


# Exploring the Antecedents of Social Support on Social Network Sites: A Supplementary Fit Perspective

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## ABSTRACT

There has been little research to examine the antecedents of social support in the setting of social network sites (SNS). This study uses supplementary fit as an antecedent to explain why people can perceive social support on SNS. The authors collect 550 validated questionnaires from Facebook, Instagram, and PTT. The statistical results reveal the following findings: (1) value-based fit promotes emotional and informational support but not instrumental support; (2) personality-based fit promotes emotional and informational support but not instrumental support. The theoretical contributions are as follows: First, social support was tested as a multi-dimensional factor, which can better identify the types of supports people perceive from SNS. Second, supplementary fit acts as an antecedent to clarify the conditions individuals' perceive as social support, which facilitate a new path for both social support and virtual communities research. Suggestions to facilitate valued-based and personality-based fit on SNS are provided.

## KEYWORDS

Emotional Support, Informational Support, Instrumental Support, Personality-Based Fit, Value-Based Fit

## INTRODUCTION

Social support refers to “an exchange of resources between two individuals perceived by the provider or the recipient to be intended to enhance the well-being of the recipient” (Shumaker & Brownell, 1984). This interchange includes the direct and the buffering effect. The former can improve an individual's physical and mental health by immersing individuals in an environment full of positive emotion. The latter can ease emotional pressure by providing resources and assistance to help enhance an individual's confidence and ability to cope with issues. Traditional applications of social support focus on exploring linkages between specific health treatments and the support provided by people around patients in real life settings (e.g., Kroenke et al., 2013; Lu & Hsu, 2013). They examined the relationships between social mechanisms and the life quality of patients, and reported that larger social networks and greater social support were related to better life quality and disease recovery. However, with the increasing use of Social Network Sites (SNS), such as Facebook, Instagram and Twitter, they are changing people's social lives and the ways they interact with others. Hundreds of millions of people access SNS as one of their daily activities to maintain existing social relationships and make new friends.

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Although scholars reported the dark sides of SNS, such as cyberbullying, addictive use, trolling, online witch hunts, fake news, stress, social comparison, and privacy abuse (e.g., Fox & Moreland, 2015; Baccarella et al., 2018), the trend of using SNS is unstoppable. Nevertheless, how people obtain social support from SNS is still mysterious. Recent research has mentioned that users might obtain social support from SNS (Lee, Noh & Koo, 2013; Oh, Ozkaya & LaRose, 2014; Lee, Chung & Park, 2015). For example, Lee, Noh and Koo (2013) studied Korean Facebook users and reported that self-disclosure positively affects social support, and social support positively affects well-being. These studies regarded social support as a standalone variable and have not examined the types of social support people perceive in a cyberspace setting. Traditional social support scholars (such as Thoits, 1982; Shumaker & Brownell, 1984; Langford et al., 1997) considered social support as a multi-dimensional variable. In this study, the authors believe that studying social support in a multi-dimensional view can explore human behavior in depth in the virtual world. Also it will be helpful for SNS companies to improve their systems to increase people's well-being.

Although few recent studies have mentioned some factors positively influencing the perceived social support, such as active Facebook use (Frison & Eggermont, 2016), authentic self-presentation (Wang et al., 2019) and demographic features (Mishra & Saranath, 2019), there is a need to theoretically explore the antecedents affecting the perceived social support in depth. A study by Mishra and Saranath (2019) reported that personal traits like age, marital status, family income and education affects the perceived social support and further leads mental adjustment to breast cancer patients. Their results enlightened the research question of this study: why and in what conditions people can sense social support in SNS. Similarity-Attraction theory (Kaptein et al., 2014) claims that individuals are more attracted to those who are similar to them in terms of gender, growing background, personal traits, values and socio-economic conditions. That is to say, people with high similarity are easier to become significant others and then we are easier to perceive their social support. Therefore, this study applies supplementary fit based on similarity of Person-Environment (P-E) fit to answer the research question. Supplementary fit refers to similar or matching characteristics between a person and other group members (Cable & Edwards, 2004). It occurs when "a person supplements, embellishes, or possesses characteristics which are similar to other individuals in the environment" (Muchinsky & Monahan, 1987, p.269). From this point of view, we assume that individuals perceive greater social support when supplementary fit occurs between the individual and other users in SNS.

