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Whether our Virtual Commercial Environments are Polite Enough or not? An Instrument for Gauging the Degree of Politeness in e-Tailers

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Abstract

Politeness issues in virtual commercial contexts received rare attention from both practitioners and researchers. This work developed an instrument for gauging degree of politeness in online retailers' storefronts. The instrument's reliability and validity were confirmed through empirical data analysis. A second-order confirmatory factor analysis revealed that online consumers' tendency in paying relative more attention to their rights being respected and gaining useful information while they are assessing online retailers' politeness. Using the instrument, online merchants and 3rd-parties can measure the degree of politeness in online retailers. In addition, patrons' tendency in paying more attention to particular factors while they were evaluating the politeness guides online merchants to allocate limited resources more efficiently. Besides its practical applications, this work sets a stage for future studies trying to investigate the relationships between the politeness construct and other constructs such as customer satisfaction, trust, repurchase intention, profitability, and others that interest business administrators.

JEL Classifications: C3, L8, M1

Keywords: e-commerce, online storefronts, politeness, instrument, SEM, confirmatory factor analysis

1. Introduction

1.1. Politeness and Successful Business

"Will you tend to leave a store after encountering an impolite treatment?"

"Will you tolerate repeated verbal or behavioral impoliteness in a store and keep shopping in there?"

"Are you willing to visit a store that has been mentioned by your friends and family members due to its impoliteness?"

"Will you recommend other people a store in which you experienced impoliteness in person?"

Obviously, general public's answers to the above questions broadly describe that politeness is a significant issue within commercial contexts. A merchant will lose its customers gradually if it cannot treat them politely or make them lose faces (Wan, 2013); even it has many merits such as competitive pricing, plentiful product choices, advanced facilities, convenient layout, etc. Impoliteness in commercial contexts often hurts people's feelings and faces, thus will overshadow the above merits, and leave customers negative impression and words-of-mouth. Based on practical experiences and rationales, politeness in commercial contexts influences peoples' perceptions, satisfaction, and loyalty. Many prior studies also support this observation directly or indirectly. Among others, Berry (1995), Reynolds and Beatty (1999) found that rapport consisting of enjoyable interactions and personal connections, is a major determinant affecting customers' satisfaction and loyalty, which contribute to a successful business. Campbell and Davis (2006) further pointed out that politeness plays a key role in early stage of nourishing rapport between sales representatives and customers. In consequence, merchants not likely to build a satisfying and loyal customer base without paying attention to the politeness in their commercial contexts. In fact, the importance of politeness goes beyond the scope of commercial contexts; politeness broadly refers to legitimate and considerate interactions among persons, which was found as a foundation of modern civilization (Whitworth & De Moor, 2003) and a key factor upholding prosperous and peaceful societies (Fukuyama, 1992).

The politeness theory introduced by Penelope Brown and Stephen Levinson (1987) gave a specific interpretation about politeness; it focuses on verbal communication among persons. In their opinions, politeness is the expression of speakers' intention to mitigate face threats caused by particular face threatening acts toward addressees. Besides, politeness consists of positive and negative parts; the positive politeness involves showing speaker's approval, solidarity, and understanding to addressees, while the negative one deals with lessening potential imposition. Since its inception, their politeness theory has being influenced many relevant research works, some in the area of business administration (Dunn, 2011).

1.2. Awareness of Politeness in Virtual Contexts

Prior study found that people reciprocally expect politeness from computers, just like they treat their computers with politeness (Nass, 2004). The findings indicate that people do care about the politeness of computers with which they interact. When waves of computer and Internet keep on permeating into various aspects of our daily life, customers eventually will well recognize the politeness issue in online storefronts, just like they currently do in physical commercial contexts. The practical implication is that, besides factors including visual design, functionality, operational procedure, and performance, the construction of a competitive online storefront, i.e., an e-commerce Web site, needs to take politeness issues into account.

