

A MODEL FOR EXPLOITING e-CRM IN B-TO-B e-COMMERCE

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In international tourism and travel literature, importance of the business-to-business (B-to-B) relationships and the role of e-CRM implementations are widely ignored. However, sophisticated relationships among to wholesalers (tour operators) and retailers (travel agencies) quite deserve to further interests of the academicians. Therefore, proposed model of this research was generated to examine to B-to-B electronic commerce environment in travel sector and the roles of e-CRM features in wholesaler-retailer relationships. Structural equation modeling results indicated that satisfaction of the retailer travel agencies' sales staff was positively and significantly effected by the website quality of the wholesaler tour operators' extranet system. The results indicated any statistically significant relationship between customer services of the tour operator and satisfaction of the travel agencies' sales staff.

Keywords: *e-CRM, website quality, satisfaction, trust, customer services*

JEL Classification: *L83, M1, O1*

INTRODUCTION

Customer relationship management (CRM) is a new managerial approach which signifies the importance of using every contact point with

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the customers (Pan & Lee, 2001). Schoder and Madeja (2004) suggest that CRM is an ideal concept for increasing companies' profitability by enabling them to identify and concentrate on their profitable customers. As a new version of CRM, e-CRM extends to the traditional CRM into electronic channels. In other words, nowadays CRM stands for just a part or a section of e-CRM. Therefore, in recent years, substantial literature on tourism marketing concentrates on the growing importance of the internet and CRM implementations (Osti, 2009). e-CRM Features are known as the "value added services" (Kuttainen et al., 2005) which generally consist of the multimedia tools. In general, features are important for personalization and inter-active relationship with the customers. Especially in web systems like extranet where the functional features are more fundamental, the wholesaler-retailer chain can be strengthened and the geographic distances are disappeared by the real-time knowledge share (Vlosky et al., 2000).

In travel industry, travel agencies' sales staffs play vital roles in establishing long-term relationships between customers and companies. Their roles of creating and maintaining relationships with the customers enable the long-term success of the companies. However, the relationships of the travel wholesalers and retailers in electronic commerce environments and the roles of agencies' sales staff in e-CRM had not been a research area for the academicians for years (Boles et al., 1996; Crosby et al., 1990; Macintosh et al., 1992). Therefore, the aim of this research is to measure to perceptions of travel agencies' sales staff from suppliers' (tour operator) extranet system in the content of e-CRM.

THEORETICAL BACKGROUND

Satisfaction (in e-CRM Platforms)

Although e-CRM is based on people, process and information-communication technology studies ignore the role of system users (Sigala, 2006) who process the knowledge on customers' expectations and tourism products (Kanellopoulos, 2006). Surprisingly, studies about the sales staff and their roles in e-CRM strategies date back to the last two decades (Crosby et al., 1990; Macintosh et al., 1992; Boles et al., 1996). More interestingly, studies are quite limited that examine the perception of sales staff who are the frequent users of e-CRM systems. For this

reason, travel agencies' sales staff and their perception about the extant system are the focus points of this study.

Trust

In business-to-business and e-CRM relationships of travel companies, studies are also very limited about user trust outputs (Doney et al., 2007) and interactions with other variables. Many researchers claim that there is a linear relationship between trust and satisfaction (Kennedy et al., 2001; Bauer et al., 2002; Flavian et al., 2006). On the other hand, a general consensus does not exist about the direction of this relationship. For example while Geyskens, Steenkamp and Kumar (1998), Szymanski and Hise (2000), Reichheld et al. (2000) state that trust evolves to satisfaction; Flavian et al. (2006), Miyamoto and Rexha (2004), Garbarino and Johnson (1999) remark that satisfaction evolves to trust. In this study, authors proposed the hypothesis below which is set forth from the second group of the researchers:

H₁: Satisfaction directly and positively effects to trust

Website Quality (Its Relationship with Trust and Satisfaction)

Ho (2007) indicates that online users tend to relate service quality with website quality, and very sensitive about the functionality, easy connection, easy to find information. Online users also expect high quality of website design which harmonizes conceptual, functional and aesthetic facts (De Marsico & Levialdi, 2004). Success of the website systems are used to be related to satisfaction in the existing literature (Bailey & Pearson, 1983). Previous studies showed that functional website quality characteristics (such as rich content, visual appeal and others) have a positive influence on satisfaction (Delone & Maclean, 1992; Molla & Licker, 2001; Spiller & Loshe, 1998; De Wulf et al., 2006; Zviran et al., 2006; Cheung & Lee, 2008).

