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Examining the influence of psychological contract and affective trust on intentions in B2C e-commerce

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Abstract

This research investigates whether affective feelings can arise from cognitive beliefs, particularly in a B2C e-commerce context. Based on the theory of affect, the need-to-belong theory, the perceived justice theory, this study examines whether a customer's affective trust feelings and psychological contract beliefs can impact the customer's behavioral intentions and whether affective trust feelings can have significant impact on behavioral intentions above and beyond the influence of psychological contract beliefs. Data were collected through a field study, and the findings supported the research model and verified the importance of both psychological contract and affective trust as significant determinants of behavioral intentions.

Keywords: affective trust, psychological contract, cognitive beliefs, feelings, behavioral intentions

Introduction

The objective of this study is to examine the nomological network of affective trust, psychological contract and behavioral intentions in business-to-consumer (B2C) e-commerce. Traditionally, the study of trust in B2C e-commerce in information systems (IS) literature has largely centered around cognitive belief constructs, i.e., cognitive trust, a construct about customer's beliefs about whether a web vendor can be dependent on or not. Based on the theory of affect which divide behavioral responses into both cognitive and affective components, many researchers found evidence that affective reactions can have direct impact on behavioral intentions (Crites, Fabrigar and Petty, 1994; Loewenstein, Weber, Hsee and Welch, 2001). Trust has been a significant focus of IS researchers since the beginning of B2C e-commerce (Jarvenpaa et al., 2000). While most of the research was focusing on cognitive trust, some researchers did realize that trust, as a psychological state, can have affective components and these affective components may have significant impact on behavioral intentions (Bhattacharjee, 2002; Featherman and Pavlou, 2003; Gefen et al., 2003). Recent findings indicated that affective trust is a distinct construct and can have direct impact on behavioral intentions beyond its cognitive counterpart (Sha, 2021). The nomological network of affective trust should be examined in the context of e-commerce. For example, can the influence of affective trust on intentions be strengthened or weakened if another construct is introduced? This research will study whether psychological contract, an important construct from organizational behavior research, can have direct impact on behavioral intentions alongside affective trust and the relationship between affective trust and psychological contract.

The tenet of the psychological contract is a perceived binding agreement between two entities in a relationship (Rousseau, 2001). Examples of this kind of relationship can be employee-employer relationships, customer-business relationships, or even student-university relationships, etc. To maintain long-term, stable relationships, there should be a mutual agreement among the stakeholders. This mutual agreement can be in physical form such as written policies, protocols, and contracts, or in perceived form, such as an understanding about two parties' obligations. In B2C e-commerce, web vendors use various design elements to convey what they can do for their potential customers including but not limited to product fulfilments. These elements are used to specify what kind of products and services can be expected from a web vendor. Once a customer accepts these offerings, a psychological contract will be established between the customer and the web vendor. This research proposes that this psychological contract can influence behavioral intentions, and affective trust can be an antecedent of psychological contract.

The paper starts with introducing the main constructs, psychological contract and affective trust, and the theories behind these constructs, namely the theory of affect, perceived justice theory, and the need-to-belong theory. Next, hypotheses about the relationships among affective trust, psychological contract and behavioral intentions will be proposed and subsequently a research model will be presented. Third, data gathered through a survey will be analyzed to validate the research model. Fourth, the results and contributions of the research will be presented.

Literature Review

The perceived justice theory, especially Rousseau and his colleagues, defined psychological contract as perceived mutual obligations between two entities (Robinson & Rousseau, 1994, Rousseau and Tijoriwala, 1998). These perceived mutual obligations are cognitive beliefs usually formed in an exchange relationship when participants of the relationship rely on a set of common understandings before engaging with each other, such as an employee and an employer. Research has indicated that there are two types of psychological contract: transactional psychological contract and relational psychological contract. The construct of transactional psychological contract is formed in a tangible contractual relationship. On the other hand, relational psychological contract is generated based on intangible agreements "that cannot be carefully scripted, concrete, or formalizable" (Bunderson, 2001). For example, in the organizational context, employment contracts, policies about compensation, promotion, training can create tangible relationships. Communications in workplaces and informal organizational practices can create intangible relationships (Rousseau, 1989). To maintain and develop these relationships, all participants should share responsibilities and obligations. The essence of psychological contract is mutuality, which means one party of the exchange relationship believes that there is a mutual understanding regarding each other's responsibilities and obligations (Rousseau, 2001).