In the age of computers and Internet, theoretical works about politeness focusing on linguistic strategies in verbal communications among persons become inadequate to interpret, assess, and manage the interactions between computers and people. In light of this inadequacy, Brian Whitworth established a "polite computing" framework (Whitworth & Ahmad, 2013) that comprises five principles for judging whether computer-initiated actions or contents in five different facets are polite or not, based on the exhibited courtesy from users' perceptions. The framework is a proper basis for assessing the extent to which an online storefront treats its patrons with courtesy, and development of the courtesy instrument in the present work was based on their framework accordingly.

1.3. Motivation and Goals

In a civilized society, people dislike verbal and behavioral impoliteness, regardless of contexts. Obviously, various forms of impoliteness in virtual storefronts that customers tend to avoid will be

harmful to online merchants. Both prior studies and rationales told us that politeness issues in e-commerce contexts are well worth notice and consideration, but it is still vague about how to manage it in virtual commercial contexts. Plainly, to effectively manage the politeness issue in e-commerce contexts, the ability to measure the degree of courtesy shown by a particular online storefront is essential.

Due to the lack of such an assessment mechanism, this research work aims to develop an instrument for gauging the degree of courtesy exhibited in an online storefront through patrons' perceptions. Besides, the reliability and validity of the instrument and its underlying model need to be examined against empirical data.

2. Literature Review

2.1. Politeness in Commercial Contexts

Many prior academic studies (Matzler, Sauerwein, & Heischmidt, 2003; Millán & Esteban, 2004; Zineldin, 2006) confirmed the influence of politeness on customer satisfaction, which is a key driver of customer loyalty (Fornell, Johnson, Anderson, Cha, & Bryant, 1996), sustainable revenue (Bolton, 1998; Hallowell, 1996), and finally successful business. In addition, according to prior studies that developed measurements for measuring service quality in different segments, politeness was treated as one of the determinants of business' service quality (Nelson & Nelson, 1995; Parasuraman, Zeithaml, & Berry, 1985), which in turn has been proved as a significant influence on customer satisfaction (Olorunniwo, Hsu, & Udo, 2006; Sivadas & Baker-Prewitt, 2000), and on buyers' re-purchasing and referral behaviors (Seiler, Webb, & Whipple, 2000). Moreover, from the viewpoint of synergistic social interactions, Whitworth and Liu (2009) believed that politeness can increase trade; a non-zero-sum activities where all parties win, which supported that politeness is a facilitator for conducting business.

2.2. Politeness in Computing Environments

While computers are continuously penetrating people's work, life, education, and other activities, it is rational that people will pay increasing attention to the politeness of computers with which they interact often. In consequence, there is a need to study the politeness management issues in virtual contexts such as online commercial Web sites. Brian Whitworth and his colleagues responded to this need; they gave a 5-item definition of software politeness based on theories about sociology and socio-technical interactions (Whitworth & Ahmad, 2013):

1) Respect user's rights; polite software respects and thus does not preempt users' rights. Besides, polite software does not utilize information before obtaining the permission from its owner.
2) Behave transparently; polite software does not change things in secret, in contrast, it clearly declares what it will do or is doing, the real purpose of the action, and who it represents.
3) Provide useful information; polite software helps users make informed decisions by providing useful and comprehensible information, in contrast, they avoid providing information that distract or even mislead users.
4) Remember users; polite software memorizes its past interactions with a specific user, thus can bring that user's choices and preferences to future interactions.
5) Respond to users with fidelity; polite software must respond to users' requests faithfully rather than trying to pursue its own agenda.

This 5-principle definition is applicable to all forms of computer software with which users interact to perform particular tasks, such as standalone software, Web sites (i.e., Web-based software), APPs on mobile devices, software as a service (SaaS), etc. Obviously, the politeness in Web-enabled contexts including online storefronts can be assessed according to the operationalized form of this definition. Nevertheless, there is no reported work that investigated how to assess it quantitatively yet.

