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UNDERSTANDING SERVICE PROVISION AND ONLINE REPURCHASE INTENTION IN ONLINE AUCTION CONTEXTS

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ABSTRACT

This study investigates how service provision can help to establish business value and further develop customer loyalty on auction websites. With respect to the increasing importance for long-term success of auction websites, this study also examines the moderating effect of webpage design in retaining customers by comparing different types of auction websites (i.e., customised vs. unified webpage design). The findings suggest that the service provision around purchasing does not have a direct impact on buyers' repurchase intention. However, service provision contributes to the development of business value and customer loyalty, and this in turn motivates buyers' intention to repurchase from the same online seller on auction websites.

Keywords: Auction website, repurchase intention, service provision, webpage design.

INTRODUCTION

While previous studies have investigated purchase intention in a customer to customer (C2C) context, there is a lack of knowledge related to repurchase intention from the same online seller in online auction contexts. This is in spite of the importance of customer retention in a business' long term operation and the increasing number of businesses that adopt C2C contexts (such as an auction website). This study aims to address this gap by understanding buyers' repurchase intention in auction websites. Product quality, sellers' reputation, website quality, brand and loyalty, are commonly adopted factors used to explain buyers' repeated purchase intention in a business to customer (B2C) context. Since those factors are related to service provision around purchasing and the C2C online shopping platform is inherited from B2C online contexts, this study investigates buyers' repurchase intention on an auction website from a three-stage service transformation (i.e., service provision, business value and loyalty).

Service provision around purchase assists the development of buyer-seller relationships and provides both sellers and buyers a guideline to trade in an online shopping environment [33]. Service provision is studied from the expectation of service and the perception of service. While the expectation of service is referred to as a personal factor, the perception of service evaluates sellers' actual performance with buyers' personal requirements [14 ; 34]. Business value refers to the benefits that businesses aim to deliver to customers. In auction websites, business value is typically referred to as a sellers' reputation, which is itself a collective review of the seller's service provision around purchase [29]. Customer loyalty is rarely studied in an auction website but is the key for repurchase intention [25]. Because of the difficulty for online sellers to differentiate themselves from competitors, previous studies evidence the challenge to develop customer loyalty in auction websites [13 ; 30]. Therefore, this study empirically examines factors that influence buyers' repurchase intention on auction websites.

The next sections of this article include the literature review, followed by the research hypotheses. The data analysis and findings of the two empirical studies will then be presented. This study will be concluded with a discussion of the findings and implications of this study.

LITERATURE REVIEW

Intentions to Repurchase on an Auction Website

Auction websites are online trading mechanisms that facilitate trading between buyers and sellers at a negotiated product price [30]. Unlike B2C online trading platforms where online stores are supported with a well-known brand, auction websites provide ordinary people a channel to distribute products on the internet. Although the trading patterns in auction websites are similar, there are auction websites that allow sellers to design their own listing page (Yahoo auction Taiwan, TaoBao) and there are those with unified design (eBay, Trade Me). In light of the diversity in auction websites and the increased competition among sellers in auction websites, knowledge of what factors increases the success potential of long term operation on auction websites is needed. While many online sellers have a lower level of brand awareness, an alternative long term operation strategy is adopted to attract and retain buyers [30 ; 35]. The feedback mechanism is an example of a long term operation strategy. The feedback mechanism allows every buyer to evaluate and rate a seller according to a particular trading experience [35]. A feedback mechanism is widely adopted in auction websites to provide buyers with a better understanding of the reliability and trustworthiness of the seller. When considering the feedback mechanism as a fair review of the seller, Oliver [20] suggests that it should allow for the development of customer loyalty. Insights into loyalty development in an auction website however, are unclear. While sellers in a B2C online trading platform have a well-known brand to enable loyalty development, the lack of brand awareness in an auction website may increase the difficulty of motivating repurchase loyalty. Studies available on this topic have either focused on quality performance and customer satisfaction [21], the interaction with sellers [27], or the trust and switching costs of online shopping adoption [15]. While sellers in B2C online trading platforms have the ability to control these factors, online sellers in an auction website need to rely on evaluations from previous trading

partners. Since expected service, perceived service, business value and customer loyalty reflect those factors, this suggests that these four concepts will motivate customer's intention to repurchase from auction websites from different perspectives.

Three-Stage Service Transformation

Expectation of service provision. Expectation of service provision has been identified as one of the important service provision aspects in an online shopping context [3 ; 10]. The widely used definition that was introduced by Zeithaml et al. [33] for the level of expected service, is a combination of previous trading experience, personal requirement and the promises made by sellers. The service expectation on auction websites is often defined in terms of attributes, such as the level of simulation (e.g., website design and product presentation), trustworthiness and reliability (e.g., willing to protect buyers' best interests), responsiveness (e.g. the interaction with sellers), the assurance (e.g., the level of security) and empathy (e.g. the commitment and obligations), and various studies have combined these in different ways [4 ; 16 ; 18 ; 32]. While these dimensions differ conceptually, they reflect buyers' expectation on service perception from the evaluation of the product, service and online sellers. In other words, expectation on service provision represents the ideal trading experience with respect to buyers' personal requirements. In an auction website, several studies have focused on the level of service expectation as a determinant of a seller's reputation. For instance, Zhang [35], who investigated the motivation of purchase intention in auction websites, concluded that the level of service expectation will influence how a buyer perceives the sellers' reputation. Similarly, Houser and Wooders [13] found that website design, service provision, and product presentation all enhanced the level of a seller's reputation, while expected service only has an impact on the way buyers perceive the seller's reputation. Yen and Lu [30] took a different outcome focus, studying the level of expectation service on the sellers with a strong brand establishment, and how the expectation of service in turn influenced their customer retention strategy.

