A Domino Effect From Fairness to Online Customer Loyalty

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Distributive fairness, procedural fairness, and interactional fairness are often researched together in many previous studies. However, in order to explore the power of fairness, the second-order fairness needs to be created to find the way to customer loyalty. An online survey was developed and distributed in Vietnam. Seven hundred fifty-eight questionnaires were completed and analyzed using a two-step methodology (including confirmatory factor analysis and structural equation modeling). The results of the study showed that there is the domino effect to customer loyalty, which departs from fairness, with trust and customer satisfaction as two mediators.

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Recently, online customer loyalty has been the dominating behavioral issue in researches of customer service. The reason is that customer loyalty nowadays is critical to many aspects of the society, including the e-commerce field. The central thrust of the marketing activities of a firm is often considered to be development, maintenance, or enhancement of customers' loyalty toward its products/services (Dick & Basu, 1994). Indeed, customer loyalty constitutes an underlying objective for strategic marketing (Kotler, 1984) and creates an important background for developing a sustainable competitive advantage (Dick & Basu, 1994). The emergence of rapid market entry of innovative products as well as maturity conditions in certain product markets

increase the global competition and challenges marketers of e-companies (Dick & Basu, 1994). Although many previous studies on customer loyalty have received considerable attention, the research on customer loyalty as well as the paths to customer loyalty in the online shopping context is still limited.

Besides, other motivations of the study are to find out the determinants of customer loyalty in online shopping. Fairness, trust, and customer satisfaction have proved to be very important approaches to e-commerce. Previous studies have looked at the fairness as individual dimensions or the first-order constructs (distributive fairness, procedural fairness, and interactional fairness) that directly affect next constructs such as trust (Chiu, Lin, Sun, & Hsu, 2009) but few studies consider the fairness as the second-order construct to recognize the overall power of fairness. Particularly, the fairness as the second-order construct constituted by the first-order constructs (distributive fairness, procedural fairness, and interactional fairness) is expected to influence directly on trust. Therefore, the objective of this study is to exploit fairness as the second-order construct of the three dimensions: distributive fairness, procedural fairness, and interactional fairness to deeply understand the consensus of these three dimensions to the paths to customer loyalty in online shopping.

LITERATURE REVIEW

Fairness

At first, fairness was mainly understood as distributive fairness. Distributive fairness, also referred to as perceived fairness of outcomes, was studied by Homans (1961) and Adams (1963). Homans (1961) stressed that the rewards should be proportional to the investment in an exchange. Adams (1963) emphasized that there are correlations between inputs and expected outcomes. The expectation departs from the contributions to the exchange, for which the fair return will be hopefully gained.

Later, another stream of fairness—procedural fairness—was highlighted by Thibaut and Walker's (1975) work on the dispute-resolution process. Thibaut and Walker (1975) suggested that the reactions depend on the fairness of the decision-making procedures, independent of the influence of fairness or favorability of the outputs. Procedural fairness is utilized to ensure provision of accurate, unbiased, correctable, representative information, and conformance with standards of ethics or morality (Leventhal, 1980). M. Greenberg and R. Willis (Folger and Greenberg 1985) referred to procedural fairness as the equity of the process of how outcomes are determined. Two dimensions of fairness (distributive fairness and procedural fairness) had been dominant for a long time in the field of psychology and marketing. However, Bies and Moag (1986) separated interactional fairness from distributive fairness and procedural fairness. They defined interactional fairness as "interactional treatment people receive as procedures are enacted" (Bies & Moag, 1986, p. 386). Interactional fairness is also seen as the fair treatment by customer service representatives throughout the online shopping process (Chiu et al., 2009).

There have been controversies in terms of the relationships among the three dimensions of fairness. Some scholars (Moorman, 1991; Tyler & Bies, 1990) disputed that interactional fairness is a part of procedural fairness. Austin (1979, p. 24) clarified that "justice pertains not merely to outcome distributions, but also to how the distribution is arrived at and the manner by which it is implemented." However, other marketing scholars proved that interactional fairness is independent from distributive fairness and procedural fairness through their discriminant validity proofs (Blodgett, Hill, & Tax, 1997; Cohen-Charash & Spector, 2001; del Río-Lanza, Váquez-Casielles, & Díaz-Martín, 2009; Tax, Brown, & Chandrashekaran, 1998). More comprehensively, there are the correlations existing among dimensions of fairness. For example, the high level of correlation (0.78) between interactional and procedural fairness was found in the study of Skarlicki and Latham (1997); the significant correlation (0.33 and 0.72) between distributive fairness and procedural fairness was identified in the research of Mansour-Cole and Scott (1998) and Sweeney and McFarlin (1997) respectively; a substantially correlated relation among distributive, procedural, and interactional fairness with the minimum correlations of 0.42 in the finding of del Río-Lanza et al. (2009), 0.38 in the findings of Beugre and Baron (2001), 0.22 in a university setting and 0.14 in an organizational setting in the study of Colquitt (2001), and 0.33 in the research of Carr (2007).

