and Type 2s had more males (69.2%) than females (30.8%). Type 1 voters comprised mainly of Chinese (52%) and Indians (32%) while Type 2 voters were mostly Chinese (81%). When it came to housing, Type 1s were more likely to live in 1- or 2-room HDB flats (33%) while Type 2s were more likely to live in 4-room (39%) or 5-room HDB flats (31%). There were no significant differences in education among the three groups, but Type 2 voters had higher education levels than Type 1 voters.

There were no significant differences among the three groups in their political interest, frequency of political talk, political knowledge, whether or not they bought campaign products or participated in a good cause. However, there was a significant difference between non-swing voters and Type 1s in their online participation and media consumption. Type 1 voters were also least likely to express their political views online and listened to radio less, but watched more TV and used more online party resources. They also trusted blogs and social networking sites more than non-

swing voters, but trusted radio less. They were also most concerned about having different voices in parliament.

Swing voters were more likely to attend rallies than non-swing voters, with 44% of Type 1 and 35% of Type 2 voters having attended at least one rally. However, they participated in rallies held by the party from which they swung. The findings showed that within Type 1s who attended rallies, 84% attended PAP rallies, and 21% went to the Workers' Party (WP) rallies. A similar pattern was also seen within Type 2 voters. Of those who revealed that they attended rallies, 37% of them attended PAP rallies and 79% attended WP rallies.

Presentation by Professor Lim Ee-Peng, "Using Text Analytics in Analysing GE2015 Online Content"

The fifth and final presenter was Professor Lim, who spoke about how text analytics assisted researchers in analysing observed data obtained from online public media. For this presentation, he looked at data obtained from blog posts generated by Singaporean bloggers during these periods: Pre-GE2015 (18 August–24 August 2015), during GE2015 (25 August–11 September 2015) and post-GE2015 (12 September–18 September 2015).

There were roughly 4,300 posts generated from about 200 blogs during GE2015. During this period, about 100 posts from 50 active blogs were generated each day. The peak number of posts (275 posts) was reached on the day before Cooling-Off Day. There was an expected drop in the number of posts on Cooling-Off Day (where campaigning is disallowed and election advertising must not be published or displayed) and the number increased after Polling Day.

Before GE2015 was announced, human coders from IPS helped trained the machine to classify posts into these categories: Political or non-political, emotional or non-emotional, and partisan or non-partisan. The human coders coded over 1,000 blog posts, and subsequently, the machine had an accuracy rate of 86% for recognising political posts (as opposed to non-political posts), 78% and 71% for partisan and emotional posts, respectively. As text analytics technology may not provide 100% accuracy, these accuracy levels were acceptable.

Results from the machine classification showed that the proportion of political posts pre- and post-GE2015 were about the same (at 55% and 56%, respectively). However, during the election period, the volume of political posts increased to 74%. The proportion of partisan posts increased slightly from 80% pre-GE2015 to 89% post-GE2015, while emotional posts had the highest increase, from 33% to 54% over the same period.

In order for the machine to classify the posts, it would look for key words. For example, if the post contained the words "PAP", "Singaporean" or "votes", it was

classified as a political post, while the use of punctuations and repeated characters suggested that the post was emotional. A word cloud was created from the posts generated during GE2015 and after. The word clouds indicated that the posts were more negative after Polling Day.

A GE2015 analytics system was also created, and the system harvested all posts generated each day. The system also allowed users to search for posts by politician names, parties, constituencies and issues.

Together with human training to ensure accuracy, text analytics can be used to analyse data. For future work, survey data can be combined with data observed on online public sources or various social media platforms.

Discussion

Dr Soon chaired the discussion session. She highlighted that the studies show that new media may not necessarily close existing knowledge gaps among voters as the gaps created from personal communication still followed the traditional digital divide gap, and social media or online space did not exert a uniform effect on users.

The following issues were also raised:

Social media use and its impact on the survey findings

A participant asked Dr Pang if other variables such as age or education were used to interpret the results on informational, expressive and relational use with rally attendance.

Dr Pang said that she did. Generally, respondents with high intensity of social media use were more likely to attend rallies. And among this group, older and higher-educated respondents were more likely to attend rallies. Dr Pang also added that older participants were more likely to attend political rallies, but this could be a reflection of how they engaged in elections. Younger participants were probably used to doing things online, whereas older participants, were more used to engaging in election through rallies.

