

# Understanding the trust building mechanisms in social media

## Regulatory effectiveness, trust transfer, and gender difference

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### Abstract

**Purpose** – Although the impacts of trust on information disclosure have been well recognized, the trust building mechanisms in social media are still underexplored. To fill this gap, the purpose of this paper is to explore two trust building mechanisms, namely, institution-based and transference-based trust building and identify how these two mechanisms vary across gender.

**Design/methodology/approach** – An online survey was conducted to collect data. The partial least squares method was used to examine the relationships among regulatory effectiveness, three trusting perceptions and disclosure intention. A cross-group path coefficient comparison method was used to test gender differences.

**Findings** – The results suggest that regulatory effectiveness affects competence- and character-based trust and these impacts are stronger for males than for females. Both competence- and character-based trust influence general trust in members while their impacts vary. Competence-based trust is more important for males while character-based trust is more important for females.

**Originality/value** – This study contributes to social media literature by identifying the two trust building mechanisms with special attention to the role of regulatory effectiveness and trust transfer. Further, this study also sheds light on how these two mechanisms vary across gender.

**Keywords** Social media, Information behaviour, Information disclosure, Gender difference, Regulatory effectiveness, Trust transfer

**Paper type** Research paper

### Introduction

Social media as a collection of “highly interactive platforms via which individuals and communities share, co-create, discuss, and modify user-generated content” (Kietzmann *et al.*, 2011, p. 241), has become an important channel for information dissemination and communication in recent years (Chen, 2013; Yin *et al.*, 2018; Zhan *et al.*, 2016; Sun, Liu, Chen, Wu, Shen and Zhang, 2017). As the sustainability of social media heavily relies on the users who voluntarily contribute to the platform (Shen, Li, Sun and Zhou, 2018; Wang *et al.*, 2018), it is of great importance to explore the factors affecting information disclosure behavior (Bazarova and Choi, 2014; Aharony, 2016). Among the many predictors of information disclosure, trust has been found to be one of the most important antecedents (Treiblmaier and Chong, 2011; Zhang *et al.*, 2016).

However, most social media research concentrates on the impacts or the consequences of trust on information disclosure (i.e. trust – outcome relationship) through regarding trust as a



means to mitigate privacy risks and enhance interpersonal relationships (Mesch, 2012; Chen and Sharma, 2013; Lin *et al.*, 2016), the antecedents of trust or those factors which lead to the formation of trust (i.e. antecedent – trust relationship) have been less studied. Prior studies in other research contexts (e.g. e-commerce) have identified a variety of trust building mechanisms including knowledge-based mechanism, institution-based mechanism and transference-based mechanism (Gefen *et al.*, 2003). Knowledge-based mechanism depends on users' accumulated knowledge or internal/external usage experience (Bansal *et al.*, 2016; Shen, Li, Sun and Wang, 2018), which can be reflected by frequency of information disclosure in this study. Further, due to our research focus on the inter-relationship between different types of trust belief, we regard the frequency as a control variable in the model. The other two mechanisms, institution-based mechanism (Pavlou and Gefen, 2004; McKnight and Chervany, 2001; Fang *et al.*, 2014) and transference-based mechanism (Wang *et al.*, 2013; Chen and Shen, 2015; Stewart, 2003; Lim *et al.*, 2006) are widely used as the trust building strategies. Specifically, institution-based mechanism stresses on the structural assurance implemented by third parties to protect users from potential risks (Fang *et al.*, 2014; Gefen *et al.*, 2003), while transference-based mechanism emphasizes that a trustor's (e.g. A) trust toward a trustee (e.g. B) can be transferred to his/her trust toward another person (e.g. C) who has a connection with the trustee (e.g. B) (Wang *et al.*, 2013; Stewart, 2003). Trust building mechanisms have been taken as the foundation for e-commerce practitioners to design their strategies. Similar with the security issue in the e-commerce context, privacy leakage is increasingly prevalent and severe on social media platforms. For example, Facebook admits that the personal information of 87m users were leaked to a third-party, leading to a large-scale privacy scandal[1]. Such privacy leakage has been proved to be the biggest inhibitor of user information disclosure (Krasnova *et al.*, 2010) and it could be eliminated by obtaining user trust. Considering that it is feasible for social media practitioners to leverage different mechanisms to establish trust in the social media context, the first research objective of this study is to examine the trust building mechanisms (e.g. institution- and transference-based mechanisms) in the social media context.

According to the previous literatures, there are two types of trust belief or perception in the social media context: trust in institution and trust in members (Bellavista *et al.*, 2008; Beldad and Kusumadewi, 2015). Trust in institution refers to the trust toward the social media platforms while trust in members captures the trust toward other users of the social media platforms, respectively. Although prior studies have shed light on the independent impacts of these two trust perceptions on information disclosure, the inter-relationship between them has not been examined (Rus and Igljic, 2005). This study tries to depict the relationship between trust in institution and trust in members through the transference-based trust building mechanism. Further, consistent with e-commerce literatures (e.g. Fang *et al.*, 2014) which indicate that regulatory effectiveness is the structural assurance implemented by social media platforms to eliminate the risk of inappropriate collection, use and dissemination of users' disclosed information (Yang and Liu, 2014). This study will examine the role of regulatory effectiveness in forming users' trust in institution through the institution-based trust building mechanism.

Furthermore, prior studies have provided increasing evidences that females and males differ in their trust-related decisions (Awad and Ragowsky, 2008; Riedl *et al.*, 2010). Specifically, previous studies have suggested that males and females rely on different trusting mechanisms and the impacts of trust on satisfaction (Robert and You, 2018), intention (Awad and Ragowsky, 2008) and behavior (Chai *et al.*, 2011) vary across gender. Accordingly, we are wondering whether the institution-based and transference-based trust building mechanisms vary across gender too. For example, institution-based trust building mechanisms may play a more important role for males than for females because prior studies have indicated that males pay more attention to the cognitive and instrumental goals (e.g. Zhang *et al.*, 2015). Therefore, the second research objective of this study is to investigate the gender differences in trust building mechanisms.

