

# What Makes Twitterers Retweet on Twitter? Exploring the Roles of Intrinsic/Extrinsic Motivation and Social Capital

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## 왜 트위터러들은 리트윗하는가? 내외적 동기와 사회적 자본의 역할 탐색

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**Abstract** This study examined what determinants affect the intention of retweeting on Twitter from the perspectives of motivations and social psychology. The primary theoretical foundations are the theory of reasoned action (TRA), motivation theory and social capital theory. An online survey was administrated to collect the data. The data collected was analyzed using the structural equation model (SEM). The findings showed that both the attitude toward the retweeting behavior and subjective norm have significant effects on the intention to retweet. The results also showed that the attitude toward the retweeting behaviors was influenced by the individual intrinsic motivation and the norm of reciprocity. Social trust also had a significant influence on the intention to retweet. This study discusses the implications of these findings.

**요약** 본 논문의 주 목적은 동기와 사회적 심리 관점에서 리트윗 행위의도에 영향을 미치는 요소를 살펴보는 것이다. 주요 이론적 근거로는 합리적 행위 이론, 동기 이론 및 사회적 자본 이론을 사용하였다. 온라인 서베이를 통하여 자료를 수집하였으며, 구조 방정식 모델을 이용하여 수집된 자료를 분석하였다. 본 연구의 결과는 리트윗 행위에 대한 태도와 주관적 규범이 리트윗 의도에 유의미한 영향을 미치고 있음을 보여준다. 또한 리트윗 태도는 개인의 내적 동기와 호혜성 규범에 영향을 받고 있음을 보여준다. 더불어 사회적 신뢰는 리트윗 행위 의도에 유의미한 영향을 미치고 있음을 나타낸다. 연구의 결과가 지닌 함의들에 대해서도 토의해본다.

**Key Words** : Motivation, Retweet, Social Capital, Twitter, TRA

### 1. Introduction

Considered to be new venues for social interaction and information sharing, Social Networking Sites (SNSs) have become some of the most popular internet services in the world. By definition, SNSs are web-based services with which users create public or semi-public profiles and articulate a list of other users

to build relationships and share information within the system[1]. SNSs usually possess the characteristics of “participation,” “openness,” “communication,” “community,” and “connectedness” that are consistent with the movement of Web 2.0 technologies[2,3].

Among the numerous SNSs in existence today, Twitter is one of the largest and most popular microblogging services. According to an official

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report[4], the number of Twitter users globally exceeded 500 million and more than a billion messages were generated per week in 2012. Moreover, Twitter has received attention because of its use in a series of important events, such as the 2009 US Airways plane crash on the Hudson River and the recent Arab uprisings[5,6].

Despite the underlying features that it shares with other SNSs, Twitter has some unique characteristics that make it more optimized for the timely and rapid diffusion of information than a purely friends-based social graph[7,8]. On Twitter, users can post short messages called “tweets” that are limited to 140 characters and can be distributed easily regardless of the media platform used, including mobile devices. Moreover, the relationship between two users is not necessarily reciprocal (or a dyadic relationship). A user can follow any other user and the user followed does not necessarily follow back. In this regard, simple one-way following allows users to receive all of the messages (or tweets) originated by those they follow[6]. Additionally, Twitter users do not need to post detailed information about themselves in their profiles compared to other popular SNSs (e.g., Facebook and LinkedIn), which leads others on Twitter to focus less on “who you are” and more on what you have to say[8].

In addition to these factors, the simplest but most powerful mechanism for facilitating information diffusion on Twitter is “retweeting” (RT). RT is the practice of relaying a tweet that is produced by another Twitter user, which is essentially email forwarding on the Twitter platform[9-10]. RT empowers Twitter users to spread information beyond the reach of their own followers and to proliferate it across the network to message-receivers who do not necessarily have a direct relationship with (or follow) the originator of the message[7,11]. Without this key mechanism, the diffusion of information would be rather confined, especially given that the Twitter network is likely to follow a power law distribution, which means that most

of the connections (or relationships) on Twitter are concentrated around a small group of influential users, including celebrities and the Twitter accounts of mass media outlets, among others[12].

