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Investigating the Nonlinear and Conditional Effects of Trust on Effective Customer Retention --The Role of Institutional Contexts

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Abstract

Transacting online, customers may concern about risks regarding the vendors and the general online environment. Trust and institutional contexts are thus in place to address such concerns. The IS literature has long studied trust's effects on customers' shopping intention. To make better use of vendors' limited resources in trust building, recent studies shed light on narrowing down trust's operational boundary for a more effective range.

Integrating the findings on the nonlinear and conditional effects of trust, this study aims at understanding the complex moderating effects of institutional contexts on the relationship between trust and repurchase intention. Drawing on prospect theory, we hypothesize that customers will perceive the effectiveness of institutional contexts in mitigating risks in two distinct conditions (perceived effective and perceived ineffective) and hence exhibit different repurchase patterns.

Our findings reveal an inverted U-shaped nonlinear relationship between trust and repurchase intention in perceived effective contexts and a U-shaped nonlinear in perceived ineffective contexts using survey data collected from online customers in the United Kingdom. Implications for vendors' effective trust cultivation in two conditions are accordingly provided.

Keywords: Trust, repurchase intention, nonlinear relationship, e-commerce, m-commerce, mobile banking, prospect theory, institutional contexts, institutional mechanisms

INTRODUCTION

It is inevitable for customers to have uncertainty and risk concerns when they transact online. They will thus be more cautious than in the offline situation. Even with a first-hand experience, they may still worry about the vendor's trustworthiness during repurchase. As a result, vendors have to address customers' risk concerns for retention. Among so many forces, trust has been identified as a primary determinant of (re)purchase intention for it being an uncertainty-reduction mechanism which can simplify the situation and rule out undesirable outcomes.

Recent literature has gone beyond assessing simple effects of trust in regard to its operational boundary to understand its complex and intriguing impacts on online (re)purchase intention (Gefen et al. 2008; van der Heijden et al. 2003). Institutional contexts (akin to institution-based trust), is one of the key conditions in shaping trust's effects (Fang et al. 2014; McKnight et al. 2002; Pavlou and Gefen 2004)). In this study, we coin institutional contexts as a collective term for institutional structures and mechanisms which are third-party developed formal regulative interventions (Zucker 1986). Institutional contexts facilitate trust in customers' online transactions via its perceived effectiveness (Pavlou and Gefen 2004). The logic follows that if customers find the institutional contexts are able to mitigate most of their risk concerns, they will perceive the contexts to be effective. Accordingly, they will determine their willingness to purchase based on the risk evaluation. The perception concept has been widely adopted in existing studies on institutional contexts (Fang et al. 2014; Gefen and Pavlou 2012; Pavlou and Gefen 2004; Pavlou and Gefen 2005)

According to Fang et al. (2014), there are contextual risks lying in the general online shopping environment which cannot be addressed by the vendor-specific risk-mitigation mechanism (i.e., trust in the vendor and vendor-specific institutional contexts). As the vendors cannot help with the contextual risks, understanding customers' perceptual difference and its subsequent impact on repurchase behavior matters a lot. Yet the current studies on the institutional contexts' moderating effects are mixed and fragmented: trust is found to be less effective in perceived effective institutional contexts (Fang et al. 2014) while Gefen and Pavlou (2012) argued that trust is effective in any level of perceived effectiveness of institutional contexts. So shall vendors still invest on trust building if the institutional contexts are perceived effective in mitigating risks? Aiming at investigating the complex moderating effect of institutional contexts on the relationship between trust and repurchase intention, we draw on prospect theory (Kahneman and Tversky 1979) in discussing customers' repurchase patterns in perceived effective and ineffective institutional contexts respectively. To widely consider customers' risk concerns on the vendors and on the general environment, we also adopt an instance of vendor-independent institutional contexts in this study, structural assurances (McKnight et al. 2002; McKnight et al. 1998), for its comprehensive coverage on the vendor-specific risks and contextual risks.