The paper is structured as follows. First, we review literatures on information disclosure, trust in social media and theories on trust building and gender differences. Second, we develop a research model to explain the trust building mechanisms and gender differences. Third, the data collection procedures are described and the data analysis results are reported. Finally, we discuss the findings, limitations, theoretical and practical implications of this study.

## Literature review

### *Information disclosure*

Privacy refers to the right to control and restrict the transmission of personal information to others (Schoeman, 1984). It has been regarded as a crucial issue in information disclosure (Smith *et al.*, 1996). Generally, private information is not entirely public within one's personal verified network (Tidwell and Walther, 2002), and individuals will be hurt as soon as sensitive information is disclosed (Mothersbaugh *et al.*, 2012). Previous literatures indicate that privacy concern captures the extent to which an individual believes that information disclosure can harm him/her financially or socially (Awad and Krishnan, 2006), increasing the disutility of information disclosure and reducing information disclosure intention (Bansal *et al.*, 2016), suggesting a negative relationship between privacy concern and information disclosure intention (Aharony, 2016).

Existing literatures on information disclosure have been conducted in two main contexts in IS research: the e-commerce context (Olivero and Lunt, 2004; Dinev *et al.*, 2006) and the self-disclosure technologies context (Chen and Sharma, 2013; Knoll and Bronstein, 2014). In the e-commerce context, most studies concentrate on the personalization-privacy paradox to balance the personalization benefits and risks caused by disclosing information (Awad and Krishnan, 2006). In the self-disclosure technologies context, researchers usually explain users' information disclosure behavior using the privacy calculus model (Li *et al.*, 2015) and trust theory (Lin *et al.*, 2016) which indicates that trust is a key predictor of information disclosure (Treiblmaier and Chong, 2011; Mesch, 2012) because it can promote risk-taking behavior in the uncertain and interdependent social networks (Mayer *et al.*, 1995).

### *Trust in social media*

Trust refers to "the willingness of a party to be vulnerable to the action of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (Mayer *et al.*, 1995, p. 712). It has been recognized as a critical success factor in social media literatures, such as the studies about social media service (Park *et al.*, 2015) and information privacy concern (Choi and Lee, 2017). Previous studies emphasize that risk perceptions are significantly related to trust (Gefen *et al.*, 2008; Treiblmaier and Chong, 2011). In social media, considering that both actions of institution and social media members could cause relevant risks of information disclosure, trust is divided into two types: trust in institution and trust in members (interpersonal trust) (Lu *et al.*, 2010; Beldad and Kusumadewi, 2015).

Trust in institution refers to the beliefs that the website or provider has the capability and aspiration to protect its users from risk-taking behavior (Lu *et al.*, 2010). It is an important type of trust in online environments where people's social and cultural backgrounds are diverse (Pavlou and Gefen, 2004). Trust in institution has been long concerned in information systems (ISs) studies. For instance, Gefen *et al.* (2003) posit that trust in institution is positively associated with purchase behavior, Lu *et al.* (2010) indicate that trust in institution significantly influence intention to get information. Trust in institution is usually divided into two dimensions: competence-based trust and character-based trust. The competence-based trust is defined as the expectation that a social media provider is capable of protecting users from unauthorized third-party intrusion (Beldad *et al.*, 2011) and the character-based trust is

defined as the expectation that social a media provider will stay the same with norms and standards which are admisible by social or users (Ridings *et al.*, 2002).

Trust in members is another indispensable construct in information disclosure (Walther, 1992; Chen *et al.*, 2016). It is defined as “an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied on” (Rotter, 1980, p. 1), which is increasingly concerned in social media literatures recently. For instance, Panahi *et al.* (2016) indicate that interpersonal trust significantly impact knowledge sharing on social media platform, Dutta and Bhat (2016) posit that trust in members increases purchase intention in social media marketing. Considering that social media users face not only with one or two other individuals, but with a general audience, trust in members in our research should be a generalized, collective notion (Ridings *et al.*, 2002).

In the social media context, individuals generally communicate with other members by using the social media platforms. According to the transference-based mechanism, a trustor’s trust toward a trustee (i.e. social media platform here) can be transferred to his/her trust toward another person (i.e. other users of this social media platform) who has a connection with the trustee (Stewart, 2003). Thus, we investigate the relationship between trust in institution and trust in members through the transference-based mechanism.

#### *Transference-based trust building mechanism*

Trust transfer is a cognitive process through which individuals’ trust in a familiar entity can be transferred to other entities by virtue of relatedness (Kim, 2008). There are three different types of trust transfer (Belanche *et al.*, 2014). First, trust transfer from personal disposition to other entities (McKnight and Chervany, 2001), in which trust as an individual trait offers a convincing basis to establish perceptions of trust in other entities (Riedl *et al.*, 2010). For example, dispositional trust in the business context could move to trust in a financial adviser (Grayson *et al.*, 2008). Second, trust transfer between embedded entities, in which one entity is a representative of another. For instance, trust in retailers transfers to trust in the retail industry (Belanche *et al.*, 2014). Last but not the least, trust transfer between independent but related entities (Sun *et al.*, 2014), such as trust in an industry moves to a new firm established by that sector (Lee *et al.*, 2011), trust in a firm can be transferred to their salesman (Doney and Cannon, 1997). Due to the communication between social media users and other members is based on the social media platform, we attempt to explore the inter-relationship between trust in institution and interpersonal trust in terms of the trust transfer mechanism.