In this regard, the concept of RT as the crucial function for information diffusion and sharing has received considerable attention from academic researchers[13]. To date, a large number of studies have been conducted on predicting the retweetability of each tweet from macro perspectives or large-scale analytics with methodological bases of content analysis and social network analysis[14]. For example, Suh et al.[10] found that the number of URLs and hashtags in tweets are positively associated with retweetability based on an analysis of 74 million tweets. However, most of the existing literature concerning RT is rather limited because it lacks interpretations concerning what factors exist at the level of an individual user on Twitter and how these factors facilitate retweeting behaviors.

The aim of this research is to elucidate the retweeting behaviors on Twitter from the perspectives of motivation and social psychology at an individual level. Specifically, this study addresses the following major questions: (1) Do individuals’ attitudes and subjective norms have an influence on an individual’s retweeting intentions? (2) What extrinsic and intrinsic motivations at an individual level affect retweeting intentions? (3) What dimensions of social capital have influences on retweeting intentions, and how do they do so? To answer these questions, this study employs an integrated theory of reasoned action (TRA) combined with bodies of other theoretical frameworks including social capital theory and motivation theory.

The findings of this study can serve as an important reference for those who need to understand the underlying mechanisms of information diffusion to spread messages in an effective way across diverse fields, from viral marketing personnel to politicians.

## 2. Theoretical background

### 2.1 The current status of Twitter use in South Korea and related research

Along with global trends, there is evidence showing the wide diffusion of Twitter in South Korea. According to Statistics, it is estimated that there were more than 7 million Twitter users in South Korea in 2013[15]. It is also reported that approximately 40% of Twitter users visited Twitter more than three times per week in South Korea in 2010[16].

In league with its proliferation, Twitter has refined individuals' relational and communication patterns in South Korea. It has also had large effects on many sectors in South Korea, from political activities to business strategies. For example, the movement in which users posted pictures of themselves voting on Twitter reshaped the political landscape, as shown in the case of the 18th general election in 2012[17].

As its influences are growing, there are increasing interests concerning the questions of how and why people use Twitter and what are the characteristics of Twitter networks among scholars in South Korea. In this context, Shim and Hwang[18] showed that Korean individuals' motivations for Twitter use include the following: 'social participation by exchanging information', 'formation of follower groups based on social interactions', 'convenient communication tool', 'ease of transferring information', 'relaxation and entertainment', 'private memory space', and 'the usefulness of 140 characters'. Nho[19] reported that most popular Twitter figures who have many followers in South Korea are celebrities and entertainers. He also claimed that these popular users utilize Twitter as a means of communicating their fame and high visibility. Notably, Chang and Ghim[20] examined the structure and dynamics of the Korean Twitter network based on an analysis of 1,133,365 Korean Twitter accounts and 77,452,090 tweets in 2010. The authors found that approximately 75% of messages are generated in the form of RTs and replies (i.e., a reply to a tweet from

one person directly to another that appears in Twitter's public Twitter stream) compared with approximately 25% representing original tweets and approximately 40% of messages from those who make original tweets but also use RT function. Based on their findings, the authors concluded that RT is one of the main functions for facilitating information diffusion and sharing in the Korean Twitter network.

However, although there have been several studies of usage patterns and the characteristics of Twitter networks in South Korea, few studies examined reason why Twitter users retweet others' messages on Twitter. Although Chang and Ghim's work mentioned and emphasized the importance of RT in the context of the Korean Twitter network, their work is limited because there are no clear explanations for what factors exist at the level of individual Twitter users and how these factors facilitate retweeting behaviors.

In this regard, the current studies examines the drivers of retweeting behavior on Twitter using the following bodies of theoretical frameworks.

### 2.2 Theory of reasoned action (TRA)

The current study is based on several bodies of theory to investigate the major determinants of retweeting behavior. The primary theoretical framework employed in this study is theory of reasoned action (TRA) introduced by Fishbein and Ajzen[21]. The underlying concept of TRA is that one's behavior is predicted by behavioral intention and that this intention is determined by two major determinants: the individual's attitude toward a specific behavior and subjective norms [21,22]. TRA has been applied to a variety of human behaviors from a wide range of topics, including political participation, media adoption and use, and health behavior, among others, and it has been validated through these applications[21,23,24].

### 2.3 Motivation theory

Even though TRA is suitable for predicting human behavior in general terms, additional theoretical

frameworks need to be taken into account to explain retweeting behavior in a more specialized context. In this regard, the current research also employs motivation theory[25]. Motivation is a psychological feature that arouses a human being to behave toward a directed goal[26], and it has been treated as a key determinant of behavior across diverse fields, including information acceptance behavior[27], work-related behavior[28], and media usage, among others[29].

