
A Study of Identity to Influence Civic Engagement and Public Opinion on Internet New Media Environment in Taiwan

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ABSTRACT

With the development of the internet, and the increase of numbers of users in the social networking sites, a network crowd behavior generated. Nowadays, the virtual civic engagement was developed and kept growing. Traditionally, the type of civic engagement is to practice through action, but it may have more types of practice. Previous studies indicated that online community not only provided the public for knowledge sharing but also generated crowd effect.

Typically, past studies found that online civic engagement could increase offline civic engagement. It also connected with crowds to timely attend a series of protests about specific issue.

With regard to the civic engagement, a personal or social identity paid an important role. Therefore, this study assumed that a sense of identity is a key factor that affects knowledge sharing and civic engagement. The purpose of this study was to investigate the identity (personal identity, relational identity, social identity) of the people on social network sites for internet public opinion. The study model used knowledge sharing and civic participation as dependent variables. Study has individual assumptions, study tools with proven reliability and validity of scales to measure, respondents are the people have been used social networking sites.

The results show that a high significant correlation between internet civic engagement and knowledge sharing, internet civic engagement is also high-correlated with practical civic engagement. As long as people can increase to publish opinion about news event on social network site, it will probably have high will to attend internet or practical civic activity.

This study hypotheses have been establish:

H1a : Personal identity is positively significantly correlated with knowledge sharing.

H1c : Social identity is positively significantly correlated with knowledge sharing.

H2a : Personal identity is positive significantly correlated with internet civic engagement.

H2e : Relational identity is positive significantly correlated with practical civic engagement.

H2f : Social identity is positive significantly correlated with practical civic engagement.

Keywords: Civic Engagement, Sense of identity, New media, Internet Public opinion

1. INTRODUCTION

Rapid development of information and communication technologies has brought changes in various applications and processes. Han Xue (2011) described that internet public opinion has become a new form of speech, which represents that the rise of a new public opinion platform,

and began to receive attention, receive a warm response to the strong concern of the social events. The Internet public opinion beyond the geographical, class, education level restrictions and can stimulated people to express their views freely. Although internet public opinion makes us to communicate with others more conveniently, it may cause the crisis.

Zhou Jian (2010) mentioned that when the Internet public opinion is rapid development, the dominant and the negative public opinion form Internet public opinion crisis. It has spread fast, the magnitude of the extensive and, difficult to control, the destructive, such as normalization features. Clearly, the rise of Internet has left the public increased by another opinion form, but the value it brings to society as a positive effect that depends on the netizens opinion-oriented results and judgment. Netizens of public opinion to play a supervisory, judge the justice of the function, it is undoubtedly positive; Conversely, if the parties will have a negative impact due to the irrational publics attacks the protagonist on an event of public opinion.

Anu(2011) researched the interaction with people or groups who share your hobbies or interests and obtained nearly 33.2% respondents answer “a lot” from 2000 respondents.

Pew Internet gave a authority to Aaron, et al(2009) who had a project that indicate some 37% of internet users aged 18-29 use blogs or social networking sites as a venue for political or civic involvement, compared to 17% of online 30-49 year olds, 12% of 50-64 year olds and 10% of internet users over 65. Also, the project show that posting material about political or social issues on the Web and using social networking sites politically are forms of online engagement that are dominated by the young—especially the youngest adults. This survey summarize that income and education have the same relationship to online and offline political activity, and there is no evidence that Web-based political participation fundamentally alters the long-established association between offline political participation and these socio-economic factors. In the end of this project, it point out that to the extent that those with low levels of income or education are less likely to be online in the first place, such differences may even be exacerbated in the internet era. But, the development of new forms of communication on the internet, blogs and social networking sites potentially expands the opportunities for civic engagement.

In Taiwan, Institute For Information Industry(2011) reported, there are 90.4% internet users have ever used social network sites like Facebook etc. Among of these internet users, there are 62.9% often use social network sites. So, the social network sites have been played more and more important roles in our life. Foreseeing Innovative New Digiservices (2012) indicated that the news are real-time interaction between news reports, facebook, twitter, YouTube, and RSS. Furthermore, there are several features such as increase the degree of engagement of the audience, and the expanding information.