The research on psychological contract in the organizational research context primarily focuses on relational psychological contract. One common research theme is the breach of a psychological contract from an employee perspective. Empirical results have shown that psychological contract is related to organizational citizenship behavior, such as advocacy participation, helping and functional participation (Coyle-Shapiro, 2002), job satisfaction (Cavanugh & Noe, 1999), mood (Conway and Briner, 2002) and trust (Robinson, 1996). Information system researchers begin to adopt psychological contract as a new perspective in examining reciprocal relationships in the IT industry, particularly in IT outsourcing (Koh, Ang & Straub, 2004) and in online marketplaces (Pavlou and Gefen, 2005). Pavlou and Gefen (2005) found that a violation of psychological contract could reduce both a bidder's trust in the community of sellers and the bidder's transaction intentions. Compared with extensive research on psychological contract in

organizational behavioral literature, research on psychological contract perspective in IS literature remain limited, particularly in the context of B2C e-commerce.

Psychological contract

In B2C e-commerce, statements such as “30-day money back guarantee” or “100% satisfaction guarantee” are usually prominently displayed on a web vendor’s website. These statements demonstrate the promises of good customer service to any potential customers. When consumers become aware of these promises, they may develop expectations that the web vendor will fulfill its explicit obligations as stated in their policies, or implicit obligations based on consumers’ experiences with other vendors. Customer reviews are another potential source to develop these expectations. These expectations about mutual obligations would form a psychological contract between the web vendor and a customer. Research in organizational behavior has demonstrated that an employee can increase his/her long-term commitment to a company, especially in organizational citizenship behaviors, if there is psychological contract between the employee and the company. By the same token, a customer’s psychological contract may positively influence their behavioral intentions toward a web vendor in the B2C e-commerce.

A related construct to psychological contract is cognitive trust beliefs. Cognitive trust beliefs are defined as a truster’s specific beliefs about a trustee’s “competence (ability of the trustee to do what the truster needs), benevolence (trustee caring and motivation to act in the truster’s interests), and integrity (trustee honesty and promise keeping)” (McKnight, Choudhury & Kacmar, 2002, p. 337). These beliefs reflect the truster’s salient, subjective assessments of the situation and the truster’s interaction with the trustee (Ba & Pavlou, 2002). Existing IS literature has empirically validated the significant impact from cognitive trust beliefs on intentions. Therefore, this research proposes that a customer’s psychological contract with a web vendor will have a significant impact on the customer’s behavioral intentions toward a web vendor.

***Hypothesis 1:** A customer’s psychological contract with a web vendor will have a significant impact on the customer’s behavioral intentions toward a web vendor.*

Affective Trust

Affective trust is defined as a truster’s anticipatory emotional feelings of bond or attachment between a truster and a trustee. There are two theoretical bases for this construct: the theory of affect and the need-to-belong theory. Theory of affect proposes that people’s attitudinal responses have three components of, i.e., affect, cognition, and conation (Crites, Fabrigar and Petty, 1994, Bagozzi, Gopinath, and Nyer, 1999). Affective reactions should directly influence people’s behaviors beyond cognitive evaluations (Loewenstein, Weber, Hsee and Welch, 2001). The second theoretical base is the need-to-belong theory. This theory proposes that human beings have a fundamental, innate drive to pursue and to maintain interpersonal relationships (Baumeister and Leary, 1995). This innate drive forces human beings to form groups in the pursuit of survival and reproductive benefits, such as food, mates, caring for offspring, hunting for large animals, and defense and competition for limited resources. People that belong to strong groups would have significant advantages over people who are in weaker groups or are alone. Additionally, the need-to-belong theory proposes that relationships or social bonds can be formed spontaneously with little effort and are often affect laden. For example, people tend to emotionally promise to a friend to maintain contact when the friend moves away. This situation also happens to neighbors even though their relationships can be much less important.

Affective trust can exist between a customer with a web vendor in B2C e-commerce. A web vendor could exhibit social identities through its website appearances, empathy toward customers, reliability in delivering products, responsiveness to customer concerns, assurance about its ability, credibility and security, and other organizational behaviors (Gefen, 2002). A mere random encounter with a web vendor could be

possible for a customer to develop a likeness toward the web vendor and eventually feelings of belonging or attachment to the web vendor. Once these feelings of belonging are established, the customer would continue to engage with the web vendor through purchases or other activities, which in turn would strengthen the feelings and relationships. These feelings of belonging, or emotional bond, are the essential characteristics of affective trust. Lee, Pi, Kwok, and Huynh (2003) found that the projected cyber social presence of a firm may present the necessary condition for the creation of an enduring long-term relationship between customers and a web vendor, which then might be the driving force behind repeated Internet shopping and customer satisfaction.