Perceived service. Previous studies have identified a close relationship between expected service and perceived service [30 ; 34]. Perceived service is the actual service that buyers receive from a particular trading. Unlike expected service which is a collective trading experience from offline and online shopping contexts, perceived service mainly reflects the examination of current trading experiences [23]. Research has also expanded the concept of perceived service to online trading platforms and identifies product confirmation [3] and trust [2] as the two additional categories that have an impact on the level of service perception in online contexts. Parthasarathy and Bhattacharjee [22] suggest that perceived service is focused on post-purchase behaviours which include product confirmation and further product maintenance requests. Research has confirmed that buyers evaluate what they receive with what the seller promised, and hence the perceived service influences buyers' post-purchase behaviour. Zeithaml et al. [34] adopt the same five dimensions to measure perceived service. In an online context, Loiacono et al. [18] proposed use of the WebQual instrument to understand how users perceive the performance of a website from its design, which suggests the importance of simulating product and service between reality and the virtual world. The level of perceived service is also referred to as customer satisfaction of a particular product, and this has a direct impact on customer satisfaction towards a brand or a seller. Olsen [21] also suggested that the evaluation of a particular shopping experience (i.e., perceived service) has a direct impact on reputation, and further develops customer loyalty.

Business value. Business value depicts the extent to which groups of people define a business from its products and services. The degree of business value differentiates perceptions of individuals with strong personal preference, such as people who always purchase from a particular brand [8], to individuals who rely heavily on public opinion, such as those examining sellers' reputation [35]. Drawing on marketing literature, Hellier, Geursen, Carr, and Rickard [12] proposed several factors which affect how individuals perceived business value: the received benefit from the product offering, the image that the business created in public opinion (e.g., reputation), and the established brand associated with the operational goals. Moreover, Pavlou et al. [23] reported that the benefits customers received from using the product, and the consistency in perceived benefits are what drive business value. In contrast, certain product strategies, such as pricing and promotion, have either been reported to not add extra value to the business, or to cause conflicting results [c.f., 29 ; 31].

The conceptualisation of business value strongly builds on the literature describing how buyers perceive the value that the seller provides through product offering, as it aims to understand how the value of a business is perceived by an individual extended to public opinion [23 ; 35]. This is different from other concepts of business value such as customer satisfaction, which focuses on individuals' value realisation in a particular trading [19]. Customer satisfaction, which has been described as the evaluation of trading experience based on personal preference [7], thus primarily focuses on the self, and provides limited information about the performance of the seller in the operation environment. In this way, it is therefore conceptually different from business value. Other group concepts used in extant studies such as brand and business image, only constitute one dimension of business value, and are hence conceptually different [10 ; 12]. It has even been suggested that brand and business image might be a less important component of business value - a notion which finds support in a study by Schiffman, Bednall, O'Cass, and Paladino [26]. The authors found that for the strategy used to develop brand and create business image, it is the seller who defines its value and hence helps buyers to understand the objective of the business, in turn affecting business value. Again, other studies in the field of online shopping contexts referred to the development of a strong trust relationship - a characteristic that is regarded as being the most important in business value realisation [2 ; 23 ; 29].

In view of the variety of group concepts used in previous studies, the additional knowledge of referent individuals or groups approve or disapprove of performing a given behaviour [1, p195]. Online sellers in auction websites differ widely in terms of reliability or purpose and may hence increase the risks in online trading. Business value, to the current knowledge, has not been applied to research on an auction website. Olsen [21] studied business image and brand and customer satisfaction to understand how the consumer perceives the value of the business in an offline market. His findings suggest that business value is the term that includes business image, brand and customer satisfaction. Moreover, the author concludes that customer satisfaction will influence business image and branding and form an aggregated term to represent how the public judges the business in the long term. Previous studies emphasise the need of applying the concept of business value in research on an auction website as it extends the idea of a seller's reputation. Moreover, the higher level of reliability represented by a seller presents high business value which could serve as an important service provision for auction websites, and may be a key for motivating buyers' repurchase intention.

