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Relationship between Local SNS Usage and Social Capital

Chunliang Yao*, Jae-Hun Joo**, M. Minsuk Shin***

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Abstract

Purpose - This study aims to understand the relationship between Chinese local SNS usage and social capital building through Chinese international students in South Korea. A research model that illustrates the relationship between the SNS usage (i.e., intensity, communication and social capital building) is proposed. Based on the analysis, this study will provide responses to the question of if SNS really presents the danger of trapping international consumers in their local comfort zone or enhance social capital for the users.

Research design, data, and methodology - The survey questionnaire is circulated among the WeChat (a Chinese local SNS) users who are the Chinese international students studying in South Korea. The collected data is analyzed by structural equation method using SPSS and AMOS.

Results - Proposed hypotheses of the positive relationships between the attachment of SNS use and both individuals' bridging and bonding social capital are supported. It's also supported that (1) interpersonal communication, (2) interpersonal communication with old friends, and (3) interpersonal communication for making new friends on SNS positively influence individuals' bridging social capital.

Conclusions - This paper demonstrates the importance of intensity of WeChat use and interpersonal communication that impact Chinese international students' bridging and bonding social capital on WeChat.

Keywords: Social Network Service, Intensity of SNS Usage, Interpersonal Communication, Social Capital, WeChat.

JEL Classifications: M10, M15, M30.

1. Introduction

Social Network Service (SNS) aims at building interpersonal relationship networks with similar occupations, hobbies, benefits, goals, and provides users with constant information sharing and open communication (e.g., Shin & Joo, 2015). Social capital is the tangible and intangible benefits and resources one can derive from his or her social relationships (e.g., Yendaw, 2014). Thus, many studies report that building social relationships on SNSs enhances social capital for the users (e.g., Li & Chen, 2014). However, existing studies are biased on Facebook, Tweeter, Linked-In,

and other global or English (the language) based SNSs (e.g., Mayr, 2015; Schijns & Smit, 2010). Employees with high-quality social resources (such as abundant structural hole, high centrality or high-level connections) are more likely to achieve high performance (Morrison, 2002). An ironic consumer behavior of SNS is that due to the global online environment, consumers who move to a different country still cling to his or her home country's local SNS, which he or she is accustomed to and the personal network is already established. In other words, born global SNS might present the danger of trapping consumers in their local frame ironically due to the global nature SNS. It is interesting and necessary to explore if international consumers (i.e., migrants) can build and maintain their social capital in another country by using their homeland SNS applications.

In this context, this present study aims to understand the relationship between WeChat (i.e., a Chinese local SNS) usage and social capital building through Chinese international students in South Korea. Consumer behavior on SNS will be examined through the intensity of their usage and the

* Master's student at Dongguk University, Gyeongju, Korea, Tel: +82-54-770-2346, E-mail: yd1991223@163.com

** Professor of Management Division at Dongguk University, Gyeongju, South Korea, Tel: +82-54-770-2346, E-mail: givej@dongguk.ac.kr

*** Corresponding author, Assistant professor of International Business at Konkuk University, Seoul, Korea. Tel: +82-2-450-3774, E-mail: shinm@konkuk.ac.kr

communication types they make on WeChat. Then, the relationship between consumer behavior and their social capital accumulation will be analyzed. Based on the analysis, this study will offer responses to the question of if SNS really presents the danger of trapping international consumers in their local comfort zone or enhance social capital for the users.

