

and the moderating role of switching cost

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Abstract. This study investigates the repeat purchase intention of experienced online buyers. In the research model, psychological contract violation is proposed as a formative second-order construct driven by distributive justice, procedural justice, interpersonal justice, and informational justice. Psychological contract violation is hypothesized to negatively affect satisfaction and trust in the online store, which in turn are hypothesized to positively affect repeat purchase intentions. Switching cost is hypothesized to negatively moderate the effects of satisfaction and trust on repeat purchase intention. Data collected from 162 of PChome's customers provide partial support for the research model. Results indicate that psychological contract violation is negatively associated with satisfaction and trust. Satisfaction is positively associated with buyers' repeat purchase intentions. A higher level of switching cost diminished satisfaction's effect on repeat purchase intention. Implications for theory and practice are discussed, and suggestions for future research are offered.

Keywords: Justice, psychological contract violation, satisfaction, switching cost, trust



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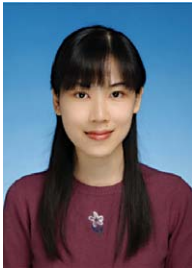
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1. Introduction

Online retailing has been an important channel or business model for many firms. In the increasingly competitive online retailing market, the main concern to online sellers has shifted from inducing consumers to adopt their online channels to motivating consumers to make repeat purchases through these channels and maintaining long term buy-seller relationships. Repeat customers are five times more profitable than new customers, but more than 50 percent of repeat customers seldom complete a third purchase [41]. Thus, it is important for online sellers to understand the particular reasons why buyers are willing to purchase repeatedly from those online stores.

Good relationship quality could reduce perceived uncertainty in order to increase the likelihood that a customer will develop a long-term relationship with a business [26]. Trust and satisfaction are the key constructs that capture the quality of a relationship. Customer satisfaction is particularly important to the success of online stores as it is posited as a major driver of post-purchase phenomena such as repeat purchase intentions. Many researchers have argued that trust is a crucial enabling factor in relations where there is uncer-

tainty, information asymmetry, and fear of opportunism [54, 32], as is the case in online shopping [67]. However, there has been little effort to empirically examine the impact of satisfaction relative to that of trust in motivating repeat purchases in the online shopping context.

The psychological contract has been conceptualized as one aspect of the social exchange relationship that exists between individuals and their organizations [73]. A psychological contract violation (PCV) occurs when one party perceives that the other has failed to fulfill its obligations or promises [77]. Based on the literature, PCV has a destructive impact on the trusting relationships between exchange parties [76]. When an employer breaks a basic rule in work relationships, trust and satisfaction decline [75]. Similarly, when an online seller breaks its promises in transactional relationships, mistrust and dissatisfaction occur. While PCV has been examined primarily within the context of organizational relationships, it should be central to our understanding of buyer-seller relationships in online marketplaces [66]. This study applies PCV to the buyer-seller relationship and examines its influence on buyers' satisfaction and trust in the online shopping context.

Anderson and Sullivan [4] found t-values for the satisfaction-repurchase intention relationship ranging from 1.1 to 13.1. Such variability highlights the possibility that the relationship between satisfaction and repeat purchase intention may be contingent on switching costs arising in the context of service provision [39]. The buyer-seller relationship may continue, not because of any sense of commitment or loyalty, but because of the high cost of switching sellers: the substantial time, energy and effort involved in developing and nurturing a new relationship [80]. Repeat purchases may not always occur despite a fair level of satisfaction and trust. Therefore, a core proposition is that the effects of satisfaction and trust on repeat purchase intention depend on the magnitude of the switching costs in the online shopping context. By operationalizing switching cost as a moderator, this study contributes to our enhanced understanding of the nature of the relationship between repeat purchase intention and its key determinants: satisfaction and trust.

2. Literature review and research model

2.1. Satisfaction

Within the context of the expectancy-disconfirmation model of customer satisfaction [58], customer

satisfaction occurs when the performance of the product or service meet the customer's expectations. Satisfaction is a post-activity measuring index that measures "the consumer's response to the evaluation of the perceived discrepancy between prior expectations and the actual performance of the product after its consumption" [88]. Measuring the degree of satisfaction of customers is rather critical since satisfaction with the service influences the customer's decision whether to continue using the channel [48].

In this study, satisfaction refers to a buyer's feelings of pleasure or disappointment resulting from comparing the perceived performance (or outcomes) of online shopping in relation to his/her expectations. Satisfaction is an affective response known to be associated with intense states of arousal that lead to focused attention on specific targets and may therefore impact ongoing behavior [62]. Oliver [58] theorizes that satisfaction is positively associated with future intention, both directly and indirectly via its impact on attitude. In the final step of the satisfaction formation processes, satisfaction determines whether or not the person intends to patronize the store in the future [82]. Support for the effect of customer satisfaction on repeat purchase intention is provided by Chitturi et al. [21]. Therefore, the following hypothesis is proposed.