2. LITERATURE REVIEW

2.1 Social network site (SNSs)

2.1.1 Definition of Social network sites

Huseyin & Nadire (2011) refer to Boyd& Ellison(2007), said that “social network sites, based on services, allow users to make open or semi-open profiles within the systems they are part of, to see list of other people in the group, and to see the relations of people within different groups”.

For different type of social network sites, they have different terminology and structure of communication networks. Mazman & Usluel (2010) refer to Bartlett-Bragg(2006), indicated that social network is range of applications that augments group interactions and shared spaces for collaboration, social connections, and aggregates information exchanges in a web-based environment.

Tajfel(1982) also redefined the concept of social group, that is, a social group can be defined as two or more individuals who share a common social identification of themselves or, which is nearly the same thing, perceive themselves to be members of the same social category. He additionally defined that the members of a social group should often share no more than a collective perception of to their own social unity and hence the social group is sufficient to act as a group.

According to above description, we found that the SNSs have an important character as compare to other media, that is, it can help people to connect with each other in virtual community to exchange information and share knowledge.

2.1.2 Function of Social Network Site

Kim (2011) indicated that the role of SNSs in providing information about politics or public affairs and providing an online space for citizens to express opinions and participate in various activities has been increasing. He also referred to the intersection between SNSs and politics. The existing scholarship has focused primarily on citizens' participatory activities such as political and civic engagement and social capital, however, there is lack of the discussion of the relationship between civic engagement and knowledge sharing in the SNSs. Hence, this study will focus on the relationship between civic engagement and knowledge sharing in the SNSs.

2.2 Civic engagement

2.2.1 Definition of civic engagement

Crocetti, Jahromi & Meeus(2012) refer to Adler & Goggin (2005) defined that the term "civic engagement" is a broad construct that includes civic skills, knowledge, attitudes, behaviors, and goals. There are numerous definitions for this term and there is debate about what activities are "civic" into beliefs, values, and goals for one's future. Joonmo & Nan(2008) mentioned about civic engagement, there is a scarcity of formal definitions which was offered in the study literature. They cited the view of Putnam(2000) that emphasize civic engagement comprise involvement and participation in the community. In Joonmo & Nan's(2008) article also mentioned that Edwards and McCarthy(2004)and McAdam(1986, 1989) focused on actions initiated, by either individuals or groups, for collective benefits.

2.2.2 The relation between identity and civic engagement

Crocetti, Jahromi& Meeus(2012)also contributed that though much civic engagement literature suggests the theoretical importance of civic identity, there were few empirical studies testing the relations between identity and civic engagement. They also emphasized that much civic engagement study alludes to the importance of identity in the process of civic development. Also, They refer to Hardy,et al.(2010) and Pancer,et al.(2007) indicated that recent studies of identity and civic engagement found a bidirectional relation between these constructs. Hence, this study will build the hypothesis.

H2: Identity is positively significantly correlated to citizen engagement.

2.3 Internet public opinion

2.3.1 Definition of Internet public opinion

Both Li Na (2009) and Gao Ying-Fei (2011) indicated that Internet public opinion is used the Internet as a medium, the majority of people have similar opinions on the Internet which exhibits an influence on the society. Jiang Le-Jin (2006) divided Internet public opinion into a broad and narrow explanation. Broadly, the Internet Public opinion relies on the opinion formed by the network as a communication channel. Narrowly, Internet public opinion is the view of the media comments by the network with the forum and news thread to reflect the opinion of majority.

Zhou Jian (2010) also mentioned that Internet public opinion can cause influence on a certain focus. As long as what fulfill with two conditions, using Internet media as the carrier and the content is public, it can be called a Internet public opinion. Wang De-Hui and Wang Xiao-Xue (2011) indicated that Internet public opinion is an important part of social public opinion and Internet communication is a concentrated expression of public opinion in the network.