In addition to the trust transfer mechanism, institution-based mechanism is another important trust building mechanism (Ridings *et al.*, 2002). Gefen and Pavlou (2006) argue that trust does not operate in a vacuum, it would depend on the way society and its institutions are regulated. Thus, we investigate the antecedents of trust in institution from the institution-based mechanism of trust building.

#### *Institution-based trust building mechanism*

Institution-based mechanism captures “the management of a specific provider or marketplace take the initiative to regulate this marketplace and prevent unacceptable behavior to enforce appropriate conduct” (Gefen and Pavlou, 2006, p. 1314). Institution-based mechanism is a structural assurance which ensures all actions in the platform will happen as promised (Zucker, 1986). As a manifestation of the institution-based mechanism, regulatory effectiveness has been extensively used in numerous disciplines (Gefen and Pavlou, 2006), such as food safety (Chen *et al.*, 2015), environmental science (Sass and Devine, 2004) and ISs (Pavlou and Gefen, 2004). For example, Gefen and Pavlou (2006) indicate that regulatory effectiveness moderates the impact of trust on transaction intentions by reducing the social uncertainty and providing an institutional level security (Mayer *et al.*, 1995), Pavlou and Gefen (2004) argue that trust in institution can be built

through institution-based mechanisms. Thus, regulatory effectiveness is expected to be an antecedent of trust in institution in this study.

Further, prior studies have provided increasing evidences that females and males differ in their decisions relevant to trust (Thelwall and Vis, 2017). Riedl *et al.* (2010) also indicate that different trust building mechanisms may work in different ways for males and females. Thus, we try to understand the boundary conditions of different trust building mechanisms by focusing on gender differences.

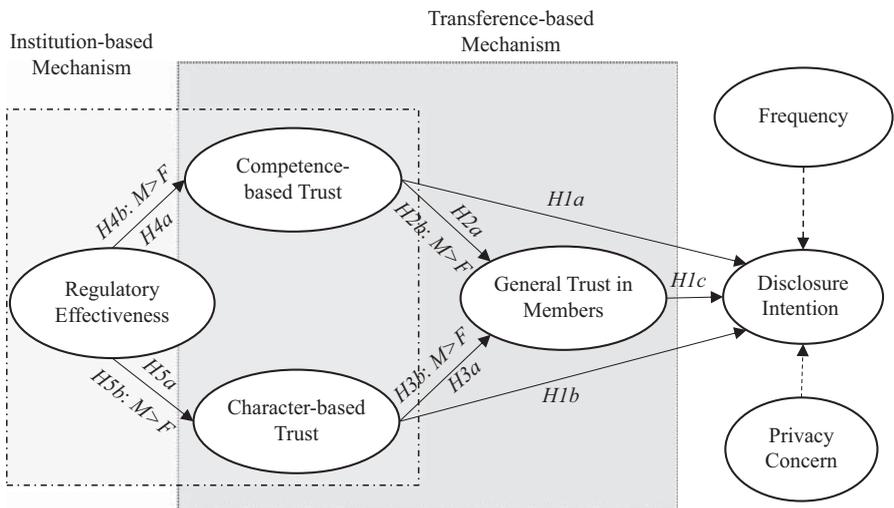
*Social role theory and gender differences*

Social role theory tries to explain the similarities and differences between man and woman in social behavior (Eagly *et al.*, 2000). Generally, males and females are different because they pay attention to role-related skills to acquire the suitable roles (Eagly *et al.*, 2000). For instance, males learn marketable skills while females learn household skills (Eagly and Kite, 1987). There are plenty of studies that investigate gender differences in IS field (Venkatesh and Morris, 2000; Zhang *et al.*, 2014). Males are more likely to be characterized as independent, confident and purposeful (Zhang *et al.*, 2015), while females are characterized as friendly, generous and sentimental (Eagly and Wood, 1991). In other words, males are usually motivated by rational and achievable needs while females tend to be encouraged by relational and expressive needs (Hoffman, 1972). These differences may drive males and females to think differently when facing different trust building mechanisms. Based on the institution- and transference-based trust building mechanisms as well as the gender differences, we develop our research model in Figure 1.

**Research model and hypotheses**

*Trust and information disclosure*

Trust in institution has been affirmed to be a crucial predictor of information disclosure (Lin *et al.*, 2016). However, different dimensions of trust in institution have potentially unique effects on behavioral intention (Beldad *et al.*, 2011). For competence-based trust, it reduces the perceived risks of information revelation which are caused by the third parties (i.e. entities with the capacity to gain unauthorized access to user information). Such risk reduction strategy cuts down individuals' anxiety about security and privacy and consequently makes them more likely to disclose their personal information (Lin *et al.*, 2016; Sun, Liu and Wang, 2017).



**Figure 1.**  
Research model

For character-based trust, it decreases the perceived risks caused by social media providers (Beldad *et al.*, 2011), influencing lay judgments about the risks of social media environment. In a less risky environment, individuals are more inclined to partake in shared activities, such as self-disclosure and getting information (Ridings *et al.*, 2002). In conclusion, one would expect that increased trust in competence and character of social media provider would result in increased information disclosure. Thus, we propose that:

*H1a.* Competence-based trust is positively associated with intention to disclose information.

*H1b.* Character-based trust is positively associated with intention to disclose information.

Information disclosed on social media could be abused not only by the third parties and social media providers but also by social media members (Beldad and Kusumadewi, 2015). For example, Beldad and Kusumadewi (2015) mentioned that social network members would abuse other's location information to satisfy their yearn for gossip. General trust in members reduces such risks and makes individuals more willing to participate in shared activities (Ridings *et al.*, 2002). In social media context, this shared activity is in the form of information disclosure. Thus, increased trust in members would result in increased information disclosure. Accordingly, we propose that:

*H1c.* General trust in members is positively associated with intention to disclose information.