Customer loyalty. In view of the range of collective terms used in previous research, the extra value of customer loyalty can be retrieved as a theoretical concept that helps us understand "a set that deals with the presence or absence of request resources and opportunities" [1, p196]. Auction websites are different from non-auction websites in their website design and purpose and may therefore range from price-driven purchase to quality-driven purchase. Customer loyalty has been applied to the B2C online context, but not in the C2C online context. Gommans et al. [8] studied customer loyalty from the perspective of a non-auction website with a well-known online seller aiming for long term operation. Their finding suggests that customer loyalty depends strongly on the level of business value perception. Moreover, the authors concluded that offline customer loyalty may be based mainly on the brand, whereas for the online context, customer loyalty depends on how an online seller benefits buyers, from the products to a secure shopping experience. Previous studies underlined the necessity of applying the concept of customer loyalty in research related to an auction website, as it extends the idea of brand development, and this has drawn considerable attention by researchers focusing on sellers' reputation on an auction website. Moreover, the distinctive scope indicated by strong customer loyalty could serve as an important service transformation for auction websites, and may hence be a key for long term operator success.

Customer loyalty builds on literature related to how consumers purchase from a particular brand or product repeatedly, as it mainly focuses on how the strong behaviour preference is developed [20]. This is different from other concepts of behaviour preference such as repurchase loyalty, which was derived from studies based on an individual's decision making with a primary focus on the willingness to repurchase. Repurchase loyalty has been described as an attempt to repurchase from a brand or a product [21], which focuses on the intention, provides little information about the relationship between personal preference and business value perception, and is different from customer loyalty. Previous studies acknowledged a positive relationship between the relative concepts, but also identified signs of their distinctiveness [8 ; 30]. Recent studies support the conceptualisation of repurchase loyalty as an outcome of customer loyalty [12]. It has been confirmed that customer loyalty is related to repurchase loyalty [e.g., 19]. Furthermore, a full mediational role of customer loyalty between the business value perception and repurchase loyalty has been stated. For instance, a study by Olsen [21] found that buyers perceive that positive value from a seller influences their repurchase decision making. The concept of customer loyalty can thus help ascertain the motive for repurchasing [21].

HYPOTHESES DEVELOPMENT

Three Stage Service Transformation

This study proposes the three-stage service transformation, suggesting that expected service and perceived service will influence how buyers perceive the value of a business, and further influence the customer loyalty development in auction websites.

Expected service and business value. Due to previous shopping experiences in offline and online contexts, individuals will have a different level of service expectation towards a particular online seller. Although past research suggests that individuals' expectation on service can be ideal, it has a strong impact on how individuals evaluate their shopping experiences [22]. Drawing on this reasoning, this study expects individuals with a higher level of service expectation to have a greater understanding of a particular online seller. This study believes that a seller that helps individuals to gain a higher level of expectation on the service provision delivers a strong benefit to buyers in auction websites.

Hypothesis 1a: Higher level of expected service are positively associated with increased business value.

Perceived service and business value. Scholars have argued that product confirmation influences an individual to review a particular trading experience [22]. Pavlou et al. [23] reported that the product quality is a key factor for online shopping environments. Based on this, this study expects product confirmation to be an important factor impacting how buyers perceive the value of an online seller in auction websites. Zeithaml et al. [33] proposed that perceived service is the service that buyers received from a trading, which is examined based on the level of service expectation. Since the value of an online seller is determined by the product and service provision, this study expected that a buyer who perceives a higher level of service provision around purchasing will reward the online seller with positive business value.

Hypothesis 1b: Higher levels of perceived service are positively associated with increased business value.

Business value and customer loyalty. Gronholdt, Martensen, and Kristensen [9] reported that customer satisfaction is the main driving force for customer loyalty development. A previous study also suggests that customer satisfaction is the factor that assists a seller in defining its business value, which represents a strong personal preference toward a seller [20]. Applying the concept onto auction websites, customer satisfaction is presented in the form of seller's reputation, which allows buyers to identify and act loyally to a particular online seller [29]. This study anticipates that a buyer perceiving a seller to have higher business value shows higher personal preference toward the seller.

Hypothesis 2: Higher level of business value is positively associated with increased customer loyalty development.

This study proposes that the three-stage service transformation will have a different level of influence on intention to repurchase. Kim and Son [16] for instance, show that service provision around purchasing has an impact on their future purchase decision. For buyers with a higher level of expectation, repurchase intention will be motivated by online sellers who can fulfil the expectation. For buyers who perceive a higher level of service perception, on the other hand, Choudhury and Karahanna [5] suggest that repurchase intention will be motivated to maintain the same level of experience. The impact from expectation perception service and repurchase intention is focused on the signal trading experience. Zhang [35] considers business value as a collective trading experience which represents how a group of buyers reviews a particular seller. Previous studies on an auction website found that a higher level of business value (i.e., seller's reputation) improves the risks in an online trading, and further increases the willingness to purchase and repurchase [e.g., 13 ; 35]. This study believes that business value has a stronger impact on repurchase intention than expected and perceived service. Although Olsen [21] suggested that the impact from business value to repurchase intention is varied by buyers' personal characteristics, it does increase the level of trust in online trading [23]. Given an online seller with a strong trust relationship developed in auction websites, the repurchase intention will be motivated by buyers' personal factor (e.g., product preference, pricing, special requests). In other words, the value that business delivers through product needs to fulfil buyers' needs and wants. Reichheld, Markey, and Hopton [24] also referred to that relationship between reliable business and personal preference as customer loyalty. Thus, the impact from business value to repurchase intention is strengthened by personal preference (i.e., customer loyalty). As a result, this study hypothesises:

Hypothesis 3a: Customer loyalty will have a more positive impact on repurchase intention than business value.