H1: Buyers' satisfaction is positively related to their repeat purchase intentions.

2.2. *Trust in the online store*

According to Blau [12], trust is a key element in the emergence and maintenance of social exchange relationships. Bradach and Eccles [13] view trust as a control mechanism that facilitates exchange relationships characterized by uncertainty, vulnerability, and dependence. These characteristics are reflected in the online shopping environment, where buyers are unable to personally scrutinize the seller, physically examine the merchandise, or collect the merchandise upon payment. Buyers have limited information and cognitive resources available, and thus seek to reduce the uncertainty and complexity of online transactions by applying mental shortcuts [34]. One effective mental shortcut is trust, which can serve as a mechanism to reduce the complexity of human conduct in situations where people have to cope with uncertainty [51]. Because of limited control over the seller and the absence of proven guarantees that the seller will not engage in undesirable opportunistic behaviors, trust is

a critical aspect of online shopping [32]. Indeed, some researchers have suggested that buyers generally have stronger intentions to transact with online sellers whom they trust [22].

In general, trust is viewed as a set of specific beliefs dealing primarily with the benevolence, competence, and integrity of another party [27]. Benevolence is the belief that the trustee will not act opportunistically against the one who trusts, even when given the opportunity. Competence is the belief in the trustee's ability to fulfill its obligations as expected by the one who trusts. Integrity is the belief that the trustee will be honest and keep its commitments. Following Pavlou and Gefen [65], trust in the online store is defined as an online buyer's belief in the capability (ability to meet the obligation), benevolence (concern for the needs of online buyers), and integrity (unlikelihood of taking advantage of online buyers) of the online store. Trust can be viewed as a behavioral belief that creates a positive attitude toward the transaction behavior, which in turn leads to transaction intentions [65]. Lack of trust in an online store prevents buyers from engaging in online shopping because they are unlikely to transact with a store that fails to convey a sense of its trustworthiness, mainly by engendering fears of seller opportunism [37]. If online stores cannot be trusted to behave in accordance with the buyers' benevolence, competence and integrity beliefs, then there is no reason why buyers should expect to gain utility (e.g., effective searching for and buying of products) from using the interface [63]. Chiu et al. [22] showed that trust had a positive impact on repeat purchase intention in the online shopping context. Thus,

H2: Trust in the online store is positively related to buyers' repeat purchase intentions.

2.3. *Switching cost*

Switching costs is defined as the costs of switching from one supplier's product to another supplier's product [69]. Switching cost may include searching, transaction and learning costs, loyalty discount loss, habit, emotional costs and cognitive effort, together with the financial, social and psychological risks [30]. Burnham et al. [15] identified 3 types of switching costs: procedural costs associated with the loss of time and/or the requirement of effort, financial costs that are related directly to the loss of quantifiable monetary resources, and relational costs that are associated with the occurrence of psychological or emotional discomfort.

Switching costs represent an important avenue for better understanding and predicting customer retention [30]. Switching costs represent an impediment to exploring new suppliers. To the extent that individuals perceive costs or barriers to exit, they will tend to remain with their supplier [15]. High switching cost restrains customers from changing the buyer-seller relationships. Prior studies have suggested that switching costs, resulting from consumer perceptions of setup costs, learning costs, and highly personalized services, make customers feel that it is difficult to switch from the current online seller to a new one [87]. There has been considerable discussion of how switching cost can affect customer loyalty or repeat purchases in the online shopping context [87].

Following Burnham et al. [15], this study defines switching costs as the costs that buyers associate with the process of switching from one online seller to another. Porter [69] suggests that switching costs act as an exit barrier in a low satisfaction relationship. In other words, while a buyer is not satisfied with the online shopping experience, including the product, transaction process, and interaction with the customer service representative, the buyer may still stay in the relationship because the psychological and economic costs of switching are considered too high. Under low switching cost conditions, buyers would be expected to stay or leave based on their satisfaction with the relationship. Satisfaction is the key driver of repeat purchase intention because an unsatisfied buyer can easily exit the relationship (as switching cost is not a barrier) [80]. Under low switching cost conditions, satisfaction strongly impacts repeat purchase intention. Therefore, satisfaction should play a lesser role when switching cost (the exit barrier) is high and a greater role when switching cost is low. Similarly, Aydin et al. [9] argued that for customers with high switching cost, there will be a weaker relationship between trust and customer loyalty than for customers with low switching cost. Jones et al. [39] provided support for the notion that switching cost negatively moderates the relationship between satisfaction and repeat purchase intention. Aydin et al. [9] provided support for the notion that switching cost negatively moderates the relationship between trust and repeat purchase intention. Thus,

H3: Higher levels of switching cost reduce the influence of satisfaction on repeat purchase intention.

H4: Higher levels of switching cost reduce the influence of trust on repeat purchase intention.

