BUILDING THE B2B CUSTOMER LOYALTY: A ROLE OF RELATIONSHIP QUALITY

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Abstract: The purpose of this study was to investigate the E-Commerce relationship quality and loyalty in B2B supplier and client's relationships. This study tries to conceptualize a model based on the relationship quality that is applied to understand loyalty in B2B environment. The subjects of this study, from whom 81 valid questionnaires were collected, were the clients of the supplier's ERP system in the Taiwan. When descriptive statistics and partial least squares (PLS) were adopted to analyse the collected valid data, we obtained the following findings. Relationship quality was perceived through the behavior of both supplier and clients and the quality of their interaction. Relationship quality antecedents include the information sharing and customer orientation. The finding suggests that supplier with strong levels of customer orientation, the supplier and clients were built a stronger relationship and high loyalty. Surprisingly, information sharing shown no significant effects on the relationship quality. This study implies that using information sharing and customer orientation strengthen their relationship quality, thereby enhancing loyalty. The finding of this study implies that it is important for a B2B supplier management to understand clients' needs and responses. B2B suppliers can learn from this study, that customer orientation, relationship quality, commitment, have a positive impact on loyalty in both direct and indirect ways.

Introduction

E-commerce may be considered as a brand-new trading pattern in the process of E-commerce development; it actuates rapid changes of the market and a significant decrease of customers' brand loyalty (Lin, 2016). What is the relationship between the customer and the enterprises in the consumer role correspondence, to get what both sides want to get the results? Research suggests that building collaborative relationships with a long-term focus is considered critical particularly (Vize et al., 2016). The relationship between both sides has always been the key factor to the success. Customer loyalty is the source of stable corporate profits, and marketing of traditional was transactions to focus on establish and maintain customer

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relationship marketing. The main purpose of relationship marketing is to enhance customer satisfaction and loyalty and to establish good customer cohesion.

E-commerce is the use of the Internet to provide physical goods, service products, marketing media, market information, after-sales service and leisure and entertainment activities. These are the e-commerce companies to attract consumers around the world to buy products through the network, but there are still many consumers because of the network to maintain a cautious attitude of fear and hesitant (include Business to Business, Business to Customer, Customer to Customer). Since e-commerce has become more competitive, so to understand the consumer acceptance of e-commerce is very important (Zhou et al., 2007). However, there have been expressions of concern highlighting the deficiency of research exploring the development of loyalty in an e-commerce context (Rafiq and Fulford, 2005; Rafiq et al., 2013; Walsh et al., 2010).

E-commerce has become the focus of attention of all parties, in this emerging market implied huge potential business opportunities. Firms to the traditional mode of transaction transfer to the internet, the main spirit is expected to improve efficiency to reduce costs, and then gain a competitive advantage. Therefore, the following will explore the characteristics of B2B e-commerce, and then derive the motivation of this study. In the section follow, this study provided a description of the context, a brief literature review. The next section details the hypotheses development.

Literature Review

Doaei et al. (2011) defining "Relationship Marketing" is an attempt to maintain, manage and strengthen relationships with customers. This will encourage clients to exclude physical stores to establish a more long - term relationship, to achieve lower transaction costs and get a win - win situation (Vize et al., 2016). It takes satisfaction and trust as two main constructs, which means satisfaction and trust will be representative constructs for relationship quality, and Vize et al. (2016) definition and suggests that relationship quality is considered "*an overall evaluation of the strength of a relationship between a buyer and seller.*" Relationship quality is basically used to explain the strength of the relationship with trading partners (Garbarino and Johnson, 1999; Tsai and Cheng, 2012).

Information sharing has been an important area of information sharing research for nearly two decades (Alavi and Leidner, 2001; Constant et al., 1994; Jarvenpaa and Staples, 2000; Ma and Agarwal, 2007; Sambamurthy and Subramani, 2005; Wickramasinghe and Weliwitigoda, 2011). Information sharing is said to be an essential influence on trust and satisfaction (Cannon and Perreault, 1999; Morgan and Hunt, 1994; Shamdasani and Balakrishnan, 2000), which are in turn considered to be the vital components of relationship quality (Crosby et al., 1990). Singh and Koshy (2011) analyzed customer orientation in B2B environments and found a significant positive impact on the customer orientation and relationship development of B2B in this study. In line with the work of Strong (1925), this