Hypothesis 3b: Business value will have a more positive impact on intention to repurchase than expected service and perceived service.

The Moderating Role of Website Design on Repurchase Intention

This study argues that the presentation of the webpage on an auction website (i.e., customisable vs. unified webpage design) is likely to influence the effect of expected service, perceived service, business value and customer loyalty on intention to repurchase. Wells, Valacich, and Hess [28], for instance, showed that a better webpage design improves buyers' ability to simulate the product, and thus results in a higher level of expected service. Other studies suggested that those online sellers who contribute extra time in webpage design are sellers with clear operation goals, and this increases the level of perceived service [6 ; 18]. Drawing on the signals sent through both types of webpage designs, Hellier et al. [12] suggested that a customised webpage design allows online sellers to create their brand and business image, whereas unified website design increases the challenge to differentiate an online store from its appearances. Therefore, this study argues that the webpage design helps buyers understand the value that the online seller offers. Brand and the ability to differentiate from other sellers help customers' loyalty develop. Gommans et al. [8] suggested that the webpage design sends the message of an increased trust relationship and a well-established value perception to buyers. This study expects that the online seller with a well-established webpage constructs a secure online trading environment, and further motivates customer loyalty with a clear business image. Thus, this study hypothesises that,

Hypothesis 4a: Expected service will have a more positive impact on repurchase intention for customised webpage design, compared to unified webpage design.

Hypothesis 4b: Perceived service will have a more positive impact on repurchase intention for customised webpage design, compared to unified webpage design.

Hypothesis 5: Business value will have a more positive impact on repurchase intention for customised webpage design, compared to unified webpage design.

Hypothesis 6: Customer loyalty will have a more positive impact on repurchase intention for customised webpage design, compared to unified webpage design.

DATA ANALYSIS AND FINDINGS

Sample and Procedure

This research was conducted among auction websites with different webpage design. Online sellers who adopt a unified webpage design tend to limit the ability to develop a trust relationship, whereas online sellers who customised their webpage to fit their product characteristics tend to minimise the trading uncertainty. The survey was sent to students in New Zealand and Taiwan in 2012 over a period of 6 weeks.

After the omission of missing values, the survey conducted in New Zealand received 154 valid responses. There were 60 percent female participants and 40 percent male participants. Of these participants, 62 percent were aged between 18 and 24, while 34 percent were between 25 and 35. TradeMe was the preferred trading platform for 92 percent of participants. The majority of participants shopped online with a lower frequency (76 percent of participants shopped at least once per month), and 81% of participants had at least 1 year of online shopping experience. The survey conducted in Taiwan received 305 valid responses. Of the participants in this cohort 61 percent were female and 39 percent were male. Participants were aged between 18 and 24. Yahoo auction was the preferred trading platform for 89 percent of participants. The majority of participants shopped online with a lower frequency (92 percent of participants shopped at least once per month) and 57 percent of participants had at least 1 year of online shopping experience.

Measures

The measurement for expectation of service and perception of service is based on past research with modifications to fit the auction website context. 7-point Likert-type scales are adopted for all items, anchored by a "strongly disagree/agree". Expected service and perceived service are measured by the five dimensions that Zeithaml et al. [33] proposed (i.e. simulation, empathy, and reliability, responsiveness and assurance dimensions) with modification. Although studies in marketing and electronic commerce fields have proposed measurements for business value, customer loyalty and repurchase intention, those measurements are not designed for C2C online auction contexts. This study identified the measurement for business value, customer loyalty and repurchase intention from observing buyers' activities on auction websites. The measurements are presented in the appendix.

Measurement Model and Analysis Approach

This study adopts partial least squares structural equation modelling (PLS-SEM) to identify and explore the correlation between constructs [11]. WarpPLS 3.0 is employed to analyse the collected data. The five constructs are reflective measurement to explore the variables from different angles. This study follows the two-step evaluation procedure to examine the measurement model first and follow this by testing the structural model. The PLS algorithm is adopted to estimate the measurement model with the bootstrapping resampling method (999 samples). The measurement model was estimated by calculating indicator reliabilities, composite reliability (R), convergent validity and discriminant validity to assess the psychometric properties of the multiple item scales [11]. Convergent validity is examined by combined loading and cross-loading to ensure every indicator has a factor loading higher than 0.7 on the designed construct [11]. Internal consistency was accessed by examining the composite reliability (CR) score and Cronbach's α (CA) for each latent construct with a recommended threshold of 0.7. Discriminant validity is evaluated to ensure that each construct should have a square root of Average Variance Extracted (AVE) greater than any of the correlations involving the latent variable [11]. Once the result of the measurement model satisfied the principal component analysis, structural model is then specified in PLS and analysed by the PLS algorithm with bootstrapping procedures to obtain path coefficients, and the associated p-value and R^2 coefficients of the constructs [11]. Hair et al. [11] suggested that the recommended size of R^2 is 0.10 in general.