2.3. Measurement of Politeness

Intuitively, the politeness is an abstract concept and thus hard to measure it directly. However, some researchers found ways to measure it due to the necessity of embedding this concept into people's behavioral model. The conventional "politeness theory" introduced by Brown and Levinson in the 80s' of the last century has been operationalized to build instruments for measuring politeness in different physical contexts. Among others, Dawn Lerman (2006) built a scale for measuring politeness in order to examine the relationship between consumer politeness and their propensity to engage in various forms of complaining behavior. The 6 items in her scale were drawn from the politeness theory, 3 on positive and 3 on negative side. The 6 items collectively assess to which extent subjects are polite while they are expressing their thought and opinions verbally.

There is no reported instrument for measuring the politeness in online storefronts, where computer-initiated actions and computer-generated contents affect users' feelings and perceptions. So, how online storefronts show adequate courtesy to their patrons should be the focus while studying the politeness issues in virtual commercial contexts. Obviously, the conventional politeness theory focusing on linguistic strategies in verbal communication is not an adequate basis for that purpose; instead, the polite computing framework focusing on how computers treat users with politeness is a proper one.

3. Research Approach

To operationalize the polite computing framework presented by Brian Whitworth (2013), the present work drew 20 questionnaire items according to the 5 principles of polite computing, and examined the reliabilities of the instrument and its factors. Then, goodness-of-fit of three alternative models were checked, the most appropriate model was selected accordingly, followed by examining its reliability, construct validity, and factor structure.

3.1. Instrument Development

Based on 5 principles of the polite computing framework, a group of 32 college students with seasoned online shopping experience (> 5 years) were invited to draw observable action items, which they thought were able to assess to what extent visited online storefronts conforming to latent principles of the polite computing concept. Then, a focus group comprising 5 faculty members with expertise in information and/or business administration concluded total 20 questionnaire items; 4 items are associated with each construct corresponding to one particular principle. Each item aims to judge to what extent an online storefront treats patrons politely while it is performing a particular function. A pre-test of the questionnaire was performed by 10 students majored in information management, minor adjustment was made subsequently. Through this process, both face and content validity of the instrument for gauging degree of politeness in online storefronts were confirmed.

Each item was assessed by a 7-point Likert scale, with higher scores representing the high end of the politeness scale; 1 indicates "strongly be dissatisfy with" while 7 means "strongly be satisfy with" a particular item. By summing up each item's points, the instrument reports the overall degree of courtesy shown by online storefronts. This instrument is called a degree of politeness in online storefronts (DEPOS) instrument in this article. Table 1 summarizes the 20 items in the instrument.

Table 1. Descriptions of items in the DEPOS instrument

Construct (latent var)	Obserable Variable	descriptions
Respect Right of Users	RR1	online storefronts played noisy but hard-to-stoppable background music
	RR2	online storefronts popped-up disturbing and irrelevant messages from time to time
	RR3	online storefronts exploited membership information to send SPAM advertisement
	RR4	online storefronts changed the default setting of homepage in my browser
Behave Transparent	BT1	online storefronts installed software or change configuration on my devices stealthily
	BT2	online storefronts asked me to fill questionnaires without disclosing purposes honestly
	BT3	online storefronts twisted images in product catalogues to make products look more attractive
	BT4	online storefronts added member to some online communities/groups without notification
Useful Information	UI1	online storefronts categorized their products well, and/or offered search functions
	UI2	online storefronts showed broken links or guided patrons to wrong destination via misleading link description
	UI3	online storefronts provided inventory (in-stock) or available time of products
	UI4	online storefronts provided me recommendation after buying a product, but there is low or even no relevance (to my purchased product) in their recommendation
Familiar With Habits	FH1	online storefronts asked me to input my username every time when I tried to enter it
	FH2	online storefronts recorded what I shopped in the past
	FH3	online storefronts keep track of my periodical purchasing behaviour
	FH4	online storefronts asked me to provide payment/contact information every time when I checked-out
Fidelity Response	FR1	online storefronts placed other products' advertisements within a checking-out page
	FR2	online storefronts ignored or changed my requests; such as payment method choice
	FR3	online storefronts popped out a window, but directed me to somewhere when I clicking its "close" button/icon
	FR4	online storefronts delivered a product/service that is not fully similar to the one I saw in their catalogue