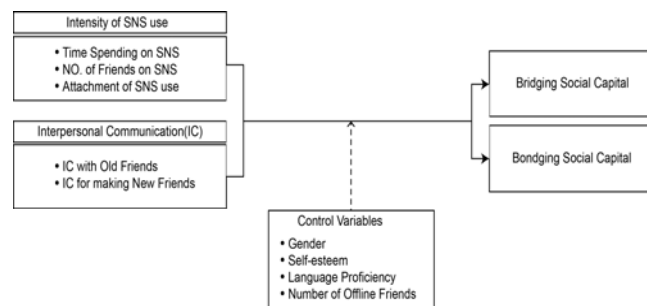
2. Literature Review

2.1. Research Model

SNS provides users a platform for their online activities, making new friends, and connecting with the outside world (Wellman et al., 2001; Wang et al., 2014). Once individuals get in touch with each other through SNS, the social relations among them occur, which then lead to strengthening social capital (Li, 2011; Won, 2016). Ellison et al. (2007) examined the relationship between the use of Facebook and the social capital accumulation. Putnam (2000) has described two types of social capital: bridging and bonding social capital. The core of bridging social capital is the social resources generated by weak relations (or “weak tie”) in the social network, which exist in such forms as new ideas, useful information and job opportunities that are brought by weak relations. Bonding social capital corresponds to strong relations (or “strong tie”) in the social networks, which exist in the form of tangible economic supports, emotions and so on. The intensity of SNS usage positively influences users’ bridging social capital; and this relationship is based on students’ degree of self-esteem and satisfaction with life (Ellison et al., 2007). Meanwhile, the intensity of using SNS in their research also significantly impacts on bonding social capital (Ellison et al., 2007). A

positive relationship between the interpersonal communication on SNS and both bridging and bonding social capital is supported when the author is discussing the impact of relations communication of SNS on the social network on user’s interpersonal relationship, and the consequent change of social capital (Chen, 2011; Cho et al., 2012). <Table 1> is summary of some studies of social capital.

Ellison et al. (2014) proposed the gender, age, education, and self-esteem as the control variables in the study. The present study does not consider the age and education as the control variable as most SNS users are in their 20-30’s and as education level should not be a factor that influence accumulation of social capital. Gender and self-esteem are proved to be the significant predictors of both bridging and bonding social capital (Ellison, 2014). Thus, this study considers the gender and self-esteem as the control variables as well. The language proficiency will influence the extent to which international migrant communicate with the locals. Also, the number of offline friends should also be considered one of the control variables. Based on the previous studies, this study presents a research model as in <Figure 1>.



<Figure 1> Research model

<Table 1> Studies Related to Social Capital

| Author | Context | Main Measurements | Findings |
|--------------------------|--|--|---|
| Landry et al. (2002) | Structural social capital, cognitive social capital, and firm’s decision to innovate | Percentage of sales dedicated to R&D; Number of different advanced technologies used by firms; Participation assets; Relational assets; Financial assets; Marketing assets; Trust assets; Pressure from competition. | Relational social capital → decision to innovation |
| Lazarova & Taylor (2009) | Boundaryless careers, social capital, and organizational performance | Internal psychological; Internal enacted; External psychological; External enacted; Structural, Relational, Cognitive Social Capital; Organizational Performance. | Social Capital → Organizational Performance |
| Pérez-Luño et al. (2011) | Social Capital, Knowledge, and Innovation | External social capital; Knowledge tacitness; Knowledge complexity; Radical innovation. | External social capital → radical innovation; Knowledge complexity → radical innovation. |
| Li & Chen (2014) | SNS and Social Capital | Maintaining home country social capital; Bridging social capital; Bonding social capital; Intensity of Facebook use; Intensity of RenRen use. | Intensity of Facebook and RenRen use → Bridging social capital; Intensity of RenRen use → Maintaining home country social capital. |

2.2. Hypotheses

Many studies report that SNS usage positively related to the bridging social capital. More recent evidence (e.g., Li & Chen, 2014) suggests as people spend more time on SNS, it would be easier for users to accumulate and maintain their bridging social capital. Ellison et al. (2007) proposed the number of "friends" and the hours spent on SNS on a given day as the self-reported assessment of SNS behavior included in the intensity test. And he proposed that intensity of SNS usage was positively associated with the individuals' perceived bridging social capital. Furthermore, when Ellison et al. (2014) studied the relationship between actual friends on SNS and SNS relationship maintenance behaviors with the social capitals, he conducted that the total number of actual friends on SNS would positively impact the users' bridging social capital. Donath and Boyed (2004) also suggest that SNS provides a low cost and simple way of communication that will help individuals to form and maintain the weak ties. Thus, the following hypotheses are proposed:

- <Hypothesis 1> Intensity of SNS use will positively associate with individuals' bridging social capital.
- <Hypothesis 1a> The time spending on SNS will positively impact individuals' bridging social capital.
- <Hypothesis 1b> The number of friends on SNS will positively impact individuals' bridging social capital.
- <Hypothesis 1c> The attachment of SNS use will positively impact individuals' bridging social capital.