In sum, this study intends to identify how supplementary fit affects people's perceived social support in the context of SNS. By doing so people's interactions in SNS can be revealed, and then methods to improve SNS can be proposed in order to increase users' life satisfaction.

The rest of the paper is organized as follows. First the hypotheses and research framework were developed based on social support and supplementary fit in the literature review section. The methodology to collect and analyze the survey data was followed. Then, we presented the results of analysis and discussed the findings. The conclusion section introduced the contributions, limitations and future research opportunities.

## LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

### Social Support

Social support refers to the exchange of resources and the functions performed for individuals by important people or secondary group members in order to enhance individuals' well-being (Shumaker & Brownell, 1984; Thoits, 2011). Social support occurs between people who are members of the same network with strong ties (e.g. family members) or weak ties (e.g. Internet friends). In the context of SNS, individuals interact through SNS platforms to gain emotional or practical support to satisfy various demands and advance the ability to adapt the environment. User' relationships on SNS tend to be weak and need not be reciprocal or symmetric. People in different areas of the world can be

part of an individual's social support system as long as they are in the same SNS, for which they are generally using a common platform, such as Facebook, Twitter or Instagram. One of the important sources to improve people's ability to adapt the environment is social support (Liu & Yu, 2013). Individuals can reduce stress and cope with difficulties by receiving social support. Adequate and proper social support helps individuals feel respected, cared for and belonging, thereby improving their adaptability in life and study.

The methods for people to access social support in SNS is through the exchange of social cues. For example, Facebook provides the tools such as comment, like, status update, share and private messages. When a Facebook user updates his/her status (like from married to single) or post his/her feelings, he/she not only express the experiences or thought but also disclose himself/herself to Facebook friends. This disclosure would facilitate the communication between the individual and Facebook friends, such as asking what happened by private messages or comments. Through the interaction, Facebook friends may provide means to cope with unpleasant incidents or even help solve the issues. With the processes of exchanging social cues, social support is accessed to improve the well-being for individuals.

A notable phenomenon is that social support may come from both SNS and people in real life. By the nature of SNS, SNS friends are easy to make and lose, which means that you are easy to make friends through SNS and easy to lose them once you do not contact them frequently. Sapiezynski et al. (2018) studied 1000 closely interacting individuals for their online and offline behaviors, and reported that 73% of Facebook friends met at least once during the research month, including 43% who met outside of campus and 35% spent at least one hour together. This study gives a schema of the structure of SNS friends: a big portion of SNS friends come from the real world friends. Thus, the characteristics and development of SNS friend groups can be seen in similar terms as real world groups. Since a certain fraction of SNS friends are generally from real life, social support would be perceived from both sources. Thus SNS acts both as a platform providing social support and as a transmitter that conveys "help" messages to SNS friends to request online or offline support. With the fast development of SNS, the boundary of online and offline support is fading, but the importance of SNS is definitely increasing. For example, a colleague asks you to provide a document for him in the office. Then, you ask him to remind you in Facebook just in case of you forget. You send the document to him through Facebook after you arrive at home. Is this support online or offline? We think this support is mixed and similar scenario happens every day in our lives. Therefore, identifying online and offline support in SNS context is unnecessary. So in this study, we do not differentiate online and offline support because they are blended in our lives.

Although online and offline support is not identified in this study, we believe that identifying the type of social support in SNS is crucial. Social support comprises different types of tangible and intangible resources and it flows through a variety of channels, such as face-to-face, phone, email or SNS. Different types of supports may be more or less appropriate for different channels to exchange social cues among people (Lu & Hampton, 2016). For example, borrowing a cup of salt needs to be done face-to-face while comforting someone for the loss of love can be managed by phone. However, what kind of supports are suitable to provide in SNS and in what conditions the supports can be accessed smoothly are important for researchers and SNS managers. To dig this issue in depth, classifying social support is the key to understand the relationships between resources exchange and people's interactions.