In the literature, there are several scales which were generated by the aim of measuring website quality. For example Parasuraman et al. (1988) have advanced their well-known ServQual scale for online transactions by e-S-Qual (Parasuraman et al., 2005). Many other scales have also offered such as Wolfinbarger and Gilly's (2003) eTailQ; Francis and White's (2002) PIRQUAL; Yoo and Donthu's (2001) SITEQUAL; Chen and Wells's (1999) (attitude toward the site) AST; Bauer et al.'s (2006)

eTransQual and Loiacono's (2000) WebQual™. WebQual™ is capable of reflecting many dimensions of a website system although some of its shortcomings can be observed like; focusing on a better system design for the website designers rather than measuring overall quality of the website in the eye of customers and ignoring the fulfilment dimension (Boshoff, 2007). This scale is needed to be tested by empirical studies in the business-to-business e-CRM area. In this study, authors preferred to WebQual™ scale as the measurement tool and offered to the hypothesis below:

H₂: The website quality (of the supplier -tour operator, in this case-company) has a direct and positive effect on the trust of users.

Moreover, user trust is assumed to be effected by suppliers' website quality and its customer/user services (Ribbink et al., 2004; Wolfenbarger & Gilly, 2003; Cox & Dale, 2002; Gregg & Walczak, 2010), while website success is affected by the users' trust towards to system and its suppliers. Therefore, the third hypothesis of this study is:

H₃: The website quality has a direct and positive effect on users' satisfaction.

Customer Services (Their Relationships with Trust and Satisfaction)

Web-based customer/user services can be used for internal and external customer support (Negash et al., 2003). In tourism and travel sector, business-to-business services and e-CRM functions are mostly used by travel agencies' sales staff whose tasks are very time sensitive and stressful. If the website or extranet system in use is well structured, they will be more effective and more profit generating people with the help user-friendly work processes. Thus, one of the main duties of the company managers is to let users to evaluate how they think about the system they use and to get their voluntarily assistance for system optimization (Gefen & Ridings, 2002). In B-to-B marketing, for a holistic e-CRM implementation, system providers' (tour operator, in this case) should be focus on technical and content quality of their extranet (Rocha & Victor, 2010). In the context of e-CRM, the improvement of customer/user satisfaction is also crucial, which can be influenced by many factors such as the quality of digital content, service and content provider. Therefore it is hard to increase satisfaction "just by improving

one factor” (Joo & Sohn, 2008). For this reason, other hypotheses of this study are:






H₄: *Customer/user services (of the supplier) have a direct and positive effect on the trust of users.*

H₅: *Customer/user services (of the supplier) directly and positively effects to user satisfaction.*

PROPOSED MODEL

The aim of this study is to examine to the relationships between the variables of website quality, customer services, satisfaction and trust.