Interpersonal communication refers to communicating with friends, sharing information, and idea with friends online. Through SNS, the users could keep in touch with friends and get in touch with new friends. In Chen's (2011) study, she considered the preference of SNS use, which means the different purposes users have to use SNS, would influence the users' social capital. And she divided the preference into three dimensions: (1) for information gathering; (2) for interpersonal communication, and (3) for online games. In this present study according to the student users' SNS behavior; we mainly consider the interpersonal communication which allows people join in different chatting groups where you can meet new people as the independent variable to interact with social capital. For interpersonal communication, we consider there are two main behaviors that users will do on SNS. First is to keep communicating with the friends already known, and another is to make new friends on SNS. Thus, following hypotheses are presented:

- <Hypothesis 2> Interpersonal communication on SNS will positively influence individual's

bridging social capital.

- <Hypothesis 2a> Interpersonal communication with old friends on SNS will positively influence individuals' bridging social capital.
- <Hypothesis 2b> Interpersonal communication for making new friends on SNS will positively influence individuals' bridging social capital.

With the developing of technology, now the SNS is being sophisticated and fully featured as well. Users use SNS not only for making new friends and building new relationships but also keeping in touch with the old friends and maintain the existed relationships. However, with the deep communication, users with a weak tie may trust each other and become close friends. This way we consider it is the transforming from weak tie to strong tie. What's more, because of the rise of WeChat use in China, now more and more parents are using WeChat as well. For the Chinese international students in South Korea, WeChat has been the main way for getting in touch with parents. Hence, we hypothesize:

- <Hypothesis 3> Intensity of SNS use will positively associate with individuals' bonding social capital.
- <Hypothesis 3a> The time spending on SNS will positively impact individuals' bonding social capital.
- <Hypothesis 3b> The number of friends on SNS will positively impact individuals' bonding social capital.
- <Hypothesis 3c> The attachment of SNS use will positively impact on individuals' bonding social capital.

Users through SNS to communicate or keep in touch with their close friends and the family members would help users to solve some problems, make important decisions and even get some job references. Chen (2011) highlighted that interpersonal communication on SNS positively influence individuals' bonding social capital. For the communication to make new friends, individuals could make friends with some people who have the similar interests and hobbies. Also, through interpersonal communications, users can make a relationship with topic experts, so they can obtain expert information. Based on this review the following hypotheses are developed:

- <Hypothesis 4> Interpersonal communication on SNS will positively influence individuals' bonding social capital.
- <Hypothesis 4a> Interpersonal communication with old friends on SNS will positively influence individuals' bonding social capital.

<Hypothesis 4b> Interpersonal communication for making new friends on SNS will positively influence individuals' bonding social capital.

present research. Each survey question on the questionnaire is presented in the measurement items in <Table 2>. Hyperlink of the online questionnaire was circulated on WeChat, which guaranteed us that all responders were WeChat users. Data were collected from 9th November to 23rd December of 2015 from 150 Chinese international students who attend Dongguk University, Dongguk University Gyeongju Campus, and Kyungpook National University in South Korea.

3. Research Method

We consider the WeChat as a popular SNS to do this

<Table 2> Measurement items

| Factor | Code | Item | Reference |
|------------------------------|--------|--|---|
| Hours spent | s-time | On a typical day, about how much time do you spend on WeChat? | |
| # of friends | Friend | About how many total WeChat friends do you have? | |
| Attachment of SNS use | IN1 | WeChat is a part of my everyday activity. | Ellison et al. (2007); Li & Chen (2014) |
| | IN2 | I am proud of telling people I am using WeChat. | |
| | IN3 | I feel out of touch when I have not logged into WeChat a day. | |
| | IN4 | I feel I am part of the WeChat community | |
| | IN5 | I would be sorry if WeChat is shut down. | |
| IC with old friends | ICA1 | I use WeChat to keep in touch with my friends and/or classmates in the school. (by viewing their posts, leaving a message or responding their posts) | Chen (2011) |
| | ICA2 | I use WeChat to keep in touch with my good friends in my daily life. | |
| | ICA3 | I use WeChat to get in touch with my old friends or classes mates. | |
| IC for making new friends | ICB1 | I use WeChat to seek some new friends who can share the same interests and hobbies. | |
| | ICB2 | I use WeChat to know some ones who know some particular topics and information. | |
| | ICB3 | I use WeChat to meet some people whom I cannot meet by other ways. | |
| Bridging Social Capital (BR) | BR1 | Interacting with people on WeChat makes me interested in things that happen outside of school. | Putnam (2000); Williams (2006) |
| | BR2 | Interacting with people on WeChat makes me want to try new things. | |
| | BR3 | Talking with people on WeChat makes me curious about other places in the world. | |
| | BR4 | Interacting with people on WeChat makes me feel like part of a larger community. | |
| | BR5 | Interacting with people on WeChat makes me feel connected to the bigger picture. | |
| Bonding Social Capital (BO) | BO1 | There are several people on WeChat I trust to help solve my problems. | Putnam (2000); Williams (2006) |
| | BO2 | There is someone on WeChat I can turn to for advise about making very important decisions. | |
| | BO3 | There are several people on WeChat that I feel comfortable talking to about intimate personal problems. | |
| | BO4 | When I feel lonely, there are several people on WeChat I can talk to. | |
| | BO5 | If I needed an emergency loan of 180,000 WON, I know someone on WeChat I can turn to. | |
| | BO6 | The people I interact with on WeChat would put their reputation on the line for me. | |
| | BO7 | The people I interact with on WeChat would be good job references for me. | |
| | BO8 | The people I interact with on WeChat would share their last dollar with me. | |
| | BO9 | I know several people on WeChat well enough to get them to do something important. | |
| Self-esteem (SE) | SE1 | On the whole, I am satisfied with myself. | Ellison et al. (2014); Rosenberg (1989) |
| | SE2 | I am able to do things as well as most other people. | |
| | SE3 | I feel I am proud of myself. | |
| | SE4 | I feel that I'm a person of worth. | |
| | SE5 | I take a positive attitude toward myself. | |