From the above findings, fairness can be regarded as a second-order concept with three dimensions: distributive fairness, procedural fairness, and interactional fairness.

Trust

In e-commerce, trust is mainly conceptualized in the diversified ways based on two categories: (1) a set of specific beliefs relying on the integrity, benevolence, and ability of an exchange partner to achieve a desired but uncertain objective in a risky situation (McKnight, Choudhury, & Kacmar, 2002; Pavlou & Fygenson, 2006); and (2) a general belief that people are trustworthy (Gefen, 2000; Jarvenpaa, Tractinsky, & Saarinen, 1999). The definition in this paper relies on the first category because trust will be seen from the aspect of beliefs of customers about the quality of e-vendors, not about the willingness to be vulnerable or secure. Thus, trust is defined in this study as the specific beliefs in the competence, benevolence, integrity, and trustworthiness of an e-vendor.

Customer Satisfaction

In e-commerce, there are many definitions of customer satisfaction in the literature. Customer satisfaction is conceptualized according to two main groups: (1) a cognitive process comparing what a customer receives (rewards) against what they satisfy to achieve the service (costs) (Evanschitzky, Iyer, Hesse, & Ahlert, 2004; Szymanski & Hise, 2000); and (2) an emotional feeling departing from an evaluative process (Anderson & Srinivasan, 2003). In this study, the definition was conceptualized in unison with the second group because they similar to each other, the study focuses on contentment of customers rather than cognitive process. Therefore, customer satisfaction in online shopping is defined as the contentment of the customers after shopping in a given virtual store.

Customer Loyalty

Customer loyalty, the most common variable for indicating behavior, is defined in marketing as a customer's repurchase intention of a specific company, store or product/service (Kotler & Armstrong, 1989). Jacoby and Chestnut (1978) observed customer loyalty as repeat purchasing in primary panel data. It becomes clear that consumers' disposition to re-buy is a pivotal element of loyalty (Gremler & Brown, 1996). Dick and Basu (1994) posited that true loyalty only exists when repeat patronage coexists with the concept of a high relative attitude, which reflects the degree to which the consumer's evaluation of one product/service dominates that of another. Azjen and Fishbein (1980) defined customer loyalty as an attitude that denotes the degree to which a consumer's disposition towards a product/service is favorably inclined. Therefore, based on previous study, in this paper, customer loyalty is defined as the customer's favorable attitude toward a website causing repeat purchasing behavior.

RESEARCH MODEL AND HYPOTHESES DEVELOPMENT

The conceptual research model of the study is shown at Figure 1.

Fairness

The perception of fairness, which is a secondorder construct of the three dimensions, might influence trust because three sub-dimensions of fairness have been found to be influent trust. In terms of distributive fairness, Pillai, Williams, and Tan (2001) identified the significant relationship of distributive fairness with trust. In the case of e-commerce, Chiu et al. (2009) proved that distributive fairness influences trust during the online shopping process. In terms of procedural fairness, trust is found to depart from procedural fairness (Pearce, Bigley, & Branyiczki, 1998).

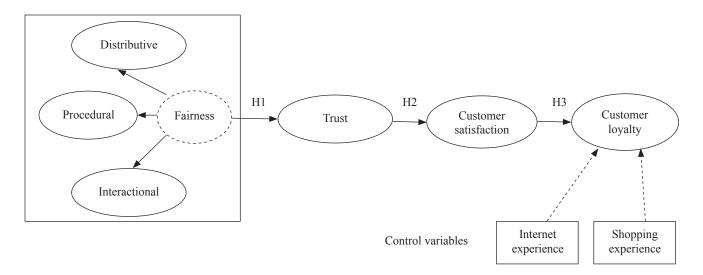


Figure 1. Analysis results.

Note: illustrates the first – order construct illustrates the second – order construct Source: authors

Cohen-Charash and Spector (2001) confirmed that procedural fairness results in trust in organizations. In e-commerce, Chiu et al. (2009) posited that the perceived fairness of policies and procedures of shopping in the virtual markets influence trust. In terms of interactional fairness, interactional fairness has been found to be influent trust. In the study of Aryee, Budhwar, and Chen (2002), they proved that interactional fairness is related to trust in an organization and in supervision. Trust, as well as organizational commitment, are empirically associated with interactional fairness (Cohen-Charash & Spector, 2001). Chiu et al. (2009) empirically proved that interaction fairness positively impacts trust in online shopping. Thus:

Hypothesis 1: Fairness significantly influences trust.