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study considers companies should set the beliefs that puts the customer's interest first, to build the long-term and stable relationship (i.e. if the companies are customer orientation) (Izogo, 2016). Commitment is based on the long-term orientation. In fact, the concept of relationship commitment is like the concept of long-term orientation that comprises the desire and utility of a buyer to have an enduring relationship with a seller (Anderson and Weitz, 1989). Customer loyalty considerations properties, successfully establishing and maintaining customer loyalty is the main subject of the supplier (Ramaseshan et al., 2013). B2B customers follow rational buying criteria and have the lower commitment to a supplier. Because B2B customers will invest more resources in their relationship to reduce the cost of switching suppliers (Pick and Eisend, 2014; Negengast et al., 2014; Russo Confente et al., 2016). Loyalty has been analyzed from two different perspectives: attitudinal and behavioral (Auh et al., 2007; Casaló et al., 2010).

Research Methodology

The theoretical model of this study, according to a supplier client of information sharing, customer orientation, relationship quality, commitment, and loyalty (Figure 1). Based on the literature, the five hypotheses to verify the following: Information Sharing had a significant positive effect on Relationship Quality; Customer Orientation had a significant positive effect on Relationship Quality; Relationship Quality had a significant positive effect on Commitment; Relationship Quality had a significant positively impact on Loyalty; Commitment had a significant positive effect on Loyalty.
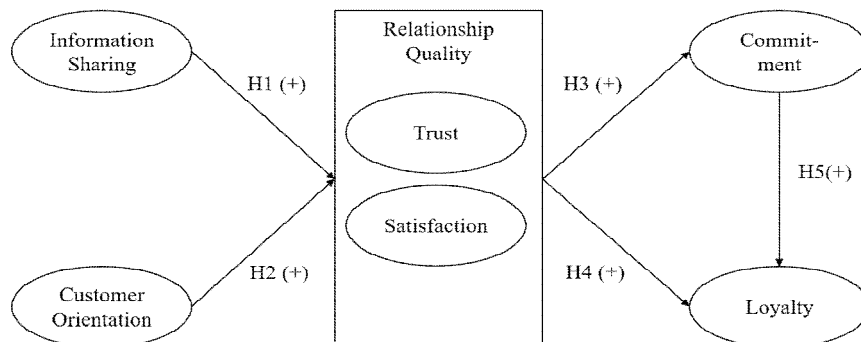

Figure 1. Theoretical Model

Sampling

Data collection is the customer information form the ERP system of the supplier. To collect the data, respondents were directed to a Web site containing the revised questionnaire by sent the E-mail form. The purpose of this research design is to test five research hypotheses. Five constructs are included in the study: information

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sharing, customer orientation, relationship quality, commitment, and loyalty. This study uses the Likert seven-point scale, with 1 - 7 points as "Most Disagree", "Disagree", "Somewhat Disagree", "General", "Somewhat Agree", Agree", "Most Agree".

Measurement

Information sharing of this study, mainly to evaluate whether it can provide the correct information to customers (Ndubisi, 2007; Wong et al., 2007; Chu and Wang, 2012; Izogo, 2016). Customer Orientation of this study, mainly to evaluate whether the company can meet the needs of its customers (Wray et al., 1994; Cheng et al., 2008; Izogo, 2016). Relationship quality consist three constructs which are satisfaction, trust, and commitment. RELQUAL scale has been developed by Payan et al. (2010) and Kim et al. (2003). In the same way, the basis of questions to evaluate loyalty refers to the usage scenario of supplier (Blocker et al., 2011; Russo et al., 2016).

Measurement Model Testing

Indicator IS2, CO4, SAT5, and TRU2 had an outer loading value of .242, .389, .494, and .489 and did not meet the preferred threshold of .50. Typically, to determine if the indicators should be removed, an outer loading relevance test should be conducted (Hair and Lukas, 2014) along with an evaluation of the indicator contribution to content validity (Hair et al., 2011). Cronbach's Alpha and Composite Reliability had a required value of .70 (Bagozzi and Yi, 1988; Gliem and Gliem, 2003) (Table 1).