2.4. *Justice and psychological contract violation*

Research in the field of organizational justice has flourished during the past decades. Organizational justice describes perceptions of fairness in organizations, by categorizing employees' feelings and evaluations about their treatment within an organization [78]. Before 1975, the study of justice was primarily concerned with distributive justice. Distributive justice refers to the fairness of outcome distributions or allocations. According to Adams' [1] equity theory, an individual's perception of the fairness of exchange relationships is determined by comparing the output/input ratio for oneself with that of referent others. It theorizes that individuals seek a fair balance between input and output and become satisfied and motivated whenever they feel their inputs are being fairly rewarded.

Thibaut and Walker's [86] studies of disputant reactions to legal procedures led to the development of their theory of procedural justice. Procedural justice refers to the perceived fairness of the processes by which outcomes are allocated or distributed among parties to an exchange. Bies and Moag [11] further distinguished the interpersonal aspect of procedural justice, labeled as interactional justice. Interactional justice refers to the quality of the interpersonal treatment people receive during the enactment of formal procedures. More recently, interactional justice has been considered to be made up of two facets: interpersonal justice and informational justice [35]. Interpersonal justice reflects the extent to which individuals are treated with politeness, dignity, and respect, and informational justice refers to the extent to which individuals are provided with information about or the rationale for outcomes and procedures.

Prior work examining the impact of the four dimensions of justice predominantly used this concept in work environments and conflict resolutions. Topics have included outcome satisfaction (e.g., pay and promotion) [24], job satisfaction [70], service recovery [23], and complaint handling [53]. Anderson and Weitz [3] observe that in marketing channel relationships, sellers with a reputation for justice engender greater trust and the expectation of continuity. Perceptions of justice have been linked to managerial and organizational trust [24], and customer satisfaction [84]. Prior research has operationalized the three or four dimensions of justice as first-order formative indicators of service recovery in e-retailing [23]. However, no study has operationalized the four dimensions of justice as first-order formative indicators of PCV and examined

their summative effect on both satisfaction with the online shopping experience and trust in the online seller.

The term psychological contract (PC) is defined as “an individual’s belief regarding the terms and conditions of the reciprocal exchange agreement between the focal person and another party” [76]. PCs, unlike expectations, entail beliefs regarding what other parties are obliged to provide, based on perceived implicit or explicit promises of reciprocal exchange [72]. PCs are generally classified as either relational or transactional in nature [73]. A transactional PC consists of specific, usually short-term monetary exchanges between parties. In contrast, a relational PC involves long-term and open-end relationships based on exchanges of socio-emotional factors (e.g., loyalty). Unlike Pavlou and Gefen’s [66] study which focused predominantly on transactional contracts, this paper focuses on the summative effects of relational and transactional PCs.

Psychological contract violation in this study refers to an online buyer’s perception that the online store has failed to fulfill the psychological contract [57]. PCV comes in two forms: renegeing or incongruence [57]. Renegeing occurs when either party to a PC knowingly breaks a promise to the other. Incongruence occurs when two parties to the exchange have different understandings about the obligations or promises. Prior research is consistent in its findings that PCV can have a negative impact on employees’ trust toward their employers, job satisfaction, and intentions to remain with the organization [72]. However, while the direct effects of PCV on individuals’ attitudes and behaviors have been frequently studied, some studies have explored the antecedents of PCV, including human resource practices and direct participation [36], while others have examined the impact of PCV by considering specific sources or triggers of it, such as justice perceptions [6].

Even though a major part of research on PCV concerns employee-organization exchange relationships, some researchers have applied this concept to buyer-seller relationships. For example, Pavlou and Gefen [66] have applied the PCV concept in the online marketplace context to examine the relationships among PCV with individual sellers, PCV with the community of sellers, trust in the community of sellers, and transaction intentions. In their study, PCV with individual sellers is proposed as a formative second-order construct driven by the occurrence of fraud, product misrepresentation, contract default, delivery delay, and failure to follow product guarantees and payment poli-

cies. It demonstrates the potentially influential role of PCV in understanding buyer-seller relationships.

Satisfaction is said to be a function of the perceived relationship between what one wants and what one perceives as being offered [50]. When an individual experiences a discrepancy between what was expected and what was received, he/she may experience a decrease in satisfaction [75]. It may be very difficult for an individual to obtain satisfaction from performing a behavior when he/she can no longer rely on the promised inducements. PCV has been found to be negatively related to satisfaction in the organizational context [83]. Thus,

H5: PCV is negatively related to buyers’ satisfaction.

According to Blau [12], social exchange relationships are based on trust. That is, when an individual does another a favor, he/she does so trusting that the other party will fairly discharge the obligation to reciprocate. When a buyer enacts a transaction with an online seller, a psychological contract is being made with the buyer that the online auction seller will keep its promises and fulfill its obligations. When a seller breaks a basic rule in exchange relationships, trust declines. Prior research has identified benevolence, competence, and integrity as the bases of trust within online transaction relationships. Each of these bases can be undermined by PCV. According to Robinson and Rousseau [75], if an exchange party reneges on its promises or obligations, that exchange party’s benevolence, competence, and integrity are questioned. Trust in the exchange party’s motives may be lost because a violation signals that the exchange party’s original motives to build and maintain a mutually beneficial relationship have changed or were false from the beginning. Therefore, PCV is hypothesized to decrease the initial trust that buyers have in the community of sellers.