Thoits (1982, p148) defined social support as "the subset of persons in the individual's total social support network upon whom he/she relies for socioemotional aid, instrumental aid, or both." Some scholars (Shumaker & Brownell, 1984; Langford et al., 1997) have explained that social support is multi-dimensional and is an inter-personal transaction system involving one or more of the following aids: (1) emotional, (2) instrumental, (3) information, or (4) appraisal. Emotional support implies the demonstrations of love and caring, esteem and value, encouragement, and sympathy. Instrumental support includes the offering of behavioral or material assistance with practical tasks or

**Table 1. The definitions of three social support dimensions**

Construct	Definition
Emotional support	the demonstrations of love and caring, esteem and value, encouragement, and sympathy
Informational support	the supply of facts or suggestions that help individuals deal with issues
Instrumental support	the offering of behavioral or material assistance with practical tasks or problem solving, such as touchable things and services.

problem solving, such as touchable things and services. Informational support is the supply of facts or suggestions that help individuals deal with issues. Appraisal support refers to the feedback about the person’s interpretation of a situation and guidance regarding possible courses of action, such as information relevant to self-evaluation. However, in the context of SNS, information and appraisal support can be combined because they both concern with the provision of information, procedures and actions to solve an individual’s issues. Thus, we synthesize social support for our study as emotional, informational and instrumental support. Table 1 summarizes the definitions of the three constructs.

### Supplementary Fit

The Person-Group fit, as developed from the Person-Environment fit, explains how individuals perceive fit relationships with others in groups. It can be conceptualized as supplementary fit based on similarity of person and the environment, and as complementary fit based on how well a person or environment meets the needs or demands of the others (Kristof-Brown et al., 2005b). In our research context, SNS provides the environment for people to interact upon it. Although different SNS platforms have different functions and interfaces, their ultimate purposes which link and tie people together are the same. Thus, we regard the environment as a constant instead of a variable. Additionally, the Similarity-attraction effect explains that when people find similarities between them and others, even mediated through SNS, they become more attracted to each other. This kind of relationships which include like-minded individuals and sharing the same viewpoints allow them to feel they are accepted by others, thus their confidences are enhanced and the relationships are reinforced. To sum, by eliminating the influence of environment in Person-Group fit, the main effect of affecting behaviors in SNS is human itself. Thus, supplementary fit is extracted to apply to this study.

Supplementary fit can be classified into value-based fit and personality-based fit (Seong & Kristof-Brown, 2012). The former stresses on the match of personal value while the latter focuses on the match of personal traits between individuals and other group members. It occurs when “a person supplements, embellishes, or possesses characteristics which are similar to other individuals in the environment” (Muchinsky & Monahan, 1987, p.269). Supplementary fit has been shown to be positively associated with team commitment, employee voice, work satisfaction, cohesion, positive affect, individual and team performance, and job retention (Seong & Kristof-Brown, 2012; Kristof-Brown et al., 2005a; Kristof-Brown et al., 2005b; Sortheix & Lönnqvist, 2015; Youngs, Miller & Perrone, 2017). These studies show that higher supplementary fit encourages more positive attitudes and discretionary behaviors that support team goals. These attitudes and behaviors imply that different types of social support are likely to be provided reciprocally in a working team, thereby improving team performance and satisfaction. That means supplementary fit may facilitate the norms and intentions to provide support to other members for all group members. Thus supplementary fit is selected as the predictor to explain why people are able to perceive social support in SNS.

### *Value-Based Fit vs. Social Support*

Sortheix and Lönnqvist (2015) reported that person-group value congruence is related to positive interpersonal relationships, positive affect and less psychological stress. Furthermore, positive interpersonal relationships facilitate the effects of value congruence on higher subjective well-being. Value congruence has been reported to positively relate to work engagement and promote intrinsic motivation, and thereby facilitate individuals' devotion to their work (Sortheix, Dietrich, Chow & Salmela-Aro, 2013; Li, Wang, You & Gao, 2015). These studies indicate that when the match of value congruence is high between an individual and others, individuals would perceive better interpersonal relationships, better group atmosphere, and higher motivation to do something good for the group. Moreover, individuals are also able to perceive high levels of support from other members.