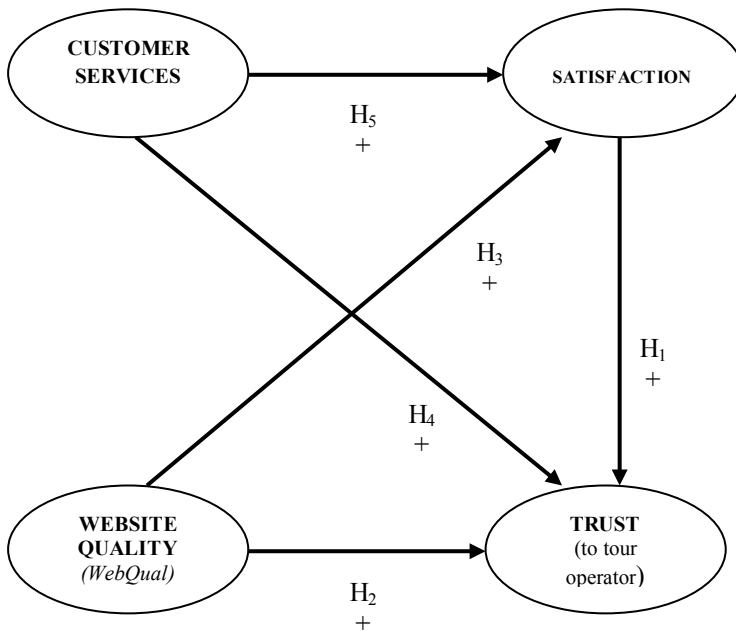
Table 1 Literature Summary

Variables	Relations	Authors
Trust  Satisfaction	Mutual and positive	Ostrom and Iacobucci (1995), Sirdeshmukh et al. (2002), Wang and Head (2007), Salegna and Goodwin (2005)
Satisfaction  Trust	Unilateral and positive	Flavian et al. (2006), Miyamoto and Rexha (2004), Garbarino and Johnson (1999)
Trust  Satisfaction	Unilateral and positive	Geyskens et al. (1998), Szymanski and Hise (2000), Reichheld et al.(2000), Bloemer and Odekerken-Schroder (2002), Lin et al. (2006)
System Features  Satisfaction	Unilateral and positive	Klenke (1992), Zviran et al.(2006), Joo and Sohn (2008), McKinney et al.(2002), Roh et al.(2005), Devaraj et al. (2006), Negash et al. (2003), Thong et al.(2006)
Customer Services  Satisfaction	Unilateral and positive	Bhattacharjee (2001), Devaraj et al. (2002)

In addition to the relationships stated at the theoretical section, in Table 1, a brief literature summary about these variables and the direction of their inter-relationships are shown.

Proposed model is shown in Figure 1 which was generated from the existing literature, explained in the theoretical section of the paper.

Figure 1 Proposed Model



METHODOLOGY

All constructs of the proposed model were measured by 5 point-type of Likert scale (1 totally disagree- 5 totally agree with), and individual scales obtained from the literature review have been combined in the

model. For example, satisfaction from the extranet system was measured by Flavian et al.s' (2006) satisfaction scale with four items, system users' trust towards to supplier (tour operator) has been measured by Álvarez et al.s' (2006) (cognitive and emotional) trust scale with eleven items, customer services has been measured by eight items taken from Wolfenbarger and Gilly's (2003) eTailQ scale, and finally website quality has been measured by Loiacono's (2000) WebQualTM scale with thirty six items (Appendix: Questionnaire Items).

Items were translated by native speaker tour guides into each language and sent via internet to abroad travel agency managers' electronic mail addresses for the distribution of sales staff (Bulgaria 92, Ukraine 80 and Kazakhstan 70 travel agencies). The average number of the sales staff for each agency was determined as 2; and the possible number of the participants was found as (2 person x 242 travel agencies in three countries) 484 people. 127 questionnaires from Bulgaria, 101 from Ukraine and 108 from Kazakhstan were obtained. Total number of the usable questionnaires was 336 and rate of return was 69 %.

RESEARCH FINDINGS

Number of the participants according to nationality are shown in Table 2. Majority of the participants of the study were middle-aged (36.9% between 26-33 years old), females (75.9%), with high level of education (76.5 %).

Table 2 Distribution of Participants by Gender and Nationality

Country		Male	Female	Total
Ukraine	N	29	72	101
	%	28,7	71,2	100,0
Bulgaria	N	32	95	127
	%	25,1	74,8	100,0
Kazakhstan	N	20	88	108
	%	18,5	81,4	100,0
Total	N	81	255	336
	%	24,1	75,9	100,0

Overall satisfaction of the participants was high (means 4,16). The lowest overall means was belong to the participants from Ukraine (4,09), while the highest was from the participants from Bulgaria (4,23). Besides, “in general terms, I am satisfied with the way that this website has carried out transactions” item (usersatisf4) had the lowest overall means in this scale (4,09). Thus, system designers should pay attention to the capacity enlargement and functional enrichment efforts for a higher user satisfaction. For all countries, there could not found any statistically significant differences according to participants’ ages and genders.