H6: PCV is negatively related to buyers’ trust in the seller.

3. Research methodology

3.1. Measurement development

Measurement items were adapted from the literature wherever possible. A pilot study of the questionnaire was conducted using 20 graduate students with online shopping experience to assess the questionnaire’s logical consistency, the ease with which it could be understood, its item sequence, and its contextual relevance.

Items for measuring distributive justice focus on the correctness [81], quality [84], and delivery [81] of the product, and fairness in terms of time and effort [53]. Items for measuring product quality and product delivery are similar to Pavlou and Gefen's [66] items for measuring product misrepresentation and delay. Items for measuring procedural justice reflect a buyer's perceptions of fairness with regard to the seller's responses to questions [53], compliance with rules [14], and policies and practices [53]. Items for measuring interpersonal justice were adapted from Colquitt [24] to fit the context of online auctions. Items for measuring informational justice reflect the concept of providing timely and adequate information or explanations [79] about four aspects of buyers' concerns: products, transactional questions, policy changes [44] and order processing.

Satisfaction was measured with items based on Oliver and Swan [59], and Maxham and Netemeyer [53]. Trust assessment was based on Gefen et al. [32], and Pavlou and Gefen [65]. Switching cost was adapted from Burnham et al. [15], and Whitten and Wakefield

[92]. Repeat purchase intention was adapted from Parasuraman et al. [60], and Pavlou and Fygenon [64]. For all the measures, a seven-point Likert scale was adopted with anchors ranging from strongly disagree (1) to strongly agree (7) (see Appendix A).

3.2. Survey administration

The research model was tested with data from 162 PChome online shopping customers. PChome was chosen because it is a widely used online store in Taiwan. In order to target online buyers, a Web-based survey was employed. A banner with a hyperlink connecting to our Web survey was published on a number of bulletin board systems (BBS), chat rooms and virtual communities. To ensure that the four types of justice were properly measured, only individuals with online shopping and service recovery experience were invited to fill out this survey. The first page of the questionnaire ensured confidentiality and addressed the purpose of this study, the length of the questionnaire, and the incentive. Three randomly selected respondents

Table 1
Demographic information of respondents ($N = 162$)

Measure	Items	Percent	Measure	Items	Percent
Gender	Male	41.4	Gender	Female	58.6
Age	<20	1.9	Education	High school and Below	6.2
	20–24	24.7		College	4.9
	25–29	37.0		University	59.3
	30~	36.4		Graduate school	29.6
Shopping Frequency (times in one year)	1–3	17.9	Internet Experience (in years)	<7	6.2
	4–6	48.8		7–9	14.8
	7–9	22.2		10–12	56.8
	10~	11.1		13~	22.2

Table 2
Descriptive statistics of constructs

Constructs	Items	Composite Reliability	Mean (STD)	AVE
Distributive Justice (DJ)	4	0.87	3.10 (1.13)	0.63
Procedural Justice (PJ)	4	0.89	3.31 (1.24)	0.68
Interpersonal Justice (IPJ)	4	0.94	3.18 (1.04)	0.80
Informational Justice (IJ)	4	0.88	3.15 (1.12)	0.64
Trust in the Online Store (TR)	4	0.90	4.69 (1.15)	0.69
Satisfaction (SA)	3	0.94	4.84 (1.08)	0.85
Switching Cost (SC)	5	0.93	3.87 (1.43)	0.72
Repeat Purchase Intention (RI)	3	0.97	4.92 (1.13)	0.92

Note: Items of the four justice dimensions were reverse coded to represent PCV. Therefore, a mean value of 7 indicates "strongly disagree."