In the context of SNS, value-based fit is concerned with value congruence between individuals and their SNS friends. Group norms are developed by value to guide the beliefs and behaviors between individuals and their SNS friends. Individuals use values to decide the degree of their participations in SNS activities. The match between an individual's values and their friends' values can facilitate their interactions, which can further improve harmonious relationships between them. So individuals may perceive more support from their SNS friends. Thus, we assume that value-based fit promotes the higher levels of perceived social support, including emotional, instrumental and information support. Hypothesis 1 to 3 are stated below.

H1: Value-based fit promotes the greater perceived emotional support for individuals.

H2: Value-based fit promotes greater perceived instrumental support for individuals.

H3: Value-based fit promotes greater perceived informational support for individuals.

### *Personality-Based Fit vs. Social Support*

Personality-based fit focuses on personality congruence, which is based on the social identity concept that individuals inspire their self-concepts by joining groups with similar personality traits (Tsui, Egan & O'Reilly, 1992). Past studies have reported that personality-based fit facilitates employees' work satisfaction, commitment and agreeableness, as well as the longevity of lover partnerships (Pavot, Fujita & Diener, 1997; Rammstedt, Spinath, Richter & Schupp, 2013; Christiansen, Sliter & Frost, 2014). A study by Al-Adwan and Kokash (2019) reported that social familiarity impacts trust and further facilitates purchase intention on Facebook. These studies promoted that people perceive themselves as fitting in groups because the others have similar personality traits. They feel more comfortable working with others when they perceive as similar and are able to focus more on job-related tasks, thus in turn improving their job performance and subjective well-being.

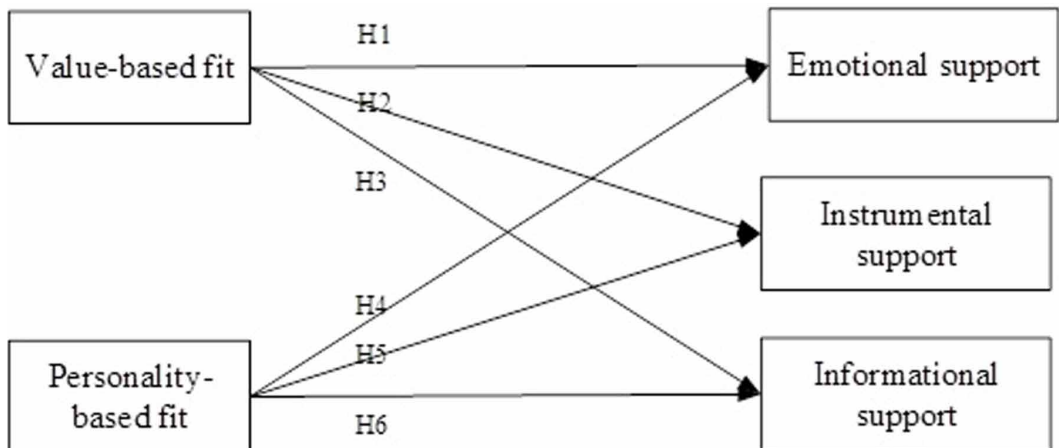
Personality, in this study, refers to a stable characteristic that are related to behavior, rather than being related to demographic variables (such as race, age, or gender). In the context of SNS, personality-based fit implies a psychological and behavioral compatibility between individuals and their SNS friends. When personality-based fit happens, individuals are cozy to assist others. Therefore, a harmonious environment and resource-sharing behaviors would be developed between individuals and their SNS friends. Thus, consistent with studies reporting positive relationships between personality-based fit and the perception of social support (Lewis, Bates, Posthuma & Polderman, 2014; Hyde, Gorka, Manuck & Hariri, 2011; Cukrowicz, Franzese, Thorp, Cheavens & Lynch, 2008), we assume that personality-based fit increases the exchange of social support, including emotional, instrumental and information support. Hypothesis 4 to 6 are stated below.

H4: Personality -based fit promotes the greater perceived emotional support for individuals.

H5: Personality -based fit promotes the greater perceived instrumental support for individuals.

H6: Personality -based fit promotes the greater perceived informational support for individuals.

Figure 1. Preliminary conceptual model



To summarize the proposed hypotheses, the preliminary conceptual model is shown in Figure 1.