#### *Trust transfer process*

In the social media context, on the one hand, institutions (i.e. social media platforms) build a reliable and secure environment to reduce the risks caused by the third parties and social media providers (Beldad *et al.*, 2011; Lin *et al.*, 2016). On the other hand, institutions also provide fair norms and standards to avoid other members in the networks to engage in information abuse behavior (Pavlou and Gefen, 2004). Following the trust-transference logic (Lee and Turban, 2001; Sun *et al.*, 2014), when an individual trusts in a social media platform, s/he will more likely trust other members in the same social media platform (Rus and Iglie, 2005), suggesting a positive relationship between trust in institution and trust in members.

For competence-based trust, social media members will be confident in that the social media provider is capable of providing resource, guidelines and safeguarding measures to deal with the third parties that maliciously use their disclosed information (Lu *et al.*, 2016). Social media users believe that social media provider also has the competence to punish the members who misuse other members' disclosed information. According to Doney and Cannon (1997) arguments which state that the values and attitudes of the institution determine the members' behavior, members will not abuse other users' information in order to avoid punishment.

Furthermore, social media users' behaviors are partially determined by the culture, value and attitude of the social media provider (Doney and Cannon, 1997). Character-based trust reflects the moral propensity of social media provider to protect its users' information from abuse (Beldad *et al.*, 2011), indicating that the social media provider has shared values and respects with its members. To maintain the consistence with the social media provider, social media users will tend to follow the value and attitude of the social media. Thus, social media users will believe that other members will not misuse their information. Based on these arguments, we propose that:

*H2a.* Competence-based trust is positively associated with general trust in members.

*H3a.* Character-based trust is positively associated with general trust in members.

During the trust transfer process, males and females may rely on different dimensions of trust in institution. For males, they are highly correlated with instrumental behaviors (Davidson and Freudenburg, 1996) and more likely to be motivated by rational and achievable

needs (Zhang *et al.*, 2015). For example, Venkatesh and Morris (2000) indicate that perceived usefulness will influence behavioral intention more strongly for males than females. Thus, males are more inclined to focus on competence-based trust in trust transfer process.

In contrast, females are more relational, expressive and interdependent than males (Hoffman, 1972). Generally, females are found to have higher needs for affiliation and social support (Zhang *et al.*, 2015). Riedl *et al.* (2010) suggest that compared with functional factors, emotional factors are more important for women. Thus, females are more inclined to concentrate on character-based trust. Based on these arguments, we propose that:

*H2b.* The influence of competence-based trust on general trust in members will be stronger for males than for females.

*H3b.* The influence of character-based trust on general trust in members will be stronger for females than for males.

#### *Regulatory effectiveness*

Regulatory effectiveness as a form of institution-based assurance that promotes reliability of social media platforms (Zucker, 1986) should be associated with users trust beliefs. Pavlou and Gefen (2004) indicate that regulatory effectiveness provides a safe and reliable environment, and equitable norms and standards, which would reduce risk and enhance trust in institutions. Specifically, regulatory effectiveness will influence competence-based trust and character-based trust in different ways.

On the one hand, if the regulatory structure of social media is perceived to be effective in establishing and defending online information disclosure, social media users will be confident that the social media provider is competent to provide resource, procedure and safeguarding measures to deal with the third parties opportunistic behavior (Lu *et al.*, 2016). Thus, effective regulation could generate social media members' trust in the competence of social media.

On the other hand, regulatory effectiveness as a form of a structural assurance (Zucker, 1986) makes the costs of abusing private information higher than the benefits (Pavlou, 2002). According to the calculation-based logic of trust, social media provider will inhibit abusing users' personal information if the benefits of misuse are lower than costs (Pavlou and Gefen, 2004). Thus, rational social media provider will take steps to fulfill their promises to avoid potential sanctions. Therefore, we propose that:

*H4a.* Regulatory effectiveness is positively associated with competence-based trust.

*H5a.* Regulatory effectiveness is positively associated with character-based trust.

We also explore how gender influences the effects of regulatory effectiveness on competence-based trust and character-based trust. According to the social role theory, females are friendly, generous and sentimental (Eagly and Wood, 1991). They are more likely to be stimulated by relational and expressive needs (Hoffman, 1972). In contrast, males are independent, confident and purposeful (Zhang *et al.*, 2015). They are easier to be encouraged by rational and instrumental needs (Hoffman, 1972). Ones and Viswesvaran (1998) emphasize that males pay more attention to institutional environment than females (Davidson and Freudenburg, 1996). In our research context, considering that regulatory effectiveness is a manifestation of the social media environment, males are more inclined to care about regulatory effectiveness when forming the trust beliefs relevant to institutions than females. Therefore, we propose that:

*H4b.* The influence of regulatory effectiveness on competence-based trust will be stronger for males than for females.

*H5b.* The influence of regulatory effectiveness on character-based trust will be stronger for males than for females.

## Research method

To examine the proposed hypotheses, an online survey was conducted to collect data from the social media users in China. The survey was conducted in the May 2016 to July 2016, lasting approximately 50 days.

### *Research setting*

A popular social media, WeChat, was selected as the research setting. According to the CNNIC (China internet Network Information Center) report[2], by the end of December 2016, 79.6 percent of internet users used WeChat to communicate with their friends and disclose their personal information. WeChat adopts a dyadic invitation mechanism for relationship building such that a new relationship can be formed only when the two sides agree to take the other as his/her friend. Further, WeChat provides users with a variety of functions to control their personal information during the information disclosure process. All these features make WeChat become an appropriate platform to examine the relationships between regulatory effectiveness, trust in institution/members and information disclosure.