3.2. Empirical Data Collection - Participants and Procedure

An open online questionnaire was used to collect participants' opinions; the participants were, in part, recruited from undergraduate information management majors. Besides, to broaden the sampling population, friends and family members of the recruited students were also invited through students. Apparently, this approach did sample participants with higher level of education than average population. That is in line with the findings by prior studies (Lokken *et al*., 2003; Nathan & Yeow, 2011), which found that online shoppers were more well-educated and technology savvy than average population.

Before answering the questionnaire, an instruction guided the participants to focus on storefronts of online retailers (e-tailers) that they visited frequently, where they tend to have memorable experiences. 379 participants filled the online survey during the 2014 spring semester, 282 completed the survey effectively; 147 (52.1%) of them are male, while 135 (47.9%) are female. The effective

sample size was adequate for the confirmatory factor analysis (CFA) according to Kim (2005), who suggested that number of participants should be 5 to 10 times of the item size (20 in this study).

4. Data Analysis

4.1. Reliability Checking

The Cronbach`s α values measure the internal consistency of the 5 constructs and the instrument. The data in Table 2 indicate that the 5 constructs have good reliabilities since their Cronbach`s α values exceeded 0.7, which was recommended by Nunnally and Bernstein (1994). The Cronbach`s α value of the overall instrument is 0.910, which indicates that the overall instrument has a good internal consistency. In addition, deletion of two items: RR1 and FH3, resulted in higher construct reliability, as Table 2 shows.

Table 2. Reliability checking of the instrument (*N*=282)

Construct	Item	Mean	SSD	Cronbach's α without	Cronbach's α
RR	RR1	4.73	1.23	0.739*	0.726
	RR2	5.57	1.46	0.637	
	RR3	4.93	1.02	0.638	
	RR4	4.90	1.27	0.635	
BT	BT1	5.23	0.86	0.812	0.831
	BT2	5.33	0.99	0.775	
	BT3	5.57	1.07	0.768	
	BT4	5.73	0.94	0.793	
UI	UI1	4.93	0.79	0.768	0.832
	UI2	4.97	0.85	0.804	
	UI3	4.77	0.82	0.803	
	UI4	5.20	1.03	0.772	
FH	FH1	4.60	1.30	0.800	0.859
	FH2	5.43	1.22	0.810	
	FH3	4.20	1.13	0.878*	
	FH4	5.40	1.04	0.792	
FR	FR1	4.37	1.07	0.741	0.816
	FR2	4.80	1.19	0.784	
	FR3	4.77	0.86	0.780	
	FR4	4.50	1.08	0.767	

*Obtaining higher construct reliability after deleting it

4.2. Item Adjustment

To check whether the 20-item instrument could be improved further, CFA was used to examine fitness of the models with 4 different item formulations. Because the models were derived based on the prior polite computing framework, CFA is a preferable method for assessing how well they fit the data collected by this research (Brown, 2012). Table 3 shows the 18-item model has the best goodness-of-fit according to the fit indices. The removal of the two items: RR1 and FH3 with the lowest factor loadings among all items, not only improved the reliability of their loaded factors: RR (Respect Right of Users) and FH (Familiar with Habits), but also improved the key fit indices of the corresponding model, as Table 3 shows.