## RESEARCH METHODOLOGY

### Measurement Development

For value-based fit, we used Cable and DeRue's (2002) three-item measure assessing perceived value congruence between individuals and their SNS friends. Items included: "The things I value in life are very similar to the things that my SNS friends' value;" "My personal values match my SNS friends' values;" and "My SNS friends' values provide a good fit with the things I value in life." Personality-based fit items were also based on Cable and DeRue (2002), including: "I feel my personality matches my SNS friends' image;" "My personality matches my SNS friends' personalities;" and "My personality provides a good fit with my SNS friends' personalities."

The measurement items to test social support were developed by Leung and Lee (2005). The items of emotional support included: "My SNS friends show me love and affection," "make me feel wanted," "comfort me sincerely," and "listen to me when I need someone to talk to." The items of instrumental support included: "My SNS friends help me with daily chores," "help me if I get sick," "give me practical assistance if I am unable to do something by myself." The items of informational support included: "My SNS friends advise me on what I really want," "give me good advice about a crisis," "give me information to help understand a situation," and "give me suggestions about how to deal with problems".

Firstly, two professors in the area of Information Systems reviewed the measurement items. Furthermore, a pilot test was conducted with 20 ethnically Chinese undergraduate students in Taiwan. Their feedbacks were used to improve the measurements to ensure the content validity. Some sentences were revised to clarify the statements and make them more suitable to this research. All items used a five-point Likert scale ranging from "strongly disagree (1)" to "strongly agree (5)".

### Data Collection and Analysis

To examine the proposed hypotheses, we conducted a snowball rolling sampling method on Facebook and Instagram. We sent the online questionnaire link to Facebook and Instagram friends, asked them to complete the online questionnaire or forward the link to their friends. PTT (<https://term.ptt.cc/>) is a popular bulletin board system in Taiwan with more than 1500 thousands registers and a variety of

active users. We used random sampling technique to regularly post invitation letters welcome PTT users to fill in our online survey. To facilitate the initiatives to participate our survey, \$100 coupons were provided for the lucky participants. We first asked the subjects to identify the most frequently used SNS, and then asked them to answer the questions according to their feelings regarding to the interactions with their friends in the most frequently used SNS. Data collection lasted one month and 550 validated questionnaires were collected. The top three of the most frequently used SNS were Facebook, Line and Instagram. Most subjects had a bachelor or higher education (90%), only 10% had high school or lower education. There were more females (55%) than males (45%). The age ranged from 25 to 35 accounted for 84% of the total participants.

Confirmatory Factor Analysis (CFA) which validates the measurement model was realized by LISREL 8.72. The criteria for the five constructs, such as reliability, Average Variance Extracted (AVE), Composite Reliability (CR) and correlations, were shown in Table 3. Construct reliability and validity were presented to assess the measurement model. The reliability was evaluated by Cronbach's coefficient alpha. Construct validity was evaluated by convergent validity and discriminate validity. Three criteria were applied to validate convergent validity: (a) all factor loadings should be significant and exceed 0.50; (b) CR should be greater than 0.70; and (c) AVE should be over 0.50. All of our indicator factor loadings were greater than 0.50 and were significant at  $p=0.01$  (see Table 2). The CR values of the five constructs were between 0.89 and 0.91, which were all above the criterion 0.70. Additionally, AVE values were all above 0.50. These results indicate that all three conditions for convergent validity were met. Also, Bagozzi and Yi (1988) suggested using SMC (Squared Multiple Correlation) to assess internal structural fit. Our SMC values were all above 0.50 (Table 2), indicating good reliability.

Discriminate validity was assessed by the square root of the AVE values shown on the diagonal (in italics) in Table 3. Our values (0.82~0.89) were greater than the correlations between any pairs of constructs located in their horizontal lines and vertical columns. This result proves that AVE values for the five constructs were higher than the variance due to measurement error. Thus, each construct was confirmed as distinct and meeting discriminate validity. Additionally, we calculated VIF (Variance Inflation Factor) of two exogenous variables (Value-based fit and Personality-based fit) and found their values were below 10 (from 1.0-2.3). Furthermore, by observing correlation matrix in Table 3, their values were below 0.8. Thus, there was no multicollinearity phenomenon.