Two broad streams of motivation have been defined and investigated to explain behaviors: extrinsic and intrinsic motivation[26,27]. Extrinsic motivation refers to a construct that pertains to the performance of an activity to attain some separable outcomes or is driven by the values and benefits of outcomes. On the other hand, intrinsic motivation refers to motivation that is driven by an interest in or enjoyment of the performance of an activity itself and does not entail external rewards, stimuli, or pressures[26].

Related to information diffusion and sharing, these two motivational factors have emphasized in much existing literature. For instance, Hung et al.[30] found that altruism as an intrinsic motivation and economic reward and reputation as extrinsic motivations are important predictors of knowledge sharing in group meetings.

In the current study, the extrinsic and intrinsic motivations that influence retweeting behaviors and the ways in which these motivations exert influence are identified and examined.

### 2.4 Social capital theory

Even though its definition may vary, social capital can be viewed as the sum of resources embedded in the various networks of social relationships that provide value to those belong to the networks[31-33]. Based on this concept, social capital theory provides insights into a variety of pro-social behaviors, which cannot be easily explained by motivations at an individual level[34]. According to several scholars[31,34,35], the concept of social capital is not unitary, but composed of

structural, relational and cognitive dimensions.

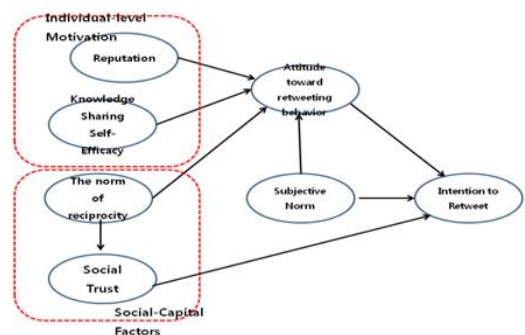
The structural dimension addresses the existence of connections and overall configurations within a social structure or network. The relational dimension captures the nature of relations among individuals within a social structure. The relational dimension of social capital is often understood as the level of trust within a social structure, including norms, obligations, etc.[24]. The cognitive dimension refers to resources that increase understanding between parties, which are usually exemplified as shared cultures and goals[34].

A series of studies have demonstrated that social capital is an important precursor of information and knowledge-sharing behaviors in several organizations and online communities[34].

In the current study, the dimensions of social capital and how this social capital has an influence on retweeting behavior are examined and identified.

### 3. Research Model and Hypotheses

The research model of the current study, presented in Fig. 1, organizes the formation of retweeting intention based on several areas of emphasis, thus integrating TRA with social capital and motivation theory. The explanations and literature review of the constructs of this model that may influence retweeting behavior are described in greater detail in the following section.



[Fig. 1] Research model in this study

### 3.1 Behavioral intention, attitude and subjective norm according to TRA

Behavioral intention refers to the extent to which a person has conscious plans to perform or not to perform a given behavior. According to TRA, if a behavior is volitional and not habitual or a result of routine that is performed almost automatically, intention plays the role of a mediator between other variables and actual behavior (or is the immediate precedent of actual behavior), and intention is highly correlated with the action itself[21].

TRA also postulates that the intention to perform an act is determined by two important factors: an attitude toward a specific action and subjective norms. Attitude can be defined as an individual's positive or negative evaluation of his or her performance of a certain behavior, while subjective norms can be defined as the perceived social pressures to perform a behavior, which considers the importance given to what others say or do[21].

Applying the intention formation from TRA in the context of an individual's retweeting behavior on Twitter, it is conceivable that attitudes toward retweeting behavior and subjective norms jointly predict retweeting intentions. Thus, the following hypotheses can be proposed:

H1: Attitudes towards retweeting behavior have a positive effect on the intention to retweet.

H2: Subjective norms have a positive effect on the intention to retweet.

Even though the relationship between subjective norms and attitudes toward the behavior was not thoroughly addressed in the original model of TRA, the current study assumes that there is a link between these two variables. In particular, this study posits that subjective norms have a positive influence on attitudes toward the behavior. Chung and Nam[36] claim that subjective norms can affect attitudes in a positive way because an individual is motivated to meet the expectations of relevant or important people when

these people positively view the performance of a particular act. Several other studies also have confirmed this linkage [24]. Thus, the following hypothesis can be suggested:

H3: Subjective norms have a positive effect on the attitudes toward retweeting behavior.