Trust

The trust – customer satisfaction link has appeared in numerous studies. Based on social exchange theory (Blau, 1964), some scholars theorized that trust evaluation will exert a direct influence on perceptions of customer satisfaction (Chiou, 2003; Singh & Sirdeshmukh, 2000). The findings of Szymanski and Hise (2000) reflected that trust is the important factor driving online customer satisfaction. In e-commerce, trust is empirically proved to be the strongest factor affecting customer satisfaction in the study of Chiu et al. (2009). Thus:

Hypothesis 2: Trust significantly influences customer satisfaction.

Customer Satisfaction

In the research of Oliver (1980), customer satisfaction is a reliable predictor of re-purchase intentions. Anderson and Srinivasan (2003, p. 125) suggested that "a dissatisfied customer is more likely to search for information on alternatives and more likely to yield to competitor overtures than a satisfied customer." Swan and Trawick (1981) argued that customer satisfaction determines intentions to patronize or not patronize the store in the future. Other studies empirically support the impact of customer satisfaction on customer loyalty in online shopping (Chang & Chen, 2009; Devaraj, Fan, & Kohli, 2002). Thus:

Hypothesis 3: Customer satisfaction significantly influences customer loyalty.

Control Variables

Internet experience. More internet experience motivates individuals to implement online transactions (Chiu et al., 2009; Pavlou, Liang, & Xue, 2007). Therefore, internet experience is considered the control variable on customer loyalty.

Shopping experience in e-commerce. Shopping experience is used as the control variable on customer loyalty in the study of Chiu et al. (2009). Shim, Eastlick, Lotz, and Warrington (2001) argued that shopping experience leads to the impacts on future online intentions. Therefore, shopping experience is considered to be the control variable on customer loyalty.

RESEARCH METHODOLOGY

Measures of the Constructs

The online questionnaire was designed to measure research constructs using multiple-item scales adapted from previous studies that reported high statistical reliability and validity. Each item was evaluated on a five-point Likert scale ranging from (1) Strongly disagree to (5) Strongly agree. Distributive fairness, procedural fairness, and interactional fairness were measured using scales adapted from Folger and Konovsky (1989). The questionnaire containing trust items were adopted from Gefen, Karahanna, and Straub (2003) while items to assess customer satisfaction and customer loyalty were adapted from Srinivasan, Anderson, and Ponnavolu (2002) and Anderson and Srinivasan (2003).

Data Collection

The data was collected by the online questionnaire through the website www.nothan.vn

in 2011. The participants were volunteers who were interested in the research topic and had experience with online shopping. The survey collected 1,025 responses. Two hundred sixtyseven out of 1,025 responses were invalid and incomplete; the remaining 758 questionnaires were used for the analysis. Demographically, 70% of the respondents were women and 30% of respondents were men; 32% of respondents were aged less than 20 and 68% of respondents were aged more than 20; 90% of respondents' education was at university or above whereas 10% of respondents' education was high school or less; 50% of respondents were students whereas 49% of respondents were employed and 1% were unemployed, housewife, or retired.

DATA ANALYSIS

Two steps (confirmatory factor analysis [CFA] was developed to check reliability and validity and then the structural equation modeling [SEM] was estimated to test hypotheses) were carried out by the maximum likelihood method using the AMOS software (version 20).

Reliability was examined using the composite reliability (CR) indicator. As shown in Table 1, the values of all constructs were above 0.7, which is the commonly acceptable level for measurement model. Regarding the convergent validity, CFA loading of all items range from 0.748 to 0.945, above the recommended cut-off level of 0.60, suggested reasonable convergent validity.

Discriminant validity was tested based on Fornell and Larcker (1981) by the greater square root of the AVE than the correlation shared between the construct and other constructs in the model. In Table 2, all the diagonal values (the square root of the AVE) exceeded the inter-construct correlations; hence the test of discriminant validity was acceptable. Therefore, it can be concluded that the scales have sufficient construct validity.

Table 1.