Table 1. Cronbach's Alpha, Factor Loading, AVE and Composite Reliability

Construct		Indicator	Factor Loading	α	CR	AVE
IS		IS1	.893	.735	.837	.636
		IS3	.623			
		IS4	.850			
CO		CO1	.793	.713	.839	.503
		CO2	.868			
		CO3	.726			
RQ	**SAT**	SAT1	.839	.733	.882	.636
		SAT2	.843			
		SAT3	.534			
		SAT4	.576			
	TRU	TRU1	.726			.689
		TRU3	.669			
		TRU4	.800			
		TRU5	.709			
COM		COM1	.769	.753	.834	.508
		COM2	.752			

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	COM3	.767			
	COM4	.616			
	COM5	.625			
LOY	LOY1	.836	.772	.869	.529
	LOY2	.879			
	LOY3	.771			

Note: IS=Information Sharing; CO=Customer Orientation; SAT=Satisfaction; TRU=Trust;
COM=Commitment; LOY=Loyalty

Results Discussion

This study model was tested using SEM in SmartPLS 2.0. The AVE value of the construct should be above .50. Discriminant validity was assessed from Fornell-Larcker criterion using the square root of the AVE and from cross loadings (Hair et al., 2014; Urbach and Ahlemann, 2010). All the construct met the requirements (Table 2).

Table 2. Discriminant validity

Construct	AVE	IS	CO	SAT	TRU	COM	LOY
IS	.636	**.797**					
CO	.636	.610	**.797**				
SAT	.508	.331	.447	**.713**			
TRU	.529	.393	.479	.570	**.727**		
COM	.503	.359	.437	.582	.495	**.709**	
LOY	.689	.425	.414	.470	.473	.673	**.830**

Note: IS=Information Sharing; CO=Customer Orientation; SAT=Satisfaction; TRU=Trust;
COM=Commitment; LOY=Loyalty

This study uses statistical analysis of the causal relationship between potential variables and determines whether the variables are significant (T-value > 1.96 and $p < .05$) (Table 3). The path coefficient is regarded as the degree of influence; R^2 is the degree of change in the degree of latent variables. Cohen (1988) pointed out that R^2 higher than .020 for the low degree of explanation; higher than .130 for the interpretation of moderate; and higher than .260 for the high degree of explanation (Table 4).

Table 3. Path Coefficient Results

Path	Path Coefficient	SE	*t*-value	*p*-value	Findings
IS -> RQ	.144	.122	1.179	.242	Not Supported
CO -> RQ	.460	.122	3.788	.000	Supported
COM -> LOY	.532	.086	6.193	.000	Supported
RQ -> COM	.598	.097	6.189	.000	Supported
RQ -> LOY	.235	.093	2.519	.014	Supported

Note: IS=Information Sharing; CO=Customer Orientation; SAT=Satisfaction; TRU=Trust;
COM=Commitment; LOY=Loyalty

H1 was not supported. The task of determining what information should be shared and with a complex task, especially since supply chains tend to evolve over time and information sharing may require the involvement of several different partners (Samaddar et al., 2006). H2 was supported which indicated that the supplier's products are closer to the needs of customers, the abler to promote the strong relationship between customers and supplier. Singh et al. (2011) research results found that customer orientation that creates value in customer relationships simultaneously helps in developing relationships with customers. Hypothesis 3, 4, 5 was supported which indicated that relationship quality and commitment and loyalty had a positive and direct effect. Kuhn and Mostert (2016) also emphasized that relationship quality predicts customers' commitment and loyalty. These results support previous studies that established that customers' relationships develop higher levels of trust and commitment (Turner Parish and Bugg Holloway, 2010; Hedrick et al., 2007, De Wulf and Odekerken-Schröder, 2003).

Goodness of Fit

GoF (0 < GoF < 1), defined as the geometric mean of the average communality and average R^2 (GoF=$\sqrt{\overline{AVE + R^2}}$); GoF$_{small}$=.1, GoF$_{Medium}$=.25, GoF$_{large}$=.36 (Akter et al., 2011) (Table 4).

Table 4. Overall for the result of the GoF

Construct	AVE	CR	R^2	α	Communality	Redundancy	GoF
IS	.636	.837		.735	.636		
CO	.636	.839		.713	.636		
RQ	.789	.882	.314	.733	.789	.231	.388
COM	.503	.834	.357	.753	.503	.176	
LOY	.689	.869	.489	.772	.689	.299	

Note: IS=Information Sharing; CO=Customer Orientation; SAT=Satisfaction; TRU=Trust; COM=Commitment; LOY=Loyalty

