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Studying Customer E-loyalty to Online Intermediary: Case of Group Buying Site

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ABSTRACT

The online intermediary connects merchants whose products and services it offers, and end-customers who do online shopping through the intermediary, but consume products and services traditionally. Specifically, this study focuses on two purchase processes, namely online transactions, and the retailer experience. Consequently, intermediaries need to know if e-loyalty can be threatened by poor service delivered by the merchants. Our goal is to identify and examine factors that determine e-loyalty towards a group-buying site as an intermediary. We developed an integrative theoretical model based on the expectation confirmation model positing that satisfaction with the intermediary's e-service and merchants' service has a significant positive impact on e-loyalty towards the intermediary. We use structural equation modelling for evaluating the satisfaction and intentions for loyalty to the intermediary, employing collected survey data of 2.691 responses from Grouper customers. We measure the intermediary's e-service quality using IS scale and we add customer support as an important factor for e-loyalty. The findings suggested that satisfaction with e-service quality significantly affected customers' e-loyalty towards intermediaries. This study provides insights for intermediaries in identifying e-loyalty drivers, understanding customers' needs, and improving online performance to maintain satisfied customers who will continue using their services.

Keywords: E-commerce, Structural Equation Modelling, Online intermediary, Grouper

1. INTRODUCTION

As a result of the advances in the Internet and technology, along with the booming electronic commerce market, many new e-business models that act as an intermediary between customers and businesses emerged. One of these is the "group buying" model, which acts as an intermediary between retailers offering their goods or services to thousands of customers at specific discounted prices. Customers benefit from appealing deals at lower prices, while retailers gain marketing exposure and sales growth. Although the idea of group buying has been around for a long time, digital technologies have allowed it to advance by enabling it to be organised online through web channels.

When Groupon (www.groupon.com) launched in the United States at the end of 2008, it introduced a rapidly expanding model that was quickly and successfully taking off in other countries [1]. It sparked a new wave in the e-commerce domain. Online group buying is defined as bringing customers with similar needs together and increasing their bargaining position to achieve a lower transaction price [2, 3]. According to some authors, online group buying has a promising future because it is a unique, innovative, and compelling online business model [4, 5]. The online group-buying model is organised as an intermediary between customers and merchants, and there are two distinct links: one between the customer and the group-buying site, and the other between the customer and the seller of the goods and services. Group-buying companies need to focus on the factors that affect repeat purchases and the creation of loyal customers. The transaction on group buying sites and with most online brokers usually takes place in two stages. The first phase involves online shopping, when the user interacts with the group-buying website, which includes searching for and selecting the desired deal, completing the purchase process by entering the payment card details, and then receiving the purchased coupon. The second stage is the exchange of the bought coupon (by the buyer or another person possessing the coupon) with the merchant, i.e. the company that is the product or service provider. The second stage is a more traditional exchange of goods for money (where the advance money is exchanged online for a coupon). The second stage depends on the merchants' performance, while the first stage depends on the e-service quality of the website. The model can be easily imitated by competitors [6], but it is very challenging to keep customers who have already purchased from you and attract new ones [7]. The sustainability of the group-buying model depends on the satisfaction of customers and merchants. They are both critical for the long-term success of the group-buying model. Merchant satisfaction is crucial for plans to promote goods or services on group buying websites [8]. They will stop using the group-buying site if they are unhappy with the promotion. Failure to provide quality service when redeeming coupons can also cause dissatisfaction by being passed on to customers [8].

The popularity of the online group-buying model provokes sustained growth of interest among researchers, but the issue of customers' loyalty in the online context is relatively low [7]. Nevertheless, the long-term success and profit of the online group buying model in a competitive environment depend on understanding the factors influencing repurchase intention and continued revisits [9]. The consideration of customer retention has become an important issue for online shopping researchers [10-13]. An increased number of studies are examining online group-buying consumer satisfaction and repurchase intention, and as predictable variables, their focus is on price discounts [14, 15], the technology acceptance model [16, 17], website quality [7, 11, 12], trust [11, 12, 18], perceived risk [16], or word of mouth [7]. Recently, Garcia et al., [19] examined the strong influence of service quality, popularity, and online brand image on consumer general satisfaction and the influence of service quality, trust, and general satisfaction on repurchase intention. By integrating the information system continuance model and gratifications theory, the influence of psychological motivations on repose intentions

through online group-buying is investigated [20]. For a more comprehensive explanation of consumers' continuous usage intention in online group buying Zhang et al., [21] replaced perceived usefulness with three perceived characteristics (price, advantage, reputation, and website quality). In addition, the impact of personalization specificity on the intent to repurchase the group-buying website is being studied [22]. The impact of the performance of online group buying and retailers on consumer satisfaction and continued intention is examined under the expectation–confirmation theory [23]. Hsu et al., [12] proposed a theoretical model by integrating the literature on the expectation–confirmation model and online shopping to test the factors affecting repeat purchase intention in online group buying by integrating value, website quality, trust, and habit into the ECM. If the success of the online intermediary model depends on both parties' performances, that is, group-buying websites and merchants, then both sides can affect the retention of customers. In this context, we contribute to scarce literature that simultaneously considers the effect of the performance of the online-group buying site and merchant' on consumer satisfaction and e-loyalty.

The company in consideration in this research is the leading group-buying site in North Macedonia: Grouper. mk, established in January 2011 and still operating successfully. Furthermore, the author is the co-founder and CEO of the company during the period of this research and is interested in customer loyalty. As the website acts as an intermediary between end-users and merchants, providing a wide range of goods and services from household appliances to vacation rental apartments to online education courses, customers can express their dissatisfaction with Grouper's e-service quality or with merchants' service quality during their visit (coupon redemption). The most common reason why customers express dissatisfaction is difficulty in coupon redemption, i.e. the service provider has made it difficult for the customer to use the purchased service or product. Difficulties caused by the company that creates dissatisfaction can be the refusal to make a reservation, i.e. giving priority to non-coupon customers, the inability of the company to service the customer, etc. [24]. In other words, even though the customer had a pleasant experience with the e-service provided by the intermediary in the first phase, there is a possibility of an unpleasant experience with the merchant that can discourage them from ever using that online group-buying site again. These aspects suggest an important consideration of both stages: the e-service or the performance of the group-buying site and post-services or the performance of merchants and their impact on the customer's satisfaction and loyalty intention towards the group-buying site.

To fill the gap in the literature, the goal of this research is to find out if dissatisfied customers can be discouraged from continuing to use the group-buying site or, even more important, if the quality of e-service can 'undo' i.e. remedy the dissatisfaction made by the merchant. More specifically, we try to answer if e-loyalty to an intermediary is statistically significant depending on the satisfaction of the customers with 1) e-service quality and 2) merchant quality of products and services. To meet the research objective, the theoretical framework needs to include both types of

transactions that occur. Based on the literature review, we propose a theoretical model and empirically examine it by questionnaire survey. While enriching and deepening the knowledge of e-loyalty towards online intermediaries, our research provides theoretical contributions and practical implications for the online intermediary pattern. We consider that the findings of our research can help both academics and practitioners gain insights for stimulating customers' repurchases and revisiting their intentions concerning online group-buying websites.