Xu Chao-Yin (2009) also mentioned that the Internet public opinion regard network as a platform for the public (the users). Internet public opinion is mainly consisted of two parts. First, the tendency of public opinion is reflected in the Internet network news. Second, the public opinion presented on BBS, forums, blogs and various social networking sites.

2.4 Sense of identity

2.4.1 The definition of Sense of Identity

Crocetti, Jahromi & Meeus(2012) refer to identity is a useful theoretical construct to understand how individuals integrate social experiences into beliefs, values, and goals for one's future. Jan & Peter (2000) refer to Thoits(1986), the core of an identity that is the categorization of the self as an occupant of a role, and the incorporation, into the self, of the meaning and expectations associated with that role and its performance.

In term of social identity, Jan & Peter(2000) refer to Tajfel & Turner(1986) and Turner, et.al(1987) also mentioned that the social identity tradition has very much relied on a phenomenological definition of identity, focusing on the cognitions, evaluations and emotions associated with group membership. They also indicate their views that identities are not only defined cognitively, they are embedded and constructed in action. The link between identity and action is not limited to claims making in the public sphere. Civil society is not only the sphere where individuals can freely express opinions, endorse religious beliefs of their choice, and be granted autonomy and protection against arbitrary treatment. Indeed, in the present-day, an increasing proportion of initiatives and tasks are assumed by social networks serving specific groups or by the whole collectivity.

As above, we could conclude that individual have ability that define and attribute oneself. Before individual attend to community, they possess identity to this community or themselves. So, we

investigate that people that have high self-identity whether have high willing to attend civic activity or publish opinion.

2.5 Knowledge Sharing

2.5.1 The definition of Knowledge Sharing

Meng-Hsiang Hsu, et al (2007) refer to Ryu et al. (2003), indicate that Knowledge sharing is the behavior when an individual disseminates his acquired knowledge to other members within an organization. They refer to Ardichvili et al. (2003) demonstrate that fear of criticism or misleading others, community members tend to shy away from contributing knowledge. Also, they summarize different perspective on the factor that affect individual's willingness of knowledge sharing and further assume individuals' behavior for knowledge sharing will be guided by personal characteristics and the environment they are in. By this description, we assume the difference of identity that is composed of three dimension, including personal identity (PI), relational identity (RI), social identity (SI) positively affect knowledge sharing in this study. Also, we build the hypothesis.

H1: Identity is positively significantly correlated to knowledge sharing.

3. METHODOLOGY

3.1 Demographic statistics

The samples comprised one hundred of respondent questionnaires. Data collection took place during September 27, 2012 to October 25, 2012. Respondents ranged in age from between 12 to 50 years, 79% of respondents are young generation between 19 and 30. In the questionnaires, 54% and 46% of respondents were male and female, respectively. The Education attainment consisted mostly of college or Master. With regard to the career of respondent, there are 37% for student, 63% for officers. The income is below NT\$40,000. 42% of respondents spent one to three hours to use social network site daily and of 31% are students, 22% of respondents spent three to five hours and 32% of these are students. It is worth to concern respondents who spent five to seven hours to use social network sites, even up to 60% of these are students. 47% of respondents never had to join the political or social groups on social network sites, and 36% of these are students. The mostly kinds of media are used by the respondents to obtain news about special event, television and social network sites, news website in sequence. 48% of respondents spend one to three hours to watch news daily, but 44% of respondents spend no more than one hour to watch news daily and 34% of these are students. 49% of respondents have never been recently involved in the specific purpose of organizations about the gathering procession or public speech, 36.7% of these are students. The demographics description was listed in table 1.