Hypothesis 2: *A customer's affective trust with a web vendor will have a significant impact on the customer's behavioral intentions toward a web vendor.*

affective trust as antecedent of psychological contract

A customer's affective trust feelings can elicit psychological contract beliefs with a web vendor. First, research has shown that feelings can be generated quicker in brain function than cognitive beliefs. When the sensory thalamus receives external stimulation, it could either send the stimulation directly to the amygdale or send the stimulation to the cortical system for processing. Then the results are sent to the amygdale, without any mediation of the cortex. The instructions sent by the amygdale direct the human body to produce powerful emotions, which in turn direct motor response. For example, after subjects received intravenous injections of procaine, they reported powerful emotions, including panic sensations, although there was no apparent cognitive processing (LeDoux, 1996, Servan-Schreiber and Perlstein, 1998). These emotions were called anticipatory emotions by Loewenstein, Weber, Hsee and Welch (2001), and these anticipatory emotions can be elicited, retrieved and processed faster than cognitive beliefs (Murphy and Zajonc, 1993). Therefore, this study proposes that affective trust, feelings of emotional bond or attachment, could be generated before psychological contract beliefs.

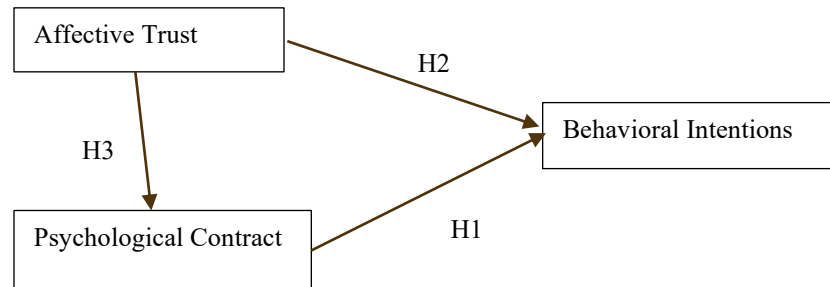
Second, once a customer visits a web vendor, this web vendor's projected social entity which is created through various design features may either conform to or differ with the customer's self-entity. Different social entities would create dissonance between the customer and the web vendor. It is likely that the customer would either stop his/her shopping experience such as abandoning the shopping cart or make a swift change as soon as another suitable vendor is found. On the other hand, matching social entities would create consonance, which would lead to a much more pleasant shopping experience. During this process, this customer might begin to have expectations about mutual obligations. It is reasonable for the customer to believe that the web vendor will fulfill the customer's order if the customer makes a purchase.

Therefore, this research proposes that a customer's affective trust with a web vendor will have a significant impact on the customer's psychological contract with the web vendor.

Hypothesis 3: *A customer's affective trust with a web vendor will have a significant impact on the customer's psychological contract with the web vendor.*

These hypotheses are captured by the research model in Figure 1.

Figure 1. Research Model



Methods

The research model was validated through a survey study of 203 undergraduate students from a midwestern university. The mean age is 22, and 58% of the participants are male. These students usually visit popular web vendors such as Amazon.com, Best Buy and various apparel vendors. Their average is about 10 times per year and have been shopping online for an average of 7.5 years. Established measurement items were used to measure affective trust, psychological contract and behavioral intentions. These measurement items were examined to make sure the wordings were written properly so that participants could understand the items correctly while the intended domain areas of the items were still intact. All the items were adapted to reflect the online shopping context.

Table 1. Measurement Items

Constructs	Items
Affective Trust	I feel attached to this web store.
	I would feel a sense of loss if this store went out of business.
	There is a connection between me and this web store.
	I can go "the extra mile" to remain a customer of this web store.
Psychological Contract	This store will ship me the right product
	This store will provide the best quality product to me
	It is this store's responsibility to protect its customers' best interests
	This store will treat its customer right
Behavioral Intentions	I can rely on this web store to purchase to purchase my product.
	I trust this web store completely.
	I am very likely to provide the web store with my personal information.
	I intend to purchase the product from this web store.