The rest of the paper we present is as follows. The next section reviews related literature and develops the research hypothesis. The third section presents a methodology and data and proposes a theoretical model of loyalty intention towards online group buying based on both online and offline customers' experiences, questionnaire development, and data collection. The fourth section presents the results of the data analysis. The fifth section offers a discussion of the obtained results, and the final section summarises the conclusions, implications, and limitations.

2. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

2.1 Satisfaction and Loyalty

Acquiring a new customer is much more costly than retaining an existing one. Loyal customers can also act as advocates and marketers, recommending the company's products and services to friends and spreading positive word-of-mouth advertising [25]. The marketing literature review reveals that academics believe that there is a strong link between satisfied and loyal customers [26]. Customer satisfaction and quality of service are the main predictors of repurchase intention [27]. Consequently, customer satisfaction is a central concept in marketing theory and practice and, of course, an important goal of all marketing activities [28, 29]. Loyal customers spend more on custom products and services than disloyal and price-sensitive customers, who can easily turn to a competitor just because of the lower price [30]. The economic benefits of high customer loyalty account for enhanced competitiveness in many industries [31]. The acceptance of an information system is an important first step towards its success, but its long-term success depends more on its continued use than its first use [32]. Satisfaction is also of great interest to practitioners because of its important effect on customer retention [33, 34]. Only fully satisfied customers can become loyal customers [35]. Economic satisfaction and social satisfaction also have a significant positive effect on repurchase intentions [36]. Customer satisfaction is considered to act as an antecedent (cause) of loyalty and arises from previous consumption experiences [37]. Other research shows that satisfaction is the cause of loyalty, and an increase in satisfaction can also cause an increase in customer loyalty [38]. To investigate customers' loyalty and intention of using the services of a group-buying site, we investigate customer satisfaction, which has a significant and positive effect directly on customer loyalty. Loyalty, in Oliver [39] p. 34, is described as: "a deeply held

commitment to repurchase or repatronise a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour." Loyalty is defined as "customer satisfaction as the primary bond that links repeat customers to service providers" [40]. When speaking of e-loyalty in e-commerce, as Safe [41] points out, it is the desirable customer attitudes that lead to repeat purchases. In other words, "e-loyalty" is the customers' favourable attitudes towards electronic commerce that will result in repurchasing behaviour [41]. As Curasi and Kennedy [40] classify attitudinal and behavioural loyalty, we refer to loyalty in our study as behavioural loyalty that results in repeat purchases [40]. "Brand loyalty" is a deep-held commitment to repurchase a product or service in the future [39]. Based on this, we investigate the satisfaction experienced with the group-buying site and the satisfaction with the merchant (service provider) and its implication for loyalty, proposing two main hypotheses:

H1: Satisfaction with e-service quality is positively related to e-loyalty to intermediaries.

H2: Satisfaction from the merchant is positively related to e-loyalty to the intermediary.

2.2 Expectation-Confirmation Theory

All definitions of customer satisfaction are related to the fulfilment of customers' expectations. Customer satisfaction is the outcome felt by customers who have experienced company performance that has fulfilled their expectations. Expectations are an important driver of the economy, finance, and almost all decisions and perceptions, but our focus in this study is on marketing and consumer behaviour. The consumer decision-making process is mainly driven by expectations [42, 43]. Expectations are personal beliefs about occurrences that may take place in the future and are developed as a combination of individuals' experiences and knowledge [44]. In most studies, expectations have been treated as a static variable that exerts both a direct and indirect influence on customer satisfaction [45, 46]. In these studies, customer expectations serve as comparative referents for quality judgments, for determining customer satisfaction, and ultimately for determining behavioural intentions. Marketers must understand customer expectations to influence customer satisfaction [28]. In the late 1980s, Oliver [47] proposed the Expectation-Confirmation Theory (ECT), which is based on expectation and expectancy confirmation. Mainly, the concept is that the customer builds an expectation before purchasing a certain product/service and compares the perceived performance after purchasing and experiencing the product/service. The customer's (dis) satisfaction and its level are determined based on the perceived actual performance, comparing it to the prior expectations. Even though there are many approaches to customer satisfaction/dissatisfaction explanation, the most widely used is the expectation confirmation theory. In the marketing context, Yi [29] explains that customer satisfaction is a collective outcome of perception, evaluation, and psychological reactions to the consumption experience with a

product/service. It means that the customer's evaluation of the product/service is a result of a comparison of the actual perceived performance with the prior expectations. According to this theory, satisfaction is defined by the intensity and direction of the gap between expectations and perceived performance. ECM is a well-researched model that has been used for a couple of decades to predict behaviour in various settings like e-commerce [32, 48]. Thus, it is reasonable to expect that ECM could be used to explain online customer behaviour in e-commerce, as confirmation had a significant effect on satisfaction, which in turn had a positive influence on IT continuation usage [49, 50]. Based on the above-mentioned, we propose the following hypothesis to evaluate customer satisfaction with the e-service quality and merchants' service quality:

H3: Confirmation of expectations is positively related to satisfaction with e-service quality.

H4: Confirmation of expectations is positively related to satisfaction with merchants' service quality.

H5: Confirmation of expectations from e-service quality is positively related to confirmation of expectations in merchants' service quality.

H6: Satisfaction with e-service quality is positively related to satisfaction with merchant service quality.

2.2 E-S-QUAL

E-Service Quality is regarded as pivotal for B2C e-Commerce success, even though low prices and web presence were initially thought to be the important drivers [51]. To measure the service quality provided by websites where customers shop online, we use a multiple-item scale called E-S-QUAL. The scale developed in the research consists of an updated version that consists of four dimensions: efficiency, fulfilment, system availability, and privacy [51].

(1) Efficiency. The ease and speed of accessing and using the site are considered very important in e-commerce since convenience and saving time are generally considered the main reasons for shopping online [52]. Thus, we propose:

H3a: Confirmation of expectations from efficiency is positively related to satisfaction with e-service.

(2) Fulfilment. The extent to which the site's promises about order delivery and item availability are fulfilled is one of the most vital factors for the judgement of the quality of an online intermediary since keeping service promises and accurate order fulfilment are elements of service quality that lead to customer satisfaction or dissatisfaction [53]. Based on the previous, we propose:

H3b: Confirmation of expectations from fulfilment is positively related to satisfaction with e-services.

(3) System availability. When customers want to shop online, the proper technical functioning of the website is crucial, as function problems like non-working buttons or 'broken' or missing links, may disappoint customers and lead to withdrawal and 'lost' sales. As a result, the online provider loses the opportunity to enhance customer loyalty [54]. Consequently, we propose:

H3c: Confirmation of expectations from system availability is positively related to satisfaction with e-services.

(4) Privacy. The degree to which the site is safe and protects customers' information is related to privacy. Many people are still concerned about buying products from the internet because of the risk connected to the mistreatment of personal information. Online retailers are becoming more familiar with the importance of providing consumer privacy [52]. Privacy has been shown to have a strong effect on the intention to purchase [55], customer satisfaction [56], and overall site quality [57]. Therefore, we propose:

H3d: Confirmation of expectations from privacy is positively related to satisfaction with e-services.