### 3.2 Reputation as extrinsic motivation

According to scholars from socio-economic disciplines, an individual is presumed to choose the course of action that maximizes utility in several situations when a set of preferences is given. That is, people behave when they expect some benefits or positive outcomes in return for their action[23]. Accordingly, several scholars found that people are more likely to engage in knowledge sharing or information technology usage when they have extrinsic motivations to do so[34-35]. In particular, a strong reputation is one of the benefits or rewards that knowledge or information contributors may receive. By showing that they have valuable information for others, knowledge or information contributors can improve their images and receive respect as experts. In this regard, many scholars claim that reputation is a major precedent of information sharing in several networked organizations. Specifically, reputation has an effect on individuals' attitudes toward information sharing[23,35]. Similarly, because users on Twitter can expect to build their reputations by sharing valuable information through retweeting, the next hypothesis is proposed:

H4: Reputation has a positive effect on attitudes toward retweeting behavior.

### 3.3 Knowledge sharing self-efficacy (KSSE) as intrinsic motivation

Self-efficacy derived from social cognitive theory can be defined as a self-evaluation of one's capabilities to execute the actions needed to produce a given achievement[37]. Self-efficacy is different from outcome expectation, which is an individual's estimate concerning the consequences of the performance.

Although outcome expectation involves externally oriented values, self-efficacy is “a reflection of one’s internal motivation based on his or her ability”[38]. Existing literature has shown that those who have high level of self-efficacy are more likely to perform the related behavior in the future than those who have low level of self-efficacy[40].

Knowledge sharing self-efficacy (KSSE) is the applied concept of self-efficacy to knowledge management to validate the effect of the belief of personal efficacy in knowledge sharing[39]. Teh et al.[40] indicated that the simple desire to share information or knowledge does not necessarily lead an individual to carry out those behaviors. Rather, the actual behavior of knowledge sharing requires confidence in completing it. The effect of KSSE on actual knowledge sharing or information sharing behavior has been widely validated[23].

A number of academic researchers have found that KSSE has a significant effect on attitudes toward information sharing. Applying KSSE to the context of retweeting behavior as a type of information sharing, the following hypothesis is proposed:

H5: Knowledge sharing self-efficacy has a positive effect on attitudes toward retweeting behavior.

### 3.4 Norm of reciprocity

In this study, the norm of reciprocity refers to information or knowledge exchange that is mutual and perceived by all parties to be obligatory and fair[39]. In particular, reciprocity in this conceptualization implies “actions that are contingent on rewarding from others and that cease when these expected reactions are not forthcoming”[41]. This concept of the norm of reciprocity has been understood as one of the relational dimensions of social capital theory and an important facilitator of knowledge sharing[34].

Many scholars agree that the norm of reciprocity underlines the commitment of individual members to share knowledge in networked organizations. In the presence of a strong norm of reciprocity in the

organization, individuals perceive this norm as salient and they feel obligated to follow it[34]. In this regard, it is conceivable that the norm of reciprocity has a positive effect on individuals’ attitudes toward retweeting behavior. Thus, the following hypothesis is proposed:

H6: The norm of reciprocity has a positive effect on attitudes toward retweeting behavior.

### 3.5 Social trust

Social trust is one of the most frequently employed manifestations of the relational dimension of social capital[42,43]. It has been described as individuals’ beliefs that others in a society will not knowingly or willingly harm them. According to Choi et al.[42], social trust is a multi-faceted concept that can be conceptualized across several dimensions, such as integrity, benevolence, and competence. In addition, they argue that social trust is a key facilitator of knowledge exchange and other types of social interaction. Chiu et al.[31] also found that social trust is an important predictor of knowledge sharing in virtual communities. Based on the studies discussed above, the following hypothesis can be proposed:

H7: Social trust has a positive effect on the intention to retweet.

Scholars, considering the perspective of social capital, also argue that social trust can be positively affected by the norm of reciprocity. Putnam[33] indicates that social trust emerges when the norm of reciprocity is more generalized from a single network to the entire network. Davenport and Prusak[44] also argue that social trust is built on a series of experiences of reciprocity in the society. Thus, it is conceivable that the norm of reciprocity has a positive effect on social trust, which leads to the following hypothesis:

H8: The norm of reciprocity has a positive effect on social trust

## 4. Methodology

### 4.1 Data collection method

An online survey was conducted to collect data. In the study, groups of South Korean adults whose ages ranged from 20 to 40 were included in the sample. Adults over 50 years of age were excluded from this study's sample because the SNS usage rate for this age group is very low[45].