Our study contributes to the studies of trust's nonlinear and conditional relationships to advance our understanding on how trust exhibit impacts on (re)purchase intention in different conditions. To our best knowledge, we are one of the few studies that examines trust's operational boundary in different conditions and integrate the boundary of trust's nonlinear relationship into conditional relationship in one comprehensive view. Our findings add evidence in confirming institutional contexts' facilitating role in customers' online (re)purchase decisions (Fang et al. 2014; Gefen and Pavlou 2012). Besides, we extend the framing concept to perception of institutional contexts to facilitate our understanding of how customers form perception of current situation. Last but not least, we apply prospect theory in online repurchase decision and leverage the findings from reference disciplines to advance IS development. Through distinguishing the perceptual differences on the effective and ineffective institutional contexts, we provide online vendors with a valid range in both conditions for effective trust building and customer retention.

LITERATURE REVIEW

Trust's Effective Boundary: Studies on Nonlinear and Conditional Effects

Customers place high emphasis on trust to decide whether to transact with an online vendor. Trust is a legitimate strategy to mitigate the uncertainty and risk in the online shopping environment, so trust is found to have an impact on customers' shopping intention (Pavlou and Gefen 2004; Pavlou and Gefen 2005).

The extant IS literature has long assumed trust's linear impact on customers' purchase intention until recent studies started to shed light on trust's operational boundary to narrow down its valid range (Gefen et al. 2008; van der Heijden et al. 2003). For instance, Liu and Goodhue (2012) found that trust will be less impactful on website revisit intention above a tipping point.

Meanwhile, trust may be bounded by the institutional contexts (Gefen et al. 2008). Fang et al. (2014) acknowledged this conditional effect that trust will be less important for repurchase decision when the institutional contexts are perceived effective while Gefen and Pavlou (2012) argued that trust is still relevant in any level of perceived effectiveness of institutional contexts.

To resolve this inconsistency in literature, in this study, we aim at providing full understanding of trust's effective boundary and condition for vendors to better retain customers. Specifically, we systematically examine institutional contexts' conditional effect on the nonlinear relationship between trust and repurchase intention in both conditions of perceived effective and ineffective institutional contexts. We position our study in relation to other key literature on nonlinear and conditional effects of trust in Table 1.

Table 1. Literature Review on Nonlinear and Conditional Effects of Trust

Effect of Trust	Citations	Valid Operational Boundary of Trust	Limitations	Practical Implications
Nonlinear effect	Liu and Goodhue (2012)	Below the tipping point.	No discussion on institutional contexts.	<u>Trust building:</u> Build trust until the tipping point.
Conditional effect	Fang et al. (2014)	Negative linear relationship with institutional contexts. →Trust is more critical when the perceived effectiveness of institutional contexts is low.	Assumed the perceived effectiveness of institutional contexts is along a continuum that trust will change in a linear fashion—trust's effect on repurchase intention will be strongest in the perceived ineffective condition and weakest in the perceived effective condition Overlook trust's effect in the **perceived effective** institutional contexts.	<u>Trust building:</u> Build trust according to the level of perceptions on institutional contexts (more effective when the contexts are **perceived ineffective**).
	Gefen and Pavlou (2012)	Trust is not bounded by institutional contexts →Trust is important at any level of perceived effectiveness of institutional contexts.	Failed to detect the conditional effect of institutional contexts on trust	<u>Institutional contexts:</u> Design the contexts until moderate level of effectiveness to address risk.
Nonlinear and Conditional effects	Our Study	Explore institutional contexts' conditional effect on trust in both **perceived effective and ineffective** conditions.		<u>Trust building:</u> Build trust according to the level of perceptions on institutional contexts (in both **perceived effective and ineffective** conditions).

Vendor-Independent Institutional Contexts: Wider Coverage on Customers' Risk Concerns

Evolving from institution-based trust, institutional contexts are impersonal structures that make the customers feel safe, assured and comfortable in doing business in such environment (McKnight et al. 1998; Pavlou and Gefen 2004). Formal regulative interventions such as escrow and credit card guarantee services are developed to safeguard customers' online transactions (Gefen and Pavlou 2012; Zucker 1986), so customers are willing to transact in this environment and trust the online vendors in it (McKnight et al. 2002; McKnight et al. 1998). Various types of institutional mechanisms and structures have been studied in extant IS studies, to name a few, structural assurances (McKnight et al. 2002; McKnight et al. 1998), Perceived Effectiveness of Institutional Structures (PEIS) (Gefen and Pavlou 2012; Pavlou and Gefen 2004; Pavlou and Gefen 2005) and Perceived Effectiveness of E-commerce Institutional Mechanisms (PEEIM) (Fang et al. 2014). In this study, we group them under the collective term, institutional contexts. "Institutional contexts" is an important condition of trust because it moderates trust's impact on customers' buying through perceived effectiveness in mitigating customers' risk concerns on the vendor/marketplace and/or on the general online environment where risk is defined as customers' subjective belief on the potential negative outcomes incurred in the online transaction (Pavlou and Gefen 2004).