Table 3. Goodness-of-fit of models with different item formulations (*N*=282)

model	χ2	χ2/df	RMSEA	CFI	GFI	AGFI	SRMR	NFI	PGFI	PNFI
		< 3	< 0.08	≧0.9	≧0.9	≧0.9	≦0.05	≧0.9	≧0.5	≧0.5
First-order, 20-item	401.76	2.511	0.073	0.97	0.87	0.84	0.066	0.94	0.67	0.79
First-order, 19-item (deleting RR1)	340.59	2.399	0.071	0.97	0.89	0.85	0.06	0.95	0.66	0.79
First-order, 19-item (deleting FH3)	262.56	1.849	0.055	0.98	0.91	0.88	0.053	0.96	0.68	0.8
First-order, 18-item (deleting RR1、FH3)	208.84	1.671	0.049	0.99	0.92	0.9	0.045	0.96	0.68	0.79

4.3. Model Selection

According to the polite computing theoretical framework and the approach for checking plausible alternative models presented by Doll and Torkzadeh (1988), the present study compared 3 different models' fitness to the sampled data. As figure 1 shows, the 3 examined models are (A) the first-order, 5-factor uncorrelated model; (B) first-order, 5-factor correlated model; and (C) second-order 1-factor, first-order 5-factor model. The ability of a model to fit participants' responses to the 18 DEPOS items was judged by the values of each model's goodness-of-fit indexes. This work used the LISREL 8.8 to build the 3 models of interest and test the fitness of each model against the sample data. According to the models' goodness-of-fit index values that are summarized in Table 4, the model A is not an acceptable model according to the values of its key fit indexes; such as the RMSEA and GFI. The model B is much better than its uncorrelated counterpart, model A. Basically, Model C and B generated very close and good model-data fits according to values of their relative and absolute fit indices (Kline, 2011).

Furthermore, in order to measure the ability of the second-order politeness factor to explain the covariation among the five first-order factors, target coefficient (Marsh & Hocevar, 1985) was used. It is equal to the ratio of the chi-square of model B to the chi-square of model C, which was 0.982; an obvious indication of the second-order politeness factor can well explain the covariation among the five first-order factors. In other words, the target coefficient value provided strong evidence of the second-order politeness factor in model C can explain 98.2 percent of the variation in the five first-order factors in model B.

The polite computing framework suggests the existence of a single politeness construct; empirical data analysis showed that the politeness construct in model C can well explain the covariation among the 5 first-order factors; besides, the model C can provide estimates of the 5 first-order factors'

validity and reliability. Based on these reasons, the model C was chosen in the subsequent works analyzing the corresponding measurement model and structural model.