The model was tested by Lisrel 8.8. The overall fit of the proposed structural model was quite satisfactory (e.g.,  $\chi^2 = 750.50$ ,  $df = 258$ ,  $\chi^2/df=2.90$ ,  $RMSEA = 0.076$ ,  $CFI = 0.98$ ,  $IFI = 0.98$ ,  $GFI = 0.89$ ,  $AGFI=0.88$ ). Although  $\chi^2$  was high ( $\chi^2=750.50$ ), the value of (Chi-square/degree of freedom) was less than 3 and the GFI and AGFI were close to 0.90. In addition, the RMSEA value was under the acceptable value of 0.08. CFI and IFI both presented good fitness.

Figure 2 shows the path diagram of the framework constructed by Lisrel 8.8. Hypotheses 1, 2 and 3 examined the links between value-based fit and three kinds of social support (emotional, instrumental and informational support). Value-based fit was significantly related to emotional and informational support, while value-based fit was insignificantly related to instrumental support. Therefore, hypotheses 1 and 3 were supported but hypothesis 2 was not. Hypotheses 4, 5 and 6 examined the effect of personality-based fit on three kinds of social support (emotional, instrumental and informational support). Based on path significance, the links between personality-based fit and emotional support and informational support were significant, though the link between personality-based fit and instrumental support was insignificant. Thus, Hypotheses 4 and 6 were supported but Hypothesis 5 was not.

## DISCUSSION

Hypotheses 1 and 3 were supported but hypothesis 2 was not, which demonstrates that the perceived emotional and informational support were related to value-based fit, but the perceived instrumental

**Table 2. Measurement items, factor loading, error, t-value, SMC<sup>#</sup>**

Construct	Items	Factor loading	error	t-value	SMC
Value-based fit	Vbf1	0.73	0.14	13.24	0.62
	Vbf2	0.74	0.12	12.58	0.69
	Vbf3	0.75	0.17	13.58	0.70
Personality-based fit	Pbf1	0.69	0.14	10.77	0.58
	Pbf2	0.67	0.15	11.67	0.56
	Pbf3	0.82	0.24	13.66	0.72
Emotional support	Ems1	0.71	0.28	13.87	0.62
	Ems2	0.79	0.15	10.36	0.70
	Ems3	0.75	0.15	10.98	0.68
	Ems4	0.77	0.27	14.49	0.69
Instrumental support	Its1	0.75	0.21	13.86	0.71
	Its2	0.92	0.27	12.18	0.75
	Its3	0.85	0.27	12.18	0.73
Informational support	Ifs1	0.72	0.29	15.03	0.63
	Ifs2	0.74	0.22	9.71	0.64
	Ifs3	0.81	0.30	10.77	0.70
	Ifs4	0.82	0.28	12.11	0.71

<sup>#</sup>SMC: Squared Multiple Correlation

support was not related to valued-based fit. This means that individuals perceive more emotional and informational support when the value match occurs between the individuals and their SNS friends. In addition, hypotheses 4 and 6 were supported but hypothesis 5 was not, which proves that the perceived emotional and informational support were related to personality-based fit, but perceived instrumental support was not related to personality-based fit. That is to say, individuals perceive more emotional and informational support when the personality trait match occurs. Although little literature has reported empirical findings corresponding to our results, our validated hypotheses (H1, H3, H4 and H6) were implicitly agreement with past studies. Such as Sortheix and Lönnqvist (2015) reported that value congruence impacts positive affect, which corresponds to our hypothesis 1. Christiansen

**Table 3. Alpha, CR, AVE and correlation matrix for constructs**

Construct	Mean	S.D.	C1	C2	C3	C4	C5	Alpha <sup>a</sup>	CR <sup>b</sup>	AVE <sup>c</sup>
C1 Value	4.15	0.90	<i>0.89<sup>d</sup></i>					0.84	0.91	0.79
C2 Personality	4.13	0.80	0.48	<i>0.86</i>				0.90	0.89	0.75
C3 Emotional	4.17	0.97	0.53	0.68	<i>0.85</i>			0.90	0.91	0.72
C4 Instrumental	3.93	0.98	0.42	0.65	0.23	<i>0.86</i>		0.87	0.89	0.74
C5 Informational	4.12	0.84	0.62	0.60	0.41	0.46	<i>0.82</i>	0.89	0.89	0.68

<sup>a</sup>Internal Consistency Reliability (Cronbach's coefficient alpha).