There are three predominant risks in the online transactions, product, financial, and information risk. Trust in the vendor, or any type of vendor-specific risk-mitigation institutional contexts, can help customer believe that the vendor will not sell defective products (product risk), sell at an unreasonable high price (financial risk), or make use of their personal identity and credit card information (information risk) based on the benevolence and integrity belief to relieve part of their risk concerns related with the vendor (Mayer et al. 1995). However, there exist other risks in the general environment, which are beyond vendor's control. Contextual risks, representing system-dependent uncertainties such as technological sources of errors and security weaknesses (Grabner-Kräuter and Kaluscha 2003), are an instance of these risks. Apparently, trust in vendor can do little with the contextual risks such as unintended double-click on the payment (financial risk) and information leaking (information risk) due to infrastructure security weakness .

Fang et al. (2014) has classified instances of institutional contexts into two categories according to the type of risks being addressed: vendor-specific and vendor-independent. The former contexts are to protect transactions with a specific vendor, so they emphasize specific risks associated with the vendor. The latter are to assure all business transactions on the Internet and to mitigate both relationship-specific risks and contextual risks (Mayer et al. 1995). For a comprehensive consideration on customers' risk concerns, in this study, we will thus employ an instance of vendor-independent institutional contexts, structural assurances. Specifically, "structural assurances" is customers' belief that contextual conditions such as promises, contracts, regulations and guarantees are in place to protect them (McKnight et al. 1998). It has received empirical supports in the contexts of e-commerce transaction and financial decision making (Inbar et al. 2011; McKnight et al. 2002).

HYPOTHESIS DEVELOPMENT

Prospect Theory

We draw on prospect theory (Kahneman and Tversky 1979) to provide a comprehensive review on institutional contexts in both conditions of high and low perceived effectiveness. The theory has been widely applied in marketing to study customers' perceptions (Grewal and Lundsey-Mullikin 2006) and attitudes toward risks and losses. In recent years, it has received increasing attention in IS (Benlian 2013; Chiu et al. 2014).

Prospect theory is a seminal work in explaining humans' decision making involving risk, so it is applicable to our online transaction context. The theory highlights that people perceive high and low risks in two split positive and negative domains and will accordingly exhibit distinctly different behavioral patterns. We apply these findings in our study and hypothesize customers will behave differently in the two conditions of perceived effective and ineffective institutional contexts. Therefore, we have to understand how customers form such perception and what they do with this perception. According to prospect theory, customers will firstly go through a framing process to anchor their current wealth position and the possible outcomes of the decision (as end points) in a decision frame (Tversky and Kahneman 1981). Following that, they evaluate how the decision will influence their wealth by quantifying the value change from the reference point (current position of wealth) to the end points (possible outcomes of wealth). Hence how customers perceive the environment to anchor their current reference point is of great impact to the value change evaluation. Found in prospect theory, customers define their current reference point in relation to the positive or negative domain based on the positivity and negativity of possible outcomes. For example, after calculating the uncertainty and risks into probabilities, if customers will gain $10, they will put themselves in the positive domain. Conversely, an option leading to a loss will be perceived in the negative domain (Kahneman and Tversky 1979). Applying it in a more sophisticated scenario, for instance, customers will perceive whether the product's price is high or low before making the buying decision. They will compare the price of their chosen product (reference point of current position) with the one of other similar products in their search range (possible outcomes as end points) (Grewal and Lundsey-Mullikin 2006): if they find the price of other products are all higher, they will compare on the savings (how much they can save on their current wealth if they buy this product). Therefore, they will perceive they are in the positive domain because they are expecting a positive outcome from buying this product.

