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# Norm of Reciprocity –Antecedent of Trustworthiness in social media

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**Abstract.** Social media is an important platform to seek advice from its members. It is important to consider members of social media as trustworthy before one may seek advice. Reciprocity is a defining feature of social media. Trust propensity of a trustor is considered an important antecedent of trustworthiness and is cited more than 10,000 times. However, it is not clear how norm of reciprocity affects trustworthiness. This study asserts that Norm of reciprocity may be a more important antecedent of trustworthiness than trust propensity. Partial least squares-structured equation modelling was used to model constructs. This study extends the Mayer's model of trustworthiness. It has important implications for computer scientists and organization consultants working in area of trust in social media.

**Keywords:** Determinants, norm of reciprocity, Social Media, Trustworthiness, Trust Propensity

## 1 Introduction

*“If people can be seen as nodes, and the connections are their relationships, trust improves its ‘bandwidth’” [1, p. 12].*

Social media is an important platform to seek advice from its members, it is important to consider members of social media as trustworthy before one may seek advice. Reciprocity is a defining feature of social media. Trust propensity of a trustor is considered an important antecedent of trustworthiness and is cited more than 10,000 times. However, it is not clear how norm of reciprocity affects trustworthiness. This study asserts that Norm of reciprocity may be a more important antecedent of trustworthiness than trust propensity. Partial least squares-structured equation modeling was used to model constructs. This study extends Mayer's model of trustworthiness. It has important implications for computer scientists and organization consultants working in the area of trust in social media.

### **1.1 Trustworthiness**

Perceived trustworthiness of others is a precursor of trust [2, 3]. Therefore, it is important to find out factors which may affect trustworthiness. In this article, Trustor means a source of trust and trustee refers to the target of trust. The source of trust is an individual and target of trust is other members of social media. Context is trust in other members of social media to seek advice.

### **1.2 Context-Social Media**

The sporadic use of social media has changed the way we seek information and professional advice. It is important to have a generalized trust in social media while seeking advice. Reciprocity is central to social media [4]. Therefore, it is essential to know how reciprocity affects trustworthiness in social media.

### **1.3 Norm of reciprocity**

The norm of reciprocity refers to the choice between being stingy or generous when returning help. The norm of reciprocity may be categorized as positive or negative [5]. This paper refers to the positive norm of reciprocity i.e. being generous while returning help.

The norm of reciprocity may be divided into direct reciprocity and indirect reciprocity. The first has to do with the exchange of information, goods, or services of the same value and the second has to do with paying forward [5]. This paper refers to the indirect reciprocity of the trustor. This norm is crucial because it goes beyond the inner circle of family and friends and extends to the outer circle. This outer circle includes people who are just our acquaintances, colleagues, and strangers [6]. Most of the members in a social network like LinkedIn, research gate are members of the outer circle. Members participate in a social network through indirect reciprocity.

## **2 Literature review**

For Trust to be established there should be a source of trust and a target of trust. The source of trust is called trustor and target of trust are called trustee [7]. In this study, trustor is individual and trustee other members of social media.

### **2.1 Antecedent related to trustee- Trustworthiness**

There are different antecedents of trust. These antecedents include trustee's reciprocity [8], social ties [9], and reputation [10]. Trustworthiness is one of the main antecedents of trust in the trustee. Perceived dimensions of trustworthiness of trustee include ability, benevolence, integrity[11, 12]. Trustworthiness means "*the trustor is confident that the trustee has attributes that are beneficial to the trustor*"[12, p. 4].

## 2.2 Antecedent related to trustor- Trust propensity a Norm of reciprocity

Researchers have studied different antecedents which affect trustworthiness. Characteristics of a trustor which affects another's trustworthiness includes propensity to trust [11,12], personality [13,14,15,16,17], gender [18], and attitude [19]. Though generalized trust or trust propensity has been widely studied, there is a dearth of research focusing on the relationship between the norm of reciprocity and trustworthiness.