(5) Customer support. Despite the widespread use and success of the E-S-QUAL model constructed from these four dimensions, Parasuraman et al. [51] in any case advise that, depending on the detail and scope of information systems, applications, and scenarios, a given scale may not fit perfectly in every situation. Therefore, they suggest, in such cases, including certain specific components that can be adapted to the needs of the research. For our research, we include another variable that we consider as significant in the context of customer satisfaction analysis of the e-service quality of an online intermediary, in our case Grouper .mk. The fifth variable we include is the user's experience evaluation of customer support, and it is similar to the responsiveness variable contained in the initial model, which includes 11 dimensions in the ES-QUAL model before its modification and reduction to the 4 most important dimensions [58]. Responsiveness was defined as a quick response and the ability to get help when there is a problem or question. In that direction, we include customer support as an important dimension in our model of examining the satisfaction of the users through the website as an intermediary. Customer support can offer various solutions to dissatisfied customers, regardless of whether it concerns a problem or dissatisfaction with the e-service or merchant's service. We consider that customer support is an important factor that can play a key role in remedying or 'undoing' customers' dissatisfaction, whether it is caused by the e-service or by the merchants. Based on the previous, we propose:

H3e: Confirmation of expectations from customer support is positively related to satisfaction with e-service.

2.2 Perceived Value, Reputation, and Quality of the Merchants' Service

To measure the quality delivered by the merchants where Groupers' customers redeem their coupons, we use multiple variables: perceived value, reputation, and quality of the

service. The items in these constructs are adapted to customers' experiences with Grouper coupons in the sense of the attitude of the merchants, i.e. how they are treated, the discounts, etc.

(1) Perceived value. A customer's perceived value is a comparison between overall customer assessments of the benefits received and the costs needed to obtain these benefits [59]. It is also explained that perceived value is the difference between what customers get from what is offered, what the market or service provider provides, and what customers pay for the benefits they want to enjoy [59]. Patterson and Spreng (1997) consider the perception of value to be a fundamental goal of any exchange transaction. Their study examined the relationship between several variables that appear after purchase, and they found that the impact of perceived value on repurchase intention was mediated by loyalty, supporting the claim that satisfaction is a predictor of loyalty intentions and perceived value. The claim that there is a strong link between perceived value and satisfaction, and between satisfaction and loyalty is also supported by Hellier et al. [60]. Therefore:

H4a: Confirmation of expectations from perceived value is positively related to satisfaction with merchants' service.

(2) Reputation. According to Casaló, et al. [25], the reputation perceived by the customer can be considered a result of the comparison between the promises made by the company and the customer's experience regarding fulfilling those promises. They emphasise that reputation can be very unstable because it is much easier to lose a good one than to create one. Corporate reputation and image are considered important factors in establishing and maintaining loyalty among customers [61]. Thus:

H4b: Confirmation of expectations from reputation is positively related to satisfaction with merchants' services.

(3) Service quality. Service quality is defined as the customers' overall judgement of the excellence of a service offering [62]. Service quality is also affected by the ability of an organisation to satisfy customers' needs according to their expectations [63]. Finally, the quality of services Groupers' customers get during coupon execution is important, and we propose:

H4c: Confirmation of expectations from service quality is positively related to satisfaction with merchants' services.

3. METHODOLOGY AND DATA

3.1 Research Model

We want to evaluate the users' online and offline experience and satisfaction to predict their intentions for loyalty, i.e. repeated purchases on the group buying site, Grouper. The sustainability of the group-buying model depends on customer loyalty, and it is necessary to identify the factors that affect loyalty, as well as the relationships between

those factors. We want to (1) investigate how user interactions with the intermediary, measured via e-service quality, affect the overall satisfaction of Grouper's customers and their propensity for loyalty, and (2) investigate how the interactions of the customers with the merchant affect the overall satisfaction of the customers of Grouper and their inclination for loyalty, i.e. repeated purchase intentions. In this regard, this research uses the theory of expectations and confirmation (ECT) as the main theoretical framework for modelling these relationships [47]. We integrate ECT with the updated information systems success model proposed by DeLone and McLean [64] to create a framework for appropriately modelling the online and offline transaction stages that take place during group-buying purchases. We create the theoretical research model e- for loyalty with Grouper as an intermediary, integrating e-service performance and merchants' service performance (Figure 1). We use ECM to compare the performances of online group buying sites - Grouper and merchants. As for the merchants' performance, this study compared the pre-purchase expectations of the merchant with the perceived performance after the service was provided, and then evaluated whether they were consistent or not (degree of confirmation), as well as using this as a reference for measuring the merchants' performance. We use the direct (subjective) approach of ECT, citing appropriateness and simplicity in assessing customer satisfaction. The use of the reasoning approach can further complicate the questionnaire because the respondent should answer the same questions by evaluating them under two conditions: before using the service (expected value) and after. With the direct approach, the respondent responds directly with only an evaluation of the perceived value, as opposed to the expected one. We measure the level of consumer satisfaction based on the consumers' perceptions after using the group-buying site Grouper and experiencing the product/service from the merchant.

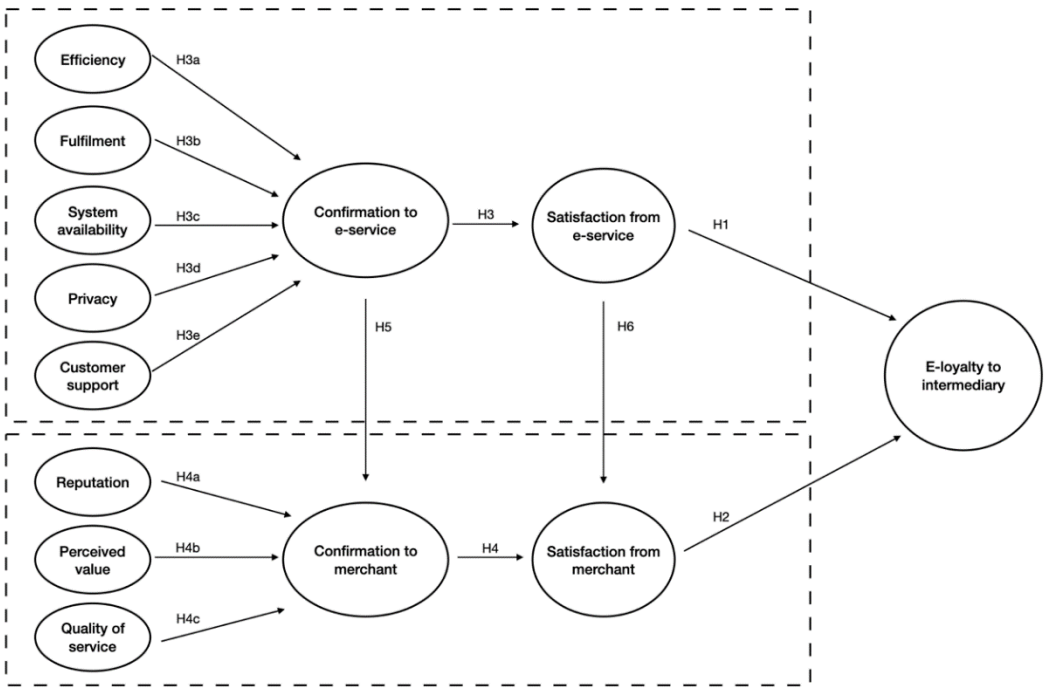

Figure 1. Research model

3.2 Questionnaire and Measurement

Survey questions are based on previously developed items from the literature that have been adapted and modified, and new items have been added to suit the planned measurement model. The questionnaire contains six sections: (1) general questions about using Grouper; (2) evaluation of the user experience from using Grouper (evaluation of the e-service quality); (3) evaluation of the users' experience during coupon redemption (evaluation of the merchant's service as a provider); (4) evaluation of the intentions for future use of Grouper (intentions for loyalty and future purchases); and (5) demographic issues. Section 6 was left optional for users to leave their contact details (email and name) if they wished to participate in the drawing for gifts. As an incentive to collect more answers to the questionnaire, Grouper associates provided 100 gifts such as spa packages, massages, lunches, and other various experiences that were dispensed to respondents. Sections (2), (3), and (4) consist of statements evaluated on a 5-point Likert scale ranging from "totally disagree" to "totally agree." Table A1 in the Appendix shows the item wording for each of the constructs and includes descriptive data, factor loadings, and Cronbach's alpha.