The perceived domain positivity and negativity will influence customers' decision making through assessment of value change. In the positive domain, people are inclined to be risk averse and prefer sure gain to probable gain. On the contrary, people favor probable loss than sure loss as they are more risk seeking in the negative domain. As the gains and losses are changes of current worth, the shape of their value curves are consistent with economics findings that the utility function is concave for risk aversion (inverted U-shaped) and convex for risk averse (U-shaped). Therefore, the value curves in prospect theory are concave for gains (inverted U-shaped), convex for losses (U-shaped) (Kahneman and Tversky 1979).

Trust in Perceived Effective Institutional Contexts

Put it specifically in the online repurchase situation in perceived effective institutional contexts, customers generally believe that the e-commerce environment is grounded safe for any vendor with which the customer is doing transaction from their first-hand experience (McKnight et al. 1998)—all the transactions will be assured and guaranteed by these impersonal institutional contexts. As a result, they have a high willingness to do repurchase with any vendor in the environment: they have learned that the institutional contexts are effective enough to mitigate both contextual and relationship-specific risks. For example, if the vendor has not delivered the goods as promised, the escrow services (an application of institutional contexts) can still protect their payment. Regarding contextual risks, their personal identity and security information will be protected as the institutional contexts are in place to enable secure data exchange and prevent from information leakage (Inbar et al. 2011). Therefore, customers are seeking for other benefits they can gain from the repurchase. Experience-related factors such as satisfaction and loyalty thus become important in the repurchase context in response to customers' needs for value-added gains. As customers are concerning the possible gains from repurchase instead of negative losses, they position themselves in the positive domain.

Based on prospect theory, in the positive domain, customers compare on gains. The existing environment is a sure gain for customers because they do not need to do anything to get the gain. Nevertheless, the customers may still question the vendor's trustworthiness. So the assurance brought by "trust in vendor" can be regarded as a gain to them because the increase of trust reduces their risk concerns and strengthens their repurchase intention. However, this gain is more like a probable gain that the customers will not necessarily get given the cognitive resources they have consumed in the trustworthiness assessment.

As stated in prospect theory, customers prefer sure gains as opposed to probable gains in the positive domain. The structural assurances are so effective in both relationship-specific and contextual risks, so the remaining uncertainty and risk diminish. Accordingly, a unit increase in trust brings incremental probable gains to customers while consuming certain cognitive resources at the same time. In this case, as cognitive misers (Liu and Goodhue 2012), humans will tend to minimize their cognitive resources on the trustworthiness evaluation for the diminishing returns. In low risk situation, humans will save their mental energy in sensemaking. Therefore, a unit increase in trust contributes to a diminishing assurance and leads to a diminishing repurchase intention for the incremental benefits gained. Customers prefer sure gains to probable gains, so trust's effect on the repurchase intention will be inverted U-shaped curvilinear as the gains follows concavity fashion in the positive domain. Previous studies report similar findings that trust will diminish its influence on the revisit intention when the trustworthiness is no longer a significant concern (Liu and Goodhue 2012) and information/system quality will contribute to diminishing system satisfaction when users have learned the system well after extensive use (Benlian 2013; Sun et al. 2014).

Trust in Perceived Ineffective Institutional Contexts

On the contrary, in the perceived ineffective institutional contexts, customers perceive the e-commerce environment is very risky, free of protection and easy to incur losses. Due to the negative consequence to their wealth, they set the reference point in relation to the negative domain.

In the ineffective condition, institutional contexts cannot eliminate neither relationship-specific nor contextual risks effectively. In other words, it is a sure loss for customers if they do not do anything to change. Customers remain alerted to the vendors in this environment and have a very low level of trust in each of the vendors. It is believed that trust will not involve in the decision making process because customers will not do transactions in very risky situation for the low respect (Gefen and Pavlou 2012). However, given these general risky contexts, if customers want to do online transactions, trust in vendor can at least wipe the relationship-specific risk concerns on the vendor to lessen the possibility of their losses (probable loss). As a result, customers will take every measure to reduce their losses because humans are loss averse (Kahneman and Tversky 1979)—in this negative domain, customers are willing to do risk taking to avoid sure losses. In such a situation, they have to rely on trust to reduce the possibility of loss as trust is the only or more effective tool in risk mitigation compared to the ineffective institutional contexts. Therefore, trust is indeed important in the very risk environment because with no risk, no need for trust exists and the higher the risk, the higher the magnitude and frequency trust will change.