<Table 3> Demographic characteristics (N=129)

| Category | Range | Frequency | Percentage |
|--|--------------------|-----------|------------|
| Gender | Male | 47 | 36.4% |
| | Female | 82 | 63.6% |
| Age | Less than 20 | 23 | 17.8% |
| | 20-29 | 105 | 81.4% |
| | 30-29 | 1 | 0.8% |
| | Over 40 | 0 | 0% |
| Grade | Freshman | 43 | 33.3% |
| | Sophomore | 11 | 8.5% |
| | Junior | 24 | 18.6% |
| | Senior | 18 | 14.0% |
| | Master/Ph.D | 33 | 25.6% |
| Years in Korea | Less than 1 year | 41 | 31.8% |
| | 1-2 years | 55 | 42.6% |
| | 2-3 years | 24 | 18.6% |
| | 3-5 years | 5 | 3.9% |
| | More than 5 years | 4 | 3.1% |
| WeChat Experience | Less than 1 month | 0 | 0% |
| | 1-6 months | 2 | 1.6% |
| | 6-12 months | 2 | 1.6% |
| | More than 1 year | 32 | 24.8% |
| | More than 3 years | 93 | 72.1% |
| NO. of Offline Friends | ≤5 | 16 | 12.4% |
| | 6-10 | 23 | 17.8% |
| | 11-20 | 17 | 13.2% |
| | 20-30 | 13 | 10.1% |
| | >30 | 60 | 46.5% |
| TOPIK Level | TOPIK I — level 1 | 14 | 10.9% |
| | TOPIK I — level 2 | 17 | 13.2% |
| | TOPIK II — level 3 | 44 | 34.1% |
| | TOPIK II — level 4 | 33 | 25.6% |
| | TOPIK II — level 5 | 16 | 12.4% |
| | TOPIK II — level 6 | 5 | 3.9% |
| Time Spending on WeChat on a typical day | < 30 minutes | 10 | 7.8% |
| | 30-60 minutes | 18 | 14.0% |
| | 1-2 hours | 30 | 23.3% |
| | 2-3 hours | 20 | 15.5% |
| | > 3 hours | 51 | 39.5% |
| NO. of Total Friends on WeChat | ≤ 10 | 0 | 0% |
| | 11-50 | 11 | 8.5% |
| | 51-100 | 19 | 14.7% |
| | 101-150 | 19 | 14.7% |
| | 151-200 | 28 | 21.7% |
| | 201-250 | 14 | 10.9% |
| | 251-300 | 15 | 11.6% |
| | 301-400 | 8 | 6.2% |
| > 400 | 15 | 11.6% | |

4. Results and Analyses

4.1. Demographic Characteristics

The original file has 139 data; we deleted 10 poor data and reanalyzed using the statistics packages. The demographic characteristics of these 129 responses are shown in <Table 3>.