Table 1. Demographic description

Category	Content	Amount	Percentage
1. Gender	Male	53	53%
	Female	47	47%
2. Education attainment	College	54	54%
	Master	37	37%

	High school	5	5%
	PhD	4	4%
3.Career	Student	37	37%
	Government employees/Teacher/Military	13	13%
	Others	13	13%
	ICT/Telecom/Communication	8	8%
	Self-employment	6	6%
	Medical/Biotech	6	6%
	Manufacture	5	5%
	Art/Entertainment/Mass communication/Service	4	4%
	Business/Financial/Insurance	3	3%
	Retail business	2	2%
	Energy/Mineral	1	1%
	Accommodation/ Catering	1	1%
	Law/Social work	1	1%
4.Age	25-30 years old	50	50%
	19-24 years old	29	29%
	31-35 years old	9	9%
	12-18 years old	4	4%
	41-45 years old	3	3%
	46-50 years old	3	3%
	36-40 years old	2	2%
5.Income	Below 20,000 NT dollars	44	44%
	Between 20,001 and 40,000 NT dollars	40	40%
	Between 40,001 and 60,000 NT dollars	11	11%
	Between 60,001 and 80,000 NT dollars	4	4%
	Above 80,000 NT dollars	1	1%
6. How much time do you use social network sites daily?	One to three hours(contain one hours)	42	42%
	Three to five hours(contain three hours)	22	22%
	Five to seven hours(contain five hours)	15	15%
	Below one hour	14	14%
	Above seven hours(contain seven hours)	5	5%
	None	2	2%

7. How many the political groups (government agencies) or social groups (non-governmental organizations, foundations) do you ever join on social network sites?	None	47	47%
	One to three groups(contain one group)	37	37%
	Three to five groups(contain three groups)	9	9%
	Above seven groups(contain seven groups)	4	4%
	Five to seven groups(contain five groups)	3	3%
8. What kind of medias do you mostly obtain news? (Multiple choice)	Television	69	26.8%
	Social network site	49	19.1%
	News website	48	18.7%
	Newspaper and magazine	43	16.7%
	Electronic paper	12	4.7%
	Forum	11	4.3%
	Broadcast	9	3.5%
	Discuss community	8	3.1%
	Others	8	3.1%
9. How much time do you spent to watch news daily?	One to three hours(contain one hours)	48	48%
	Below one hour	44	44%
	Three to five hours(contain three hours)	7	7%
	None	1	1%
10. When did you have been recently involved in the specific purpose of organizations about the gathering procession or public speech?	Never	49	49%
	No more than one year	45	45%
	One to three years(contain one hours)	5	5%
	Three to five years(contain three hours)	1	1%

3.2 Measurement instruments

This study used questionnaire survey method as instrument, particularly web-base survey. The analysis was conducted using SPSS software package. Hypotheses were tested using statistic method on data collected from SNS users. The questionnaire use Lickert five-point scale.

3.3 Study model and hypothesis

Based on the previous literature review, the current study proposes the following hypothesis. The purpose of study focused on exploring the relation between sense of identity and Knowledge Sharing (KS), sense of identity and Civic Engagement (CE). we suppose sense of identity to affect the dependent variables Knowledge Sharing (KS) and Civic Engagement (CE). Identity is the independent variable, including personal (IDP), social (IDS), relational identity (IDR).

In appedix1, the identity scale was developed by Cheek, Smith, & Tropp in 2002. The University of Pretoria executed a research project about a confirmatory factor analytic study of the aspect of identity questionnaire (AIQ-IV) in 2010 .In the project description, Del Prado et al. (2007)conducted a study ,he indicated the alpha reliability for the assessment range from 0.8 to

0.83 for personal identity scale, 0.82 to 0.91 for relational identity scale, 0.80 to 0.82 for social identity scale. According to Antonia and Marcia (2000) in this research project, reliability coefficients between 0.60 and 0.80 are acceptable. So, we used the original identity scale as measurement.

In appendix 2, the knowledge sharing scale was developed by Abel.U, Mark W. Sharratt, Eric .T & Sandhya.S in 2007, we revised something to meet our purpose.

In appendix 3, the civic engagement scale was reference by Su-Fen Tseng, Zhen-cheng He (2011). Their study comprised two constructs of civic engagement, Internet civic engagement and practical civic engagement. We combined two constructs in our study as civic engagement (CE), and revised and add descriptions as our question items.