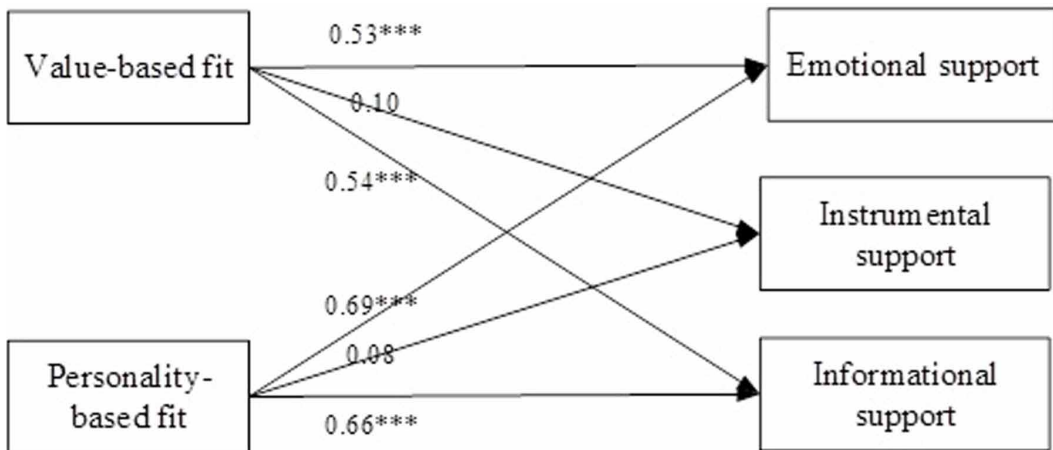
<sup>b</sup>Composite Reliability

<sup>c</sup>Average Variance Extracted

<sup>d</sup>The diagonal (in italics) shows the square root of the average variance extracted for each construct.



Figure 2. Statistical analysis of the model (\*\*\*)  $p < 0.01$



et al. (2014) found that misfit between personality and the jobs may result in low work satisfaction, which implies that workers' distress leads worse communication and information exchange with others. This corresponds to our hypothesis 6.

Hypothesis 2 and 5 were not supported, which raises an interesting question "can instrumental support exist on SNS?". In practice, all types of social support play their own roles in different stages and situations. Kroenke et al. (2013) studied that how social relationships influence quality of life in 3,139 female breast cancer survivors in a real world setting. They reported that each type of support (tangible, emotional/informational, affection, positive social interaction) is important depending on outcome, stage, and treatment status. Emotional/informational support is the most commonly considered benefit of social relationships, and is related to higher social and emotional well-being. Tangible support is important for physical outcomes. Positive social interaction is the most predictive variable for quality of life. The transmission of informational and emotional support through online social networks has been demonstrated (Coulson, 2005; Bambina, 2006; Wang, Kraut & Levine, 2012). For example, Wang, Kraut and Levine (2012) studied informational and emotional support in an online cancer support group, and reported that informational support is negatively related to the length of the members remained in the group, and emotional support is positively related to it. They speculated that informational support satisfies members' short-term information needs while emotional support enhances members' relationships with other group members.

However, Liu and Yu (2013) studied the relationships between Facebook use, online social support, general social support and psychological well-being. They found that general social support mediates the relationships between online social support and psychological well-being. They speculated that online social support contains only a subscale of social support (e.g., emotional, informational, and companionship support), but general social support includes emotional, informational, companionship, and instrumental support. That is to say, the perceived instrumental support only exists in real life instead of virtual environment, which implies that SNS users only perceive emotional and informational support but not instrumental support. Instrumental support is about behavioral or material assistance with practical tasks or problems, such as goods and services. These tangible aids need to be engaged in a real life. However, the SNS platform still acts as a transmitter to convey help messages to SNS friends, and then individuals can obtain the practical assistance in a real life.