Dr Soon also asked Dr Pang, who is part of a multi-country studies, if her findings for the Singapore case differ from those in Hong Kong or Taiwan.

Dr Pang said that she was still waiting for results from the surveys done in Hong Kong and Taiwan. However, from her meta-analysis (a statistical method which involved comparing findings from independents studies selected according to scope and examining the main effects on a certain dependent variable), she could say that the intensity of use for informational, expressive and rational use of social media was consistent with usage elsewhere. Relational use of social media also ranked the highest, followed by informational use. Social networking sites were also popular among Internet users. Additionally, findings from earlier studies found that during the Umbrella Movement in Hong Kong, students were using closed-group social media platforms to engage in relational use to mobilise others and to create social networks. Those who engaged in relational use were also more likely to engage in more frontline activism. This was the opposite in Singapore as relational use did not drive rally attendance.

Dr Soon then asked Dr Goh how her latest findings on narrowing the knowledge gap built on her analysis done for GE201.

Dr Goh answered that during GE2011, the knowledge gap narrowed as lower-educated voters were consuming more alternative media. For GE2015, the respondents' ability to narrow the knowledge gap depended on their education levels and their media consumption. Personalised communication had no significant effect on political knowledge, thus users who engaged in political communication did not enhance their political knowledge.

Different types of social media

A participant asked Dr Elmie if distinctions were made for private Facebook and Twitter accounts that would make them closed-group rather than open-group social media platforms. If so, was there a difference in how respondents perceived political perceptions?

Dr Elmie said that the questions in the survey did make a distinction between closed- and open-group social media platforms. For example, for open-group social media platforms, the question was phrased as such, “Overall, how do you think people on the social network sites you visit (e.g., Facebook, Twitter, Instagram) feel about how the government is handling issues related to population growth, transport or housing?”

On Dr Pang’s finding that lower-educated males above the age of 60 were more likely to engage in informational and expressive use that did not contribute to their political knowledge, a participant asked if she had data on the type of networks that this group was using. If the networks were open, it would suggest that respondents were exposed to a breadth of information. However, if the networks were closed, like a WhatsApp group chat, then there would be a possibility that they were just exchanging the same content, same opinions and same views with their friends. This would also mean that they would know a lot about one party that they like, or one issue that they were fond of, but little of everything else.

Dr Pang answered that the types of platforms used were a mix of social networking sites like Facebook, blogs and YouTube. For further analysis, she could look further into the information content and whether use of different types of social media platforms could influence informational or expressive use. The questionnaire did ask respondents if they had unfriended or unfollowed anyone during GE2015, but the findings were not presented at the symposium. If the respondents did unfriend or unfollow anyone, it may mean that they would like to have a more homogeneous opinion climate and control the opinions they see on their social networking sites.

The same participant had a similar question for Dr Goh and asked if she had information on the type of networks that the respondents used, and if that could give her a clearer idea on the kind of participation or communication that the respondents engaged in online.

Dr Goh said that the data did not allow her to examine what respondents were talking about. It was a good step though to establish that use of social media did promote political engagement and that it improved political knowledge gain for certain demographics.

A participant asked if the survey examined the use of different social media platforms, and if so, which platforms were the most effective.

Dr Pang answered that the survey divided social media platforms into four categories based on conceptual definitions. For example, blogs like mrbrown and sites like The Online Citizen were ego-centric as they generated their own content; discussion forums such as REACH and hardwarezone were sites where users converged based on common interests; the third were open-groups such as Facebook and Twitter; and the last were closed-groups such as Viber, WhatsApp and Facebook Messenger.

As for which social media platforms were most effective, Dr Soon replied that on the whole, mainstream media was used more frequently than social media and was also trusted more — mainstream media was thus a "fierce competitor" for social media. Breaking the results down further, it showed that mainstream media outlets and their online websites were used and trusted more. For social media, it was social networking sites such as Facebook and Twitter that were used most frequently, while IM platforms were trusted the most.

Partisanship of blogs

Dr Soon asked Prof. Lim if there was a variation in partisanship across the election period within blogs.