Model 1: TradeMe New Zealand - An auction website with unified webpage design

Eight items with insufficient factor loading on the designed construct were removed from the measurement model (see appendix). Internal consistency was satisfied with all five constructs. The internal consistency and convergent validity was acceptable with indicators highly correlated with the designed construct. The discriminant validity was also satisfied. As presented in Table 1, Model 1 provides a reasonable level of reliability and validity of the reflective latent variable.

Table 1. Composite Reliability (CR), Average Variance Extracted (AVE), Cronbach's α (CA), Correlations

	CR	AVE	CA	ES	PS	BV	CL	IR
Expected Service (ES)	0.967	0.648	0.963	0.805				
Perceived Service (PS)	0.942	0.575	0.933	0.451	0.758			
Business Value (BV)	0.879	0.592	0.827	0.562	0.514	0.770		
Customer Loyalty (CL)	0.894	0.628	0.851	0.142	0.325	0.443	0.792	
Intention Repurchase (IR)	0.922	0.746	0.887	0.462	0.478	0.692	0.423	0.864

Note: square roots of average variances extracted (AVE's) shown on bold.

Figure 1 presents hypothesis testing results. In line with Hypotheses 1a and 1b, expected service and perceived service had a strong and positive impact on business value establishment in online auction websites. Business value, accounted for by expected service and perceived service, was $R^2 = 0.39$. The estimation model confirmed Hypothesis 2, which suggested that business value positively impacted customer loyalty development and accounted for a R^2 value of 0.22. Expected service and perceived service positively impacted buyers' repurchase intention with a similar effect size (Table 2), but the impact was not significant. Business value and customer loyalty had a strong and positive impact on motivating repurchasing intention in auction websites, but customer loyalty had a small effect size (0.077) compared with business value (0.446) (Table 2). The combined variance in intention to repurchase explained by the model, including expected service, perceived service, and business and consumer preference value, resulted in a R^2 value of 0.53. To test Hypotheses 3a and 3b, the impact from the

expected service, perceived service, business value and customer loyalty on intention to repurchase were compared. Customer loyalty had less impact on repurchase intention than business value, and thus, Hypotheses 3a was rejected. Expected service and perceived service did not have a significant impact on intention to repurchase, but contribute to business value with a strong impact on intention to repurchase. As a result, Hypothesis 3b was supported.

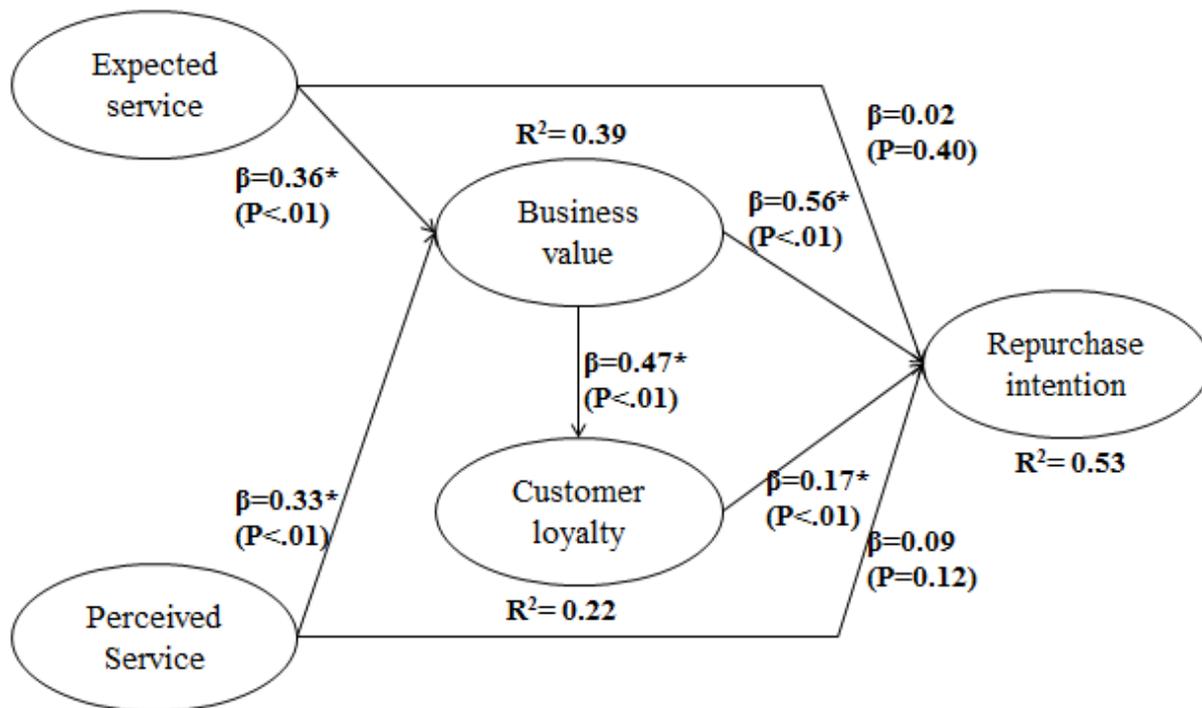


Figure 1. Influence of service provisions on intention to repurchase with unified webpage design