Participant recruitment and data collection were conducted by a professional research company called *Embrain* ([www.embrain.com](http://www.embrain.com)). This internet research firm ranked first among Korean internet market research firms in 2013 and had the largest number of panels (approximately 1 million) who regularly participated in survey research[46]. Among these participants, 3,197 were randomly selected between July 7, 2013 and July 15, 2013 and were notified by an e-mail invitation message linked to an online survey page operated by *Embrain* (<http://onair.ezsurvey.co.kr>). However, 2,897 were excluded from the study sample as a result of the screening process due to factors such as being a current Twitter users, knowing the function of RT among other reasons.

As a result, 300 respondents were included in the sample. All participants were current Twitter users and identified as Korean. They were asked questions regarding demographic information and SNS usage patterns in addition to questions related to construct measurement. Table 1 presents more detailed information about the participants in this study.

[Table 1] Profile of sample respondents

Profile category		Frequency	Percentage(%)
Gender	Male	154	51.3
	Female	146	48.7
Age	20-29	84	28.0
	30-39	102	34.0
	40-49	114	38.0
Occupation	Student	50	16.7
	Civil servant	11	3.7
	Salesperson	15	5.0
	Office worker	132	44.0
	Self-employed	23	7.7

	Housewife	27	9.0
	Researcher	7	2.3
	Engineer	14	4.7
	Teacher	8	2.7
	Other	13	4.3
Educational level	High school	26	8.7
	College	143	81.0
	Advanced degree	31	10.3
Monthly household income	Below 1 million	9	3.0
	1-2 million	21	7.0
	2-3 million	56	18.7
	3-4 million	67	22.3
	4-5 million	54	18.0
	5-6 million	38	12.7
	6-7 million	15	5.0
	7-8 million	18	6.0
Above 8 million	22	7.3	

### 4.2 Measurement items

The measurement items for this study were adapted from existing measures and modified for retweeting behaviors (more details are provided in Table 2). Twenty-one items were taken directly or adapted from previous literature. Table 2 shows the measurement items as well as their descriptions and sources. The survey questionnaire was developed using a 7-point Likert scale ranging from "1 = Strongly disagree" to "7 = Strongly agree." The Cronbach's alpha scores for all constructs were higher than .80[47].

[Table 2] Measurement items

Construct	Description of items	Sources
REP 1	Retweeting messages would improve my status in Twitter	Bock et al.[17] Chow & Chan[18]
REP 2	Retweeting messages would enhance my personal reputation in Twitter	
REP 3	I feel that I earn respect from my friends or followers by retweeting messages	
KSSE 1	I have confidence in my ability to provide information that my friends or followers in Twitter consider valuable	Bandura[31] Chen & Huang[50] Fishbein & Ajzen[15]
KSSE 2	I have the insights needed to provide knowledge valuable to my friends or followers in Twitter	
KSSE 3	I have confidence in responding or adding comments to messages by my friends or followers in Twitter	
RCP 1	When I retweet messages to my friends and followers, I expect that they will help me when I am needed	Blau[35] Bock et al.[17]
RCP 2	I find that retweeting messages can be advantageous to me and friends(or	Lin et al.[33]

	followers) in Twitter	
RCP 3	I think that retweeting messages can improve reciprocal benefit	
STS 1	I can trust my friends and followers in Twitter	Choi et al.[36] Chiu et al.[25] Nahapiet & Ghosal[37] Putnam[27]
STS 2	I find that my friends and followers in Twitter will not take advantage of me and others even when the opportunities arises	
STS 3	I find that my friends and followers in Twitter are truthful in dealing with one another	
ATT 1	Retweeting in Twitter is an enjoyable experience	Chow & Chan[18] Fishbein & Ajzen[15]
ATT 2	I like retweeting in Twitter	
ATT 3	Retweeting in Twitter is a wise move	
SN 1	Those who are important to me in Twitter think that I should share information by retweeting	Fishbein & Ajzen[15]
SN 2	Those who are important to me in Twitter have already shared information by retweeting	
SN 3	Many people in Twitter have already shared information by retweeting	
INT 1	I will continuously retweet others' messages in Twitter in the future	Fishbein & Ajzen[15]
INT 2	I will frequently retweet others' messages in Twitter in the future	
INT 3	I will recommend the retweet function in Twitter to others	