In response, Prof. Lim said that the machine was not trained to distinguish between pro-PAP, anti-PAP and anti-government. Instead, as long as the blogger expressed anti- or pro-government or PAP in the post, the machine would consider the blog as partisan. There were a small number of posts that were coded pro-PAP or pro-government during machine training by human coders. More training is needed for the machine to analyse whether partisanship changed over time.

Social desirability bias

Another participant also asked Dr Elmie if there was a systemic misrepresentation of the finding that a respondent's own opinion was least critical of the way the government had handled issues related to population growth, transport and housing, due to social desirability bias.

Dr Elmie said that the bias was mitigated by asking respondents for their own opinions first so there is a higher likelihood of them being truthful and not compare their opinions with others.

Another participant commented that Dr Elmie's findings were not static, as one has to take into account presumed influence. For example, the findings showed that open-group social media platforms were most critical because respondents may have had a presumed understanding of social media platforms as already being critical.

Dr Elmie agreed and said that this explained why respondents felt that opinions on open-group social media platforms were most critical, as respondents were influenced by how the media had framed social media as a negative space. He noted that the survey questions had measured perception and whether the perception was positive or negative.

Characteristics of swing voters

One participant said that it was fascinating that the majority of respondents refused to reveal whom they had voted for. He asked who those respondents were and if there were distinctive characteristics between those who revealed their answers and those who did not. Another participant was curious why it was mainly the women who had swung from the PAP to the opposition.

A/P Zhang said that the low response rate was not surprising given the local context. It could also be because respondents did not know the correct meaning of "your vote is secret". She had not done a systematic comparison between those who revealed whom they voted for and those who did not, but it seemed that the former were more politically active than the latter. She did not know why more females than males swung from the PAP to the opposition, as this was information that could not be gleaned just by looking at the survey data. She suggested that political parties such as the PAP could conduct focus group discussions with participants whose profiles matched those mentioned in her presentation to find out more about their voting behaviours.

Another participant commented that the 4% swing from PAP to opposition and 8% swing from opposition to PAP was smaller than the reported national swing. He asked if it was possible that respondents lied in their response.

To this, A/P Zhang said despite the difference in percentages, she did not think that the data should be discounted, as at least the pattern was consistent. Having some information was better than having no information at all.

Issues that influenced voting behaviour

A participant asked if the survey included questions to find if there were any issues that had influenced respondents' voting behaviours.

Dr Soon said that the survey listed 10 reasons that could have influenced voting behaviour. Respondents were then asked to indicate "yes" or "no" for each item. "Fear of the opposition forming the government" was not one of the top three factors that influenced how respondents voted. Instead, the top three were "quality of candidates", "policy changes related to transport, housing cost and/or foreign workers" and "Singapore's vulnerability as a country". The passing of Lee Kuan Yew

and SG50 celebrations were ranked low, while wanting an alternative voice in government was ranked somewhere in the middle.

A participant questioned the finding as he had anecdotal evidence that indicated Lee Kuan Yew's death had influenced Singaporean's voting behaviour. He said that a person he had met had decided to vote for PAP because the "father of the nation had passed away". He also cited his friend who had described himself as "quite anti-PAP and anti-LKY" but was influenced by the media coverage surrounding the death of Lee Kuan Yew to the extent that he found himself tearing.

Mr Tan responded that the purpose of the survey was to go beyond anecdotal evidence. Besides, he said that if researchers were to rely on anecdotal evidence, then the opposition should have won more seats based on what was seen on social media.

Online discussion not translating into real world effects

A respondent asked why online chatter on election issues did not translate into election results. Were there external factors that negated or limited the effect of social media?

Prof. Lim replied that Singaporeans were occupied by issues such as transportation, entertainment politics and Korean pop. It would also be hard to get data from observing behaviour of social media users, as users may consume information but not generate content. He also suggested that people may have consumed and generated content, but only for certain topics.

For example, he said that some research indicated that people consumed political information but did not share them. Dr Soon also added that within social media, there were some developments which may limit the effects of social media. She highlighted an article written by Mr Tan leading up to GE2015 on the normalisation of the online space. In that article, Mr Tan observed that there was a greater increase of pro-PAP or pro-government voices in the last few years. This was the opposite of the assumption that the online space was anti-establishment. Additionally, Dr Elmie's study showed that what respondents saw and heard online may not necessary influence nor have any effect on their voting behaviour.

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If you have comments or feedback, please email ips.enews@nus.edu.sg