Factor	Measures	CFA loading	Critical ratio (t-value)	CR	AVE
Distribu	tive fairness (DF)			0.85	0.65
DF1	I think what I got is fair compared with the price I paid	0.837	24.698*		
DF2	I think the value of the products that I received from the online store is proportional to the price I paid	0.834	-		
DF3	I think the products that I purchased at the online store are considered to be a good buy	0.748	21.880*		
Procedu	ıral fairness (PF)			0.92	0.79
PF1	I think the procedures used by the online store for handling problems occurring in the shopping process are fair	0.868	36.403*		
PF2	I think the policies of the online store are applied consistently across all affected customers	0.873	32.522*		
PF3	I think the online store would clarify decisions about any change in the Website and provide additional information when requested by customers	0.932	-		
Interact	ional fairness (IF)		0.95 0.87		
IF1	Customer service representatives of the online store treat me with respect when interacting with me through email or telephone	0.945	46.146*		
IF2	Customer service representatives of the online store treat me with friendliness when interacting with me through email or telephone	0.932	46.146*		
IF3	Customer service representatives of the online store treat me with politeness when interacting with me through email or telephone	0.913	-		
Fairnes	s (FA)				
DF	Distributive fairness	0.761	-		
PF	Procedural fairness	0.851	17.674*		
IF	Interactional fairness	0.879	19.040*		
Trust (7	TR)			0.89	0.72
TR1	Based on my experience with the online store in the past, I know it is honest	0.834	-		
TR2	Based on my experience with the online store in the past, I know it keeps its promises to customers	0.852	27.941*		
TR3	Based on my experience with the online store in the past, I know it is trustworthy	0.862	28.406*		
Custom	er satisfaction (CS)			0.89	0.73
CS1	I am satisfied with my decision to purchase from the Website	0.816	28.733*		
CS2	I think I did the right thing by buying from the Website	0.871	28.310*		
CS3	If I had to purchase again, I would feel differently about buying from the Website	0.880	-		
Custom	er loyalty (CS)		0.9	92 0	.79
CL1	I believe that this is my favorite retail website	0.868	-		
CL2	I try to use the website whenever I need to make a purchase	0.923	35.211*		
CL3	When I need to make a purchase, this website is my first choice	0.882	32.765*		

CFA Results for Measurement Model

Construct	Construct								
Construct	DF	PF	IF	FA	TR	CS	CL	IE	SE
DF	0.806								
PF	0.648	0.889							
IF	0.669	0.748	0.933						
FA	0.761	0.851	0.879	-					
TR	0.653	0.731	0.755	0.859	0.849				
CS	0.637	0.713	0.737	0.838	0.804	0.854			
CL	0.469	0.524	0.541	0.616	0.602	0.747	0.889		
IE	0.013	0.015	0.016	0.018	0.028	0.033	0.077	1	
SE	0.059	0.066	0.068	0.078	0.029	0.126	0.147	0.163	1

Table 2.Correlation of Latent Variables

SE0.0590.0660.0680.0780.0290.1260.1470.1631Note: Diagonal elements (in bold) are the square root of the average variance extracted (AVE). Off-diagonal elements are the correlations among constructs; CI, customer interface quality; PS, perceived security; CS, customer satisfaction; TR, trust; PU, perceived usefulness; PF, procedural fairness; DF, distributive fairness.

Source: author

Table 3.Overall Model Fit Indices for the Research Model

Model fit Indices	Results	Recommended value	
χ²/df	4.207 (χ^2 = 689.899; df=164)	≤5.0	
GFI	0.916	≥0.9	
CFI	0.957	≥0.9	
TLI	0.951	≥0.9	
NFI	0.945	≥0.9	
AGFI	0.892	≥ 0.8	
RMSEA	0.065	≤ 0.08	

Source: authors

In order to check the fit of the models, some indices need to be satisfied above the recommended values: a chi-square with degrees of freedom (χ^2 /df), goodness-of-fit index (GFI), comparable fit index (CFI), tucker lewis index (TLI), normed fit index (NFI), adjusted goodness of fit index (AGFI), and root mean square error of approximation (RMSEA). Table 3 summarizes the overall fit indices of the research model. The fit indices surpass the recommendations suggested by earlier studies of Wheaton , Bengt , Duane, and Gene (1977), suggesting adequate model fit.

Figure 2 shows the result of the SEM. All hypotheses are supported. H1 is supported by a significant co-efficient of 0.68 from fairness to trust. Trust was associated with customer satisfaction with a coefficient path of 0.39, therefore H2 is supported. H3 posited that customer satisfaction would positively affect customer loyalty. The results were significant with a coefficient path of 0.40, and therefore H3 is supported.

The explanatory power of the research model was shown in which the model accounts for

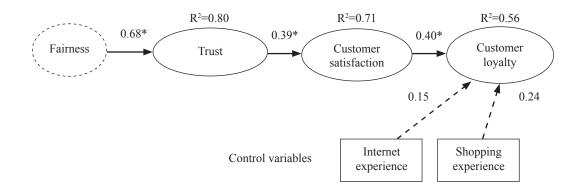


Figure 2. Analysis results.