Managerial Implication

This study has several important implications for managers of B2B industry. The finding reveals that customer orientation is of primary importance in maintaining both sides relationship. G. Macintosh (2007) research reaffirmed the importance of customer orientation for satisfaction and loyalty, and can strengthen the relationship between customer and supplier. Relationship Quality and Commitment are conducive to the promotion of Loyalty. Therefore, B2B managers should pay more attention to customer orientation thinking, to enhance Relationship Quality and Commitment, and make Loyalty more stable. Relationship quality and commitment and loyalty had a positive and direct effect. Also revealed a positive and direct link between relationship quality and commitment and loyalty. It meant

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that supplier needs consolidate its relations of trust, satisfaction, and commitment by complying with deadlines, valuing teamwork, showing experience, financial strength. It's importance to maintain a clear and transparent relationship with customers. This study results also emphasized the fact commitment is an important antecedent of loyalty. Information sharing was limited to complexity, costs, and risks. In this study, there was not supported in information sharing to relationship quality. It shown that clients consider that the relationship with the supplier and the performance of supplier do not meet the expectations. Therefore, supplier should, as far as possible, strengthen the relationship between the supplier and clients, whether the quality of the service or product. In addition, supplier could seek more convenient delivery methods and improve product quality, to obtain more orders.

Conclusion

This study provided a comprehensive theoretical model that examines path relationships among information sharing, customer orientation, relationship quality, commitment, and loyalty. This implies that customer orientation strengthens their relationship quality, thereby enhancing loyalty. The finding of this study implies that it is important for a B2B supplier management to understand clients' needs and responses. B2B suppliers can learn from this study, that customer orientation, relationship quality, commitment, have a positive impact on loyalty in both direct and indirect ways.

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BUDOWANIE LOJALNOŚCI KLIENTA B2B: ROLA JAKOŚCI RELACJI

Streszczenie: Celem artykułu była analiza jakości relacji z klientami i lojalności w handlu elektronicznym u dostawcy B2B. Niniejsze badanie jest próbą konceptualizacji modelu opartego na jakości relacji, który jest próbą zrozumienia lojalności w środowisku B2B. Przedmiotem badania byli wybrani klienci systemu ERP w oparciu na zebranych 81 kwestionariuszach firm na Tajwanie. Przyjęto statystyki opisowe i w oparciu o metodę najmniejszych kwadratów (PLS) w celu przeanalizowania zebranych istotnych danych.

Jakość relacji postrzegano poprzez zachowanie zarówno dostawcy, jak i klientów oraz jakość ich interakcji. Jakość relacji przede wszystkim obejmuje dzielenie się informacjami i orientację na klienta. Wyniki sugerują, że dostawcy z silnym poziomem orientacji na klienta, zbudowali silniejszą więź i wysoką lojalność relacji z dostawcami i klientami. Co zaskakujące, wymiana informacji nie wykazała znaczącego wpływu na jakość relacji. Badanie zakłada, że korzystanie z wymiany informacji i orientacja na klienta wzmacnia ich jakość relacji, zwiększając przez to lojalność. Odkrycie tego badania implikuje, że dla dostawcy usług B2B ważne jest zrozumienie potrzeb i odpowiedzi klientów. Dostawcy B2B winni zauważyć, że orientacja na klienta, jakość relacji, zaangażowanie, mają pozytywny wpływ na lojalność zarówno w sposób bezpośredni, jak i pośredni.
Słowa kluczowe: wymiana informacji, orientacja na klienta, relacje B2B, PLS-SEM, marketing relacji

建立B2B客户忠诚度：关系质量的角色

摘要：本研究的目的是调查B2B供应商和客户关系中的电子商务关系质量和忠诚度。本研究尝试基于关系质量理论模型来理解B2B环境下的忠诚。本研究的主题是收集到81份有效问卷，是台湾供应商ERP系统的客户。采用描述性统计和偏最小二乘法(PLS)对收集到的有效数据进行分析，得出以下结论。关系质量通过供应商和客户的行为以及相互作用的质量来感知。关系质量前因包括信息共享和顾客导向。这一发现表明，具有较强的客户导向水平的供应商，供应商和客户之间建立了更强的关系和更高的忠诚度。令人惊讶的是，信息共享对关系质量没有显着的影响。这项研究表明，使用信息共享和客户导向增强了他们的关系质量，从而提高了忠诚度。这项研究的发现意味着对于B2B供应商管理来说，了解客户的需求和响应非常重要。

B2B供应商可以从这项研究中了解到，客户导向，关系质量，承诺，直接和间接的方式对忠诚有积极的影响。

关键词：信息共享，顾客导向，B2B关系，PLS-SEM，关系营销