### *Measures*

All the measures in this survey were adapted from prior studies. Specifically, the items for regulatory effectiveness were adapted from Gefen and Pavlou (2006). Competence-based trust and character-based trust were measured with the items adapted from Gefen and Straub (2004) and general trust in members was measured with the items employed by Shu and Chuang (2011). Intention to disclose information was measured with the items adapted from Xu *et al.* (2009). Finally, as privacy concern was taken as an important predictor of information disclosure (Bansal *et al.*, 2016), it was treated as a control variable and measured with the items adapted from Dinev *et al.* (2006). The detailed descriptions about constructs and measures were shown in Table I. All items were measured using seven-point Likert scales. As the survey was conducted in China, a back-translation approach was used to convert the original English items into Chinese.

### *Data collection procedure*

Snowball sampling approach was used to collect the data. This approach was used due to its advantages to contact respondents in a social network which was fit with our research context. It was widely used by previous studies on social media (Kim and Shin, 2016; Chen *et al.*, 2018) and recognized as more appropriate for the studies on information disclosure (Tow *et al.*, 2010; Keith *et al.*, 2013). Specifically, we first invited students of a methodology course to participate in the survey and encouraged them to share the questionnaire to their WeChat friends and invite them to participate in this survey.

Finally, we got 443 questionnaires in total. After removing invalid responses including those with answering time less than 80 s and those with the same answer to all questions, 386 valid responses were obtained. The demographic characteristics of the respondents were reported in Table II. Among these respondents, 39.64 percent were males, nearly 79.02 percent of the respondents were with the age ranging from 18 to 25, 45.34 percent were undergraduates and 71.50 percent were willing to disclose information in WeChat, which were quite similar with the distribution of WeChat user population that reported by Pew Research Center[3] and CNNIC[4], suggesting that the data were representative.

### *Data analysis method*

Partial least squares (PLS) is used as the data analysis method for the following reasons. First, PLS as a structural equation modeling (SEM) approach (e.g. second-generation

Constructs	Items	Source
WeChat is a popular social media where we can chat with friends and share information. In this questionnaire, "information disclosure" refer to the behavior that you share your information in WeChat. Please select your agreement level of each item where "1" denotes "strongly disagree" and "7" on behalf of "strongly agree"		
Regulatory effectiveness (RE)	<ol style="list-style-type: none"> <li>1. I am confident that the Wechat is an effective third-party enforcing mechanism that assures that all information disclose in this social network are conducted properly</li> <li>2. I believe that the Wechat is an effective third-party authority that helps resolve conflicts</li> <li>3. I believe that the Wechat is an effective authority in this social network that assures that all information disclose are in accordance with the specifications</li> <li>4. I believe that the Wechat is an effective third-party authority that certifies the appropriate conduct of information disclose</li> </ol>	Gefen and Pavlou (2006)
Competence-based trust (COBT)	<ol style="list-style-type: none"> <li>1. The Wechat is competent in protecting my private information</li> <li>2. The Wechat has the knowledge of how to protect users' information</li> <li>3. The Wechat knows how to protect its users' privacy</li> <li>4. The Wechat uses the right technology to protect my information from third-party access</li> </ol>	Gefen and Straub (2004)
Character-based trust (CHBT)	<ol style="list-style-type: none"> <li>1. I can rely on the Wechat's promise to keep personal information of its users, including personal information, privately</li> <li>2. I do not doubt the honesty of the Wechat</li> <li>3. I expect that the Wechat will keep promises they make</li> </ol>	Gefen and Straub (2004)
General trust in members (GTM)	<ol style="list-style-type: none"> <li>1. I believe my Wechat friends are sincere</li> <li>2. I believe my Wechat friends are trustworthy</li> <li>3. I believe my Wechat friends do not use my information for other purposes</li> <li>4. I believe my Wechat friends are dependable</li> <li>5. I believe my Wechat friends are harmless</li> <li>6. I believe my Wechat friends do not cheat me</li> </ol>	Shu and Chuang (2011)
Privacy concern (PC)	<ol style="list-style-type: none"> <li>1. I am concerned that the information I submit on Wechat could be misused</li> <li>2. I am concerned that a person can find private information about me on Wechat</li> <li>3. I am concerned about submitting information on Wechat, because of what others might do with it</li> <li>4. I am concerned about submitting information on Wechat, because it could be used in a way I did not foresee</li> </ol>	Dinev <i>et al.</i> (2006)
Intention to disclose private information (IDPI)	Specify the extent to which you would reveal your personal information to use the Wechat <ol style="list-style-type: none"> <li>1. Willing/unwilling</li> <li>2. Unlikely/likely</li> <li>3. Not probable/probable</li> </ol>	Xu <i>et al.</i> (2009)

**Table I.**  
Measurement items

statistical analysis technology) can examine both the measurement model and the structural model and provide a systematic analysis of the whole structural model. According to Lowry and Gaskin (2014), compared with first-generation technologies (e.g. correlations, regressions or difference of means tests such as t-test and ANOVA), PLS offers extensive and scalable causal-modeling capabilities. Second, compared to the covariance-based SEM techniques (e.g. LISREL), PLS is more suitable to deal with the data with small sample size (Sun *et al.*, 2015) and abnormal distribution (Chai *et al.*, 2011). The sample size requirement for PLS analysis should be ten times the largest number of independent variables or formative indicators (Chin and Newsted, 1999), which is 50 for the current study as there are five independent variables (including control variables) for

Items	Demographics	Sample	%
Gender	Male	153	39.64
	Female	233	60.36
Age	< 18	17	4.40
	18~25	305	79.02
	26~30	40	10.36
	> 30	24	6.22
Education	Junior college or below	87	22.54
	Undergraduates	175	45.34
	Master	121	31.35
	Doctor	3	0.77
Frequency of disclosing information in WeChat	Hardly	110	28.50
	Once a month	106	27.46
	Once a week	104	26.94
	Once a day	50	12.95
	Several times a day	16	4.15

**Table II.**  
Demographic statistics

disclosure intention. Considering that the sample size of this study is relatively small and research purpose is to test the whole nomological network, we choose PLS as our data analysis method. Specifically, Smart PLS 2.0 was used as the analytic tool.