Trust perceptions of the participants towards to tour operator was also high in general (4,14). There were statistically high differences between the participants from Bulgaria (4,18), and Kazakstan (3,95). Female participants who expressed that “tour operator has a good understanding of the products and services available in the tourism market” (trust2) had higher means (4,25) than male participants (4,20). Besides, the participants who were between 18-25 years old had lower means (3,98) than the participants who were between 42 and above years old (4,27). Overall satisfaction of the participants from the customer services (user support system) were high (3,99) as well. However, participants from Ukraine had the lowest means (3,96) than other countries for this variable like other variables. Female participants who stated that “after sale support at this site is excellent” (custserv5) had higher means (3,83) than male participants (3,65); and means for the item “inquiries are answered promptly” (custserv3) statistically significant according to age of the participants. Participants who were between 18-25 years old had more positive perceptions than 42 years and above years old participants.

Finally, overall perception of the participants about website quality of the tour operator’s extranet has been analyzed, and no statistically significant differences could be found according to nationalities. But, female participants’ means was higher (3,96) than male participants (3,84) in general. Moreover, female participants had more positive perceptions about the system functions. There could not found any significant differences according to age of the participants.

Measurement Model

In this study, reliability of the satisfaction scale was evaluated by Cronbach’s Alpha which was 0.77 and acceptable. Cronbach’s Alpha was

0.88 for user trust; 0.84 for customer services and 0.94 for WebQualTM which proved that all scales had sufficient reliabilities. On the other hand, some items of the scales had to be deleted because of their low factor loadings. Remaining items were totally four for customer services scale; four for user trust scale and four for satisfaction scale.

The validity of the satisfaction, user trust and customer services scales did not retested as they obtained from the existing literature, however WebQualTM scale had to be re-tested by confirmatory factor analysis (CFA), because of its multi-dimensionality. After the first analysis, Chi-square value was as 4090.92; degrees of freedom (df) 594; RMSEA (root mean square error of approximation) 0,133; AGFI (adjusted goodness-of-fit index) 0,55; RMR (root mean square residual) 0,11 and SRMR (standardized RMR) 0,095 which reflected that goodness-of-fit indices were not acceptable. At the second step, some items had to be deleted which negatively effect to the validity with low factor loadings. Items which had factor loadings lower than 0,50 and insignificant t-values eliminated. After these corrections, indices became acceptable enough for the further analyses. Chi-square value was 712.82; degrees of freedom (df) 245 and RMSEA 0,075.

For supplying the convergent validity of the scale, the significance of the t values (above than 1.96) in item-latent variable relationship has been examined, which was followed by the calculation of extracted variance tests for determining the construct validity. Variance- extracted and construct reliability values above than 0,40 are acceptable (Tabachnick and Fidell 2007). Factor loadings and construct reliability of each dimension of the WebQualTM is shown below (Table 3). After the significance of t-values, variance-extracted and construct reliability were tested and found acceptable for “convergent validity”. The next step was to test “discriminant validity” of the scales.

In this study, discriminant validity of the WebQualTM scale was tested by Anderson and Gerbing's (1988) method. If the scale consist of various dimensions, the parameter estimation between two factors (their correlations) can be fixed to 1 (limited model) or set free on the other model (unlimited model). If the Chi-square value of the unlimited model is significantly lower than limited model, it can be said that scale has discriminant validity according to this method. Advanced analyses showed that all unlimited model Chi-square values were lower than limited model values. Thus, the scale showed discriminant validity and high level of construct reliability.