Table 3
Confirmatory factor analysis and cross-loadings

	DJ	PJ	IPJ	IJ	TR	SA	SC	RI
DJ1	0.80	0.40	0.41	0.34	-0.49	-0.55	-0.26	-0.53
DJ2	0.81	0.37	0.45	0.48	-0.46	-0.56	-0.20	-0.58
DJ3	0.77	0.45	0.45	0.36	-0.49	-0.47	-0.29	-0.47
DJ4	0.79	0.34	0.44	0.39	-0.43	-0.52	-0.26	-0.52
PJ1	0.37	0.82	0.56	0.59	-0.66	-0.53	-0.20	-0.35
PJ2	0.39	0.82	0.54	0.59	-0.61	-0.48	-0.12	-0.31
PJ3	0.46	0.83	0.53	0.36	-0.56	-0.46	-0.33	-0.40
PJ4	0.40	0.82	0.53	0.43	-0.58	-0.44	-0.27	-0.38
IPJ1	0.54	0.57	0.89	0.54	-0.68	-0.59	-0.20	-0.53
IPJ2	0.51	0.62	0.89	0.61	-0.75	-0.65	-0.28	-0.48
IPJ3	0.49	0.59	0.93	0.60	-0.71	-0.63	-0.24	-0.52
IPJ4	0.44	0.58	0.88	0.55	-0.65	-0.53	-0.24	-0.46
IJ1	0.35	0.43	0.46	0.78	-0.52	-0.48	-0.23	-0.37
IJ2	0.30	0.51	0.51	0.77	-0.58	-0.53	-0.37	-0.40
IJ3	0.49	0.59	0.57	0.89	-0.58	-0.53	-0.23	-0.40
IJ4	0.44	0.37	0.52	0.75	-0.50	-0.47	-0.06	-0.38
TR1	-0.54	-0.55	-0.61	-0.61	0.82	0.66	0.18	0.52
TR2	-0.36	-0.62	-0.64	-0.55	0.81	0.53	0.24	0.40
TR3	-0.49	-0.57	-0.58	-0.43	0.82	0.61	0.29	0.53
TR4	-0.53	-0.69	-0.74	-0.66	0.86	0.74	0.35	0.57
SA1	-0.60	-0.56	-0.63	-0.51	0.71	0.88	0.38	0.68
SA2	-0.64	-0.53	-0.62	-0.60	0.72	0.94	0.28	0.66
SA3	-0.63	-0.52	-0.60	-0.63	0.70	0.94	0.29	0.70
SC1	-0.32	-0.24	-0.26	-0.19	0.27	0.27	0.87	0.48
SC2	-0.15	-0.24	-0.19	-0.18	0.23	0.20	0.83	0.34
SC3	-0.38	-0.31	-0.34	-0.35	0.38	0.44	0.83	0.41
SC4	-0.24	-0.16	-0.15	-0.19	0.21	0.25	0.87	0.40
SC5	-0.21	-0.19	-0.16	-0.24	0.25	0.25	0.85	0.40
RI1	-0.63	-0.45	-0.58	-0.51	0.63	0.72	0.49	0.96
RI2	-0.65	-0.43	-0.55	-0.47	0.58	0.71	0.48	0.97
RI3	-0.62	-0.37	-0.48	-0.43	0.57	0.71	0.49	0.96

Note: Bold numbers indicate item loadings on the assigned constructs.

were contacted via e-mail in order to get their names and addresses for mailing the incentive: a US\$90 MP3 player. The returned questionnaires were initially screened for usability and reliability; complete and valid questionnaires were used for data analysis. Table 1 lists the demographic information of the respondents.

3.3. Data analysis

Data analysis utilized a two-step approach as recommended by Anderson and Gerbing [5]. The first step involves the analysis of the measurement model; the second step tests the structural relationships among latent constructs. The aim of the two-step approach

is to establish the reliability and validity of the measures before assessing the structural relationship of the model. SmartPLS 2.0 [71] was used because it allows latent constructs to be modeled as formative or reflective indicators. SmartPLS places minimal restrictions on sample size and residual distribution.

3.3.1. Measurement model

Second order constructs (i.e. PCVs) were approximated using the approach of repeated indicators (or repeated manifest variables) suggested by Chin¹. All

¹ Chin's PLS FAQ webpage—<http://disc-nt.cba.uh.edu/chin/plsfaq/plsfaq.htm> (last accessed 27 March 2011)

items of the four dimensions of justice were reverse coded to represent the injustice dimensions that form PCV. The adequacy of the measurement model was evaluated on the criteria of reliability, convergent validity, and discriminant validity. Reliability was examined using the composite reliability values. Table 2 shows that all the values were above 0.7, satisfying the commonly acceptable level. Additionally, the convergent validity of the scales was verified by using two criteria suggested by Fornell and Larcker [31]: (1) all indicator loadings should be significant and exceed 0.7, and (2) average variance extracted (AVE) by each construct should exceed the variance caused by measurement

error for that construct (i.e., AVE should exceed 0.50). As shown in Table 3, all items exhibited a loading higher than 0.7 on their respective construct, and as shown in Table 2, all the AVEs ranged from 0.63 to 0.92, thus satisfying both conditions for convergent validity.