We argued that the supplementary fit theory needs to be revised to adapt to research context when future research applies it on social network environments. A significant discrepancy with previous studies is our research settings. Most supplementary fit studies have focused on working groups with

strong ties and fixed compositions (ex. Kristof-Brown et al., 2005b; Sorthaix & Lönnqvist, 2015). People who are in working groups always share the same goals, have similar background or work in the same organization. Additionally, the group compositions are relatively static and do not change frequently. Since individuals may work together eight hours per day, five days per week, group members are familiar with each other's "working side" sense of value and personality. But our study focuses on SNS interactions which have weak ties. People on SNS are not hanging out together as intensively as in a work environment and the most common mode of communication method is typing text, rather than of face to face communication. The value and personality people exhibit on SNS might be very different from those shown in the working group. Although some of individuals' SNS friends are who they know from real life, individuals may perceive "another side" sense of value and personality for their SNS friends, which could be very distinct from being in working group.

Supporting this point of view is the study by Seong et al. (2012) reported that all types of supplementary fits are often highly correlated since they are evaluated through subjects' perceptions rather than by objective measures. For example, Kristof-Brown (2000) found that recruiters' perceptions of applicants' values-based fit and personality-based fit were highly significantly correlated ( $r=0.72$ ,  $p<0.05$ ). It was suggested that individuals separately evaluate different types of fits with specific properties of working teams and then combine them to form an overall perception of fit with the working environment (Jansen & Kristof-Brown, 2005). However, in our study the correlation coefficient of value-based fit and personality-based fit was 0.48 (see Table 3), indicating mild correlation, which did not fully support their claim. This may be because individuals can evaluate the value and personality of their SNS friends and consider them as separate characteristics instead of aggregating them into a composite assessment. When people are using SNS, their attitudes towards judging people could be more relaxed, playful, not goal-orientated, and less affected by peer pressure than when working in a group.

## CONCLUSION

This study has integrated supplementary fit theory and social support theory to form a unique model to explain why people can perceive social support and what kinds of social support people can perceive in a SNS setting. The results showed that both greater value-based fit and personality-based fit promote higher perceived emotional and informational support. Although the relationships between valued-based fit and personality-based fit and instrumental support were not confirmed, we believe that SNS acts to connect the virtual and real worlds by transmitting messages calling for instrumental support due to the importance of instrumental support in our real life.

This study made three main theoretical contributions. First, in contrast to previous studies regarding social support as a single-dimensional factor, this study conceptualized it as a multi-dimensional factor composed of emotional, informational and instrumental support, which can refine future social support research. Second, we extended social support research to SNS environment. Traditional social support research focused on real life groups, such as patient support groups. In contrast, this study examined social support in SNS, a setting with properties different from traditional groups. Due to the rapid development of SNS, it is used not only by individuals in general, but also specific groups use it to engage in particular activities. For example, a patient support group may use Facebook or Instagram to support online psychological treatment. Therefore, this study can be a useful reference for future research on similar settings. Third, the study applied value-based fit and personality-based fit as antecedent variables to explain why social support can be perceived on SNS, and there has been little research on this issue. Results of this study illuminated a new path for research on both social support study and virtual communities.

For practical contributions, in order to improve valued-based fit and personality-based fit, we suggested that SNS platforms could add a function to recommend friends with similar values and personality. Currently, Facebook recommends potential friends according to friends they have in

common. That means, two strangers may receive an invitation to become friends if they have a common friend, indicating that the recommendation system works based on social networks. But if Facebook could synthesize individuals' background, location, demographic information, posted article, interests and even browsing history to recommend potential friends, individuals might be able to make more friends with similar values and personality, which enables to perceive higher social support.

One limitation of this study is noteworthy. We developed hypotheses based on general SNS. However, exclusive SNS platforms for some specific groups, like researchers or lawyers, is a trend. Different SNS platform may have different properties that affect the form of supplementary fit and perceived social support, especially these exclusive SNS platforms. These people join SNS for special purposes and the composition is simplex. Thus, their value and personality congruence could be higher than general SNS and the perceived social support could be divergent from general SNS. Therefore, this limitation leads to the future work that refining social support and extending the antecedents of perceived social support for specific SNS communities would be an interesting topic.

### **Conflicts of Interest**

We wish to confirm that there are no known conflicts of interest associated with this publication and there has been no significant financial support for this work that could have influenced its outcome.

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