Table 3 Variance Extracted and Construct Reliability (WebQual™)

Dimension	Item Code	Standard Factor Loadings	t-Values	Variance Extracted	Construct Reliability
infofittotask	web1	0,76	15.32	0,55	0,78
infofittotask	web2	0,81	16.51		
infofittotask	web3	0,66	12.54		
tailcomm	web4	0,68	13.09	0,45	0,71
tailcomm	web5	0,71	13.70		
tailcomm	web6	0,64	12.14		
onlinecomp	web7	0,68	12.80	0,41	0,68
onlinecomp	web8	0,67	12.68		
onlinecomp	web9	0,58	10.60		
relativeadv	web10	0,86	18.15	0,62	0,83
relativeadv	web11	0,71	14.06		
relativeadv	web12	0,80	16.49		
visualapp	web13	0,86	19.06	0,72	0,88
visualapp	web14	0,92	21.36		
visualapp	web15	0,77	16.30		
innova	web16	0,91	20.86	0,69	0,86
innova	web17	0,95	22.70		
innova	web18	0,59	11.54		
emotionalap	web20	0,73	13.58	0,45	0,62
emotionalap	web21	0,61	11.22		
consimage	web22	0,83	18.06	0,68	0,86
consimage	web23	0,89	19.83		
consimage	web24	0,75	15.62		
easeofunders	web25	0,83	17.74	0,63	0,83
easeofunders	web26	0,80	16.68		
easeofunders	web27	0,76	15.46		
intuitiveopr	web29	0,90	17.39	0,62	0,76
intuitiveopr	web30	0,66	12.34		
trust	web34	0,53	9.91	0,60	0,81
trust	web35	0,88	18.17		
trust	web36	0,87	17.94		

Testing Hypotheses

Proposed model was tested by structural equation modelling. Remaining items for each variable and relationships among these variables in the proposed model are shown in Figure 2. In addition, the goodness-of-fit indices of the model were given in Table 4. Chi-square/df and AGFI criterions were acceptable, and all the other indices were higher acceptance limits.