## Data analysis and results

### *Measurement model*

The measurement model was assessed by examining the reliability and validity which were calculated by PLS Algorithm. The maximum iteration was 500. The reliability can be assessed by checking the values of Cronbach's  $\alpha$ , composite reliability (CR) and average variance extracted (AVE). To improve reliabilities of corresponding constructs, one item was dropped from character-based trust (i.e. CHBT3) due to its low loading. Subsequently, as shown in Table III, the AVE,  $\alpha$  and CR values of all constructs were more than 0.7, exceeding the recommended threshold values which suggest that AVE must be more than 0.5,  $\alpha$  and CR value must be more than 0.7 (Fornell and Larcker, 1981), indicating that all the constructs were with appropriate reliabilities.

The validity includes convergent validity and discriminant validity. Convergent validity can be assessed by checking whether the item loadings on their respective constructs are high (Fornell and Larcker, 1981). Table IV shows that the item loadings on their respective constructs are over 0.7 for all the items, indicating good convergent validities for the constructs.

	No. of items	Mean	SD	AVE	Composite reliability	Cronbach's $\alpha$
CHBT	2	3.966	1.456	0.791	0.883	0.737
COBT	4	4.040	1.485	0.735	0.917	0.879
GTM	6	4.761	1.442	0.770	0.953	0.940
INT	3	3.515	1.667	0.674	0.852	0.751
PC	4	4.676	1.509	0.805	0.943	0.919
RE	4	3.729	1.537	0.731	0.916	0.877

**Notes:** CHBT, character-based trust; COBT, competence-based trust; GTM, general trust in members; INT, intention to disclose private information; PC, privacy concern; RE, regulatory effectiveness

**Table III.**  
Descriptive statistics  
and reliability

	CHBT	COBT	GTM	INT	PC	RE
CHBT1	0.898	0.672	0.340	0.310	-0.038	0.476
CHBT2	0.881	0.543	0.396	0.240	-0.043	0.410
COBT1	0.544	0.814	0.324	0.314	-0.034	0.551
COBT2	0.538	0.882	0.332	0.267	0.103	0.450
COBT3	0.586	0.877	0.392	0.246	0.032	0.465
COBT4	0.676	0.854	0.362	0.296	0.001	0.469
GTM1	0.293	0.325	0.831	0.246	0.141	0.248
GTM2	0.375	0.380	0.905	0.238	0.070	0.322
GTM3	0.376	0.335	0.893	0.172	-0.001	0.335
GTM4	0.380	0.375	0.906	0.220	0.068	0.338
GTM5	0.359	0.376	0.891	0.223	0.068	0.338
GTM6	0.382	0.370	0.837	0.218	-0.059	0.387
INT1	0.307	0.332	0.251	0.949	-0.141	0.409
INT2	0.303	0.314	0.234	0.947	-0.175	0.399
INT3	0.073	0.078	0.084	0.747	-0.060	0.064
PC1	-0.074	0.028	0.050	-0.151	0.905	-0.054
PC2	0.001	0.015	0.081	-0.151	0.905	-0.036
PC3	-0.033	0.009	0.010	-0.157	0.920	-0.083
PC4	-0.060	0.048	0.055	-0.126	0.858	-0.039
RE1	0.386	0.495	0.391	0.349	-0.021	0.823
RE2	0.401	0.490	0.274	0.368	-0.046	0.850
RE3	0.451	0.456	0.289	0.324	-0.093	0.870
RE4	0.465	0.501	0.329	0.350	-0.045	0.875

**Table IV.**  
Loadings and  
cross loading

**Notes:** CHBT, character-based trust; COBT, competence-based trust; GTM, general trust in members, INT, intention to disclose private information; PC, privacy concern; RE, regulatory effectiveness

Discriminant validity can be assessed by evaluating whether item loadings on their corresponding constructs are greater than on other constructs and whether the square roots of AVE are larger than the correlations with other constructs (Fornell and Larcker, 1981). Table IV shows that item loadings on associated constructs are larger than on any other constructs. Table V further shows that the square roots of AVE are much more than the correlations among constructs, indicating good discriminant validities for these constructs.

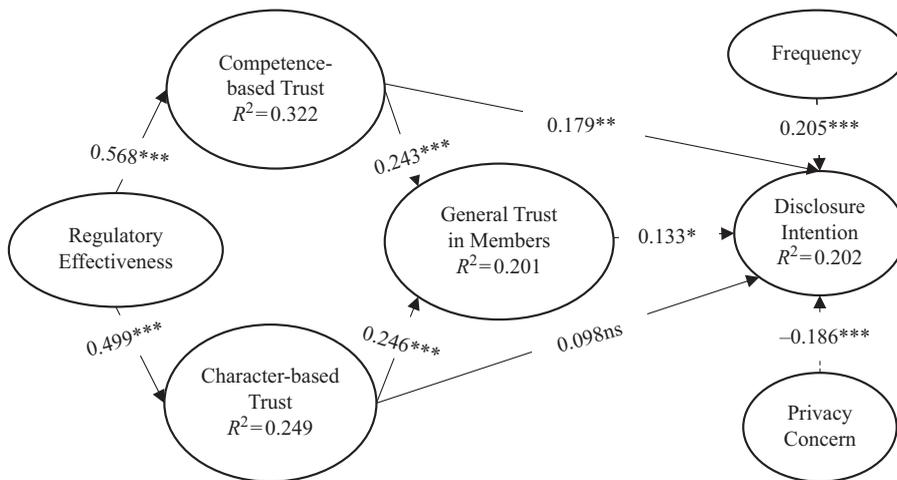
#### Structural model

PLS results of the structural model were shown in Figure 2. Both competence-based trust ( $\beta = 0.179$ ,  $t = 2.504$ ) and general trust in members ( $\beta = 0.133$ ,  $t = 2.231$ ) were found to have significant effects on intention to disclose information, supporting *H1a* and *H1c*. However, the impact of character-based trust on intention to disclose information was not significant

