



# The Effect of Propensity to Trust on Customers' Initial Trust in Web-Based Online Stores

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## ABSTRACT

Propensity to trust has been considered as a direct predictor of trust and as a moderator of the relationships between trust and its predictors. Our model provides a relatively comprehensive yet parsimonious model to examine the effect of propensity to trust on customers' initial trust in Web-based online stores. Our study showed evidence of the moderating effect of propensity to trust on the relationships between part of initial trust (goodwill) and its two predictors (company profile and website quality). Interestingly, however, we found no evidence of the direct effect of propensity to trust on initial trust.

## INTRODUCTION

A trustor's propensity to trust has been proposed as one of the factors that affect trust. In a conceptual paper, Mayer et al. (1995) proposed that characteristics of the trustor (trustor's propensity to trust) had a positive effect on trust and a moderating effect on the relationships between trust and its predictors. Based on the Mayer et al.'s proposal, some researchers in the IS area tested the role of propensity to trust as a direct predictor (McKnight et al., 2002; Gefen, 2000; Koufaris and Hampton-Sosa, 2004) or as a moderator (Lee and Turban, 2001; Borchers, 2001), but the results were inconsistent. To test the effect of propensity to trust, we propose a somewhat comprehensive and parsimonious model. We also focus on customers' initial trust in an e-business because propensity to trust may play a more critical role in the process of initial trust development (McKnight, 1998).

## INITIAL TRUST

In this study, we define initial trust as a type of trust that initiates and maintains an initial relationship (i.e., the status between trustor and trustee before it becomes a committed relationship). Following the previous studies (e.g., McKnight et al., 2002), we used the trusting belief scale to measure the initial trust construct of our study. For this study, however, we used a two-dimension model of trusting belief (competence and goodwill) because it provides a more parsimonious framework and also is supported by previous studies (e.g., Barber, 1983; Nootboom, 1996; Das & Teng, 2001). In the two-dimension model, the goodwill dimension covers the benevolence aspect and honesty aspect of the McKnight et al.'s model. The competence dimension measures customers' beliefs that a company has ability to perform what it is supposed to do (Mayer et al., 1995; McKnight et al., 1998).

## FACTORS IMPACTING INITIAL TRUST

Previous studies identified and/or empirically tested the factors impacting initial trust (trusting belief). Summarizing the factors, we propose four key groups of the factors that are likely to affect initial trust: company profile, supporting organization, website quality, and propensity to trust. We consider the first three (company profile, supporting organization, and website quality) as the main predictors of initial trust

because they have been frequently regarded as the key factors that impact trust.

Company profile represents a company's appearance in terms of size, reputation, and history. These three are deemed to be closely related (Jarvenpaa and Tractinsky, 1999) and we combined these into one scale representing a company's appearance, namely company profile. Customers' perceptions of supporting organizations (those which support a company) are a type of assurances based on such external sources as third-party recognition (Cheung & Lee, 2000; Lee & Turban, 2001) or third-party seals (McKnight & Chervany, 2001-2002). Many online Web-based retailers include in their websites the names of (and links to) assurance service organizations (e.g., Better Business Bureau, TRUSTe, VeriSign, etc.), their parent companies (e.g., computers4sure.com with its parent company, Office Depot), their partners (e.g., TOYS"R"US online store presented by Amazon.com). All these organizations are external sources (supporting organizations) that assure customers that they can trust the company. Website quality is also likely to affect initial trust because websites are the main business tools of online Web-based retailers. Therefore, website-related constructs have been used as a predictor of trust: information quality and web interface quality (Fung & Lee, 1999), perceived site quality (McKnight et al., 2002), social presence (Gefen & Straub, 2002-2003), and perceptions about the website (Koufaris & Hampton-Sosa, 2004). We include these predictors in our model, but do not focus on these in this paper.

Characteristics of the trustor is also expected to affect trust, but in a more complex way. Mayer et al. (1995) defined trust as trustor's willingness and explained two types of predictors of trust: characteristics of the trustor (propensity to trust) and characteristics of the trustee (trustworthiness - ability, benevolence, and integrity). McKnight et al. (1998) proposed a similar concept, disposition to trust, with two dimensions: faith in humanity and trusting stance. They argued that in an initial stage of trust development a trustor depends on his or her disposition to trust to build trust in a trustee. Gefen (2000) also included in his model disposition to trust as one of the predictors of trust and found that it had a significant effect on trust. McKnight et al. (2002) also empirically tested the effect of disposition to trust on institution-based trust, trusting beliefs, and trusting intentions and presented evidence of the effect of propensity to trust on institution-based trust and trusting beliefs, but not on trusting intention.

