Design Quality of Websites for Electronic Commerce: Fortune 1000 Webmasters' Evaluations

CHANG LIU, KIRK P. ARNETT AND CHUCK LITECKY

INTRODUCTION

The importance of effective use of Web technology for electronic commerce (EC) has been presented by many researchers (e.g., Jarvenpaa and Todd 1997; Komenar 1997; Garfinikel 1997; Pitkow 1997; Thornton 1997; Varney 1996; Wigand 1996). EC continues to demonstrate promise to help business organizations cut costs, interact directly with customers, run more smoothly and in a more timely manner. More importantly, EC may help an organization outperform its competition. Consequently the results of at least one survey predicted a 300% jump in EC within the next two years (Deloitte Consulting, 1998).

Although there has been significant research on supporting EC, existing empirical research focusing on the design quality of websites in the context of EC is often anecdotal and exploratory in nature (see for instance Kirsner 1998). Most studies rarely involved more than one or two factors in a particular website design. Thus, while it is reasonable that there should be a considerable number and variety of factors related to the design of websites to support EC, little knowledge exists relative to the issues of effective combinations of potential factors. In addition, the preponderance of design studies focuses on the issue of building security for on-line transactions on the Web. As the Web moves into commercial applications, concerns about the security implications of doing business on the Web have arisen (Marion 1995; Messmer 1995). However, security is only a necessary but not a sufficient condition of designing a successful website in the context of electronic commerce. A Web market must be secure, but a secure Web market does not guarantee customers. Other factors also play important roles in determining whether customers shop on the Web.

The problems described above are simple but do generate strong appeal for studies of factors related to the design of successful websites. Accordingly the objective of this paper is to explore some of the factors that contribute to well designed websites for electronic commerce.

A DEFINITION OF 'WELL DESIGNED' WEBSITES

A convenient starting point for this exploratory research is to survey Webmasters on their perceptions of customers' reactions to their websites. Webmasters may only be considered surrogates for the ultimate consumer, but as a starting point for exploratory research may be more professional, better informed on web design issues, have more experience and are inex- pensively, reachable through their published websites.

Abstract

This article presents a study of Fortune 1000 webmasters’ perceptions of thirty-five variables that support quality in the design of consumer-oriented websites used for electronic commerce. The study combines consumer marketing constructs: Learning Capability, Playfulness, Service Quality with information systems constructs of Information Quality, System Quality, and System Use. The subjects have expert level knowledge related to quality issues in the design of web sites. Eighteen percent of the Webmasters responded to two formats of an electronic survey. The overall importance ratings correlated positively and significantly with the marketing and information systems research constructs, thus these constructs were shown as significant to well designed web sites for consumer-oriented electronic commerce. Designers of web sites might apply these results.

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Moreover if differences exist between Webmasters perceptions of web design quality and consumers, then it will be important for later research to use the results of this early study to assess the effects of those differences. So, these results establish a base and provide an instrument from which to conduct research with other groups.

The functions and features of companies’ websites can be classified by three phases of marketing activities: pre-sales, on-line sales, and after-sales (Liu, Arnett, Capella and Betty 1997). The pre-sales phase includes a company’s efforts to attract customers by advertising, public relations, new product or service announcements, and other related activities. Customers’ electronic purchasing activities occur in the on-line sales where orders and charges are placed electronically through the Web facilities. Kotler (1994) stressed that trustworthiness, dependability, and reliability are important characteristics in order for business transactions to occur. The after-sales phase includes customer service, problem resolution, and the like. This later phase should generate customer satisfaction by meeting customer demand and pleasing customers. Here, a well designed website for EC attracts customers and makes them feel the site is reliable, dependable, and trustworthy along with generating customer satisfaction.

THEORETICAL FRAMEWORK

Because website design is related to both information systems and marketing, literature from both areas is applicable for a research framework for this study. In marketing, consumer information search strategies and measuring service quality were considered. In information systems, literature related to information quality, information system management, measuring information system success, and end-user computing were considered.

Information quality

Prior research has employed various measures of success for information systems, including: user satisfaction (Ives et al. 1983; Raymond 1985; Amoako and White 1993; Guimaraes et al. 1996), business profitability (Barua 1995; Mukhopadhyay 1995), improved decision quality and performance (Martin 1982; Rivard 1989; Pearson and Shim 1994; Wilson 1998), perceived benefits of information systems (Davis 1989; DeLone 1992; King 1996; Purvis 1997), and the level of system usage (DeLone 1988, 1989). Each of these studies stressed that information quality provided by a system cannot be ignored. Consequently a positive relationship between information quality and website design quality was expected which leads to the following hypothesis:

H₁: Information quality is positively related to a well-designed website

Learning capability

An important characteristic of electronic commerce is the interaction between customers and the business enterprise (Bakos 1991). Many studies in the field of electronic commerce have emphasized the importance of electronic communication to support the interaction (e.g. Malone, Yates and Benjamin 1987; Bakos 1991; Applegate and Gogan 1995; Benjamin 1995). This twoway, on-line communication between customers and firms will not only facilitate building relational markets, but also increase the customers’ abilities to browse and to find relevant information on the Web.