To gain the first drive to change the low trust level in the vendor, customers go to the three categories of trust antecedents to seek for evidence for vendor's trustworthiness. For instance, experience-based, they recall their primary interaction experience with the vendor (McKnight et al. 1998); cognition-based, through the interaction, they will observe something objective, like the information quality the vendor provides to them and; affect-based, they derive trust from the affective bonds, such as friends' referral, recommendations, other buyers' word-of-mouth and the vendor reputation (Jarvenpaa et al. 2000). The increase in trust reduces much of their concerns on loss or risk and brings them stronger confidence to do the repurchase. Customers will thus engage in the risk-taking behavior after the trust passes a certain threshold (Mayer et al. 1995). Since humans' risk taking on losses follows a U-shaped fashion in the negative domain, the trust's effect on the repurchase intention will be U-shaped curvilinear.

As we study trust's nonlinear effects on repurchase intention, we first hypothesize on the nonlinear relationship.

H1: The effect of a returning customer's trust on repurchasing intention exhibits nonlinear effect, such that as trust increases the marginal effect of trust on online purchase intention diminishes (diminishing returns).

We then hypothesize the nonlinear effects in two conditions—perceived effective and ineffective institutional contexts (e.g., structural assurances) respectively.

H2: A returning online customer's perceived effectiveness of structural assurances negatively moderates the nonlinear relationship between customer trust and online repurchase intention, such that as structural assurances increases the curvature of the relationship between customer trust and online repurchase intention becomes more negative (i.e. relationship between trust and repurchase intention is inverted "U" shaped curvilinear when perceived effectiveness of structural assurances is higher, and relationship between trust and repurchase intention is "U" shaped curvilinear when perceived effectiveness of structural assurances is lower).

METHODOLOGY

We collected data through a survey as it is best suited for obtaining psychological beliefs and attitudes and it can enhance the generalizability of research findings.

Survey Development

We used the constructs—structural assurances (Mcknight et al, 1998), repurchasing intention Jarvenpaa et al. (2000), trust in vendor (Einwiller 2003; Jarvenpaa et al. 2000)—from existing literature to enhance validity. Control variables such as vendor reputation, risk, experience using mobile banking, gender, age, and income level were included to ensure that the empirical results are not due to covariance with other variables. We followed advice in adapting some items and consulted subject matter experts to ensure content validity. The revised questionnaire was then piloted among several staff and students in two large universities before being accepted as the final version. Total usable responses were 444.

Data Analysis Technique

The model was analyzed using covariance SEM (Mplus software based on its strength in providing unbiased parameter estimates, overall model fit, nested model comparisons (Anderson and Gerbing 1988) and advance modeling techniques for nonlinear and interactions effects (Klein and Moosbrugger 2000). To test quadratic effects and latent interactions, we used the latent moderated structural (LMS) equations approach (Klein and Moosbrugger 2000).

LMS explicitly correct for nonnormality and mutlticollinearity that is caused by latent nonlinear terms. This approach is expected to provide more accurate and precise estimates, as it does not violate normality assumptions that may be violated in the constrained error approach. Several simulation studies have established that LMS provides efficient parameter estimators and unbiased standard errors. As no chi-square values and fit indices are provided by LMS estimations due to the nonnormality of the outcomes, the log-likelihood difference test ($\Delta 2LL$) was applied to test for the improvement in fit of the moderated structural equation modeling (SEM) compared with a linear SEM without product terms.

Measurement Model

We conducted confirmatory factor analysis (CFA) following the standard procedure. All the ICRs were above the standard threshold of 0.7. AVE was greater than 0.50, indicating that items for each construct explain at least 50% of variance in the respective constructs. To assess discriminant validity, the AVE and matrix of loadings and cross loadings were examined. The square-root of AVE for all the constructs in this study exceeded the correlations of those constructs with other constructs. None of the cross-loadings exceeded the loading of items onto their own constructs indicating all the constructs passed the criteria of discriminant validity. This test of discriminant validity also provided evidence that common method bias was not involved and there was limited, if any, threat of multi-collinearity.