Discriminant validity was tested using the following three tests. First, an examination of cross-factor loadings (Table 3) indicates good discriminant validity, because the loading of each measurement item on its assigned latent variable is larger than its loading on any other constructs [19]. Second, the correlations among all constructs are all well below the 0.85 threshold [43], suggesting that all constructs are distinct from

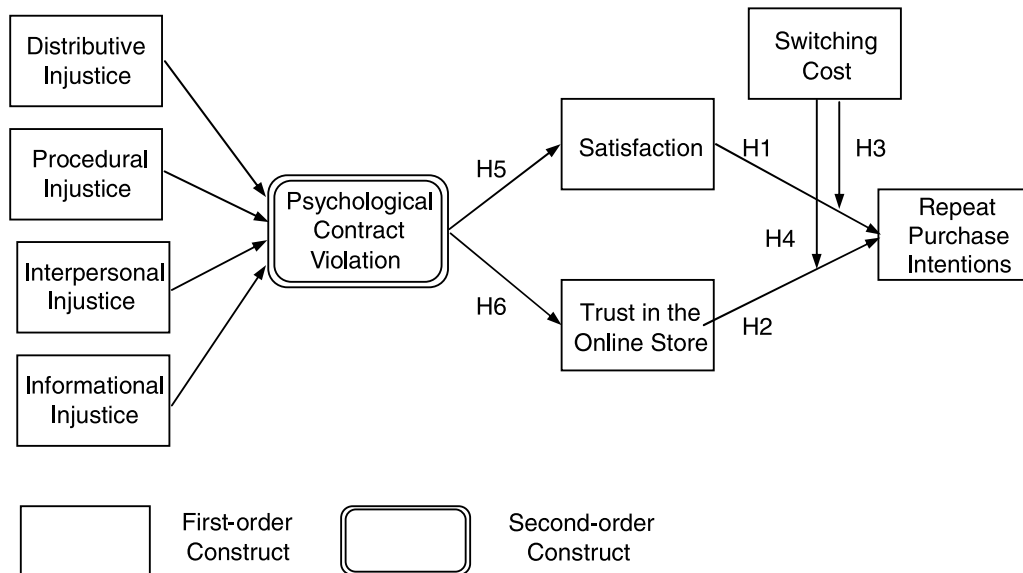


Fig. 1. Research model for online shopping repeat purchase.

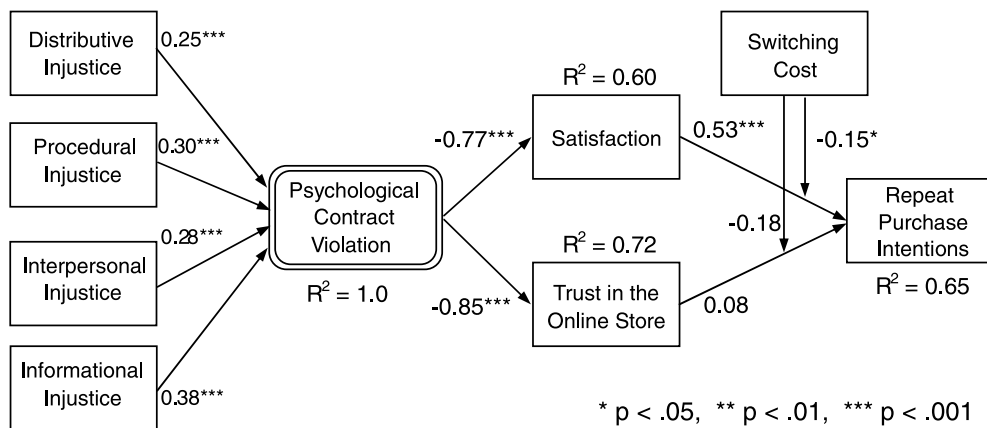


Fig. 2. SEM analysis of the research model.

Table 4
Correlation among constructs and the square root of the AVE

	DJ	PJ	IPJ	IJ	TR	SA	SC	RI
DJ	0.79							
PJ	0.49	0.82						
IPJ	0.55	0.66	0.89					
IJ	0.50	0.60	0.64	0.80				
TR	-0.59	-0.73	-0.78	-0.68	0.83			
SA	-0.68	-0.58	-0.67	-0.63	0.77	0.92		
SC	-0.32	-0.27	-0.27	-0.28	0.32	0.34	0.85	
RI	-0.66	-0.43	-0.56	-0.49	0.62	0.74	0.51	0.96

Note: The diagonal elements (in bold) represent the square root of the AVE.

each other. Third, the square root of the AVE from the construct is much larger than the correlation shared between the construct and other constructs in the model (Table 4) [31].

3.3.2. Structural model

In PLS analysis, examining the structural paths and the R-square scores of endogenous variables assesses the explanatory power of a structural model. Paths exhibiting a *P*-value less than 0.05 will be considered significant. Bootstrapping of the 162 cases was done with 500 samples for significance testing. Figure 2 shows the results of structural path analysis. Four out of six paths exhibited a *P*-value less than 0.05. Overall, the base model accounted for 65% of the variance of repeat purchase intention (Fig. 2). Thus, the fit of the overall model is fairly good.