<Table 4> Exploratory factor analysis and internal consistency

| Item | Factor Loading | | | | | | EV | V (%) | CA | | | |
|------|----------------|-------|-------|-------|-------|-------|--------|--------|-------|-------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | | | | | | |
| IN1 | 0.191 | 0.042 | 0.678 | 0.197 | 0.086 | 0.286 | 2.546 | 8.488 | 0.848 | | | |
| IN2 | 0.145 | 0.233 | 0.574 | 0.263 | -.077 | 0.357 | | | | | | |
| IN3 | 0.170 | 0.012 | 0.778 | -.005 | 0.170 | 0.118 | | | | | | |
| IN4 | 0.222 | 0.041 | 0.722 | 0.086 | 0.214 | 0.349 | | | | | | |
| IN5 | 0.265 | 0.101 | 0.564 | 0.050 | 0.369 | 0.258 | | | | | | |
| ICA1 | 0.063 | 0.117 | 0.333 | 0.052 | 0.175 | 0.788 | 1.049 | 3.496 | 0.902 | | | |
| ICA2 | 0.124 | 0.025 | 0.368 | 0.139 | 0.199 | 0.772 | | | | | | |
| ICA3 | 0.186 | 0.117 | 0.327 | 0.217 | 0.172 | 0.749 | | | | | | |
| ICB1 | 0.300 | 0.152 | 0.082 | 0.747 | 0.161 | 0.220 | 1.691 | 5.636 | 0.844 | | | |
| ICB2 | 0.186 | 0.158 | 0.071 | 0.811 | 0.237 | 0.239 | | | | | | |
| ICB3 | 0.116 | 0.314 | 0.260 | 0.679 | 0.244 | -.101 | | | | | | |
| BR1 | 0.126 | 0.246 | 0.156 | 0.421 | 0.627 | 0.296 | | | | | | |
| BR2 | 0.142 | 0.207 | 0.183 | 0.373 | 0.673 | 0.304 | 1.294 | 4.312 | 0.905 | | | |
| BR3 | 0.232 | 0.367 | 0.235 | 0.130 | 0.708 | 0.096 | | | | | | |
| BR4 | 0.407 | 0.089 | 0.208 | 0.399 | 0.533 | 0.152 | | | | | | |
| BR5 | 0.370 | 0.317 | 0.241 | 0.348 | 0.553 | 0.103 | | | | | | |
| BO1 | 0.650 | 0.295 | 0.006 | -.110 | 0.406 | 0.228 | | | | | | |
| BO2 | 0.773 | 0.112 | 0.118 | 0.056 | 0.317 | 0.120 | 12.736 | 42.454 | 0.934 | | | |
| BO3 | 0.744 | 0.183 | 0.129 | 0.054 | 0.342 | 0.199 | | | | | | |
| BO4 | 0.624 | 0.122 | -.082 | 0.373 | 0.230 | 0.350 | | | | | | |
| BO5 | 0.769 | 0.205 | 0.053 | -.037 | -.026 | 0.316 | | | | | | |
| BO6 | 0.725 | 0.107 | 0.363 | 0.315 | -.046 | 0.000 | | | | | | |
| BO7 | 0.685 | 0.215 | 0.332 | 0.324 | 0.171 | -.110 | | | | | | |
| BO8 | 0.794 | 0.137 | 0.256 | 0.221 | 0.013 | -.068 | | | | | | |
| BO9 | 0.806 | 0.125 | 0.243 | 0.226 | 0.097 | -.002 | | | | | | |
| SE1 | 0.144 | 0.779 | 0.006 | 0.204 | 0.071 | 0.163 | | | | 3.005 | 10.014 | 0.918 |
| SE2 | 0.171 | 0.855 | 0.182 | 0.069 | 0.047 | 0.029 | | | | | | |
| SE3 | 0.265 | 0.834 | 0.121 | 0.137 | 0.163 | 0.025 | | | | | | |
| SE4 | 0.166 | 0.842 | 0.042 | 0.034 | 0.229 | 0.010 | | | | | | |
| SE5 | 0.084 | 0.803 | -.049 | 0.182 | 0.173 | 0.108 | | | | | | |

*EV: Eigen Value; V: Variance; CA: Chronbach's Alpha

4.2. Reliability and Validity

Three factors with eigenvalue over 1.0 are extracted from exploratory factor analysis by using SPSS software as shown in <Table 4>. For Cronbach's Alpha, it is estimated to acquire the measure of reliability of the question items (Henson, 2001). A widely advocated level of adequacy for the coefficient alpha has been at least 0.70 (Cortina, 1993). <Table 4> proves that all variables' Cronbach's alpha values are more than 0.7. And according to the Harman's one-factor test, we get 40.306% of total variance which is less than 50%. So we can say the common method bias of this present study is not terrible. Moreover, the variance (%) of bonding social capital (42.454) is much higher than other variables. As can be seen, "bonding" variable has more items than other variables, and considering the research model is much simple, the common method bias would occur.