For many potential customers, using Web technology is a new experience. Also since Web technology advances rapidly and websites are updated frequently, providing interactive learning tools is necessary, since consumers need to develop and apply their abilities through exploratory behavior (Webster et al. 1993). Thus, a positive relationship between learning capability and a well designed website is expected, which leads to the following hypothesis.

H₂: Learning capability is positively related to a well designed website

Playfulness

The importance of playfulness in websites has been emphasized by website designers. A recent study by Rice (1997) suggests that an important factor to determine the likelihood of a repeat visit to a website is whether the visitors found the visit enjoyable. A website should attract attention and provide features to allow customers to enjoy their online shopping activities.

In marketing, the concept of hedonic value reflects shopping’s potential entertainment and emotional worth (Bellenger et al. 1976). A satisfied consumption activity not only comes from an extrinsic reward of purchasing products or services but also gains a more intrinsic, personal, and emotional reward from purchasing, a derived pleasure. On the Web, hedonic pleasure generally refers to the degree of playfulness that consumers experienced (Jarvenpaa and Todd 1997). This suggests that shopping activities on the Web produce both hedonic and utilitarian outcomes.

From the above, it follows that Web designers should cultivate hedonic pleasure in site design by motivating customers to participate, promoting customers excitement and concentration, and including charming features to attract customers and to help them enjoy their visit. This will lead to increase customer information search activities (Schmidt 1996). The related hypothesis is:

H₃: Playfulness is positively related to a well designed website
System quality

According to a recent survey conducted by the European Electronic Messaging Association, more than 79% of respondents said that the design quality, especially security, is their top concern for electronic commerce activities (Shankar 1996). However, security is only one aspect of designing for system quality. Anderson and Bezuidenhout (1996) stressed that reliability is also needed for high speed Web services so that websites can be used to realize their full potential, especially in consumer electronic markets. A reliable system should have quick error recovery and should ensure correct operation and computation (Bailey and Pearson 1983). Obviously, the quality of the system itself is an important indicator of whether the design is successful. Thus, the following hypothesis:

\[ H_4: \text{System quality is positively related to a well designed website} \]

System use

Customers’ usage of a website is another aspect on which business organizations and website designers should focus. This is because the use of an information system is often employed as a measure of the success of the system (Ives et al. 1980). Also, system use is an important determinant of user satisfaction (Baroudi et al. 1986). Thus the hypothesis follows as:

\[ H_5: \text{System use is positively related to a well designed website} \]

Service quality

Prior studies have stressed the importance of providing a high quality of service in marketing activities (Tcas 1994; Zeuthaml et al. 1996). Business organizations and Web designers should actively seek ways to improve service quality provided through websites. Management and Web designers should carefully consider how to arrange and present service to their customers. This care is necessary because of the absence of face-to-face contact in the service encounter on a website. Thus, the following hypothesis:

\[ H_6: \text{Service quality is positively related to a well designed website} \]

MEASUREMENT OF VARIABLES

Variables in the webmaster survey were elicited from a seven-point Likert scale from (7) completely important to (1) completely unimportant. Table 1 describes the research factors, their measurement variables, and the internal reliability assessment.

Information quality

From the literature review, the following variables were adopted for measuring information quality: accuracy, timeliness, relevance (Ahituv 1980); flexible information presentation (Allen 1996); customized information presentation (Rousseau 1999); price information (Bakos 1991); product/service comparability, product/service differentiation, complete product/service description (Baty
Table 1. Research factors, measurements, and reliability assessment

<table>
<thead>
<tr>
<th>Hypothesis number</th>
<th>Research construct</th>
<th>Measure component</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁</td>
<td>Information quality</td>
<td>relevant; accurate; timely information; flexible &amp; customized information presentation; products/services differentiation; complete description of products/services; price information; satisfying ethical standards; perceived products/services quality; information to support business objectives</td>
<td>0.775</td>
</tr>
<tr>
<td>H₂</td>
<td>Learning capability</td>
<td>interactive function between customers and business organization; well defined link; help function; customized search engine</td>
<td>0.551</td>
</tr>
<tr>
<td>H₃</td>
<td>Playfulness</td>
<td>enjoyment; excitement; feeling of participation; charming; excapsim</td>
<td>0.829</td>
</tr>
<tr>
<td>H₄</td>
<td>System quality</td>
<td>security; rapid accessing; quick error recovery; precise operation and computation; balanced payment method between security &amp; ease of use; coordination</td>
<td>0.747</td>
</tr>
<tr>
<td>H₅</td>
<td>System use</td>
<td>confidence; control; ease of use; track on-line order status; privacy</td>
<td>0.926</td>
</tr>
<tr>
<td>H₆</td>
<td>Service quality</td>
<td>quick responsiveness, assurance; empathy; following-up service</td>
<td>0.863</td>
</tr>
</tbody>
</table>

and Lee 1995); perceived information quality on product/service (Jarvenpaa and Todd 1997); satisfying ethical standard (Laudon 1995); and support of business objectives (Niederman et al. 1991). The average score of these variables is the measure of information quality. The internal consistency coefficient (Cronbach’s alpha) of these items is 0.775, which showed that the items are internally consistent.