3.3 Sample and Data Collection

To test our proposed model, we conducted a survey. The sample frame is the custom database of Grouper in North Macedonia. The selection criteria for the sample were users that bought and used a coupon in the last 6 months, i.e., all users who bought and used a coupon in the period from November 1, 2016, to April 30, 2017. The sample consisted of 14.040 users out of 103.340 registered users on the group-buying site Grouper. An email inviting users to complete the questionnaire was sent by Grouper using an email provider the company uses to send email messages to its users: Elastic Email. In the message sent, users were asked to complete the questionnaire, emphasising that they would contribute to the research aimed at assessing the satisfaction of Grouper users. Additionally, the incentive was made clear to boost response rates, i.e., it was stated that 100 users who completed the survey will each receive a gift at random. The email was successfully delivered to 13,152 email addresses. Five days after sending the first email, a reminder was sent to invite those who did not fill it out to get involved and answer the questionnaire. The questionnaire was closed with 2.691 valid questionnaires and a response rate of 20.46%. As all the questions in the questionnaire were mandatory (except the optional section for the gifts), the removal of the incomplete questionnaires was not necessary. The demographic analysis of the survey results indicated that respondents were predominantly women (58.6%), were 35 to 54 years old (44%), had been using Grouper for more than 2 years (51.6%), visited the website daily (46.6%), visited the website directly (46.6%), and used the mobile application (62.7%). Given the descriptive statistics (Table 1) of the respondents' characteristics, we can assume that this is a sample of users who use Groupon coupons regularly, which makes it even more representative to assess satisfaction with both parties, the website, and the merchant service, because their overall evaluation is based on more experiences of using Grouper coupons.

Table 1. Demographic statistics information about the respondents (N=2691)

Measure	Item	Frequency	Percent
Gender	Male	1114	41.2
	Female	1577	58.6
Age	<24	350	13
	25-34	1184	44
	35-44	772	28.7
	45-54	307	11.4
	>55	78	2.9
Time of using the site	<1 month	37	1.4
	1-6 months	349	13
	7-12 months	273	10.1
	1-2 years	644	23.9
	>2 years	1388	51.6
Frequency of visits	Everyday	1254	46.6
	At least once a week	1182	43.9
	Monthly(1-2 times)	206	7.7
	Quarterly (3-4 times a year)	49	1.8
Visit the site	Directly	1475	46.6
	Via Facebook	209	7.8
	Via e-mails notifications	909	33.8
	Via mobile applications	88	3.3
	Other	10	0.4
Mobile app. use	Yes	1686	62.7
	No	1005	37.3

3.4 Data Analysis

We use structural equation modelling (SEM), a powerful multivariate technique found increasingly in scientific investigations, to test and evaluate multivariate causal relationships. We used SPSS Amos to carry out the analysis, relying on robust Maximum Likelihood Estimation (MLR), to account for non-normality and other sources of distortion, such as heteroscedasticity and non-normal distribution of error terms [2]

We assessed the quality of the measurement model by examining inter-item analysis of internal consistency or reliability [65]. More specifically, we use Cronbach's coefficient alpha [66] and calculate it for each scale, as recommended by Flynn et al. [67]. Reliability is mainly used to test the consistency and stability of the scale. The minimum acceptable inter-item reliability level is 0.7 [68]. For discriminant validity assessment, we use the Fornell and Larcker criterion [69]. This method compares the square root of the average variance extracted (AVE) with the correlation of latent constructs, and the square root of each construct's AVE should have a greater value than the correlations with other latent constructs [70].

4. RESULTS

4.1 Descriptive statistics

We present descriptive statistics for construct variables in Table 2. Customers assessed all variables very well, and the mean value is above 4. It can be noticed that only two variables connected to merchants: confirmation to the merchant (3.8) and reputation (3.9), are below 4. The mean value of the variable for the intention of loyalty is 4.6; a similar value has been assigned to the variable for satisfaction with the e-service (4.5), which indicates a high degree of satisfaction and high intentions for loyalty. Descriptive statistics of the answers of the respondents to each item construct are presented in Table A1 (Appendix).

Table 2. Descriptive statistics information about the constructs variables

	Mean	Std. Deviation
Loyalty Intentions wan ith intermediary (LII)	4.5891	.75111
Satisfaction with e-service (SWE)	4.5014	.74792
faction of merchant (SWM)	4.0829	.90546
Confirmation of e-service (COE)	4.2465	.82606
irmation on to merchant (COM)	3.8151	.95795
Efficiency (EF)	4.5397	.68260
System Availability (SA)	4.4397	Fulfilment
Fulfilment (FL)	4.6146	.67865
Privacy (PR)	4.3567	.84239
Customer support (CS)	4.3229	.84994
Reputation (RE)	3.9362	.80093
ived Value (PV)	4.0647	.85294
Service quality (SQ)	4.1023	.89895

N=2691; minimum 1 and maximum 5

4.2 Structural Model

We assessed the quality of the measurement model by examining inter-item analysis by internal consistency or reliability using Cronbach's coefficient alpha, and the values ranged approximately between 0.82 and 0.95. Therefore, all sub-scales exhibited behaviour well above the minimum acceptable reliability level. In addition, a second way to evaluate convergent validity is to examine the factor loadings of each construct. As presented in Appendix Table A1, the results show that the loading of each indicator on its assigned construct is larger than its loading on any other construct, confirming adequate convergent validity. Discriminant validity refers to the extent to which factors are distinct and uncorrelated. The rule is that variables should relate more strongly to their factor than to another factor. In Appendix Table A2, we can see that the square root of AVE (shown on the diagonal of the correlation matrix in bold) for each construct is higher than the correlation between that construct and any other construct. Based on

these results, we can say that the measurement model's result indicates that the model has good internal consistency, indicator reliability, convergent validity, and discriminant validity.

The chi-square statistic evaluates how well the model reproduced the sample covariance/ correlation matrix. The 39-item, 13-factor model had a significant chi-square (5009.902, p, .001, df. 689). A small chi-square to degrees of freedom statistic normally indicates a good model fit, but in this case, the chi-square was significant, suggesting a poor fit. But in most statistics, large sample sizes increase power, resulting in significance with a small effect size [71]. We consider additional fit indices to determine whether the model fit is acceptable. At the overall model level, the initial goodness of fit indices (GFI, 0.90 and RMSEA, 0 to 1.0) are met (GFI =0.904, and RMSEA=0.048) as presented in Appendix Table A3.

The path coefficients, standard error, and t-values for all hypothesised paths are presented in Table 3. The significant path coefficients ranged from 0.311 to 1.210, exceeding the suggested minimum standard of significance, which is 0.20 [72]. In short, the fit of the overall model performs well within the theoretical requirements.