Note: **p<0.01

illustrates the first – order construct illustrates the second – order construct Source: authors

56-80% of variance (R^2 score). In detail, the research model accounts for 80% of the variance of trust; the research model accounts for 71% of the variance of customer satisfaction; the research model accounts for 56% of the variance of customer loyalty.

The paths from two control variables (Internet experience and shopping experience) did not have the significant effect on customer loyalty.

DISCUSSION AND IMPLICATIONS

In general, the study supports the theoretical model and hypotheses among constructs. A number of findings are worth mentioning:

First, previous studies related to fairness have focused on individual sub-dimension of fairness (distributive fairness, procedural fairness, and interactional fairness). The results of the study theoretically contribute to the fairness research by indicating that fairness can be conceptualized as a second-order construct that is measured by distinct factors: distributive fairness, procedural fairness, and interactional fairness. By establishing the second-order fairness construct, fairness has the power to influence trust in online shopping. Moreover, in previous studies (Chiu et al., 2009), when three dimensions stand individually, the research model accounts for 65% of variance of trust but in this study when fairness was located as the second-order construct with such three dimension, the extent of explained variance in trust is 0.80. It implies that fairness is possibly one of the most important antecedents of trust in online vendors, shedding light on the trust-building potential of the second-order fairness factor from three dimensions (distributive fairness, procedural fairness, and interactional fairness).

Second, trust has significant impacts on customer satisfaction. The results seem to support the findings of previous studies (Chiou, 2003; Chiu et al., 2009) which highlighted the importance of trust in forming customer satisfaction. In addition, the extent of explained variance in trust (R2=0.71) emphasizes that trust plays a critical role in increasing customer satisfaction in e-commerce. The explanation is that customers wonder whether they can believe in a virtual market that contains high risks. Therefore, if customers trust the website, they will quickly satisfy with transactions and continue shopping there.

Third, customer satisfaction is the dominant predictor of loyalty intention with the efficient

path of 0.40. Additionally, the R² value of 0.56 shows that customer satisfaction accounts for 56% of the variance of customer loyalty. It seems appropriate to suggest that creating individuals' perceptions of customer satisfaction is a primary means of enhancing customers' loyalty in e-commerce.

Fourth, the mediator roles of trust and customer satisfaction are shown. According to Mackinnon and Warsi (1995), in order to check mediator role, the relationship between the independent variable and the mediator must first be investigated; and second, a relationship between the mediator and the dependent variable should be assessed. As the result of the study, both trust and customer satisfaction are satisfied. Regarding trust, fairness significantly influences trust; and trust significantly influences customer satisfaction. Regarding customer satisfaction, trust significantly impacts customer satisfaction; and customer satisfaction significantly impacts customer loyalty. Hence, it can been said that if e-vendors want to enhance customer lovalty, e-vendors should start from fairness as the solid anchor, and from there, create the domino effects on customer loyalty through trust and customer satisfaction.

LIMITATION AND FUTURE RESEARCH

Despite contributing to the literature and reporting some interesting findings, the current study does have some limitations that open avenues for future research.

First, there were issues in terms of the sample collection that could be improved. The questionnaire was designed to force the respondents to answer all the questions. The online survey could add some choices in which the respondents can choose not to answer questions. In addition, though we took care to translate the questionnaire in Vietnamese, the translation still could influence the results of the factor structures.

Second, interactional fairness has been deeply exploited. Some studies (Lee, Joshi, & Kim,

2011) have further divided interactional fairness into interpersonal and informational fairness. Therefore, it will be another direction for the next study to research fairness as the secondorder construct with four dimensions: distributive fairness, procedural fairness, interpersonal fairness, and information fairness.

Third, regarding post-consumption intention, this study went so far as customer loyalty. It would be more comprehensive if the study focused on word-of-mouth and willingness to pay more as well, which were the major drivers of success in e-commerce (Anderson & Mittal, 2000; Reichheld, Markey, & Hopton, 2000).

CONCLUSION

Fairness will be viewed comprehensively if it can be considered a second-order construct with three sub-dimensions: distributive fairness, procedural fairness, and interactional fairness. E-vendors should pay more attention to enhancing fairness to create solid anchors, because from solid anchors, trust and customer satisfaction will be established, with the domino effects spilling over to customer loyalty. Building customer loyalty is not difficult if practitioners recognize the flow of such domino effects and take advantage of the key role of fairness to consolidate the strategy of the companies.

Researchers can consider our study as the reference to explore the spectrum of online shopping behaviors and the post-consumption intention to motivate and maintain customer loyalty.

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