<Table 5> shows the evidence of convergent and discriminant validity. A construct attests the convergent validity if the composite reliability (CR) is greater than 0.7, and the average variance extracted (AVE) exceeds 0.5 (Hilger et al., 2007). From the <Table 5>, we can see that all CR values of the constructs ranged from 0.678 to 0.924 that all values exceed the acceptance level of 0.7, and the AVE values are greater than 0.5. Hence, the convergent validity is assured. For the discriminant validity, of each construct, which is to test if each construct differs, AVE and inter-construct correlation are compared (Moutinho & Hutcheson, 2011). <Table 5> shows the diagonal value in boldface for each construct is higher than the off-diagonal elements representing correlation. Hence, we can also indicate our measurement variables have discriminant validity.

<Table 5> Discriminant validity indices

| Factor | Average | CR | AVE | IN | ICA | ICB | BR | BO | SE |
|--------|---------|-------|-------|--------------|--------------|--------------|--------------|--------------|--------------|
| IN | 3.616 | 0.788 | 0.540 | 0.735 | | | | | |
| ICA | 4.121 | 0.924 | 0.754 | 0.755 | 0.868 | | | | |
| ICB | 2.889 | 0.778 | 0.650 | 0.502 | 0.486 | 0.806 | | | |
| BR | 3.450 | 0.882 | 0.631 | 0.636 | 0.617 | 0.770 | 0.794 | | |
| BO | 3.440 | 0.914 | 0.606 | 0.575 | 0.407 | 0.574 | 0.660 | 0.778 | |
| SE | 3.766 | 0.678 | 0.678 | 0.303 | 0.267 | 0.476 | 0.610 | 0.475 | 0.824 |

Diagonal value (in boldface) are the square root of AVE.

4.3. Hypothesis Test

This present study mainly explores the relationship between the intensity of SNS use, the interpersonal communication on SNS, and users' bridging and bonding social capital. For better objective reflection, we considered the gender, TOPIK, number of offline friends and user's self-esteem as the control variable. And for testing the

intensity of SNS use, we adopt two self-reported assessments of SNS use, and a series of Likert-5-scale attitudinal questions are concluded (Ellison et al., 2007). In <Table 6> and <Table 7>, three models are tested respectively with different contents. Model 1 is the testing of four control variables. And among the four control variables, only user's self-esteem has a positive impact on both bridging and bonding social capital much significantly. Model 2 is the testing we consider the two self-reported assessments of SNS use in, and they are time spending on SNS and a total number of friends on SNS. For the result, only user's self-esteem and the amount of time spent on SNS on a day have a positive impact on both bridging and bonding social capital. Model 3 is the testing of all variables as discussed in previous analyses. Model 3 provides the result of this research hypothesis as well.

In the regression predicting WeChat bridging social capital, the control variables accounted for 2.72% of the variance, with self-esteem ($\beta=0.512$, $p<0.001$) emerging as significant, such that users with higher self-esteem reported higher perceived bridging social capital. The addition of the SNS usage variables: time spending on SNS and the total number of friends on SNS, increased the R^2 to 0.296, with spending time on SNS ($\beta=0.504$, $p<0.001$) positively predicting bridging social capital. However at last, the addition of intensity of SNS usage behavior: attachment of SNS use ($\beta=0.238$, $p<0.01$), interpersonal communication with old friends ($\beta=0.179$, $p<0.05$), and interpersonal communication with new friends ($\beta=0.451$, $p<0.001$) increased the model's R^2 to 0.625 and provided support for H1c and H2 (concluding H2a and H2b). Furthermore, <Table 6> shows the control variables are significantly influencing the result of our analysis. When we are testing Model 1 of control variables with the bridging social capital, the adjusted R^2 is 0.272; when we test Model 2, we got adjusted R^2 is 0.296; and when test Model 3, the R^2 is 0.625. From Model 1 to Model 3, the value of R^2 increased. This proves the control variables are significant in this present study for testing bridging social capital (see <Table 6>).

The following <Table 7> shows the results of the hypothesis of this study.