After confirming that the properties in the measurement model are valid, an examination of the model revealed that all model estimates were in the hypothesised direction, and 10 out of 14 hypothesised relationships are statistically significant, thereby being supported, as shown in Table 3.

Table 3. Results of hypotheses testing

Hypothesis relationship	β	S.E	t-Value	Supported
H1: Satisfaction from e-service → loyalty to intermediary	.311	.035	8.830***	Yes
H2: Satisfaction from merchant → loyalty to intermediary	.029	.027	1.094	No
H3: Confirmation → satisfaction - e-service quality	.489	.047	10.514***	Yes
H4: Confirmation → satisfaction - merchants' service quality	.507	.028	17.790***	Yes
H5: Confirmation of e-service quality → confirmation of merchants' service quality.	0.763	0.17	45.300***	Yes
H6: Satisfaction with e-service quality → satisfaction with merchants' service	0.768	0.18	42.575***	Yes
H3a: Efficiency → e-service	.498	.144	3.457***	Yes
H3b: Fulfilment → e-service	.141	.100	1.412	No
H3c: System availability → e-service	.081	.025	2.253	No
H3d: Privacy → e-service	.036	.016	2.319	No
H3e: Customer support → e-service	1.07	.199	5.585***	Yes
H4a: Perceived value → merchants' service	.269	.052	5.139***	Yes
H4b: Reputation → merchants' service	.153	.040	3.816***	Yes
H4c: Service quality → merchants' service	1.210	.174	6.962***	Yes

*** denote path coefficients significant at the p<0.001 levels.

5. DISCUSSION

This study assumed that there is a positive relationship between customer satisfaction and loyalty to an online intermediary, in our case, a group-buying site. We intended to find out how satisfaction with the online and offline experience will affect e-loyalty to online group buying sites as an intermediary between the merchants and customers. The results of the analysis showed that customer satisfaction with the provided e-service has a significantly positive influence on e-loyalty towards the intermediary, thereby validating H1 (β = 0.311, t= 8.830). This implies that the higher the customer satisfaction level with the online group buying service, the higher the customer's intention to remain loyal to the group buying site. Of course, customer satisfaction is an important factor in such intentions, as previous research has consistently shown [73, 74]. The model reveals that e-loyalty towards the intermediary is not affected by the customer satisfaction from the merchant as H2 (β = 0.029, t = 1.094) is not supported. This finding is not in line with the results of Tseng et al.[23], who indicate that the performances of both the online group buying and the physical retailer have a significantly positive influence on the experience dissonance, even more, they indicate that the physical retailer's performance has a greater influence on the experience dissonance than the online group buying's performance. Confirmation of expectations experienced with e-service influences satisfaction towards e-service, and confirmation of expectations experienced during coupon redemption, influences satisfaction with merchants' quality significantly. Consequently, H3 and H4 (β = 0.489, 0.507; t = 10.514; 17.790, respectively) are validated. In addition, confirmation of expectation and satisfaction of e-service quality of the intermediary has a significant positive impact on confirmation and satisfaction of merchants' service quality supporting H5 and H6 (β = 0.763, 0.768, t = 45.300, 42.575, respectively). This finding suggests that online group buying sites should not only work to enhance customer satisfaction and expectation with their e-services but should also work to enhance customer satisfaction and expectation with the physical merchants. In other words, the online group buying e-service should improve functions with a special focus on efficiency and customer support, as results revealed. Confirmation of the expectations towards e-service quality exerts a significant positive impact on efficiency and customer support, validating H3a and H3e (β = 0.498, 1.07, t = 3.457, 5.585, respectively). The ease and speed of accessing and using the site are very important to Grouper's customers since convenience and saving time are generally considered the main reasons for shopping online [52]. In addition, customer support or responsiveness to customers' complaints about experienced dissatisfaction whether online or offline, is important for satisfaction and continuous purchase intention [24]. Since H3b, H3c, and H3d are not supported, we do not find the effect of conforming the expectation to fulfilment, system availability, and privacy of the e-service to be statistically significant. On the other hand, we discover that perceived value, reputation, and service quality have a statistically significant effect on the confirmation of the expectations of merchants' service quality, thus supporting H4a, H4b, and H4 (= 0.269, 0.53, 1,210, t = 5.457139, 3.816, and 6.962,

respectively). This means that the intermediary should pay more attention to the selection of merchants that offer deals for goods and services on their platform.

6. CONCLUSIONS

The competition in the online industry is constantly increasing with the low barriers to entry and ease of entry of new players in the market. The sustainability of the online model operating as an intermediary depends on the customers' satisfaction from using the website as a shopping platform as well as their satisfaction with the merchant that offers the services/products. The end users are those who buy and use the services of the intermediary (group-buying platform) and the merchant (the provider of the products/services). The purpose of this research is to identify and examine factors that determine e-loyalty towards group-buying sites offering e-services, including the satisfaction of the merchant that offers the products and services. As an intermediary, the group-buying site must leverage end-users and merchants' satisfaction. If merchants are not satisfied with the deal's performance, they can decide not to provide offers through the site in the future, or they can deliver unsatisfactory service to customers during coupon redemption, thus resulting in an unsatisfied customer that can stop buying the deals in the future. Group buying companies need to focus on the factors that influence repeat purchases and the creation of loyal customers. In this study, our focus is on end-users, or customers that use the online services that the intermediary website provides, and the offline services that are offered by merchants. We developed an integrative theoretical model based on the expectation confirmation model, positing that satisfaction with e-services and merchants has a significant positive impact on e-loyalty towards the intermediary. To test the theoretical model and hypotheses, we surveyed Grouper's customers and collected 2.691 responses. We measure e-service quality for the intermediary using the IS scale, and we add customer support as an important factor that can play a key role in remedying and 'undoing' customers' dissatisfaction regardless of whether it is caused by issues on the side of the intermediary (e-service) or the merchant's side. We used structural equation modelling for evaluating the satisfaction and intentions for loyalty towards the intermediary, and the findings suggest that satisfaction with e-service quality has a significant effect on customer loyalty to the intermediary. This implies that the higher the customer satisfaction with the online group-buying service, the higher the intention of loyalty to the group-buying intermediary. The model reveals that e-loyalty towards the intermediary is not affected by customer satisfaction with the merchant. This finding is contrary to our expectations that the intentions for loyalty to the intermediary depend on the satisfaction of both parties (the e-service of the intermediary and the merchant). Thus, the intermediary can compensate for possible dissatisfaction, customers might have with merchants and affect the overall perceived experience and value obtained by the end user. This study provides insights for online intermediaries in identifying important loyalty drivers, understanding customers' needs, and improving online performance to create and maintain satisfied customers who will continue to use their

services. We confirmed that confirmation of the expected experience produces satisfaction among the customers. We found that efficiency and customer support are important for the e-service of the intermediary, and reputation, perceived value, and service are important for the confirmation of expectations and satisfaction from the merchant.

The finding that loyalty intentions are greatly influenced by the customer's experience with the intermediary is promising for the future of group buying sites. If managed well and taken care of, the dissatisfaction that customers might have with certain merchants who may not provide appropriate service, will not affect the overall perception and intentions of the customer regarding the future use of the intermediary's services.