4. Discussion and implications

The results of this study indicate that satisfaction has a direct effect on repeat purchase intention, while trust does not have a significant effect. Research suggests that the impact of trust decreases with online shopping experience, especially because of familiarity with the seller [20]. Van der Heijden et al. [90] suggest that trust is a threshold variable. This means that once a certain evaluation level is reached, the variable no longer contributes to repeat purchase intentions. Our findings indicate that trust had reached the threshold level in the minds of many of our respondents, and thus it was not a significant predictor of repeat purchase intentions. Trust has been recognized as a crucial enabling factor in online transactions while the respondents in this study—buyers

with service recovery experience—seemed relatively more concerned with satisfaction with online shopping.

Switching cost negatively moderated the influence of satisfaction on repeat purchase intention. The importance of satisfaction as a predictor of repeat purchase intention decreased as perceived switching cost increased. However, switching cost did not significantly and negatively moderate the influence of trust on repeat purchase intention. A possible explanation is that switching cost plays the role of a mediator between trust and repeat purchase intention, as opposed to a moderator. Further data analysis was conducted to examine the mediating effect of switching cost by following Baron and Kenny's [10] procedures, producing the following findings: (1) trust does not have a significant effect on repeat purchase intentions ($\beta = 0.11$); (2) trust has a significant effect on switching cost ($\beta = 0.33$); and (3) switching cost has a significant effect on repeat purchase intentions ($\beta = 0.28$), and the effect of trust on repeat purchase intentions is reduced ($\beta = 0.07$). Therefore, switching cost fully mediates the relationship between trust and repeat purchase intentions.

Results indicate that PCV has a strong negative impact on both satisfaction and trust. PCV is a second-order variable which is conceptually similar to the PCV construct in Pavlou and Gefen's [66] study. The path coefficient between PCV and trust in this study ($\beta = -0.85$) is much stronger than the path coefficient between PCV and trust in Pavlou and Gefen's [66] study ($\beta = -0.26$). A possible explanation is that Pavlou and Gefen's [66] study focused on transactional contracts, while our study focused on the summative effect of both relational (procedural, informational and interpersonal) and transactional (distributive) justice dimensions. The finding is consistent with Millward and Herriot's [56] suggestion that the exchange relationship is better characterized as containing varying degrees of both relational and transactional elements. The relative weights of the four dimensions of justice indicate that relational justice dimensions are more important than the transactional dimension.

Results indicate that, although all four justice types are significant formative indicators of PCV, their importance is not the same. Interpersonal justice is the strongest source of PCV, followed by procedural justice. A possible explanation for the dominant importance of interpersonal justice is that buyers have reasonably complete information about how the seller interacted with them (because of the information's relative transparency). Procedural justice ($t = 16.8$) is

more important than distributive justice ($t=11.1$) in forming justice. This finding is consistent with Folger and Greenberg's [29] argument that the method of determining outcomes may be more important than the actual outcomes achieved.

4.1. *Implications for theory*

In terms of theory building, this study developed a parsimonious model to examine the over-arching effects of the four dimensions of justice on customer satisfaction and trust in the online seller by modeling PCV as a second-order formative construct. From a descriptive standpoint, PCV represents an additional key element of buyer-seller relationships in online shopping that has been ignored in the literature. The integration of the four distinct dimensions of justice also results in a more descriptive model that better explains buyers' repeat purchase intentions in the online shopping context. In addition, the extent of explained variance in satisfaction and trust implies that the four dimensions of PCV are possibly among the most important antecedents of satisfaction and trust. The study extends the justice literature from employee-organization relationships to buyer-seller relationships, shedding light on the potential of the four dimensions of justice as sources of buyers' satisfaction with online shopping experience and trust in the sellers.

Interpersonal justice may be more potent, not only because of its intrinsic value (e.g., treating buyers with respect and politeness), but also because of its signaling value (e.g., as a "signal" for the transaction procedures) [70]. From a seller's perspective, it would be especially unfortunate to interpret our results to imply that distributive justice, procedural justice and informational justice may be paid less attention. The appropriate interpretation is that, given the situational context of our sample, further increases in distributive justice, procedural justice and informational justice may be less potent than similar increases in interpersonal justice.

According to Homans [38], people are fundamentally rational in character and all actions are motivated by the pursuit of a profitable balance of benefits over costs. The results suggest that other influential variables might exist which have stronger effects than trust on repeat purchase intentions in the uncertain online transaction environment. For example, future research should examine the possible impacts of variables associated with utilitarian value and hedonic value.

In addition, further data analysis indicates that switching cost plays the role of mediator in the relation-

ship between trust and repeat purchase intentions. The finding is that enhanced trust ensuing from psychological contract fulfillment may in turn increase buyers' repeat purchase intentions indirectly through switching cost. Since trust is not a significant predictor of repeat purchase intentions, an interesting area for future research is to identify other strong mediators between PCV and repeat purchase intentions.