In the regression predicting WeChat bonding social capital, the control variables accounted for 1.91% of the variance, with self-esteem ($\beta=0.437$, $p<0.001$) emerging as significant, such that users with higher self-esteem reported higher perceived bonding social capital. The addition of the SNS usage variables: time spending on SNS and total number of friends on SNS, increased the R^2 to 0.279, with spending time on SNS ($\beta=0.335$, $p<0.001$) positively predicting bonding social capital. Finally, the addition of intensity of SNS usage behavior: attachment of SNS use ($\beta=0.288$, $p<0.05$), interpersonal communication with new friends ($\beta=0.232$, $p<0.05$) increased the model's R^2 to 0.404 and provided support for H3c and H4b. Furthermore, <Table 8> shows the control variables are significantly influencing the

<Table 6> Regression of bridging social capital

| | Model 1: Controls | Model 2: Spending time and total friends | Model 3: Intensity & Interpersonal communication |
|------------------------------------|-------------------|--|--|
| Standardized Coefficient (t-value) | | | |
| Gender | -0.065 (-0.830) | -0.091 (-1.171) | 0.048 (0.781) |
| TOPIK | -0.032 (-0.416) | -0.065 (-0.842) | -0.053 (-0.922) |
| NO. of Offline Friends | 0.069 (0.899) | 0.046 (0.594) | 0.078 (1.366) |
| Self-esteem | 0.512 (6.611)*** | 0.504 (6.510)*** | 0.198 (3.095)** |
| Time Spending on SNS | | 0.173 (2.163)* | -0.117 (-1.735) |
| NO. of Friends on SNS | | 0.482 (0.631) | 0.089 (1.438) |
| Attachment of SNS use | | | 0.238 (2.737)** |
| ICA | | | 0.179 (2.388)* |
| ICB | | | 0.451 (5.958)*** |
| Adjusted R ² | 0.272 | 0.296 | 0.625 |
| F(sig.) | 12.985 (0.000) | 9.952 (0.000) | 24.664 (0.000) |

*p<0.05; **p<0.01; ***p<0.001

<Table 7> Hypothesis result

| Hypothesis | Path | Standard Coefficient (t-value) | Result |
|------------|--|--------------------------------|---------------|
| H1 | H1a Time spending on SNS →Bridging Social Capital | -0.117 (-1.735) | Not Supported |
| | H1b NO. of Friends on SNS →Bridging Social Capital | 0.089 (1.438) | Not Supported |
| | H1c Attachment of SNS Use →Bridging Social Capital | 0.238 (2.737)** | Supported |
| H2 | H2a Interpersonal Communication with Old Friends → Bridging Social Capital | 0.179 (2.388)* | Supported |
| | H2b Interpersonal Communication for Making New Friends → Bridging Social Capital | 0.451 (5.958)*** | Supported |

<Table 8> Regression of bonding social capital

| | Model 1: Controls | Model 2: Spending time and total friends | Model 3: Interpersonal communication |
|------------------------------------|-------------------|--|--------------------------------------|
| Standardized Coefficient (t-value) | | | |
| Gender | -0.061 (-0.735) | -0.094 (-1.202) | -0.015 (-0.199) |
| TOPIK | 0.061 (0.757) | -0.018 (0.234) | 0.004 (0.049) |
| NO. of Offline Friends | 0.064 (0.792) | 0.053 (0.673) | 0.079 (1.107) |
| Self-esteem | 0.437 (5.349)*** | 0.449 (5.742)*** | 0.257 (3.192)** |
| Time Spending on SNS | | 0.335 (4.142)*** | 0.122 (1.434) |
| NO. of Friends on SNS | | -0.095 (-1.154) | -0.076 (-0.973) |
| Attachment of SNS use | | | 0.288 (2.627)* |
| ICA | | | 0.035 (0.371) |
| ICB | | | 0.232 (2.434)* |
| Adjusted R ² | 0.191 | 0.279 | 0.404 |
| F(sig.) | 8.569 (0.000) | 9.273 (0.000) | 10.639 (0.000) |

*p<0.05; **p<0.01; ***p<0.001

<Table 9> Hypothesis result

| Hypothesis | Path | Standard Coefficient (t-value) | Result | |
|------------|------|---|-----------------|---------------|
| H3 | H3a | Time spending on SNS → Bonding Social Capital | 0.122 (1.434) | Not Supported |
| | H3b | NO. of Friends on SNS → Bonding Social Capital | -0.076 (-0.973) | Not Supported |
| | H3c | Attachment of SNS Use → Bonding Social Capital | 0.288 (2.627)* | Supported |
| H4 | H4a | Interpersonal Communication with Old Friends → Bonding Social Capital | 0.035 (0.371) | Not Supported |
| | H4b | Interpersonal Communication for Making New Friends → Bonding Social Capital | 0.232 (2.434)* | Supported |

result of our analysis. When we are testing Model 1 of control variables with the bonding social capital, the adjusted R^2 is 0.191; when we test Model 2, we got adjusted R^2 is 0.279; and when test Model 3, the R^2 is 0.404. From Model 1 to Model 3, the value of R^2 increased. This proves the control variables are significant in this present study for testing bonding social capital. Full results are presented in <Table 8>.