Note. REP(Reputation), KSSE(Knowledge sharing self-efficacy), RCP(reciprocity), STS(Social trust), ATT(Attitude), SN(Subjective norm), INT(Intention)

## 5. Results

### 5.1 Measurement validation

A measurement model using confirmatory factor analysis (CFA) was estimated before the structural model using AMOS 18. Several “goodness of fit” measures showed a good fit for the measurement model in this study. First, the value of  $\chi^2$  indicates a good fit of the measurement model ( $\chi^2 = 294.429$ ,  $df = 168$  and  $CMIN/df = 1.753$ ,  $p < .001$ ). Other measures also indicated a good fit of the measurement model (GFI = .914, CFI = .975, and RMSEA = .050).

Subsequently, reliability and construct validity were assessed. The results of these assessments are shown in Table 3. The composite reliability (CR) values for all seven constructs were higher than .70, which exceeded the minimum standard recommended by Bagozzi and

Yi[48]. Moreover, the factor loading of all items exceeded the cutoff point (.70). Additionally, the average variance extracted (AVE) scores of all seven constructs were higher than .50, which indicates strong convergent validity[49].

[Table 3] Individual item factor loadings, CR, and AVE

Construct	items	Loading s	p-value	CR	AVE
REP	REP1	.842	p<0.001	.891	.732
	REP2	.946	p<0.001		
	REP3	.932	p<0.001		
KSSE	KSSE1	.878	p<0.001	.852	.659
	KSSE2	.911	p<0.001		
	KSSE3	.769	p<0.001		
RCP	RCP1	.811	p<0.001	.866	.684
	RCP2	.930	p<0.001		
	RCP3	.842	p<0.001		
STS	STS1	.856	p<0.001	.879	.709
	STS2	.863	p<0.001		
	STS3	.941	p<0.001		
ATT	ATT1	.850	p<0.001	.873	.697
	ATT2	.879	p<0.001		
	ATT3	.814	p<0.001		
SN	SN1	.865	p<0.001	.876	.703
	SN2	.883	p<0.001		
	SN3	.880	p<0.001		
INT	INT1	.804	p<0.001	.725	.887
	INT2	.954	p<0.001		
	INT3	.942	p<0.001		

The discriminant validity was also examined. As shown in Table 4, the square roots of every AVE were greater than the correlations between the corresponding constructs, which indicated the discriminant validity of the constructs[44].

[Table 4] Correlations of the latent variables and standard errors

	REP	KSSE	RCP	STS	ATT	SN	INT
REP	<b>.856</b>						
KSSE	.318	<b>.812</b>					
RCP	.442	.388	<b>.823</b>				
STS	.346	.300	.576	<b>.842</b>			
ATT	.293	.352	.403	.360	<b>.834</b>		
SN	.326	.387	.486	.378	.649	<b>.839</b>	
INT	.316	.293	.438	.377	.599	.669	<b>.941</b>

Note. The diagonal value in this table indicates the square root of the AVE.



### 5.2 Evaluation of structural model

Structural equation modeling was used to estimate the parameters of the structured model. Goodness-of-fit statistics indicate the overall acceptability of the structural model. The value of  $\chi^2$  indicates a good fit for the structural model ( $\chi^2 = 501.907$ ,  $df = 181$ ,  $CMIN/df = 2.773$ ,  $p < .001$ ). Other measures also indicate a good fit of the structural model ( $GFI = .852$ ,  $CFI = .938$ ,  $RMSEA = .077$ )[50].

Given the satisfactory fit of the model, the estimated path coefficients of the structural model were examined to evaluate the hypotheses. As hypothesized, the effect of attitude toward retweeting behavior on the intention to retweet was significant in a positive way (H1) ( $\beta = .281$ ,  $p < .001$ ). And subjective norm has a significant positive effect not only on the intention to retweet (H2) ( $\beta = .444$ ,  $p < .001$ ) but also on attitude toward retweeting behavior (H3) ( $\beta = .578$ ,  $p < .001$ ).

Reputation did not have a significant effect on the attitude toward the retweeting behavior (H4) ( $\beta = .064$ ,  $p > .05$ ), while KSSE did (H5) ( $\beta = .114$ ,  $p < .05$ ).

The norm of reciprocity have a significant positive effect not only on attitude toward the retweeting behavior (H6) ( $\beta = .115$ ,  $p < .05$ ), but also on social trust (H8) ( $\beta = .574$ ,  $p < .001$ ).