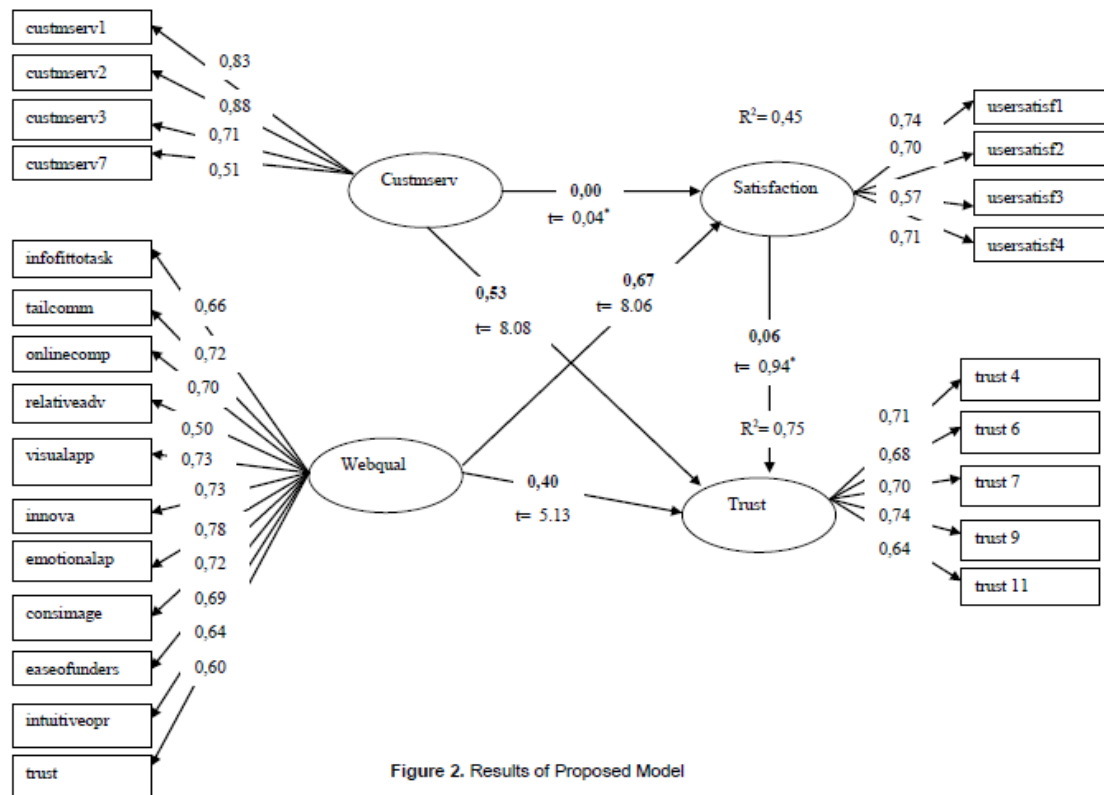


Figure 2. Results of Proposed Model

Table 4 Goodness-of-fit Indices of Proposed Model

Goodness-of-fit Indices	Proposed Model	Recommended Values	References
Degrees of freedom (df)	245		
χ^2	712.82		
χ^2/df	2.90	≤ 3.00 or ≤ 5.00	Etezadi-Amoli and Farhoomand (1996), McKinney et al.(2002)
GFI	0,85		
AGFI	0,82	$\geq 0,80$	Chase (1978), Etezadi-Amoli and Farhoomand (1996)
CFI	0,97	$\geq 0,90$	Hair et al. (1998)
NNFI	0,96	$\geq 0,90$	Lin (2007)
RMSEA	0,075	$\leq 0,10$	Lin (2007)
SRMR	0,074	$\leq 0,10$	Lin (2007)

As before mentioned, this study had five hypotheses. After the analyses, three of these hypotheses were confirmed:

H₂: *The website quality of the supplier has a direct and positive effect on the trust of users.*

H₄: *Customer services of the supplier have a direct and positive effect on the trust of users.*

H₃: *The website quality of the supplier has a positive effect on users' satisfaction.*

On the other hand, two hypotheses had to be rejected which were:

H₅: *Customer services of the supplier have a direct and positive effect on users' satisfaction.*

H₁: *Satisfaction directly and positively effect to trust.*

In addition to hypothesis testing, other findings were summarized as follows:

The analyses results indicated that "Response Time" sub-dimension (web31, web32, web33) of the WebQualTM scale was statistically insignificant. Besides, "I feel cheerful when I use the website" item (web 20) on the "Emotional Appeal" sub-dimension and "It would be easy for me to become skilful at using the website" item (web28) on "Intuitive

Operations” sub-dimension were found statistically insignificant. Therefore, all these sub-dimensions and items are eliminated from the scale. Rest eleven sub-dimensions confirmed to the multi-dimensionality of the WebQualTM which was generated by Loiacono et al. (2007). Loiacono et al. (2007) suggest that scale is a very reliable measurement tool and has completed its early development stages. Now, it should be tested for the business-to-business relationships and non-commercial foundations&customer electronic commerce interactions. Thus, the study is one of the candidate works which may contribute to fill this gap in the business-to-business e-CRM literature.

Proposed model test results indicate that customer services does not directly and positively influence to user satisfaction. The only variable that explains satisfaction positively and significantly is website quality which also directly and positively influence to user trust. However, satisfaction has no influence on user trust. Customer services and website quality variables explain just 0,44 of the user satisfaction. Therefore, in the future studies, these variables can be examined and their characteristics can be understood by e-CRM specific scales.

CONCLUSIONS AND SUGGESTIONS

In this study, e-CRM tools of a multinational tour operator and their influences on extranet users in three countries have been investigated by a proposal model. The main connection points of the agencies’ sales staff with the tour operators are extranet and customer services. The more effective are extranet and customer services of a tour operator, the more system users are going to be satisfied with their jobs and trust to their suppliers. Actually, a quality travel wholesaler is focus on identifying and acting on the internal and external user’s needs and expectations (Yurtseven, 2006). Thus, tour operators need to understand their retailers’ needs and expectations, to establish technological infrastructures for data sharing, and to build win-win strategies for long-term business partnerships. At this point, internet and e-CRM features of the extranet systems empower organisations to achieve those objectives (Mavri & Angelis, 2009).

LIMITATIONS

The basic limitation of this study is choosing the convenience sampling method. For this reason, findings of the research are not suitable for any generalization for major samples. However, conducting the research in three countries and making collaboration with one of the major tour operators in those markets can be seen as the main strengths of the study.