These findings can serve practitioners who can use them for better management in creating and keeping satisfied and loyal customers. The research contributes to the theory by integrating the expectation model in online intermediary sites and incorporating satisfaction towards online and offline services as predictors for e-loyalty. Few studies simultaneously consider the performance of group-buying websites and retailers [23]. Moreover, this study examines the effect of e-service satisfaction and merchant satisfaction on repurchase intention towards the group-buying website, and the findings are innovative that the e-loyalty of the customers depends on an intermediary. E-service quality and proper management of dissatisfied customers by the merchants produce loyal customers.

Although our findings provide useful implications for theory and practice, the study still faces several limitations. First, the findings of this study presented only the responses of customers of group buying sites, and therefore they can be different from those of other types of online intermediaries. Second, the study we used as a sample involved customers of Grouper in North Macedonia, and the generalizability of the findings to other countries and other online intermediaries may be limited. Third, the respondents may answer the questionnaires with a possible bias due to the provided incentive in the form of gifts that were dispensed on a random basis to 100 respondents.

This study can provide an avenue for future research to collect data from various online intermediaries in diverse countries and test the designed model.

7. REFERENCES

[1] I. E. Erdoğmus and M. Çiçek, "Online group buying: what is there for the consumers?," *Procedia-Social and Behavioral Sciences,* vol. 24, pp. 308-316, 2011.

[2] R. J. Kauffman and B. Wang, "Bid together, buy together: On the efficacy of group-buying business models in Internet-based selling," *The e-business handbook,* pp. 99-137, 2002.

[3] B. Han and M. Kim, "Hofstede's collectivistic values and sustainable growth of online group buying," *Sustainability,* vol. 11, no. 4, p. 1016, 2019.

[4] W.-T. Wang, Y.-S. Wang, and E.-R. Liu, "The stickiness intention of group-buying websites: The integration of the commitment–trust theory and e-commerce success model," *Information & Management,* vol. 53, no. 5, pp. 625-642, 2016.

[5] W. Zhao, A. Wang, and Y. Chen, "How to maintain the sustainable development of a business platform: a case study of Pinduoduo social commerce platform in China," *Sustainability,* vol. 11, no. 22, p. 6337, 2019.

[6] S. Chea and M. M. Luo, "Post-adoption behaviours of e-service customers: The interplay of cognition and emotion," *International Journal of Electronic Commerce,* vol. 12, no. 3, pp. 29-56, 2008.

[7] H.-H. Cheng and S.-W. Huang, "Exploring antecedents and consequence of online group-buying intention: An extended perspective on the theory of planned behaviour," *International Journal of Information Management,* vol. 33, no. 1, pp. 185-198, 2013.

[8] N. Angelovska, S. Josimovski, and L. P. Ivanovska, "Drivers that Impact the Merchants' Repeat Intention for Group Deal Promotions," *Managing Global Transitions: International Research Journal,* vol. 17, no. 3, 2019.

[9] C.-T. Liu, Y. M. Guo, and C.-H. Lee, "The effects of relationship quality and switching barriers on customer loyalty," *International Journal of Information Management,* vol. 31, no. 1, pp. 71-79, 2011.

[10] K. M. Alraimi, H. Zo, and A. P. Ciganek, "Understanding the MOOCs continuance: The role of openness and reputation," *Computers & Education,* vol. 80, pp. 28-38, 2015.

[11] M.-H. Hsu, C.-M. Chang, K.-K. Chu, and Y.-J. Lee, "Determinants of repurchase intention in online group-buying: The perspectives of DeLone & McLean IS success model and trust," *Computers in Human Behavior,* vol. 36, pp. 234-245, 2014.

[12] M.-H. Hsu, C.-M. Chang, and L.-W. Chuang, "Understanding the determinants of online repeat purchase intention and moderating role of habit: The case of online group-buying in Taiwan," *International Journal of Information Management,* vol. 35, no. 1, pp. 45-56, 2015.

[13] T.-C. Lin, S. Wu, J. S.-C. Hsu, and Y.-C. Chou, "The integration of value-based adoption and expectation–confirmation models: An example of IPTV continuance intention," *Decision Support Systems,* vol. 54, no. 1, pp. 63-75, 2012.

[14] S.-h. Liao, P.-h. Chu, Y.-j. Chen, and C.-C. Chang, "Mining customer knowledge for exploring online group buying behaviour," *Expert Systems with Applications,* vol. 39, no. 3, pp. 3708-3716, 2012.

[15] Z. Zhang, Z. Zhang, F. Wang, R. Law, and D. Li, "Factors influencing the effectiveness of online group buying in the restaurant industry," *International Journal of Hospitality Management,* vol. 35, pp. 237-245, 2013.

[16] W. M. Lim and D. H. Ting, "Consumer acceptance and continuance of online group buying," *Journal of Computer Information Systems,* vol. 54, no. 3, pp. 87-96, 2014.

[17] M.-T. Tsai, N.-C. Cheng, and K.-S. Chen, "Understanding online group buying intention: the roles of sense of virtual community and technology acceptance factors," *Total Quality Management & Business Excellence,* vol. 22, no. 10, pp. 1091-1104, 2011.

[18] S. Baratian, A. S. Safaei, and A. Abraham, "The Effect of Trust and Price on Satisfaction and Intention to Online Group Buying," in *International Conference on Intelligent and Fuzzy Systems*, 2022: Springer, pp. 242-249.

[19] J. M. Garcia, O. B. D. L. Freire, E. B. A. Santos, and J. Andrade, "Factors affecting satisfaction and loyalty to online group buying," *Revista de Gestão,* vol. 27, no. 3, pp. 211-228, 2020.

[20] C.-W. Chen, P.-H. Yu, and Y.-J. Li, "Understanding group-buying websites continuous use behaviour: a use and gratifications theory perspective," *Journal of Economics and Management,* vol. 12, no. 2, pp. 177-204, 2016.

[21] H. Zhang, Y. Lu, S. Gupta, and P. Gao, "Understanding group-buying websites continuance: an extension of expectation confirmation model," *Internet Research,* 2015.

[22] T. Che, X. Zheng, Z. Peng, K. H. Lim, and Z. Hua, "Consumer's Revisit Behavior in Online Group-Buying: A Shopping Value Perspective," 2015.

[23] S.-M. Tseng, J.-R. Wu, C.-W. Chou, and H.-L. Tsai, "A study on consumer evaluations of continued group-buying intentions," *International Journal of Innovative Science, Engineering & Technology,* vol. 4, no. 6, pp. 2348-7968, 2016.

[24] N. Angelovska, "Understanding customer complaint behaviour for effective resolution," *UTMS Journal of Economics,* vol. 12, no. 1, 2021.

[25] L. V. Casaló, C. Flavián, and M. Guinalíu, "The role of satisfaction and website usability in developing customer loyalty and positive word-of-mouth in the e-banking services," *International journal of bank marketing,* 2008.

[26] R. Bennett and S. Rundle-Thiele, "Examining the satisfaction-loyalty relationship," *Journal of Services Marketing,* vol. 18, no. 7, pp. 514-523, 2004.

[27] M. G. Kenney and N. M. Khanfar, "Antecedents of repurchase intention: propositions towards using marketing strategy to mitigate the attrition of online students," *Services Marketing Quarterly,* vol. 30, no. 3, pp. 270-286, 2009.