	CHBT	COBT	GTM	INT	PC	RE
CHBT	0.890					
COBT	0.685	0.857				
GTM	0.412	0.411	0.878			
INT	0.311	0.329	0.250	0.821		
PC	-0.045	0.027	0.054	-0.164	0.897	
RE	0.499	0.568	0.375	0.407	-0.060	0.855

**Table V.**  
Square roots of AVEs  
and correlations

**Notes:** CHBT, character-based trust; COBT, competence-based trust; GTM, general trust in members; INT, intention to disclose private information; PC, privacy concern; RE, regulatory effectiveness. The numbers in the diagonal row are square roots of the AVEs



Notes: \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$

Figure 2.  
Result of the structural model

( $\beta = 0.098$ ,  $t = 1.295$ ), so *H1b* was not supported. In the trust transfer process, both competence-based trust ( $\beta = 0.243$ ,  $t = 3.890$ ) and character-based trust ( $\beta = 0.246$ ,  $t = 3.561$ ) were found to have significant effects on general trust in members, so *H2a* and *H3a* were supported. The results also showed that regulatory effectiveness had significant effects on competence-based trust ( $\beta = 0.568$ ,  $t = 14.521$ ) and character-based trust ( $\beta = 0.499$ ,  $t = 11.012$ ), supporting *H4a* and *H5a*. Besides, the control variable privacy concern was found to have a significant impact on disclosure intention ( $\beta = -0.186$ ,  $t = 3.527$ ) and frequency of information disclosure also influenced behavioral intention significantly ( $\beta = 0.205$ ,  $t = 4.213$ ). The research model explained most variances of competence-based trust ( $R^2 = 0.322$ ), character-based trust ( $R^2 = 0.249$ ), general trust in members ( $R^2 = 0.201$ ) and intention to disclose information ( $R^2 = 0.202$ ).

To explore the moderating effect of gender, we divided the full sample into male and female sub-groups using the group comparison method proposed by Keil *et al.* (2000). The results (see Table VI) showed that in the trust transfer process, the impact of competence-based trust on general trust in members was stronger for males than females ( $\Delta\beta = 0.139$ ,  $t_{\text{spooled}} = 13.530$ ) while the impact of character-based trust on general trust in members was stronger for females than males ( $\Delta\beta = -0.160$ ,  $t_{\text{spooled}} = -7.353$ ), supporting *H2b* and *H3b*. The relationships between regulatory effectiveness and competence-based trust ( $\Delta\beta = 0.124$ ,  $t_{\text{spooled}} = 21.846$ ) and between regulatory effectiveness and character-based trust ( $\Delta\beta = 0.152$ ,  $t_{\text{spooled}} = 22.983$ ) were stronger for males than for females, so *H4b* and *H5b* were supported.

Relationship	Male	Female	$\Delta\beta$	$t_{\text{spooled}}$	Conclusion
<i>H1b</i> : COBT $\rightarrow$ GTM	0.331***	0.192*	0.139	13.530***	Male > Female
<i>H2b</i> : CHBT $\rightarrow$ GTM	0.156	0.316***	-0.160	-7.353***	Male < Female
<i>H3b</i> : RE $\rightarrow$ COBT	0.637***	0.513***	0.124	21.846***	Male > Female
<i>H4b</i> : RE $\rightarrow$ CHBT	0.579***	0.427***	0.152	22.983***	Male > Female

Notes: RE, regulatory effectiveness; COBT, competence-based trust; CHBT, character-based trust; GTM, general trust in members. \* $p < 0.05$ ; \*\*\* $p < 0.001$

Table VI.  
Comparison of relationships between male and female groups

## Discussion and implications

### *Discussions*

This study takes trust as a polytype concept to explore its antecedents and outcomes in social media. There are some interesting findings. First, the results indicate that the impact of character-based trust on intention to disclose information is not significant, which is consistent with Beldad and Kusumadewi (2015) conclusion. In the social media context, when making decision on whether or not to disclose their personal information, users may pay more attention to the competence of social media platform to protect their privacy than to the character or integrity of social media platform.

Second, this study confirms the relationship between trust in institution and general trust in members based on the transference-based trust building mechanism, which is consistent with the conclusion of McKnight and Chervany (2001). Prior studies in other research contexts (e.g. e-commerce) have illustrated the trust transference from platforms (e.g. e-commerce marketplace) to users (e.g. vendors in e-commerce marketplace). This study further finds that in the social media context, trust in platform (e.g. trust in institution here) can be transferred to trust in platform users (e.g. trust in members) too. Besides, the results also show that males and females rely on different trust building mechanisms in the social media context. Specifically, the impact of competence-based trust on general trust in members is stronger for males than for females while the effect of character-based trust on general trust in members is stronger for females than males because males are more rational and they focus more on the competence of social media provider while females are more relational and they concentrate more on the character of social media provider.

Third, the results show that regulatory effectiveness contributes to trust in institution according to the institution-based trust building mechanism, which is consistent with the findings in the e-commerce context, e.g., Pavlou and Gefen (2004). In the social media context, if individuals perceive regulatory structure of social media to be effective, they will be confident in the competence and character of social media provider. Moreover, our results also suggest that the impacts of regulatory effectiveness on trust in institution are stronger for men than for women, indicating that men are more sensitive to rational needs and institutional mechanisms of social media.