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APPENDIX (Questionnaire Items)

User Satisfaction	
usersatisf1	In general, I am satisfied with the service I have received from the website
usersatisf2	The experience that I have had with this website has been satisfactory
usersatisf3	I think that my travel agency made the correct decision to use this website
usersatisf4	In general terms, I am satisfied with the way that this website has carried out transactions
Trust	
trust1	Tour operator is well equipped to deal effectively with anything I ask for
trust2	Tour operator has a good understanding of the products and services available in the tourism market
trust3	The promises it makes are credible
trust4	Tour operator has a lot of experience and usually knows what is best for me
trust5	I think it is a good tourism service supplier
trust6	The staff has been sincere in their dealings with me
trust7	Tour operator always keeps the promises it makes
trust8	If there is a problem it is honest with me
trust9	Tour operator worries about me being provided with a

trust10	good service It gives me good advice when I ask its opinion about the best tourism service
trust11	I trust this tour operator a lot. (overall)
Customer Services	
custmserv1	Tour operator is ready and willing to respond to customer needs
custmserv2	Customer service personnel are always willing to help you
custmserv3	Inquiries are answered promptly
custmserv4	When you have a problem, the website shows a sincere interest in solving it
custmserv5	After sale support at this site is excellent
custmserv6	This website has customers' best interests at heart.
custmserv7	I feel like the company wants to provide me with a good system using experience
custmserv8	This website appreciates my business
Website Quality (WebQual™)	
infofittotask	<i>Informational fit-to-task</i> The information on the website is pretty much what I need to carry out my tasks
infofittotask	<i>Informational fit-to-task</i> The website adequately meets my information needs
infofittotask	<i>Informational fit-to-task</i> The information on the website is effective
tailcomm	<i>Tailored information</i> The website allows me to interact with it to receive tailored information
tailcomm	<i>Tailored information</i> I can interact with the website in order to get information tailored to my specific needs
tailcomm	<i>Tailored information</i> The website has interactive features, which help me accomplish my task
onlinecomp	<i>Online completeness</i> All my business with the company can be completed via the website
onlinecomp	<i>Online completeness</i> Most all business processes can be completed via the website
onlinecomp	<i>Online completeness</i> The website allows transactions on-line
relativeadv	<i>Relative advantage</i> It is easier to use the Website to complete my business with the company than it is to telephone, fax, or mail a representative
relativeadv	<i>Relative advantage</i> The website is an alternative to calling customer service or sales
relativeadv	<i>Relative</i> The website is easier to use than calling

	<i>advantage</i>	an organizational representative agent on the phone
visualapp	<i>Visual appeal</i>	The website displays visually pleasing design
visualapp	<i>Visual appeal</i>	The website is visually appealing
visualapp	<i>Visual appeal</i>	The website is visually pleasing
innova	<i>Innovativeness</i>	The website is innovative
innova	<i>Innovativeness</i>	The website design is innovative
innova	<i>Innovativeness</i>	The website is creative
emotionalap	<i>Emotional appeal</i>	I feel happy when I use the website.
emotionalap	<i>Emotional appeal</i>	I feel cheerful when I use the website
emotionalap	<i>Emotional appeal</i>	I feel sociable when I use the website
consimage	<i>Consistent image</i>	The website projects an image consistent with the company's image
consimage	<i>Consistent image</i>	The website fits with my image of the company
consimage	<i>Consistent image</i>	The website's image matches that of the company
easeofunders	<i>Ease of understanding</i>	The display pages within the website are easy to read
easeofunders	<i>Ease of understanding</i>	The website labels are easy to understand
easeofunders	<i>Ease of understanding</i>	The text on the website is easy to read.
intuitiveopr	<i>Intuitive operations</i>	It would be easy for me to become skillful at using the website
intuitiveopr	<i>Intuitive operations</i>	I find the website easy to use
intuitiveopr	<i>Intuitive operations</i>	Learning to operate the website is easy for me
response	<i>Response time</i>	When I use the website there is very little waiting time between my actions and the website's response
response	<i>Response time</i>	The website loads quickly
response	<i>Response time</i>	The website takes long to load. (R)
trust	<i>Trust</i>	I feel safe in my transactions with the website.
trust	<i>Trust</i>	I trust the website to keep my personal information safe

<i>trust</i>	<i>Trust</i>	I trust the website administrators will not misuse my personal information
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