[28] R. E. Anderson, "Consumer dissatisfaction: The effect of disconfirmed expectancy on perceived product performance," *Journal of marketing research,* vol. 10, no. 1, pp. 38-44, 1973.

[29] Y. Yi, "A critical review of consumer satisfaction," *Review of marketing,* vol. 4, no. 1, pp. 68-123, 1990.

[30] R. W. Buchanan and C. S. Gillies, "Value managed relationships: the key to customer retention and profitability," *European Management Journal,* vol. 8, no. 4, pp. 523-526, 1990.

[31] F. F. Reichheld, "Loyalty-based management," *Harvard business review,* vol. 71, no. 2, pp. 64-73, 1993.

[32] A. Bhattacherjee, "Understanding information systems continuance: An expectation-confirmation model," *MIS quarterly,* pp. 351-370, 2001.

[33] P. G. Patterson and R. A. Spreng, "Modelling the relationship between perceived value, satisfaction and repurchase intentions in a business-to-business, services context: an empirical examination," *International Journal of Service Industry Management,* 1997.

[34] W. D. Neal, "Satisfaction is nice, but value drives loyalty," *Marketing research,* vol. 11, no. 1, p. 20, 1999.

[35] T. O. Jones and W. E. Sasser, "Why satisfied customers defect," *Harvard business review,* vol. 73, no. 6, pp. 88-&, 1995.

[36] Z. Sun, H. Zhao, and Z. Wang, "How does group-buying website quality for social commerce affect repurchase intention? Evidence from Chinese online users," *Asia Pacific Journal of Marketing and Logistics,* 2021.

[37] H. H. Chang and S. W. Chen, "The impact of customer interface quality, satisfaction and switching costs on e-loyalty: Internet experience as a moderator," *Computers in Human Behavior,* vol. 24, no. 6, pp. 2927-2944, 2008.

[38] F. F. Reichheld and P. Schefter, "E-loyalty: your secret weapon on the web," *Harvard business review,* vol. 78, no. 4, pp. 105-113, 2000.

[39] R. L. Oliver, "Whence consumer loyalty? " *Journal of Marketing,* vol. 63, no. 4_suppl1, pp. 33-44, 1999.

[40] C. F. Curasi and K. N. Kennedy, "From prisoners to apostles: a typology of repeat buyers and loyal customers in service businesses," *Journal of Services Marketing,* 2002.

[41] N. S. Safa and M. A. Ismail, "A customer loyalty formation model in electronic commerce," *Economic Modelling,* vol. 35, pp. 559-564, 2013.

[42] W. F. Van Raaij, "The formation and use of expectations in consumer decision making," *Handbook of consumer behaviour,* pp. 401-418, 1991.

[43] R. A. Spreng and R. D. Mackoy, "An empirical examination of a model of perceived service quality and satisfaction," *Journal of retailing,* vol. 72, no. 2, pp. 201-214, 1996.

[44] J. M. Olson, N. J. Roese, and M. P. Zanna, "Expectancies," 1996.

[45] E. R. Cadotte, R. B. Woodruff, and R. L. Jenkins, "Expectations and norms in models of consumer satisfaction," *Journal of Marketing Research,* vol. 24, no. 3, pp. 305-314, 1987.

[46] D. K. Tse and P. C. Wilton, "Models of consumer satisfaction formation: An extension," *Journal of marketing research,* vol. 25, no. 2, pp. 204-212, 1988.

[47] R. L. Oliver, "A cognitive model of the antecedents and consequences of satisfaction decisions," *Journal of marketing research,* vol. 17, no. 4, pp. 460-469, 1980.

[48] A. Bhattacherjee, "An empirical analysis of the antecedents of electronic commerce service continuance," *Decision support systems,* vol. 32, no. 2, pp. 201-214, 2001.

[49] J. Wu and D. Padgett, "A direct comparative framework of customer satisfaction: an application to internet search engines," *Journal of Interactive Marketing,* vol. 18, no. 2, pp. 32-50, 2004.

[50] C. S. Lin, S. Wu, and R. J. Tsai, "Integrating perceived playfulness into

expectation-confirmation model for web portal context," *Information & Management,* vol. 42, no. 5, pp. 683-693, 2005.

[51] A. Parasuraman, V. A. Zeithaml, and A. Malhotra, "ES-QUAL: A multiple-item scale for assessing electronic service quality," *Journal of service research,* vol. 7, no. 3, pp. 213-233, 2005.

[52] C. Ranganathan and S. Ganapathy, "Key dimensions of business-to-consumer websites," *Information & Management,* vol. 39, no. 6, pp. 457-465, 2002.

[53] Z. Yang and X. Fang, "Online service quality dimensions and their relationships with satisfaction: A content analysis of customer reviews of securities brokerage services," *International journal of service industry management,* 2004.

[54] J. A. Wachter, "Portfolio and consumption decisions under mean-reverting returns: An exact solution for complete markets," *Journal of financial and quantitative analysis,* vol. 37, no. 1, pp. 63-91, 2002.

[55] E. T. Loiacono, R. T. Watson, and D. L. Goodhue, "WebQual: A measure of website quality," *Marketing theory and applications,* vol. 13, no. 3, pp. 432-438, 2002.

[56] D. M. Szymanski and R. T. Hise, "E-satisfaction: an initial examination," *Journal of retailing,* vol. 76, no. 3, pp. 309-322, 2000.

[57] B. Yoo and N. Donthu, "Developing and validating a multidimensional consumer-based brand equity scale," *Journal of business research,* vol. 52, no. 1, pp. 1-14, 2001.

[58] V. A. Zeithaml, A. Parasuraman, and A. Malhotra, *A conceptual framework for understanding e-service quality: implications for future research and managerial practice*. Marketing Science Institute Cambridge, MA, 2000.

[59] P. Kotler and K. L. Keller, *A framework for marketing management*. Pearson Boston, MA, 2016.

[60] P. K. Hellier, G. M. Geursen, R. A. Carr, and J. A. Rickard, "Customer repurchase intention: A general structural equation model," *European journal of marketing,* 2003.

[61] S. Raj, "Striking a balance between brand “popularity” and brand loyalty," *Journal of Marketing,* vol. 49, no. 1, pp. 53-59, 1985.

[62] J. Santos, "E-service quality: a model of virtual service quality dimensions," *Managing Service Quality: An International Journal,* 2003.

[63] D. K. Yoo and J. A. Park, "Perceived service quality: Analyzing relationships among employees, customers, and financial performance," *International Journal of Quality & reliability management,* 2007.

[64] W. H. DeLone and E. R. McLean, "The DeLone and McLean model of information systems success: a ten-year update," *Journal of management information systems,* vol. 19, no. 4, pp. 9-30, 2003.

[65] J. C. Nunnally, *Psychometric theory 3E*. Tata McGraw-hill education, 1994.

[66] L. J. Cronbach, "Is there rest for the test weary? " 1960.

[67] B. B. Flynn, S. Sakakibara, R. G. Schroeder, K. A. Bates, and E. J. Flynn, "Empirical research methods in operations management," *Journal of operations management,* vol. 9, no. 2, pp. 250-284, 1990.

[68] J. C. Nunnally, *Psychometric Theory*. New York, NY, USA: McGraw-Hill Publishing Co, 1978.