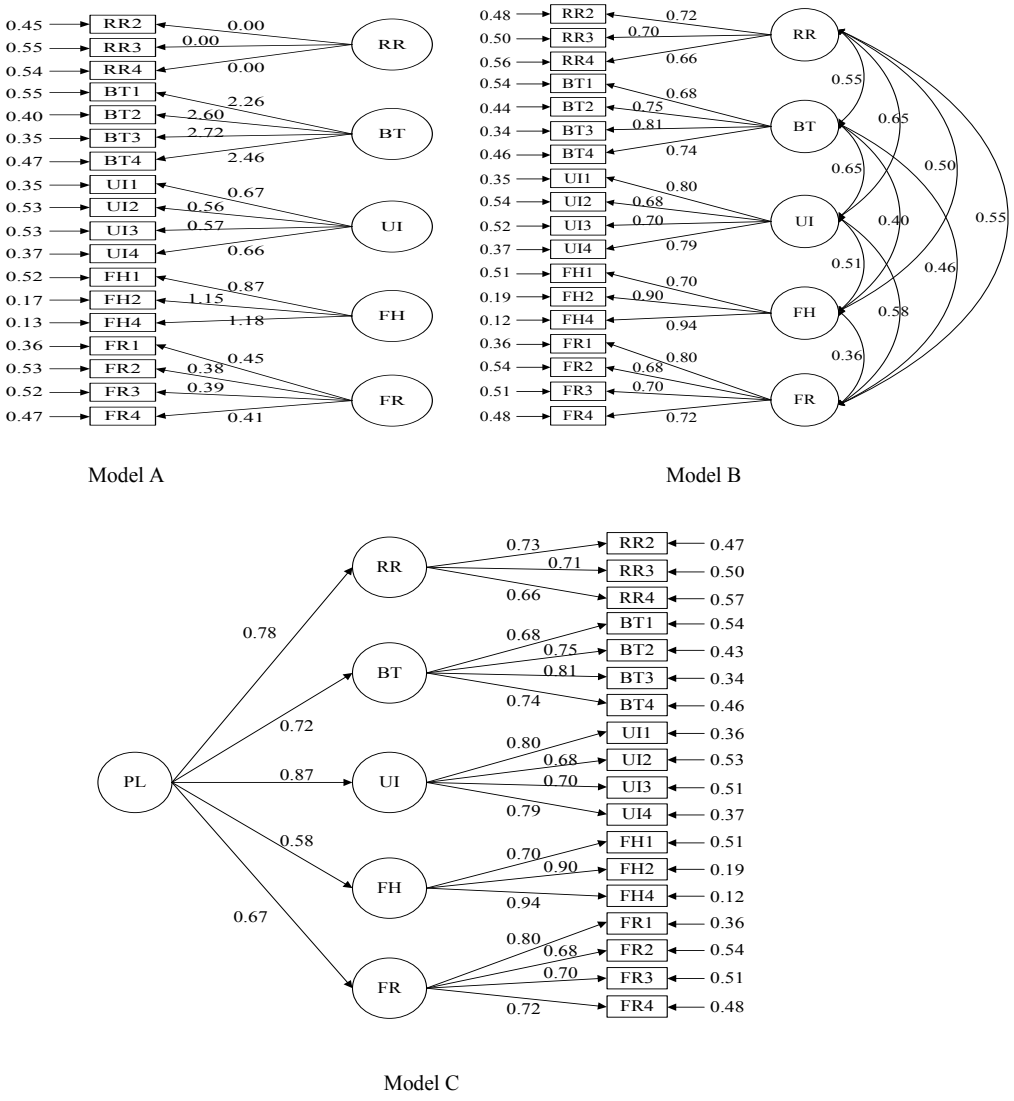

Figure 1. Three alternative models with factor loadings and structural coefficients

Table 4. Goodness-of-fit indexes in alternative models (*N*=282)

model	χ2	χ2/df	RMSEA	CFI	GFI	AGFI	SRMR	NFI
		< 3	< 0.08	≧0.9	≧0.9	≧0.9	≦0.05	≧0.9
(A) 1st-order, 5-factor, uncorrelated	725.01	5.370	0.125	0.92	0.78	0.72	0.27	0.9
(B) 1st-order, 5-factor, correlated	208.84	1.671	0.049	0.99	0.92	0.90	0.045	0.96
(C) 2nd-order, 5-factor	212.6	1.635	0.048	0.99	0.92	0.90	0.046	0.96

4.4. Measurement Model Analysis

4.4.1. *Reliability and Convergent Validity*

According to the suggestions of Bagozzi and Yi (1988), this work applied maximum likelihood estimation to test the measurement model. The criteria include factor loadings and indicator reliabilities, i.e., square multiple correlation (SMC) of the 18 observed items, composite reliabilities (CR) and variance extracted (VE) of the five first-order factors, as Table 5 summarizes. Factor loadings above 0.32 represent substantial coefficient and structural equivalence (Tabachnick & Fidell, 2008), so all items in the DEPOS instrument were considered meaningful and retained for their loaded factor. The SMC values indicated that the reliabilities of individual observed items are higher or very close to the recommended level of 0.5 (Bagozzi & Yi, 1988), except the RR4 item. Composite reliabilities and variance extracted measure the reliability and convergent validity of each factor, respectively. The recommended cut-off values of CR and VE are 0.7 and 0.5, respectively (Fornell & Larcker, 1981). Overall speaking, the analysis results showed the measurement model has good reliability and convergent validity.