The hypotheses are below:

- H1a: Personal identity is positively significantly correlated with knowledge sharing.
- H1b: Relational identity is positively significantly correlated with knowledge sharing.
- H1c: Social identity is positively significantly correlated with knowledge sharing.
- H2a: Personal identity is positive significantly correlated with internet civic engagement.
- H2b: Relational identity is positive significantly correlated with internet civic engagement.
- H2c: Social identity is positive significantly correlated with internet civic engagement.
- H2d: Personal identity is positive significantly correlated with practical civic engagement.
- H2e: Relational identity is positive significantly correlated with practical civic engagement.

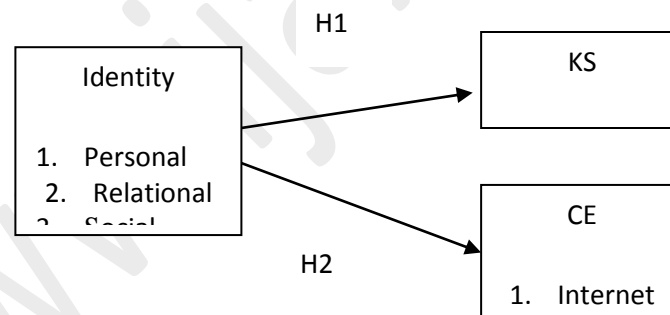


Fig1. The study of hypothesize model

Table2. The construct of correlation

		Personal identity score	Relational identity score	Social identity score	Knowledge sharing score	Internet civic engagement score	Practical civic engagement score
Personal identity score	Pearson correlation significance (two-tailed tests)	1	.398** .000	.237* .018	.376** .000	.207* .038	.122 .228
Relational identity score	Pearson correlation significance (two-tailed tests)	.398** .000	1	.611** .000	.131 .194	.037 .715	.251* .012
Social identity score	Pearson correlation significance (two-tailed tests)	.237* .018	.611** .000	1	.315** .001	.166 .100	.293** .003
Knowledge sharing score	Pearson correlation significance (two-tailed tests)	.376** .000	.131 .194	.315** .001	1	.623** .000	.461** .000
Internet civic engagement score	Pearson correlation significance (two-tailed tests)	.207* .038	.037 .715	.166 .100	.623** .000	1	.623** .000
Practical civic engagement score	Pearson correlation significance (two-tailed tests)	.122 .228	.251* .012	.293** .003	.461** .000	.623** .000	1

H2f : Social identity is positive significantly correlated with practical civic engagement.

4. Study analysis and result

4.1 Product Moment Correlation Analysis

According to table2, the analysis of this study is below:

1. Personal and Social identity is closely middle-correlated with knowledge sharing. That is, respondents who have sense of personal and social identity will probably have motive and intention to share personal opinion on the internet, but not absolutely.
2. Relational identity is high-correlated with personal and social identity. So, the correlation is accounted that respondents who have highly sense of relational identity will probably have high sense of personal and social identity. In other words, the high relational identity represent someone who have awareness of high interpersonal relation with others, and the person generally also think that he or she have well social interaction and self-identity.
3. Internet civic engagement is high-correlated with knowledge sharing. That is, respondents who have highly knowledge sharing(ex: to share the opinions on a news event, be an opinion contributor, others found my opinion is useful, my opinion could prompt other people to develop their own thoughts) on social network sites will affect the extent to attend civic activity on internet.
4. Practical civic engagement is middle-correlated with knowledge sharing and high-correlated with internet civic engagement. That is, respondents who have knowledge sharing will most likely to participate practical civic engagement. Likewise, respondents who have highly internet civic engagement will have high probability to participate practical civic engagement.