Table 2. Total Effects on Latent Constructs on IR

	Model 1			Model 2		
	Total effect	P Value	Effect sizes	Total effect	P Value	Effect sizes
ExpSer -> IR	0.254	0.019	0.122	0.371	<0.001	0.220
PerSer -> IR	0.301	0.002	0.154	0.317	<0.001	0.192
BV -> IR	0.635	<0.001	0.446	0.730	<0.001	0.596
CL -> IR	0.171	0.005	0.077	0.194	<0.001	0.128

Model 2: Yahoo Auction Taiwan – An Auction Website with Customised Webpage Design

All items had a factor loading exceeding the threshold of 0.7 with a significant P value. With CR scores higher than the threshold of 0.7 and AVE exceeding 0.5 (Table 3), the internal consistency and convergent validity of the measurements proved satisfactory. Discriminant validity was also satisfied: first, each latent variable had an AVE score higher than the construct's square correlation with other latent variables [17]. Second, each indicator had a higher loading on the designed construct than its cross-loadings on other latent variables. The reliability and validity for Model 2 was supported.

Table 3. Composite Reliability (CR), Average Variance Extracted (AVE), Cronbach's α (CA), Correlations

	CR	AVE	CA	ES	PS	BV	CL	IR
Expected Service (ES)	0.973	0.696	0.971	0.834				
Perceived Service (PS)	0.958	0.655	0.952	0.648	0.809			
Business Value (BV)	0.931	0.658	0.912	0.646	0.601	0.811		
Customer Loyalty (CL)	0.931	0.630	0.915	0.450	0.573	0.662	0.794	
Intention Repurchase (IR)	0.931	0.660	0.913	0.579	0.587	0.807	0.564	0.813

Note: square roots of average variances extracted (AVE's) shown on bold.

Figure 2 presents hypothesis testing results. In line with Hypotheses 1a and 1b, expected service and perceived service had a strong and positive impact on business value establishment in online auction websites. Business value, accounted for by expected service and perceived service, was $R^2 = 0.49$. The estimation model confirmed Hypothesis 2, which suggested that business value positively impacted customer loyalty development and accounted for a R^2 value of 0.44. Expected service had a larger effect size on intention to repurchase than perceived service (Table 2), but the impacts on repurchase intention were

insignificant. Business value and customer loyalty had a strong and positive impact on motivating repurchasing intention in auction websites, but customer loyalty had a small effect size (0.194) compared with business value (0.730). The combined variance in intention to repurchase explained by the model, including expected service, perceived service, and business and consumer preference values, resulted in a R² value of 0.70. Hypothesis 3a was rejected as customer loyalty did not have a stronger impact on intention to repurchase than business value on auction websites. Although expected service and perceived service did not have significant impacts on intention to repurchase, business value mediates the relationship between the perceived service, expected service and intention to repurchase, and thus, Hypotheses 3b was supported.