Table 1:Results of nested structural equations models

	Model-1	Model-2	Model-4	Model-5
Vendor reputation	0.37***	0.04	0.02	0.04
Risk	-0.04	-0.05	0.00	-0.00
Experience using mobile banking	0.06	0.05	0.02	0.02
Gender	0.07	-0.01	0.03	-0.01
Age	0.08	0.06	-0.00	0.08
Income	-0.06*	-0.08+	-0.02	-0.04+
Trust		0.31**	0.27**	0.28*
SA		0.18**	0.17**	0.25**
Trust^2			-0.13+	-0.12+
SA*Trust				-0.05
SA* Trust^2				-0.08*

Note: SA – Structural assurances; Nonlinear and interaction effects were estimated using LMS approach
**p <0.01; *p <0.05; +p <0.1

Structural Model

Table 1 presents the results. Hypothesis-1 was supported, as linear and non-linear effect of the trust on repurchase intention were significant. Hypothesis 2 was also supported as moderating effect of structural assurances on the nonlinear relationship between trust and repurchase intention was significant.

DISCUSSION

Major Findings

To help online vendors effectively promote customers' repurchase, our study investigates trust's impacts on customers' repurchase intention in varying levels of perceived effectiveness of institutional contexts. It is found that the oversimplified unconditional linear relationship between trust and repurchase intention may not always hold because trust will be only valid within an operating boundary (Gefen et al. 2008; Liu and Goodhue 2012; van der Heijden et al. 2003). Institutional contexts, as a critical condition in customers' online repurchase decision, will exert influence on the strength of trust's effect on repurchase via its perceived effectiveness on ability to reduce customers' perceived risks in the e-commerce environment.

Our study unveils that customers perceive the institutional contexts' high effectiveness and low effectiveness as two separate concepts instead of one in the same continuum. In other words, how customers perceive the effective institutional contexts will be distinctly different from the one for ineffective institutional contexts, so are their corresponding behavior. Hence, we unveil trust's distinct impacts on repurchase intention in respective condition. Specifically, in the perceived effective institutional contexts (high in perceived effectiveness), trust and repurchase intention is inverted U-shaped curvilinear, trust leads to repurchase intention rising at a decelerating rate. Increase in trust in vendor will contribute to diminishing increase of repurchase intention. On the contrary, in the perceived ineffective institutional contexts (low in perceived effectiveness), trust and repurchase intention is U-shaped curvilinear, repurchase intention will grow even faster than the pace of trust at an accelerating rate. Hence, increase in trust will cultivate a stronger repurchase intention from the vendor.

Theoretical Implications

In this study, we first contribute to the studies of trust's nonlinear relationships. Nonlinearity studies are getting attention in recent days for the complex relationships and richer understandings they capture and provide, for instance, adoption and continuance (Brown et al. 2014) and IS success (Benlian 2013; Sun et al. 2014). In the extant literature, trust's context has been oversimplified (Gefen et al. 2008) and presumed a monotone effect on the linear relationship (Sun et al. 2014)—when trust is high, (re)purchase intention will be high. But linear models may not fully capture the relationship complexities among variables and even "yield a limited or an inaccurate understanding" of the phenomena (Sun et al. 2012, p.749). Therefore, we acknowledge Liu and Goodhue's finding (2012) on trust's valid operational boundary and further incorporate boundary condition into it.

Our study also contributes to studies on institutional contexts. To our best knowledge, we are one of the few studies to examine trust's nonlinear operational boundary in different conditions (perceived effective and ineffective) respectively and integrate the findings in one systematic framework. By doing so, we extend the findings of trust's nonlinear relationship (Liu and Goodhue 2012) to the condition of institutional contexts and resolving the inconsistencies in extant studies on trust's valid operational boundary (Fang et al. 2014; Gefen et al. 2008; Gefen and Pavlou 2012). Specifically, we discover two valid ranges of trust in the respective condition of perceived effective and ineffective institutional contexts.