*H1: In an initial relationship, customers' propensity to trust has a positive effect on customers' beliefs about the company's competence.*

*H2: In an initial relationship, customers' propensity to trust has a positive effect on customers' beliefs about the company's goodwill*

In addition to the direct effect of propensity to trust on trust, Mayer et al. (1995) proposed a moderating effect of propensity to trust on the

relationships between trust and its predictors. They argued that “propensity can enhance the effect of these factors (i.e., the main predictors), thereby producing a moderating effect on trust (p. 722, parentheses added).” Cheung and Lee (2000) also proposed a model with propensity to trust as a moderating factor. Later, Lee and Turban (2001) extended and empirically tested the model and provided evidence of the moderating effect of propensity to trust on the relationship between perceived integrity and trust.

*H3: In an initial relationship, customers’ propensity to trust moderates the effect of the main predictors (i.e., company profile, supporting organization, and website quality) on customers’ beliefs about the company’s competence.*

*H4: In an initial relationship, customers’ propensity to trust moderates the effect of the main predictors (i.e., company profile, supporting organization, and website quality) on customers’ beliefs about the company’s goodwill.*

The model to be tested is shown in Figure 1.

## METHODOLOGY AND ANALYSIS

The measurement scales of this study were adopted from various sources. Most of the items for company profile were derived from Marketing literature (e.g., Ganesan, 1994; Doney & Cannon, 1997) and new items were added to fill the company history aspect. The scale by Cheung and Lee (2000) were adopted with a slight modification (use of the words, supporting organization) to measure the supporting organization construct. The website quality construct was measured by the items proposed by Wolfinger and Gilly (2002) with a minor modification (to fit the initial trust framework). Propensity to trust was measured with the 20-item generalized trust scale by Couch et al. (1996). The initial trust construct (competence trust and goodwill trust), however, were developed in accordance with the measurement development guidelines (e.g., Churchill, 1979) and with the supporting foundation of previous conceptual and empirical studies from the various fields. Five judges evaluated the initial trust items and a series of pretests was conducted to streamline the measurement scales. With the finalized scales, a questionnaire was prepared to collect data via surveys.

For the main survey, four websites were carefully selected in such a way that the participants would have not likely visited the websites before the survey. In a series of surveys, each respondent was asked to navigate one of the companies’ websites and complete a questionnaire. About

four hundred questionnaires were distributed to the students of a college of the south-eastern United States and three hundred and nineteen responses were collected. The screening process resulted in three hundred cases. We reviewed the remaining data carefully and were sure that the respondents could be potential customers of the target companies.

We used some necessary statistical procedures (e.g., factor analysis, structural equation modeling, etc.) to trim some items of the constructs. We also tested the data for validity and reliability and the results were satisfactory (reliabilities ranging from .74 to .89).

Following Cohen et al. (2003)’s guidelines, we used regression analysis to test the hypotheses (e.g., the centering process, pp. 255 – 301). Two sets of models were used to test the hypotheses: Model A with competence as the dependent variable and Model B with goodwill as the dependent variable. For each model, the predictors were entered into each model in three steps. In the first step, the three main predictors (company profile, supporting organization, and website quality) were entered into the analysis (A1 and B1). In the second step, propensity to trust was added to the analysis (A2 and B2). In the third step, the interaction terms (CP\*PTT, SO\*PTT, WQ\*PTT) were added (A3 and B3).

R-square for Model A1 was 0.568 (adjusted R-square = 0.563) and the model was statistically significant ( $p < 0.001$ ,  $F=129.524$ ;  $df=3, 296$ ). Model B1’s R-square of 0.521 (adjusted R-square = 0.516) and its F ratio ( $F=107.257$ ;  $df=3, 296$ ;  $p < 0.001$ ) were also significant. Both models had a good overall fit and therefore, further analyses were conducted. The coefficients for the variables were all significant at  $p = 0.05$  (A1 and B1) and therefore there were evidence that these three main predictors were important factors that affect initial trust.

Propensity to trust, however, did not turn out the way it was proposed as a predictor. When propensity to trust was added to the competence model, the R square did not change and the adjusted R square deteriorated (Model A2). For the goodwill model (B2), addition of propensity to trust increased the R-square and the adjusted R-square, but the increment was not significant. In either case, the coefficients of propensity to trust were not satisfactory and therefore, there was no evidence that propensity to trust was a predictor of initial trust (rejected Hypotheses 1 and 2).

When the interaction variables (CP\*PTT, SO\*PTT, WQ\*PTT) were included in the competence model, the R square increased a little, but the adjusted R square declined (A3). In addition, the coefficients of these variables were not significant and therefore, the data failed to support Hypothesis 3 (rejected Hypothesis 3).