Table 5. Measurement model fit indices for convergent validity (N=282)

Variable	Standardized loading	Measure error	Indicator reliability (SMC)	Composite reliability (CR)	Variance extracted (VE)
RR2	0.73	0.47	0.53		
RR3	0.71	0.50	0.50	0.74	0.5
RR4	0.66	0.57	0.44		
BT1	0.68	0.54	0.46		
BT2	0.75	0.43	0.56	0.83	0.6
BT3	0.81	0.34	0.66		
BT4	0.74	0.46	0.55		
UI1	0.80	0.36	0.64		
UI2	0.68	0.53	0.46	0.83	0.6
UI3	0.70	0.51	0.49		
UI4	0.79	0.37	0.62		
FH1	0.70	0.51	0.49		
FH2	0.90	0.19	0.81	0.89	0.7
FH4	0.94	0.12	0.88		
FR1	0.80	0.36	0.64		
FR2	0.68	0.54	0.46	0.82	0.5
FR3	0.70	0.51	0.49		
FR4	0.72	0.48	0.52		

4.4.2. *Discriminant Validity*

As Table 6 shows, square root of the average variance extracted (AVE) of each construct was much larger than all other inter-factor correlations, and greater than the recommended acceptable cut-off

level of 0.7 (Fornell & Larcker, 1981). So, the discriminant validity of the five latent constructs in the measurement model was confirmed. Taking both convergent and discriminant parts into account, construct validity of the measurement model was confirmed.

Table 6. Inter-construct correlations matrix

Latent	RR	BT	UI	FH	FR
RR	0.70*				
BT	0.40	0.75*			
UI	0.46	0.49	0.75*		
FH	0.41	0.29	0.44	0.85*	
FR	0.42	0.37	0.47	0.38	0.73*

*: the square root of VE

4.5. Structural Model Analysis

As shown in Table 7, multiple goodness-of-fit indexes' values collectively confirmed that the model with five first-order factors loading on single second-order politeness factor has an excellent fit to the sampled data, which mean that hierarchical, multidimensional structure model can well represent the DEPOS instrument's underlying structure.

Table 7. Goodness-of-Fit measurements

Goodness-of-fit measure		Level of acceptable fit	value
Chi-square			212.6 (P=0.0)
df			130
Chi-square/df		<3	1.635
RMSEA		<0.08	0.048
Absolute fit indices	GFI	>0.9	0.92
	AGFI	>0.9	0.92
	SRMR	<0.05	0.046
Parsimonious fit indices	PNFI	>0.5	0.82
	PGFI	>0.5	0.70
	CN	>200	232.17
Relative fit indices	NFI	>0.9	0.96
	NNFI	>0.9	0.98
	CFI	>0.9	0.99
	IFI	>0.9	0.99
	RFI	>0.9	0.96

5. Discussion

According to the statistics in Table 2, all the 18 items were graded above the median of the politeness scale: 4, which suggests sampled patrons thought examined online retailers tend to be polite in their overall impression, despite there are still substantial rooms for further improvement. Among the 5 factors, "behave transparently (BT)" is the only one with all items being graded above 5.0; its 4 items range between 5.23 and 5.73. A frank explanation is that online shoppers thought virtual storefronts where they often visited behave with adequate transparency. Combining with its high loading (λ = 0.72) on the second-order politeness factor, online merchant should keep paying more attention to their behavioral transparency in order to sustain better assessment in terms of politeness. In contrast to the BT factor, all 4 items in the "fidelity response (FR)" factor were graded below 5.0; between 4.37 and 4.80, which means patrons thought online retailers should quickly respond to their requests with more responsiveness and fidelity.