Table3. This study verification of hypotheses

Hypothesis	Correlation	Significance	Strength	Establish
H1a : PI is positively correlated to KS	0.376	$0.000 < 0.01$	middle	Yes
H1b : RI is positively correlated to KS	0.131	$0.194 > 0.05$	low	No
H1c : SI is positively correlated to KS	0.315	$0.001 < 0.01$	middle	Yes
H2a : PI is positively correlated to Internet CE	0.207	$0.038 < 0.05$	low	Yes
H2b : RI is positively correlated to Internet CE	0.037	$0.715 > 0.05$	low	No
H2c : SI is positively correlated to Internet CE	0.166	$0.100 > 0.05$	low	No
H2d : PI is positively correlated to Practical CE	0.122	$0.228 > 0.05$	low	No
H2e : RI is positively correlated to Practical CE	0.251	$0.012 < 0.05$	low	Yes
H2f : SI is positively correlated to Practical CE	0.293	$0.003 < 0.01$	low	Yes

4.2 Independent-Samples T Test Analysis

4.2.1 Different construct test

Through different dimensions such as identity, knowledge sharing to analyze, we obtained the following results using independent sample t test. First of all, personal identity is divided into high score and low score group to discuss the influence on internet civic engagement, the group mean difference t-test is equal to 2.349, $p = .021 < .05$, to achieve significant level. The mean difference within 95% confidence interval is [0.328, 3.899]. This represents respondents who gain high personal identity scores significantly have higher willing to participate internet civic engagement than the lower score of personal identity. But the practical civic engagement is non-significant with personal identity. The results of this study are the same as the above correlation analysis.

Next, we focused on the relational identity to discuss the influence on practical civic engagement. The group mean difference t-test is equal to 2.609, $p = .010 < .05$, to achieve significant level. The mean difference within 95% confidence interval is [0.536, 3.937]. This represents respondents who gain better relational identity scores significantly have higher willing to participate practical civic engagement than the lower score of relational identity. But the internet civic engagement is non-significant with relational identity. In term of social identity, the result of test is not significant with internet and practical civic engagement.

Finally, when our study tested the construct of knowledge sharing, the result is significant with internet and practical civic engagement. That means the respondents who gain the high knowledge sharing score will also have higher willing to participate internet and practical civic engagement.

5. FUTURE STUDY AND SUGGESTIONS

After this study, there are some suggestions for civic engagement :

1. College or graduate students seldom concern the news and current affairs daily, so the training of civic engagement should to promote to watch the news report on internet.
2. The majority of college or graduate students spent five to seven hours to use social network sites daily. The news media have to strengthen presentation on social network site to attract audience who obtain the news information through internet.
3. In the result of this study, internet civic engagement is correlated with knowledge sharing. It is important to train audience who watch the news in any types of medium have a positive attitude to response opinion. or views.
4. The majority of college or graduate have never been attend involved in the specific purpose of organizations about the gathering procession or public speech recently, and they have no motive or interest to join political or social groups on social network sites. These groups should timely take place the interesting activity to make them confident in this group.
5. The university should have more related course to realize civic engagement and civic society.

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Appedix1. The operational definition of identity

Constr uct	Item content	Resou ce	Origi nal item Cronb ach' α refere nce by Leoni e(201 0)	After this study,we verify the Cronbach' α of identity construct	Cronbach ' α if item deleted	Factory analysis communal ities	Component Matrix
IDP1	My personal values and ethical standards.	Cheek, Smith, &	0.80 to 0.83	0.857	0.840	0.547	0.739
IDP2	My dream of the future and imagine.				0.834	0.585	0.765
IDP3	My personal goals and hopes for the future.				0.842	0.484	0.695
IDP4	My own emotions						

	and feelings.	Tropp(2002)			0.842	0.448	0.670
IDP5	My thoughts and ideas.				0.836	0.599	0.774
IDP6	My way of dealing with the fear and anxiety.				0.851	0.356	0.597
IDP7	I felt that I was unique and different.				0.841	0.465	0.682
IDP8	I know that even if the lives of a lot of external changes, the innermost thoughts remains unchanged.				0.856	0.252	0.502
IDP9	In my self-awareness, I think I am a category of people.				0.852	0.285	0.534
IDP10	My own self-evaluation, I have my own personal views.				0.838	0.521	0.722
IDR1	I feel my relation with others was close.	Cheek, Smith, & Tropp(2002)	0.82 to 0.91	0.897	0.890	0.454	0.674
IDR2	I could be a good friend that concern about others.				0.887	0.548	0.740
IDR3	I promise that I will be paying a concern to my friends.				0.885	0.600	0.775
IDR4	I will share experience with my close friends.				0.896	0.341	0.584
IDR5	I have a interpersonal relationship that satisfy each other.				0.886	0.540	0.735
IDR6	I will connect the degree of intimacy with another person.				0.891	0.459	0.677