Finally, it was also found out that social trust affect intention to trust significantly in a positive way ( $\beta = .141$ ,  $p < .01$ ). Table 5 summarizes the results of hypothesis tests.

[Table 5] Summary of the path coefficient

Hypothesis	Supported	Standardized coefficient
H1: ATT ==> INT	Yes	.281(4.243)***
H2: SN ==> INT	Yes	.444(6.509)***
H3: SN ==> ATT	Yes	.578(9.427)***
H4: REP ==> ATT	No	.064(1.194)
H5: KSSE ==> ATT	Yes	.114(2.071)*
H6: RCP ==> ATT	Yes	.115(2.118)*
H7: STS ==> INT	Yes	.141(2.891)**
H8: RCP ==> STS	Yes	.574(9.351)***

### 6. Discussion and conclusions

This study examined the formation of retweeting

behaviors from the perspectives of motivations and social psychology at an individual level using an extension of TRA by Fishbein and Ajzen[21]. This study can come to the following conclusions and implications based on the results described above.

First, there are significant relationships between all of attitude toward the retweeting behavior, subjective norm and the intention to retweet (H1, H2, H3). These results provide additional evidences for the validity of TRA and several relevant literatures using this framework in explaining individual behaviors from various scopes[21,23]. In especial, the results indicate that subjective norm has an impact on behavioral intention directly and indirectly through attitude. These imply that users' several behaviors in the sphere of Twitter including retweeting behavior can be fueled by a social circle incentive. Those in the group of shared interests in Twitter have more social interaction and they feel socially pressured to do the same behavior as others in the group for the purpose of belong to this communication circle continuously[51]. Moreover, the findings show that subjective norm is a greater determinant in explaining the intention to retweet than an attitude. Two plausible explanations for these can be described. Social norms may be more salient in digital social interaction than in offline because it is relatively hard for individuals to individuate themselves with limited social cues in online setting, thus they are more susceptible to the normative value as Postmes et al.[52] argued. Second, it is also because the samples in this study are all Koreans, who have more collectivistic natures compared to those in individualistic cultures[47].

The findings indicate that reputation as an extrinsic motivation does not have a significant effect on the attitude toward the retweeting behavior (H4), which is conflict with the results of prior literature[34]. Several accounts for these are possible. It is likely that those who expect reputation or enhanced images are more concerned with making their own tweets rather than simply re-broadcasting others' messages. It may be

because those who make original tweet can get more credits for valuable information rather than those who rebroadcast these tweets by retweeting even though there are also some cases where the authorships (or attributions) of messages are not clear[9]. Or it is also possible that Twitter users do not perceive reputation as appropriate or substantial rewards especially when many of them do not post detail information about themselves or do not use their real identities[35].

On the other hands, KSSE as an intrinsic motivation has a significant effect on attitude toward retweeting behavior (H5). These findings are consistent with and extend prior research in the sense that intrinsic motivations increase knowledge or information sharing behavior[39]. Moreover, this result in this study supports the idea from the self-determination theory that intrinsic motivation has more influences on the given behavior than the extrinsic motivation[32].

The results also indicate that the norm of reciprocity has a significant predictor for attitude toward retweeting behavior (H6). This finding supports the notion that Twitter users are likely to share information through retweeting when they expect their contributions are reciprocated even in online network setting as in the case of face-to-face[34]. Moreover, it shows that the norm of reciprocity has a significant effect on social trust (H8), which is consistent with the existing literature[41]. Tsai and Ghoshal [54] argue that positive experience of social interaction leads to build trust among members in the group.

That is, the continuous mutual gains in several dyadic (or two-way) relationships enhances the generalized reciprocity where individuals can expect reciprocity not only from the recipient of their contribution but also from the third party, which can be also translated into "social trust"[55]. In this regard, this finding implies that Twitter users build more generalized reciprocity or social trust based on the experience of the norm of reciprocity between a dyadic relationship.

Finally, social trust has a significantly positive effect

on the intention to retweet (H8). This finding is consistent with the prior research[39] and implies that social trust is a crucial contextual factor for promoting more retweeting behavior. Even though several useful findings are found, the limitations of this study and directions for the future study need to be described. First, the samples are rather limited because this study uses the quota sampling method and only Korean participants. In this regard, more representative samples are needed to be used in the future study. Second, the future studies can examine other determinants such as other motivational factors and other dimensions of social capital.

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