Results

The first step in validating the structural assurance model is to examine the convergent and discriminant validity of the constructs. The validities were first examined through the principal components analysis (PCA) (Hair, Anderson, Tatham & Black, 1998). Convergent validity can be established if there are no high cross loadings on unintended constructs. The results from PCA (Table 2) show that three factors with an

eigenvalue greater than 1 were extracted, and these factors can explain 69% of the total variance. These three factors correspond well to the intended constructs in the research model. All the loadings on intended construct were greater than 0.72, and there are no cross loadings greater than 0.34.

Table 2. Principal Component Analysis

Items	Intentions	Psychological contract	Affective Trust
pcon1	0.337	0.766	0.137
pcon2	0.272	0.81	0.224
pcon3	0.301	0.795	0.127
pcon4	0.025	0.775	0.006
atrust1	0.261	0.194	0.793
atrust2	-0.167	0.035	0.716
atrust3	0.21	0.067	0.847
atrust4	0.314	0.147	0.731
intention1	0.818	0.302	0.009
intention2	0.785	0.281	0.277
intention4	0.804	0.308	0.102
intention5	0.689	0.049	0.151

Confirmatory factor analysis with IBM SPSS AMOS 26.0, a structural equation modeling (SEM) software package, was used to further examine the measurement model and establish each construct's convergent validity, discriminant validity and predictive validity. Average variance extracted (AVE) was used to demonstrate convergent and discriminant validity. Convergent validity could be established if AVEs of each construct exceeded the criteria (0.5) set by Fornell and Larcker (1981). Additionally, discriminant validity could be established if the square root values of the AVEs were greater than the cross correlations among constructs. Table 3 lists the composite reliabilities, correlations and AVEs for the five constructs. Correlations are listed off-diagonal, and the AVE values for the respective constructs (0.60, 0.62 and 0.63) are listed in the diagonal of the matrix. As shown in Table 3, all items met the Fornell and Larker test for convergent validity. The internal consistency reliability was assessed by calculating Cronbach's alphas. All of the constructs' Cronbach's alphas are greater than the 0.70 minimum threshold proposed by Nunnally (1978).

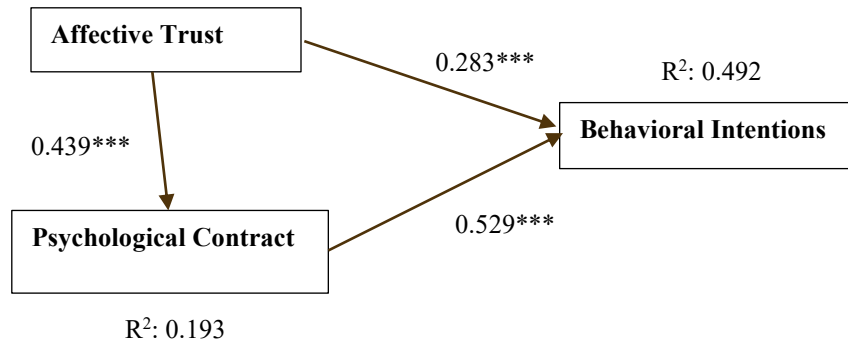
Table 3. AVE Values and Correlations of the Research Model

	Constructs	Cronbach's Alphas	1	2	3
1	Affective Trust	0.86	0.60		
2	Psychological Contract	0.86	0.439	0.62	
3	Behavioral Intentions	0.87	0.516	0.654	0.63

The three hypotheses are also analyzed by using AMOS 26.0 and the results are shown in Figure 2. The beta weights from independent variables to their respective dependent variables are indicated besides the arrows, along with the significance levels. Model fit statistics (discrepancy ratio, 1.625; CFI, 0.973; NFI, 0.933; RMSEA, 0.056) indicate that the model fits the data adequately. The value of RMSEA is below the recommended guidelines (0.08) for a good fit. Figure 2 shows that all the hypotheses were supported by the results. Both psychological contract and affective trust have significant impact on a customer's behavioral intentions. The influence of psychological contract on behavioral intentions is about 0.53, which

is almost twice that of affective trust (about 0.28). The amount of variance in behavioral intentions that can be explained by both affective trust and psychological contract is almost 50% (0.492). The results also show that affective trust does have significant impact on psychological contract. The impact of affective trust on psychological contract is 0.439, which is highly significant in terms of both significant level and actual impact strength.