### *Limitations and future research*

This study also has several limitations. First, as the data are collected in only one social media platform (i.e. WeChat) through the snowball sampling approach, and the respondents are undergraduates with the age ranging from 18 to 25 years, the generalizability of the findings should be a concern. Therefore, researchers are encouraged to investigate whether our research findings are also applicative in other populations by considering the moderating role of age and other social media platforms by exploring the moderating effects of social media features (e.g. sociability (Wang and Sun, 2016)) in future research.

Second, we only examine our research model in a country with the collectivistic and feminine culture – China (Hofstede, 1991), where the individuals are inclined to trust others, both trust in institution and trust in members. Thus, applying our conclusions to other cultures (e.g. individualistic and masculine culture) should be with cautions. Future research needs to improve our research model by considering the moderating effects of culture.

Third, to highlight the institution-based trust building mechanism, we only investigate one antecedent of trust in institution, i.e., regulatory effectiveness. However, there are several other important factors that reflect the institution-based trust building mechanisms, e.g., feedback or reputation mechanism (Pavlou and Gefen, 2004). These factors should be considered to provide a more comprehensive understanding.

Finally, this study examines the trust building mechanisms using self-reported subjective data based on a survey. Future research may consider other research methods such as econometrical analysis using objective data or mathematical modeling approaches to further confirm the validity of the findings.

### *Theoretical implications*

This study can contribute to trust and information disclosure literatures in several ways. First, it enriches trust literatures by exploring the inter-relationship between trust in institution and general trust in members through the transference-based trust building mechanism. Previous studies indicate that expectations toward institutions could encourage individuals to trust others who are in same institutions. However, there are few empirical studies that concentrate on the inter-relationship between trust in institution and general trust in members in the social media context. Based on the transference-based trust building mechanism, this study provides both theoretical foundations and empirical supports for the inter-relationship, offering a more comprehensive understanding on the trust building mechanisms in social media.

Second, this study explores the role of regulatory effectiveness in forming trust beliefs through the institution-based trust building mechanism. Previous studies indicate that trust should depend on the way society and its institutions are regulated, but only limited studies explore the impacts of regulatory effectiveness on trust beliefs, especially in the social media context. The present study empirically confirms the impacts of regulatory effectiveness on trust in institution, extending the trust and social media literatures by addressing the call for identifying the important antecedents of trust beliefs.

Third, this study identifies the boundary conditions under which different trust building mechanisms work by investigating the moderating role of gender. Our study finds that regulatory effectiveness as a manifestation of the institution-based mechanism has a stronger impact on trust in institution for males than for females. In the trust transfer process, males pay more attention to the competence-based trust while females care more about the character-based trust. These findings imply future researchers to employ a contingency perspective to understand the effectiveness of different trust building mechanisms.

### *Practical implications*

The findings of this study have important practical implications as well. First, social media practitioners should pay more attention to the design of regulatory mechanisms (e.g. providing privacy protection service and punitive measures) to build or maintain trust. For example, WeChat could enhance privacy protection functions and policies and let the users be aware of these functions and policies. Further, WeChat practitioners should set several punitive measures to deal with individuals who disclose others' privacy without their permissions.

Second, social media providers should recognize the gender differences in the trust building process and provide personalized services to males and females, respectively. Specifically, social media practitioners should design mechanisms that emphasize competence for males while the mechanisms stressing on integrity and benevolence for females. For example, WeChat can demonstrate that the privacy protection techniques are strong enough to protect users' personal information to male users, while highlight the shared vision between WeChat and users to obtain the female users' trust (e.g. integrity and benevolence).

## **Conclusion**

This study tries to understand the trust building mechanisms in the social media context and the gender differences in the trust building mechanisms. Specifically, this study identifies three trust beliefs, namely, trust in institution (both competence and character

based) and trust in members, and theorizes the relationships between regulatory effectiveness and these trust beliefs through two trust building mechanisms (i.e. institution- and transference-based trust building). Through an online survey from a famous social media platform in China (i.e. WeChat), this study finds that regulatory effectiveness affects trust in institution which in turn affects trust in members. Further, this study also confirms the gender differences in trust building mechanisms, such that institution-based mechanism works better for males than for females, and during the trust transfer process, males focus on the competence-based trust while females pay more attention to the character-based trust. These findings enrich the theoretical understanding on trust building and gender differences in the social media context and provide practical implications for social media providers to improve their website design.

### Acknowledgments

The work described in this paper was partially supported by the grants from the National Natural Science Foundation of China (Project Nos 71571133, 71671132, 71828202), the grants from Humanities and Social Sciences Foundation of the Ministry of Education, China (Project Nos 16YJC870011 and 17YJC630157), the Higher Educational Research Project of Hubei Provincial Department of Education (Project No. 2014025), the Fundamental Research Funds for the Central Universities (Project No. 2042018kf0224) and the Research Fund for Academic Team of Young Scholars at Wuhan University (Project No. Whu2016013).

### Notes

1. [www.reuters.com/article/us-facebook-privacy/facebook-says-data-leak-hits-87-million-users-widening-privacy-scandal-idUSKCN1HB2CM](http://www.reuters.com/article/us-facebook-privacy/facebook-says-data-leak-hits-87-million-users-widening-privacy-scandal-idUSKCN1HB2CM)
2. [www.cnnic.net.cn/hlwfzyj/hlwzxbg/hlwtjbg/201701/P020170123364672657408.pdf](http://www.cnnic.net.cn/hlwfzyj/hlwzxbg/hlwtjbg/201701/P020170123364672657408.pdf)
3. [www.pewinternet.org/fact-sheet/social-media/](http://www.pewinternet.org/fact-sheet/social-media/)
4. [www.cnnic.net.cn/hlwfzyj/fxszl/fxswz/201301/t20130121\\_38606.htm](http://www.cnnic.net.cn/hlwfzyj/fxszl/fxswz/201301/t20130121_38606.htm)

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