The following <Table 9> shows the results of the hypothesis of this study.

5. Conclusion

This paper has underlined the importance of intensity of WeChat use and interpersonal communication that impact Chinese international students' bridging and bonding social capital on WeChat. In this study, we systematically analyzed the demographic characteristics of our responders. In addition, many study the social capital on some SNSs such as Facebook and RenRen (e.g., Li & Chen, 2014); however, there is less study has empirically researched the relationships between WeChat use and social capital. This study has enriched the research content of SNS. Meanwhile, we consider the gender, self-esteem, language proficiency and the number of offline friends as the control variables when we analyzed the Chinese international students' bridging and bonding social capital in Korea. To consider the language proficiency and the number of offline friends as the control variables contribute to the research of bridging and bonding social capital, and that helps to avoid the different level of obtaining and maintaining the social capital because the Korean language proficiency. Based on Chen (2011), interpersonal communication is defined as keeping in touch with old friends and communicating with new friends. In this present study, we adopted the interpersonal communication. We hope that our research will be beneficial and constructive in solving the difficulty of gaining social capital on WeChat for those international students.

5.1. Theoretical Implications

For international students, spending time on WeChat or having a large number of friends on WeChat does not influence their social capital. In order to gain much more

social capital, students should try to integrate themselves into the WeChat community. Communicating with friends helps to accumulate students' social capital. Also, students should try to make new friends with who shares the same commonalities. Briefly, students should try to find some new people who have the same interests and hobbies as they have or some people who know some particular topics and information that we care on WeChat, and then, make friends with them and talk to them. Communication is highly proved as the key to gain social capital on WeChat for Chinese international students in South Korea. These findings add to a growing body of the literature on our understanding of social capital on SNS use. This empirical study explored the relationship between SNS usage and social capital from Chinese international students in South Korea. In addition, we have synthetically analyzed the intensity of international students using WeChat; and the interpersonal communication, which is one of the users' preferences of using SNS, is systematically described as communication with old friends and communication for making new friends. In this respect of intensity of SNS use, only the extent of using SNS has a positive impact on both bridging and bonding social capital. Both communications with old friends and for making new friends are positively associated with students' bridging social capital; but only communication for making new friends have a positive influence on bonding social capital, not bridging social capital.

5.2. Practical Implications

Through SNS and interpersonal communication inside the enterprise, employees can increase their resources within the enterprise. Morrison (2002), in order to increase employees' intensity of SNS usage and interpersonal communication to enhance their social capital, once proposed the networks inside the organization which can be divided into formal network and informal network. The formal network belongs to the relation under the formal organizational structure, and composed of regulations, whose interpersonal interaction is arranged by the organization instead of personal willingness. The informal network is divided into information network and friends network. The information network refers to the network established by the key actor for the purpose of interest, for example, the key actor can obtain useful career-related information in the organization through the information network. On the other hand, friends network can

offer emotional support and affiliation to the key actor. Different networks (such as information network, friends network and working flow network) have different roles in affecting employees' working performance and peripheral performance.

5.3. Limitations and Future Research

Our work clearly has some limitations. Despite this, we believe this work could be a springboard for studying the students' or other users' social capital on WeChat. The most important limitation is a result of the factor that we examined the small sample size. As there are so many universities with more Chinese international students in South Korea, we only send the questionnaire to three

universities. In addition, we didn't examine the number of Korean friends the students have on WeChat. Because WeChat is mainly used in China, and to know if users' Korean friends also use WeChat to keep in touch would provide us a complete analysis.

These findings suggest the following directions for future research: first of all, to collect the data from more universities as a big sample size. Then the measurement of testing Korean users can be also contained in the study. Furthermore, with the development of the research on social capital on SNS, different methodologies of measuring it will be developed as well. In the future study, different methods can be used and different dimensions can be concerned while testing and analyzing this topic.

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