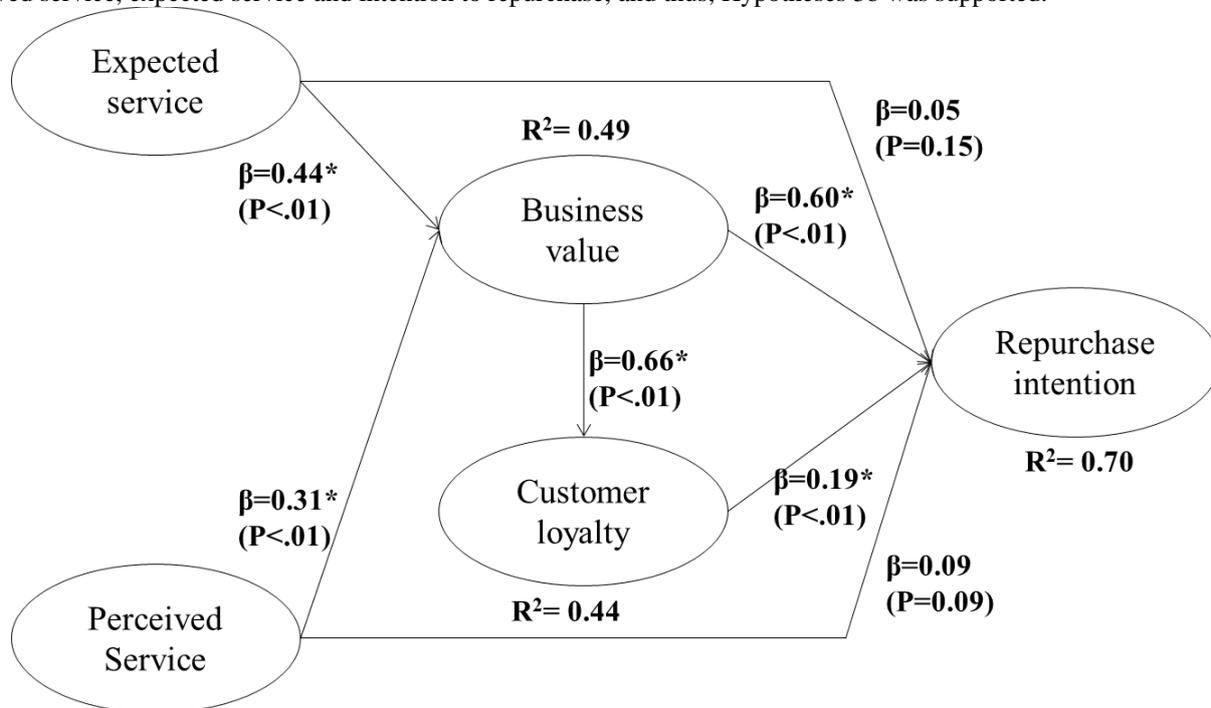


Figure 20. The impact of service provisions on intention to repurchase with customised webpage design

The Moderating Role of Website Design on Repurchase Intention

The analysis result of Model 1 and Model 2 were compared to test Hypotheses 4a, 4b, 5 and 6 (Table 4). The impact of expected service on intention to repurchase was improved with customised webpage design(β = 0.046)than with unified webpage design (β = 0.023), however, the impact was not significant. Perceived service did not have significant impactson intention to repurchase on both types of auction websites; furthermore, the design of webpage did not positively improve how buyers perceived the service provision around purchasing. Hypotheses 4aand 4b were both rejected.Hypothesis 5 was supported by this study. The comparison between the two models suggested that the webpage design helps buyers to perceive a higher level of business value (β = 0.602) than unified webpage design (β = 0.555).Online sellers with customised webpage design also increased the impact from the customer loyalty to intention to repurchase. Customer loyalty in auction websites withcustomised webpage design had a strongereffect on intention to repurchase (β = 0.194) than auction websites with unified webpage design reliance (β = 0.171) (Hypothesis 6 is supported).

Table 4. Hypotheses Testing - Path analysis (β, P Value)

Path	Model 1			Model 2		
	β	P value	Hypotheses	β	P Value	Hypotheses
H1a:ES -> BV	0.364	<0.001	Supported	0.444	<0.001	Supported
H1b:PS ->BV	0.328	<0.001	Supported	0.313	<0.001	Supported
H2:BV -> CL	0.466	<0.001	Supported	0.663	<0.001	Supported
H3a:CL*IR>BV*IR			Rejected			Rejected
H3b:BV*IR> ES*IR&PS*IR			Supported			Supported
H4a:ES -> IR*webpage design	0.023	0.403	Rejected	0.046	0.154	Rejected
H4b:PS -> IR* webpage design	0.093	0.119	Rejected	0.088	0.088	Rejected
H5:BV -> IR* webpage design	0.555	<0.001	Supported	0.602	<0.001	Supported
H6:CL -> IR* webpage design	0.171	0.005	Rejected	0.194	<0.001	Supported

DISCUSSION AND IMPLICATIONS

The aim of this study was to improve ourknowledge related to online service provision fordifferent types of auctionwebsites and to investigate how these can be translated into long-term operational strategies. This study found that expected service and

perceived service affects buyers' intention to repurchase indirectly. Moreover, whether business value and customer loyalty increase the willingness to repurchase depends on the webpage designs. This study makes several contributions to the academic literature. First, it enhances understanding of the literature on service provision for online auction websites by introducing three stage service transformations. By linking expected service and perceived service to business value and customer loyalty, as well as the willingness to repurchase, the results confirm that the concept is an important service provision for auction websites. Although expected service and perceived service do not motivate buyers' repurchase intentions directly, they support the development of a business' value and customer loyalty in both models. This study was expecting the impact from expected service and perceived service to increase intention to repurchase, observed by business by business value realisation and customer loyalty development. As trading on auction websites focuses more on the value of products [29], a strong personal preference on product or vendor, including customer loyalty, may be less important, which explains why customer loyalty fails to expand the impact from business value to intention to repurchase. Observing literature existing research on customer loyalty, which has been conducted primarily in non-auction website [e.g., 30 ; 36], this study demonstrates the viability of the construction of customer loyalty in auction websites.

Second, this study enhances our understanding of the online academic debate on whether website design has an impact on business' long term operational strategy [e.g., 30]. While some researchers believe that it is a challenge for online sellers to achieve long term operational strategies [29], others have conducted research that identifies ways to attract buyers in auction websites. So far, the focus has been on the quality of the product [13], or the sellers' reputation [35]. This study extends the understanding by examining the joint impact of expected service and perceived service as indirect predictors of intention to repurchase on auction websites. The results suggest that the website design has a positive impact on the development of business value and customer loyalty, and further increases the willingness to repurchase. As suggested by Wells et al. [28], the way an online seller presents its products is related to their business objectives, which signals the trustworthiness of the online sellers. The website design is closely associated with the level of service expectation, which will influence how buyers perceive the service provision and further influence the intention to repurchase through business value and customer loyalty. As suggested by Kim and Son [16], the way an online seller constructs its webpage determines buyer's expected service. With the signal sent through webpage design, Kim and Son [16] warn of the possibility of backfire effects on perceived service, which have a stronger impact on business value and intention to repurchase than expected service. However, no such indications of backfire effects were identified in this study.