Figure 2. Research Model with Results



Discussions and Implications

Based on the perceived justice theory, the affect theory and the need-to-belong theory, this research empirically examined the relationships among affective trust, psychological contract, and behavioral intentions. The proposed research model has both affective trust and psychological contract as antecedents of behavioral intentions, and affective trust as a predictor to psychological contract. A survey study about student subjects' shopping habits yielded significant supporting results to the research model. All the hypotheses were validated. Customers' behavioral intentions in B2C e-commerce are usually examined through the lens of the technology acceptance model (TAM) or through the lens of cognitive trust. This research provides another perspective on potential factors that can influence behavioral intentions.

The results show that psychological contract has much higher influence on intentions than affective trust. This is reasonable due to the B2C e-commerce research context. Customers do expect web vendors to fulfill their obligations once they make a purchase. More importantly, the results demonstrate that customers' feelings of bond or attachment indeed have significant impact on intentions beyond the influence of psychological contract, a cognitive construct. The impact from affective trust to behavioral intentions is 0.28, a still significant amount. Jointly, both psychological contract and affective trust explained about 49% of the variance in behavioral intentions. Additionally, affective trust is a significant predictor for psychological contract. It is easier for a customer to form contractual expectations if the customer feels that he or she has a connection with a web vendor. The impact from affective trust to psychological contract is 0.439, which is a lot higher than the impact from affective trust to behavioral intentions. This may indicate that the primary influence of affective trust on behavioral intentions is through psychological contract. Since only 19.3% of variances in psychological contract were explained by affective trust in this study, this lower R^2 implies that there are other antecedents of psychological contract that can impact psychological contract beliefs. Future research can expand the research model by including potential antecedents for both affective trust and psychological contract, such as perceived fairness or trust propensity.

This research demonstrated that web vendors can improve their success in B2C e-commerce if they can form emotional bonds with customers and make it clear as what a customer can expect from them as soon

as possible. The success of a web vendor should be how well the web vendor can persuade customers to engage behaviors beyond simply browsing for content, such as sharing personal information or making purchases. The results of this study verified that web vendors should strive to improve their bonding with customers since affective trust can impact intentions directly and indirectly. Design elements such as sincere messages, social media postings or advertising messages that can demonstrate a web vendor's social identities would make it easier for the web vendor to connect with its core customers. Customer service policies can also be effective in conveying the vendor's responsibilities. Carefully crafted customer service policies that are easily locatable, enforceable and verifiable would reduce a customer's mental workload to create a psychological contract and make it a lot more likely for the customer to pursue subsequent behaviors.

Limitations and Conclusion

The main limitation of this research is that the research model only encompasses three constructs. By examining only affective trust, psychological contract and behavioral intentions, a parsimonious model can be achieved, and important relationships can be prominently revealed. However, this approach can ignore important constructs and relationships in a nomological network. It is evident from the results that about 51% of the variances in behavioral intentions are left unexplained by the predictors. Future research should extend the scope of this research by exploring other important constructs that can influence both behavioral intentions and psychological contract. It is important to see whether affective trust can still demonstrate its significance once other constructs, such as perceived risk or habit, are added to the research model. The second limitation is that intervening constructs might be omitted from the model, especially between affective trust and psychological contract. Only 19.3% of the variances in psychological contract are explained by affective trust. There might be other direct predictors of psychological contract or predictors that mediate between affective trust and psychological contract left out by this study. The third limitation is that this study doesn't differentiate between types of web vendors or platforms. It is possible that bigger and well known web vendors such as Amazon would elicit different feelings and beliefs from a customer than small, niche vendors would be able to do. The customer could already have certain affective trust feelings and psychological bonds with the well-known web vendor. The fourth limitation is that the sample used in the study are convenient samples from students enrolled in a university. Although they do actively engage in online shopping, college students do represent a different segment of the customer population in general. It is important to further study a more representative sample to examine the validities of the research model. Future studies should also examine actual consumer behaviors since self-reported data as used in this study could be problematic due to common method bias or social desirability bias.

This paper empirically examined whether customers' behavioral intentions can be influenced by affective trust and psychological contract. The impact of psychological contract was examined through perceived justice theory, and the impact of affective trust was examined through the theory of affect and the need-to-belong theory. Results from a survey validated the research model and the significance of the proposed relationships. Future research should continue to examine the mechanisms of how behavioral intentions are formed in B2C e-commerce and the role of affect in it.

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