IDR7	I will develop a relationship of mutual caring with others.				0.881	0.650	0.806
IDR8	I am eager to realize about the true thoughts and feelings of my best friend.				0.893	0.426	0.653
IDR9	I often have intimate contact with others.				0.879	0.664	0.815
IDR10	I feel sense of connection with others, when I close others.				0.881	0.638	0.799
IDS1	I was welcomed by others.	Cheek, Smith, & Tropp (2002)	0.80 to 0.82	0.843	0.823	0.506	0.711
IDS2	Others have reaction that I have said and done.				0.825	0.514	0.717
IDS3	My external perception: my height, my weight and my body.				0.836	0.453	0.673
IDS4	My reputation and how others see me.				0.826	0.515	0.718
IDS5	I think I'm attractive to others.				0.793	0.703	0.839
IDS6	I give attitude, behavior and impressions to others.				0.795	0.715	0.846

Appendix2. The operational definition of knowledge sharing

Construct	Revised Item content	Resource	Original item Cronbach 'α (If item deleted) reference by Abel.U ,et al(2007)	After this study, we verify the Cronbach 'α of knowledge sharing construct	Cronbach 'α if item deleted	Factory analysis communalities	Component Matrix
KS1	I often share my views on a news event with people on the social network sites.	Abel.U, Mark W. Sharratt , Eric.T& Sandhya.S(2007)	0.946	0.966	0.963	0.753	0.868
KS2	I am the one of many positive news events opinion contributors on social network sites.		0.952		0.963	0.755	0.869
KS3	I consciously spend time to share the news events of opinion contributions to the social network site.		0.948		0.959	0.865	0.930
KS4	I try to share my views on social network sites.		0.949		0.961	0.813	0.902
KS5	Other members of social networking sites found my views is useful.(ex: press agreement button)		0.952		0.963	0.738	0.859
KS6	My views on social network sites could		0.948		0.963	0.736	0.858

	prompt that other people to develop their own thought.						
KS7	I am a contributor on social network sites website.		0.947		0.960	0.834	0.913
KS8	I thought my opinion is positively influence on the news event.		0.950		0.961	0.797	0.893
KS9	As a whole, I felt that my opinion about news event have great contribution value on social network site.		0.946		0.962	0.781	0.884

Appedix3. The operational definition of civic engagement

Constru ct	Revised Item content	Resou ce	Original item Cronbach'α reference by Su-Fen Tseng, Zhen-cheng He (2011)	After this study,we verify the Cronbach' α of civic engagem ent construct	Cronba ch'α if item deleted	Factory analysis communa lities	Component Matrix
ICE1	I will participate petition activities on the social network sites.	Su-Fen Tseng, Zhen-cheng He	0.778	0.909	0.894	0.702	0.838
ICE2	I would like launch activity or discussion about social issues on the social network sites.				0.880	0.797	0.893
ICE3	I have ever participated						

	activities or discussions about social issues on the social network sites.	(2011)			0.883	0.777	0.881
ICE4	I will be published own views about public issues on the social network sites.				0.893	0.710	0.843
ICE5	I will join the groups to discuss a particular issue or event to express their views of the person or event. For example: anti fans group.	This study added			0.897	0.695	0.834
PCE1	I will voluntarily participate social service works.				0.855	0.551	0.742
PCE2	I will provide most of the funding resources for community or neighborhood activities.		0.709	0.864	0.858	0.523	0.723
PCE3	I will attend the rally or speech activities of a political nature.	Su-Fen Tseng, Zhen-cheng He (2011)			0.812	0.754	0.868
PCE4	I will participate in organized protests activities.				0.821	0.711	0.843
PCE5	I will participate in the elections or policy-related activities.	This study added			0.825	0.707	0.841