Finally, the results highlight the importance of considering webpage design. The result of the study suggests that regardless of the website design, online sellers might be recognised by the reputation, mostly motivated by business value and customer loyalty, rather than expected service and perceived service. In auction websites, collective review is more important than individual opinions [35]. The findings for business value and customer loyalty reflect evaluation from different perspectives, according to the auction website environment and buyers' personal preferences. Although the customised webpage design improves the level of impact on repurchase intention, it seems that the main goal of website design is to improve the level of trust and offer buyers with a secure trading environment. More generally, it can also be concluded that, with customised website design value, the benefits provided by an online seller (business value) allows buyers to identify how the online seller fits their preference (customer loyalty). The development of a trust relationship between seller and buyer seems to speed up due to the proper design of webpages. This study provides preliminary evidence that the webpage design signals different levels of trust and improves the willingness to repurchase in auction websites.

Managerial Implications

This study also provides practical knowledge for online sellers on auction websites who may wish to achieve long term profit generation by considering the types of auction website they adopt to start an online business. A beneficial approach might be a practical manner to allow online sellers to motivate buyers' intentions to repurchase. The findings suggest that signal trading evaluation does not lead to repeat purchase in auction websites. Online sellers need to provide consistent service and product quality to develop a strong business value, which will further motivate customers' loyalty and intention to repurchase. In other words, a strong and positive business value differentiates an online seller from competitors and achieves long term operational success. Website design improves the trust relationship between online sellers and buyers which increases the impact on intention to repurchase. Regardless of the design of the webpage, it should be noted that consistent service provision and a secure trading environment are keys for long term success in auction websites.

Limitations and Future Research

The small sample in the New Zealand dataset introduced the inability to represent the New Zealand online buyer population. The survey adoption may also introduce responding error. Future research may involve in-depth interviews with buyers to extend the understanding from this research and to validate the survey finding with practical evidences. Although both models managed to explain more than 50% of the variance for intention to repurchase, there are still other factors to be identified from the webpage design perspective. Future research could also collect data from the online sellers to identify other factors that may be encouraging buyers' intention to repurchase.

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APPENDIX

The measurement for each construct in both models:

(Those measurements removed from Model 1 are presented in *italic*).

Expected Service. The website should be easy-to-use and user friendly; The product/information should be easy to find; The website needs to be fast loading and well organised ; Online sellers should provide detailed product pictures to help customers in understanding the product; The information related to the product should be useful and help me make a judgment about the product; Online sellers should set up a special channel for any problems that customers have with their received orders; Online sellers should have guarantees/a refund policy available to protect my benefits; Online sellers should have the customers' best interest at heart; Online sellers should act as they have promised; Online sellers should respond to my questions with information which helps me with my decision making; Online sellers should respond to my requests within a reasonable period of time; Online sellers will be consistently courteous with customers; With problems in my order, online sellers should respond to me satisfactorily; Online sellers should have a well-established post-sale service; The auction website provider should provide a secure shopping environment; The order progress should be available online.

Perceived Service. Their websites are easy-to-use and user friendly; The product and its related information are easy to find; Their websites are fast loading and well organised ; The pictures of a product assist me in making a decision; I can use the information related to the product to judge its quality; I can reach the seller easily if there is any problem in my order; They act responsibly when there is a problem in my order; Their response is useful and assists me in decision making; I receive their responds in a reasonable period of time; They give special care to every customer's request; I am satisfied with their responses ; This online seller has a well-organised and caring post-sale service.

Business Value. I shop with a particular online seller because I know they are reliable; *I will not shop with online sellers who have bad feedback even if they offer an attractive low price*; I will check online sellers' feedback before I make a purchase; *I will shop with online sellers who offer special services (e.g. fast delivery, credit payment.)*; I shop on auction websites as price comparison is easy and fast; I shop on auction websites for a bargain; I shop on auction websites because of convenience, time-saving and no geographic limitation.

Customer Loyalty. *I can name those online sellers whom I often shop with*; I save the websites of those online sellers whom I often shop with into my favourites list; I will recommend my friends those online sellers whom I often shop with; *When shopping via auction websites, the reliability of online sellers is my first priority*; I will browse the product listing of the online sellers I often shop with when I am bored; I would love to receive the latest news from online sellers I often shop with; If they have new listing products, I will make time to browse them; *I will only turn to their competitor when they do not have the product I need.*

Intention to Repurchase. I am willing to repurchase from the same online seller if the quality of the product from my last experience meet my expectation; Due to special needs/products request (e.g. style, rarity of product), *I am not willing to repurchase from the same online seller if there are unsolved complaints in their feedback*; *I am not willing to repurchase from the same online seller if they cancel/change the products/service that attract me (e.g. free shipping, VIP discounts, etc.)*; *My willingness of repeat purchasing will be motivated when I receive their latest news or promotion*; With similar product and service standards, I am more willing to make repurchases if the price is reasonable; I am willing to make repurchase from the same online seller only when they are producing the product I like.