On the other hand, for the goodwill model (Model B3), the interaction terms improved the R square and the adjusted R square significantly ( $p = 0.027$ ). The coefficients of the two interaction terms were also significant (PTT\*CP -  $p = .027$ ; PTT\*WQ -  $p = .026$ ). Therefore, there was evidence of the partial moderating effects of propensity to trust on the relationships between goodwill and the two of its predictors (i.e., company profile and website quality) and the details of Model B are shown in Table 1 through 3.

Following the guidelines (Cohen et al., 2003), we further analyzed the moderating effects of propensity to trust. First, we developed simple regression lines between goodwill and company profile (Figure 2), and between goodwill and website quality (Figure 3), each for three levels (high, mean, and low) of propensity to trust.

The results shown in Figure 2 and Figure 3 provide more detailed information about the moderating effects of propensity to trust on the relationships between goodwill and the independent variables. As shown in Figure 2, the lower the propensity to trust, the higher the effect of company profile on goodwill. This was an interesting finding which is explained in the next section. On the other hand, propensity to trust was an enhancer (Cohen et al., 2003) that boosted the effect of website quality on goodwill (i.e., the higher the propensity to trust, the higher the effect of website quality on goodwill).

Figure 1. Research model

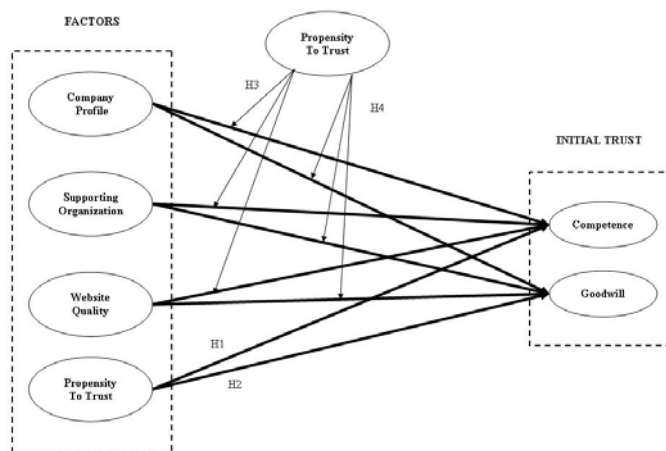


Table 1. Summary of Model B: Goodwill as the dependent variable

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
B1	.722	.521	.516	.66300	.521	107.257	3	296	.000
B2	.725	.525	.519	.66115	.004	2.655	1	295	.104
B3	.735	.540	.529	.65419	.015	3.104	3	292	.027

B1 Predictors: company profile (CP), supporting organization (SO), website quality (WQ); B2 Predictors: CP, SO, WQ, propensity to trust (PTT); B3 Predictors: CP, SO, WQ, PTT, CP\*PTT, SO\*PTT, WQ\*PTT

Table 2. ANOVA (Model B)

Model		Sum of Squares	df	Mean Square	F	Sig.
B1	Regression	141.439	3	47.146	107.257	.000
	Residual	130.111	296	.440		
	Total	271.549	299			
B2	Regression	142.599	4	35.650	81.556	.000
	Residual	128.950	295	.437		
	Total	271.549	299			
B3	Regression	146.585	7	20.941	48.931	.000
	Residual	124.964	292	.428		
	Total	271.549	299			

B1 Predictors: company profile (CP), supporting organization (SO), website quality (WQ); B2 Predictors: CP, SO, WQ, propensity to trust (PTT); B3 Predictors: CP, SO, WQ, PTT, CP\*PTT, SO\*PTT, WQ\*PTT

Table 3. Coefficients (Model B)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
B1	(Constant)	4.850	.038		126.708	.000
	CP	.156	.044	.145	3.521	.000
	SO	.168	.040	.186	4.162	.000
	WQ	.597	.045	.583	13.121	.000
B2	(Constant)	4.850	.038		127.061	.000
	CP	.157	.044	.146	3.550	.000
	SO	.163	.040	.180	4.045	.000
	WQ	.587	.046	.572	12.838	.000
	PTT	8.180E-02	.050	.067	1.629	.104
B3	(Constant)	4.840	.038		126.365	.000
	CP	.159	.044	.147	3.611	.000
	SO	.157	.040	.174	3.910	.000
	WQ	.606	.046	.591	13.250	.000
	PTT	6.881E-02	.050	.056	1.379	.169
	PTT*CP	-.133	.060	-.091	-2.216	.027
	PTT*SO	-3.658E-02	.046	-.037	-.798	.426
	PTT*WQ	.130	.058	.103	2.238	.026

company profile (CP), supporting organization (SO), website quality (WQ), propensity to trust (PTT)

## DISCUSSION AND CONCLUSIONS

In this study, we focused on tracing the effects of propensity to trust on the initial trust development process. The analyses revealed partly confirming yet somewhat interesting results. The three main predictors of initial trust (company profile, supporting organization, and website quality) were important factors that affected initial trust. The results were consistent with the previous studies that examined the impact of the predictors of trust (e.g., Jarvenpaa and Tractinsky, 1999; Lee & Turban, 2001; McKnight et al., 2002).