By applying prospect theory in e-commerce transaction decision, we extend the concept of framing to perception of institutional contexts. As reviewed, it is not the first time that prospect theory is applied in IS, such as IS success (Benlian 2013; Sun et al. 2014), crowdsourcing context strategy or in e-commerce utilitarian versus hedonic values (Chiu et al. 2014). However, to our knowledge, it is the first time that framing concept is applied in explaining customers' perception formation process. With the understanding of framing process, we differentiate the institutional contexts high and low in perceived effectiveness into two separate concepts and study customers' different behaviors based on the perception. We expect this conceptualization can be extended to other contexts where variations of perception play an important role.

We leverage findings from reference discipline to advance IS development. Reviewing the emerging studies on nonlinear relationships in IS, most scholars draw on theories from economics to explain the nonlinear change: diminishing marginal utility and prospect theory on diminishing contribution of IS service quality to satisfaction (Benlian 2013; Sun et al. 2014) and theory of complementaries on the negative synergy between subjective norms and attitude (Brown et al. 2014). In this study, we embed prospect theory from behavioral economics into the online repurchase context and benefit from its great explanatory power in humans' actual behavior.

Lastly, our empirical testing in mobile banking context adds evidence to the generalizability of our theoretical arguments on institutional contexts. We extend the findings on trust's nonlinear and conditional relationships from e-commerce to its sub-set, mobile commerce, and get supports from the dataset. It implies that institutional contexts may exert similar impact on customers' trust in mobile banking vendor and customers' repurchase behavior pattern from the same vendor may follow the same manner in two respective perceptual domains.

Practical Implications

As vendors cannot control the vendor-independent institutional contexts, our study focuses on understanding customers' perceptual differences on the effectiveness of institutional contexts. Specifically, we detect different valid ranges for trust building in the perceived effective and ineffective institutional contexts.

In the perceived effective contexts, although previous studies suggest withholding resources in trust building in this condition, our study finds a valid range to get an optimal influence on customer retention. At the very beginning when the trust is low, customers are still skeptical about vendor's trustworthiness. Therefore, if vendors can spend efforts on assuring the customers, it will be highly likely for the customers to conduct repurchase. After that, with the diminishing assurance, customers shift attention to other gains to improve their experience. So vendors can invest on activities improving customers' shopping experience rather than continue to boost trust.

In the perceived ineffective contexts, in contrast to the belief that trust is immaterial in such risky situation (Gefen and Pavlou 2012), we find that trust is actually engaged and grows at an even faster pace than repurchase intention. When the trust is high enough, the vendors will harvest its effective influence on customers' repurchase. But before trust reaches the threshold, vendors have to cultivate the trust growth in cognition-, affect-, experience-based through every contact point with the customers. For example, they have to provide accurate product information (cognition-based), nurture and protect their reputation (affection-based). They have to manage customers' feedback by listening and viewing customers' reviews and providing follow-up to improve their service quality. These follows-up will also help create good experience to the customers that the vendor cares about their feelings and feedback, so the satisfied customers may derive trust from the positive experience (experience-based) and even are willing to share their good experience with others (affect-based).

Limitations and Suggestions for Future Studies

It is believed that the institutional contexts of some less developed countries and areas may be perceived low in effectiveness. However, in our study, we find that even the customers in the United Kingdom who are supposed to have a nationwide well-established infrastructure and effective online institutional mechanisms will also rate the effectiveness of the general online institutional contexts they are shopping with as 1 or 2 out of 7-point Likert scale. This is probably because, for example, legally binding mechanisms which are supposed to be effective may not be perceived so if the rules are not clearly articulated (Pavlou and Gefen 2004, p.38). Therefore, we argue that the perceived effectiveness of institutional contexts is independent from cultural difference—customers in any culture or nation will perceive the institutional contexts they are shopping in in varying level of effectiveness. But since we collected samples in the United Kingdom, we are not able to verify whether it can be applied to less developed countries and areas.

We extend the framing concept to online purchase context and find customers' distinct behavioral patterns in the positive and negative domain. Further studies can be carried on examining whether the construct is in the same continuum or can be split into two positive and negative valence constructs (i.e., trust versus distrust) such as satisfaction and dissatisfaction.

Conclusion

This study integrates the studies on trust's effective operational boundary and conditions in a comprehensive view. The results find that trust will exhibit different impacts on customers' repurchase intention in perceived effective and ineffective institutional contexts. Accordingly, vendors are suggested investing in trust-building activities according to the valid boundary found in two respective conditions.

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