A major finding of the study is the moderating role of switching cost in the relationship between satisfaction and repeat purchase intention. Our results suggest that the impact of satisfaction on repeat purchase intention alters under contingency conditions. A buyer will tend to purchase repeatedly despite less than ideal satisfaction if he/she perceives that the economic and psychological costs of switching to a new online seller are too high. It is important to search for moderating variables that turn simple main effects into more insightful conditional relationships [28]. Evidence presented suggests that a deeper understanding of satisfaction and repeat purchase intention is possible when interactions are taken into consideration.

4.2. *Implications for practice*

From a seller's perspective, it would be especially unfortunate to interpret our results to imply that trust may be paid less attention because of its relatively weak effect. A buyer may or may not purchase products from a trustworthy seller, but he/she will definitely not purchase products from an untrustworthy seller. Gaining buyer trust is largely under the control of sellers. This study suggests that sellers should pay attention to four ways of forming PCV and increase buyers' trust belief. An important way is to treat buyers with respect, sincerity, friendliness, and politeness during interactions with them. The quality of interpersonal treatment might signal to buyers that the seller cares for their well-being. This is good news for sellers, because the economic costs of interacting in a manner that raises the dignity of buyers are not likely to be as high as the costs associated with satisfying procedural, informational, or distributive justice.

For relationships in which the perceived switching cost is low, deterioration of online shopping satisfaction will strongly impact customer loyalty and could lead to client defection. Therefore, online sellers must pay extra attention to these relationships: providing customers fair transactions and good service can increase customers' perceptions of switching cost. If customers are satisfied with the present seller, they will not think

about switching because they will face considerable risk and uncertainty in choosing an alternative seller.

4.3. Limitations and Future research

We note that our findings must be interpreted in light of the study's limitations. First, the data were collected from a single online shopping website which also has a reputation as a portal and online shopping store. However, PChome is not unique in this respect. Other well-known online shopping websites in Taiwan are also multipurpose sites. Yahoo-Kimo (tw.yahoo.com), for example, is known primarily as a portal. More importantly, most online shopping websites use very similar principles and policies. Nonetheless, the generality of the model and findings to other online shopping websites requires further research. Second, the results may have been impacted by self-selection bias. Our sample comprises only active buyers. Individuals who have already ceased to shop at PChome might have different perceptions about the influence of the four dimensions of justice, satisfaction, trust and switching cost, and so could have been differently affected by them. Therefore, the results should be interpreted as explaining the repeat purchase intentions of current buyers only. Whether the results can be generalized to nonparticipants or to disaffected participants will require future research. Third, as the data are cross-sectional and not longitudinal, the posited causal relationships could only be inferred rather than proven. Finally, although this study suggests that justice can be applied in the context of online buyer-seller transactions, the link may not be as strong as that found in the context of service recovery or complaint handling. Future research could verify such an issue.

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Appendix A. Questionnaire items**Distributive justice (DJ)**

- DJ1 I think it was a reasonable price to pay for the product I received from PChome.
- DJ2 I got what I paid for from PChome.
- DJ3 I think the products that I received from PChome were the same quality as advertised.
- DJ4 I think what I got was fair compared to the effort and time I spent on online shopping.

Procedural justice (PJ)

- PJ1 PChome responds to buyers' requests or questions in a timely manner.
- PJ2 PChome complies with seller rules of transaction.
- PJ3 PChome has fair policies and practices to handle problems or disputes.
- PJ4 PChome responds to buyers' requests or questions in a consistent manner.

Interpersonal justice (IPJ)

- IPJ1 PChome treats me with respect.
- IPJ1 PChome treats me with sincerity.
- IPJ2 PChome treats me with friendliness.
- IPJ3 PChome treats me with politeness.

Informational justice (IJ)

- IJ1 PChome provides accurate information about products.
- IJ2 PChome provides adequate explanations or information in response to buyers' questions or queries.
- IJ3 PChome provides adequate information about transaction policies or any changes in those policies.
- IJ4 PChome provides adequate information about order processing.

Trust in the online store (TR)

- TR1 Based on my experience with PChome in the past, I know it is honest.
- TR2 Based on my experience with PChome in the past, I know it cares about buyers.
- TR3 Based on my experience with PChome in the past, I know it is not opportunistic.
- TR4 Based on my experience with PChome in the past, I know it provides good service.

Satisfaction (SA)

- SA1 I think purchasing products from PChome is a good idea.
- SA2 I am pleased with the experience of purchasing products from PChome.
- SA3 Overall, I am satisfied with the experience of purchasing products from PChome.

Switching cost (SC)

- SC1 It would take a lot of time and effort to change online sellers.
- SC2 Switching to new seller would probably involve hidden costs/charges.
- SC3 I worry that the service offered by other sellers will not work as well as expected.
- SC4 It takes a lot of time and effort to get used to a new seller.
- SC5 In general it would be a hassle changing from PChome to another seller.

Repeat purchase intention (RI)

- RI1 RI1 I plan to continue using PChome to purchase products.
- RI2 It is likely that I will continue purchasing products from PChome in the future.
- RI3 I consider PChome to be my first choice for future transactions.