### 2.2.1 Norm of Reciprocity

The norm of reciprocity is the basis for exchange. Reciprocity is the main basis for social networks and cooperation[4]. In an ethnographic study of a music file sharing system, it was found that reciprocity was a vital factor for the viability of community [20]. Trust and reciprocity depend on culture, and they are essential for the generation of social networks [21]. Individuals achieve better results by building conditions where the norm of reciprocity and trust propensity can help to overcome strong temptations of short-term self-interest [22]. Although trustee's reciprocity is researched widely [13,14,15,16,17], There are almost no studies on how a trustor's reciprocity affects perceived trustworthiness. Though there are economic investment studies on the relationship between the norm of reciprocity and trust, there is almost no psychometric-based research on the norm of reciprocity as an antecedent of trust. There are research studies on the effect of trust propensity on trustworthiness. However, there is a need to research on the norm of reciprocity effect trustworthiness in social media as reciprocity is a central mechanism for social media[4].

### 2.2.2 Trust Propensity

Trust propensity/generalized trust is a *"tendency to be willing to depend on general others across a broad spectrum of situations and persons"* [12, p. 3]. It is one of the most cited antecedents and is cited more than 10,000 times in different context [2].

## 3 Research Model

Mayer's model is the basis of this paper. Mayer's model is selected because it is a parsimonious model with a manageable number of factors. Parsimony provides a sound foundation for empirical research. Mayer's model has clear definitions for trust, has clarity in antecedents and has a distinction between source and target of trust [2]. According to Mayer's model, trust propensity is an important antecedent of trustworthiness and is rooted in Ericson's development theory.

### 3.1 Erikson's Development theory

Trust develops during childhood as infant seeks or receives help from his or her caregiver. People develop trust propensity as they grow up. It is a generalized reaction to life's experiences with other people. Trust propensity does not mean that one believes others are trustworthy. It is a tendency to depend on others. It is an invisible colored glass that alters our interpretation of situations [23, 24].

### 3.2 Research Model

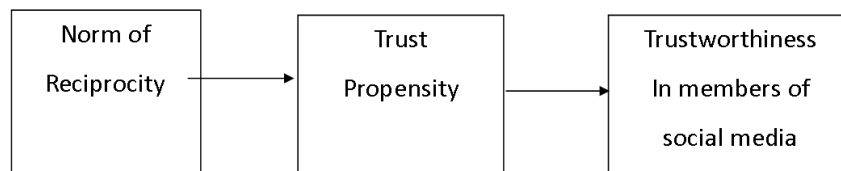


Figure1-Proposed Research Model

#### 3.2.1 Norm of Reciprocity and trust propensity

Social exchange is the foundation of interaction among humans. Norms or rules have a central place in interactions. These rules guide the nature of relations and ties among actors, and these ties shape the exchange of resources and benefits [25]. Personal ties are based on trust, reciprocation, and reward. Therefore, the norm of reciprocity and trust propensity affects the exchange[25].

Colquitt emphasized that high trustors show a tendency to act in a cooperative way across most contexts and situations. Those with a high trust propensity, or high trustors, would be good at building exchange relationships because they have greater tendency to stick to the norm of reciprocity, which leads to long-term commitment and protection of the relationship. These, in turn, result in the development of social networks which would provide information to aid a trustor's decision making and thus result in action [24, 26, 27] .

The greater the positive norm of reciprocity, the more positive is the local social exchange relationship will be. Therefore, the positive norm of reciprocity would lead to increased propensity to place trust in strangers [28].

*Hypothesis H1: Norm of reciprocity would affect trust propensity.*

#### 3.2.2 Trust propensity and Trustworthiness

Trust propensity of the trustor has been researched widely and is considered an important antecedent of trustworthiness [29]. Trust Propensity would lead to trustworthiness in the members of social media [1,26,30,31,32,33]

*Hypothesis H2: Trust propensity would affect trustworthiness in members of social media.*

## **4 Methodology**

A systematic positivist approach to research using quantitative methodology involves formulating a hypothesis, collecting data, and ensuring the validity and reliability of the instrument selected for research. Trustworthiness is formative construct whereas trust propensity and norm of reciprocity are reflective construct. Data was analyzed using PLS-SEM due to the presence of the formative construct in the model. PLS-SEM is a causal modeling approach. It aims at maximizing the explained variance of the endogenous constructs [34]

### **4.1 Measures**

A standardized version of questionnaires for trust propensity[3] and norm of reciprocity [5] was selected. A survey for constructing “trustworthiness” [3] was modified to measure trustworthiness in members of social media. There were 23 items in the questionnaire. All responses were asked on Likert scale. An expert panel reviewed items to assess the content validity of key constructs.