Propensity to trust, however, turned out to be an interesting factor. The direct effect of propensity to trust on initial trust was not detected from our data. This result was not a surprise, however, because a previous study also found a similar result (Koufaris & Hampton-Sosa, 2004). Furthermore, logical reasoning may provide a clue for this result. Theoretically, a person's trait is likely to affect trust: with no knowledge about a trustee, the higher propensity to trust, the higher the level of trust. Practically, however, the assumption of absolutely no knowledge is unlikely to happen. With an exception of "blind trust", therefore, a trustor is unlikely to trust a trustee if the external sources affect the trustor in a negative way (e.g., poorly designed website). This may imply that propensity to trust itself seems to be too weak to be a standalone predictor of trust. In our study, each participant was asked to visit a

website, which probably provided a chance to collect some knowledge about the company. Therefore, the no-knowledge assumption was not the case of our study, which might result in no direct effect of propensity to trust on trust.

This study also found partial moderating effects of propensity to trust: only on the relationship between goodwill and company profile and on that between goodwill and website quality. This finding may require more examinations of the goodwill construct. By definition, the goodwill trust is customers' identification of a company's intention, and building the goodwill trust seems to require more intensive mental process than building the competence trust does. For instance, when a customer develops initially the goodwill trust, she probably unconsciously have to depend on more resources (internal or external) and propensity to trust may be the primary internal resource that helps her develop the goodwill trust: the high quality website will affect the goodwill trust more if the level of propensity to trust is high (i.e., moderating effect). On the other hand, perceived competence of a company (competence trust) may be established at a first glance through a simple process. Therefore, a customer who experiences a high quality website can relatively easily evaluate his perception about the company's competence without additional resources (i.e., no moderating effect).

Figure 2. Simple regression lines for goodwill on centered company profile at three values of centered propensity to trust

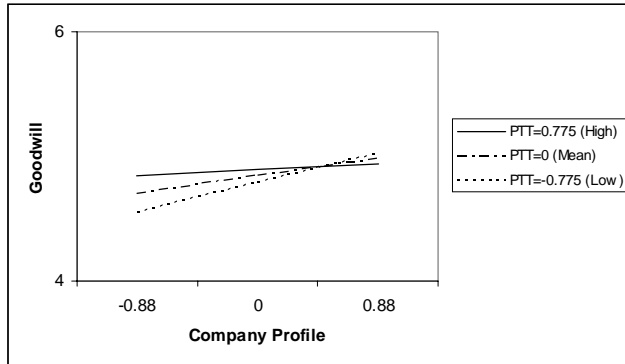
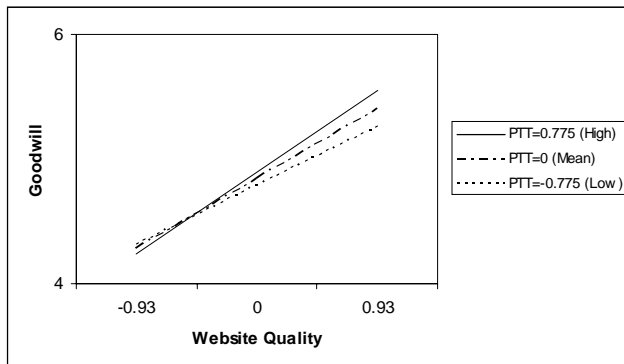


Figure 3. Simple regression lines for goodwill on centered website quality at three values of centered propensity to trust



The moderating effect of propensity to trust on the relationship between company profile and goodwill was an interesting finding of this study. Unlike the case with website quality, respondents with low propensity to trust had a more significant effect of company profile on goodwill. It seems that customers with a low propensity to trust start out low on goodwill and depend more on intrinsic characteristics of a company (e.g., company profile) to develop perceived goodwill of a company. On the other hand, customers with high propensity to trust initially have higher level of goodwill and maintain it with a little increase as their perceptions of company profile increase.

The results of this study, however, require cautious interpretations. For instance, using convenient sample (students) may limit the extension of this study to the general population. The design of this study may also be different from actual situations in which customers navigate websites voluntarily. Cross-sectional nature of this study is also a limitation that needs to be improved in future studies.

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