The second-order confirmatory factor analysis revealed relative stronger correlations between the politeness and 3 first-order factors: the factor of obtaining useful information (UI, $\lambda = 0.87$), the factor of their rights being respected (RR, $\lambda = 0.78$), and the factor of behave transparently (BT, $\lambda = 0.72$) while patrons are assessing the exhibited courtesy in online storefronts. In contrast, they put relatively less weight on whether online storefronts remember their identity and shopping preferences (FH, λ = 0.58).

To many online shoppers, time efficiency is critical while they are going through a purchasing process, which comprises several steps and often is time-consuming. In consequence, patrons dislike any useless information distracting or misleading them during their shopping processes, which is consistent with a prior study (Sorce, Perotti, & Widrick, 2005) saying that informativeness motive online shopping. Prior studies suggested that patrons prefer having more control in their shopping contexts and during their shopping processes (Eroglu, Machleit, & Davis, 2001; Ganesh, Reynolds, Luckett, & Pomirleanu, 2010; Lee, 2002; Sorce *et al*., 2005), which explain why patrons dislike that online storefronts preempt their rights. Regarding the higher loading on the factor of behave transparently, shoppers are generally price-sensitive (Biswas, Pullig, Yagci, & Dean, 2002; Han, Gupta, & Lehmann, 2001; Teng, 2009), especially while they are purchasing high-priced items such as computers and travel packages (Chen & Hu, 2012). That kind of price sensitivity rationalizes subjects were concerned about opaque and/or twisted information presented in online storefronts, since only complete and correct information enable prospective customers to assess a product or service item's reasonable price range and then make rational decisions accordingly.

Regarding the different loadings of 5 factors on the politeness, a practical explanation is that the reliability and validity analysis support a single and composite politeness scale can be used to assess the overall exhibition of courtesy in online storefronts. However, any observed deviation suggests a single politeness score had better be used in conjunction with scores from individual factors, which can provide merchant administrators more insight into politeness issues of interest.

6. Conclusions

6.1. Contributions and Limitations

In a civilized society, people dislike verbal and behavioral impoliteness, regardless of contexts. Obviously, various forms of impoliteness in virtual storefronts that patrons tend to avoid will be harmful to online merchants. However, relevant issues received rare attention from both practitioners and researchers. This work develops an instrument that can gauge the degree of courtesy exhibited in e-tailers' storefronts. After developing the new instrument, this study confirmed the psychometric properties of the instrument and its underlying model with a sample of 282 subjects. Among other

properties, the factor structure was confirmed through testing a hierarchical model with five first-order factors loading on a second-order politeness construct by using confirmatory factor analysis.

The research findings indicate that there is substantial room for improving online retailers' courtesy further. Besides, the factor structure and loadings show that a single politeness score can assess the overall degree of the politeness, and that each factor affect customers' courtesy perceptions to which extent, so merchants owning online business can focus on noticeable but their weak points accordingly.

Regarding the limitation of this work, because many aspects including society class, education, occupation, income, prior shopping experience, types of examined online business (e.g., e-tailer, e-bank, or e-travel agent), and others collectively shape people's feelings, perceptions, and preferences. Therefore, further research works and subsequent meta-analytic structural equation modeling (Cheung & Chan, 2005) are necessary to generalize the findings of similar instruments.

6.2. Future Directions

This work focuses on measuring the degree of courtesy exhibited in e-tailers, sets stage for further research on two major facets; one is the politeness management issue in other service-oriented online industries, such as e-brokerage, e-banking, online travel agency, and others with intensive interactions with their patrons, or even e-government with which large number of citizens interact. Another direction worth investigation is the influence of politeness on other constructs in various theoretical models. These constructs might include but not limit to rapport, perceived usefulness, perceived ease-of-use, customer affinity, trust, loyalty, revenue, profitability, and many others that interest business administrators.

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