[69] C. Fornell and D. F. Larcker, "Evaluating structural equation models with unobservable variables and measurement error," *Journal of marketing research,* vol. 18, no. 1, pp. 39-50, 1981.

[70] J. F. Hair Jr, M. Sarstedt, C. M. Ringle, and S. P. Gudergan, *Advanced issues in partial least squares structural equation modelling*. Sage publications, 2017.

[71] R. K. Henson and J. K. Roberts, "Use of exploratory factor analysis in published research: Common errors and some comment on improved practice," *Educational and Psychological Measurement,* vol. 66, no. 3, pp. 393-416, 2006.

[72] W. W. Chin, "The partial least squares approach to structural equation modelling," *Modern methods for business research,* vol. 295, no. 2, pp. 295-336, 1998.

[73] I. Park, A. Bhatnagar, and H. R. Rao, "Assurance seals, on-line customer satisfaction, and repurchase intention," *International Journal of Electronic Commerce,* vol. 14, no. 3, pp. 11-34, 2010.

[74] I. Park, J. Cho, and H. R. Rao, "The effect of pre-and post-service performance on consumer evaluation of online retailers," *Decision Support Systems,* vol. 52, no. 2, pp. 415-426, 2012.

APPENDIX

Table A1. Reliability and convergent validity for the measurement model

Construct	Item	Mean	St.deviation	Loadings	Cronbach's alpha
Efficiency (EF)	EF1 The site is well organized.	4.56	0.76	0.56	0.89
	EF2 I easily find what I am looking for.	4.54	0.78	0.52	
	EF3 Buying is quick and easy.	4.67	0.73	0.60	
System Availability (SA)	SA1The site was always available whenever I accessed it.	4.52	0.84	0.76	0.89
	SA2 The site had no downtime.	4.36	0.94	0.82	
	SA3 I have not encountered any freezing of the site at the time of purchase.	4.44	0.93	0.73	

Table A1. Reliability and convergent validity for the measurement model

Construct	Item	Mean	St.deviation	Loadings	Cronbach's alpha
Fulfilment (FL)	FL1I gets the coupons after the purchase as promised.	4.77	0.69	0.63	0.83
	FL2 The information provided in the offers is reliable.	4.39	0.92	0.56	
	FL3 Using the coupons is easy and simple.	4.68	0.73	0.62	
Privacy (PR)	PR1I believe Grouper does not share my personal information with third parties	4.32	0.92	0.69	0.94
	PR2. I believe that shopping is safe.	4.43	0.83	0.63	
	PR3 I believe that my privacy is guaranteed.	4.31	0.91	0.68	
Customer Support (CS)	CS1 Customer support is readily available to make contact.	4.37	0.88	0.80	0.94
	CS2 Customer support is fast and efficient in answering my questions.	4.32	0.90	0.81	
	CS3 If I encounter a problem when buying or using the coupon I will get a solution from Grouper.	4.28	0.92	0.78	
Confirmation of e-service (COE)	COE1My experience of using Grouper was better than I expected.	4.40	0.85	0.57	0.91
	COE2 Customer support exceeded my expectations.	4.08	0.95	0.79	
	COE3 The website worked better than I expected	4.26	0.90	0.63	
Satisfaction with e-service (SWI)	SWIE I am satisfied with the experience of using Grouper.	4.58	0.76	0.63	0.90
	SWE2 I am satisfied with the experience when buying a deal.	4.56	0.78	0.62	
	SWE3 I'm satisfied with the user support I get from Grouper.	4.36	0.90	0.75	

Table A1. Reliability and convergent validity for the measurement model

Construct	Item	Mean	St.deviation	Loadings	Cronbach's alpha
Reputation (RE)	RE1 The companies that offer Grouper deals have a good reputation.	3.75	0.94	0.60	0.82
	RE2 I buy deals from companies that I believe have a good reputation.	4.17	0.92	0.43	
	RE3 The companies that offer deals meet my quality standards.	3.88	0.95	0.67	
Perceived Value (PV)	PV1Grouper offers great discounts.	3.94	0.96	0.58	0.88
	PV2 I received a suitable service/product according to the price I paid.	4.10	0.96	0.77	
	PV3 I got the appropriate value for the invested funds from using the offers.	4.15	0.92	0.74	
Service Quality (SQ)	SQ1I generally got good service from the company when I used the coupon.	4.18	0.91	0.77	0.89
	SQ2 I was not treated differently from regular customers because I was with a coupon.	3.98	1.12	0.75	
	SQ3 I am satisfied with the service I received from the company.	4.14	0.94	0.82	
Confirmation to merchant (COM)	COM1The coupon experience was better than I expected.	3.96	0.99	0.81	0.94
	COM2 Overall, most of my expectations of the company's service/product were exceeded.	3.77	1.02	0.80	
	COM3 The quality and service of the company were better than expected.	3.72	1.04	0.83	

Table A1. Reliability and convergent validity for the measurement model

Construct	Item	Mean	St.deviation	Loadings	Cronbach's alpha
Satisfaction of merchant (SWM)	SWM1 I am satisfied with the experience of using the coupon in the company.	4.08	0.93	0.84	0.95
	SWM2 I am satisfied with the quality and service provided when using the coupon.	4.06	0.96	0.83	
	SWM3 I am satisfied with the attitude of the employees in the company when using the coupon.	4.11	0.97	0.81	
Loyalty intentions with an intermediary (LII)	LII1I plan to continue buying deals from Grouper.	4.68	0.73	0.79	0.93
	LII2 I would recommend Grouper to my friends.	4.62	0.78	0.76	
	LII3 Grouper will be my first choice for future online discount shopping.	4.47	0.88	0.69	

Table A2. Correlation Matrix with Square root of AVE

	EF	CA	FL	PR	CS	COE	SWI	RE	PV	SQ	COM	SWM	LII
EF	**0.56**												
CA	0.53	**0.77**											
FL	0.53	0.60	**0.60**										
PR	0.44	0.55	0.55	**0.67**									
CS	0.50	0.69	0.59	0.51	**0.79**								
COE	0.45	0.64	0.60	0.62	0.60	**0.66**							
SWI	0.54	0.64	0.73	0.63	0.63	0.74	**0.66**						
RE	0.56	0.68	0.63	0.54	0.62	0.60	0.65	**0.58**					
PV	0.58	0.40	0.35	0.27	0.40	0.24	0.34	0.48	**0.70**				
SQ	0.49	0.48	0.50	0.41	0.47	0.52	0.52	0.44	0.39	**0.78**			
COM	0.50	0.34	0.24	0.25	0.32	0.23	0.22	0.33	0.37	0.31	**0.81**		
SWM	0.42	0.42	0.60	0.42	0.46	0.52	0.62	0.47	0.41	0.43	0.07	**0.83**	
LII	0.26	0.21	0.32	0.23	0.22	0.24	0.31	0.19	0.22	0.16	-0.10	0.52	**0.74**

Note: Square roots of average variances extracted (AVEs) shown on diagonal

Table A3 SEM goodness of fit indices

GOF coefficients	Value	Reference value
Chi-squared	5009, 902	Chi-squared/df =7:
df	689	poor fit*
p	0.000	
GFI (goodness of fit index)	0.904	>0.90: good fit
RMSEA (Root mean square error approximation)	0.048	RMSEA < 0.05 = ex. fit

***Note:** In most statistics, large sample sizes (N=2691) increase power, resulting in significance with a small effect size [71].