### **4.2 Data collection**

Survey was filled by professionals and students in India. The sample was restricted to a region as it is necessary to control for cultural factors as trust propensity and norm of reciprocity depend on culture. These respondents were avid users of LinkedIn and Facebook and frequently access these networks for seeking advice. Data was collected through offline and online channels. Subjects consisted of Males (37%) and females (63%). Out of 200 responses, 162 responses were valid.

## **5 Results**

This section explains parameters for the construct validity of constructs and results of the structural model. For construct validity, measures for internal consistency, convergent, and divergent validity were noted. For Internal consistency of construct, Cronbach alpha should be above 0.7, and Composite reliability of constructs should be above 0.8. All the values were above the threshold value of 0.7 for Cronbach alpha and above 0.8 for composite reliability. Criteria for internal consistency and reliability were satisfied (Table1).

**Table 1-** Construct Validity-Cronbach alpha and composite reliability

	Composite Reliability	Cronbach Alpha	AVE
Trust Propensity	0.779	0.694	0.44
Norm of Reciprocity	0.75	0.701	0.49
Trustworthiness	0.861	0.822	0.4522

Bootstrapping was done with 5,000 subsamples. Trustworthiness is a second order reflective-formative construct. Latent scores of the second order construct were evaluated and imported into the model. T-stats were greater than 2.57, and VIF (Variation inflation factor) values were less than the threshold of 3.3. Table 2 shows the weights, VIF, and p-values of formative constructs.

**Table 2 -** Construct validity of Formative construct Trustworthiness and its sub constructs

Trustworthiness Dimensions	Beta	T-Stats	VIF
Benevolence	0.337	5.83	1.6
Integrity	0.424	16	1.7
Competence	0.431	17	1.8

### 5.1 Structural Model evaluation

In the structural model, all path coefficients were found to be statistically significant. R-square for endogenous constructs was moderate and were 0.28 (H1), and 0.198(H2). Both the hypothesis H1 and H2 were accepted (Table 3). The effect size for Norm of reciprocity (0.393) was greater than effect size of trust propensity (0.24).

**Table 3 –** Structural model statistics

No	Beta	R2	P-value	f	Accept/Reject
H1	0.527	0.28	.0001	0.393	Accept
H2	0.414	0.198	0.05	0.24	Accept

## 6 Discussion

Firstly, this is a first psychometric study to emphasize the role played by the norm of reciprocity in measuring trustworthiness in members of social media. The norm of reciprocity is an important construct especially in the social media context because it is the basis of the existence of the online social network [4]. Our analysis shows that positive norm of reciprocity may be more important than trust propensity as it has greater path coefficient (0.527), greater statistical significance (0.001) and greater effect size (0.393) than that of trust propensity (beta=0.414,  $p=0.05$ , effect size=0.24).

Secondly, it is important to validate Mayer's model [2] in the social media context. The importance of construct in trust research is determined by its context. This study proposed a new construct, "norm of reciprocity" as a determinant of trustworthiness.

## 7 Conclusion

This study validates Mayer's model. Mayer's model [2] was developed for interpersonal trust in an organizational context. Different antecedents have different importance in different context. As reciprocity is central to the existence of social media, the norm of reciprocity may be an important antecedent [4].

Non-probability sampling, single source bias, common method bias, and focus on variance evaluation rather than goodness of fit were limitations of this study.

### 7.1 Future research

This research opens many areas for further studies. Firstly, Future studies may focus on using qualitative methods such as ethnography, grounded theory, and case studies.

Secondly, collaborative economy is based on social media in general and social network in particular. Trust is an important organizing mechanism. Therefore, this research may be further progressed by taking it into the context of the design of collaborative organizations, social networks, and virtual communities.

Thirdly, this study was done in the context of social networks while seeking professional advice. Researchers may design studies in other countries to understand how culture and institutions affect the norm of reciprocity, trust propensity, and trustworthiness.

### 7.2 Implications

This study has implications in different areas. Firstly, this study has implication for computer scientists working in the area of social media. The norm of reciprocity is strongly correlated with trust propensity and could be used as a proxy to measure perceived trustworthiness and the trustor's trust propensity.



Secondly, employees' trust propensity affects the way they perceive things around themselves, and in turn their decision making and performance. Organization consultants can design programs to enhance the norm of reciprocity in virtual organizations like social networks, which would, in turn, enhance trust propensity.

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