Learning capability

Five variables were used to measure learning capability: well organized hyperlink, help function (Varney 1996); customized search engine (Balderston 1996); interactive function between customers and businesses, and interactive function among customers (Armstrong and Hagel 1996). The Cronbach’s alpha of the five-item scale is 0.551.
Playfulness

Five variables representing playfulness were adapted from Babin et al. (1994). These variables are: enjoyment, excitement, feeling of participation, escapism, and charm-ing. Playfulness variables had a Cronbach’s alpha of 0.829.

System quality

This was measured by six items: rapid access, quick error recovery, correct operation and computation (Bailey and Pearson 1983); security (Bhimani 1996); balanced pay-ment method between security and ease of use (Panurach 1996); and coordination to support all functional areas (Mukhopadhyay et al. 1996). The Cronbach’s alpha of these items is 0.747.

System use

As discussed previously, the measurement variables of system use are: customers’ control of the transaction process, ease of use, confidence, tracking of the on-line order status, and privacy. System use yielded a Cronbach’s alpha of 0.926.

Service quality

The variables of quick responsiveness, assurance, reliability, empathy, and follow-up service are used to measure service quality. These measurements are well established in the marketing literature. The Cronbach’s alpha for this scale is 0.863.

DATA ANALYSIS AND RESULTS

A final questionnaire followed a pre-test of the instrument with six webmasters and the survey of selected webmasters of PC Magazine’s top 100 sites. The survey was e-mailed to 661 webmasters of the Fortune 1000 who showed a deliverable e-mail address. A total of 119 usable responses were obtained from the webmasters. The responding webmasters represent seven broad industry classifications as defined by Fortune which indicates that the results can be used to explain webmasters’ perceptions for design quality of electronic marketplaces on the Web across different industries.

To test the proposed hypotheses, mean values and a matrix of intercorrelations among the research constructs were calculated. The average response for the six-items of attractiveness, dependable, reliable, trustworthy, meeting customer demand, and pleasing customers is the measure of the overall web design importance value. If the overall importance mean value rating was correlated positively and significantly with the six research constructs (information quality, learning capability, playfulness, system quality, system use, and service quality), the hypotheses could be supported.

The means, standard deviations, and matrix of intercorrelations among the six research constructs are presented in Table 2. The overall well design importance rating correlated positively and significantly with all six independent constructs. The probabilities (p values), which are show in parentheses, are less than 0.01. Therefore, research hypotheses H1–H6 can be strongly supported.

SUMMARY AND CONCLUSIONS

When websites are used for EC activities, special concerns are relevant to attracting customers, and getting customers

Table 2. Matrix of intercorrelations among study constructs (N = 119)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>S.D.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Well designed importance</td>
<td>5.90</td>
<td>0.74</td>
<td>1.00</td>
<td>(0.0)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Information quality</td>
<td>5.64</td>
<td>0.68</td>
<td>0.27</td>
<td>1.00</td>
<td>(0.0028)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Learning capability</td>
<td>5.33</td>
<td>0.83</td>
<td>0.26</td>
<td>0.72</td>
<td>1.00</td>
<td>(0.0041)</td>
<td>(0.0001)</td>
<td></td>
<td>(0.0)</td>
</tr>
<tr>
<td>4. Playfulness</td>
<td>5.10</td>
<td>1.04</td>
<td>0.35</td>
<td>0.37</td>
<td>0.36</td>
<td>1.00</td>
<td>(0.0001)</td>
<td>(0.0001)</td>
<td>(0.0)</td>
</tr>
<tr>
<td>5. System quality</td>
<td>5.49</td>
<td>0.99</td>
<td>0.31</td>
<td>0.64</td>
<td>0.62</td>
<td>0.30</td>
<td>1.00</td>
<td>(0.0006)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td>6. System use</td>
<td>5.47</td>
<td>1.39</td>
<td>0.30</td>
<td>0.50</td>
<td>0.53</td>
<td>0.21</td>
<td>0.69</td>
<td>1.00</td>
<td>(0.0008)</td>
</tr>
<tr>
<td>7. Service quality</td>
<td>6.16</td>
<td>0.92</td>
<td>0.42</td>
<td>0.70</td>
<td>0.59</td>
<td>0.39</td>
<td>0.59</td>
<td>0.53</td>
<td>1.00</td>
</tr>
</tbody>
</table>

* Note: (1) p values are in the ( ).
(2) The measurement scale of mean values is from 1 (completely unimportant) to 7 (completely important).
to use the sites for purchases. Logical expectations are that both the popular literature and professional Webmasters from the Fortune 1000 companies will have considerable insight into the most important factors. However, other perspectives are relevant as well. As EC activities continue to accelerate, there is an increasingly important need for scholarly identification and analysis of the factors that can be included in the design of a website to enhance the quality of that site. The Webmasters who implement and manage a website give one perspective related to the quality in design of sites. An additional perspective can and should be gathered from the consumers, or users, of the website. The instrument presented in Appendix A can serve as a base for that inquiry. When and if both perspectives are applied then we can expect to see a well-designed website. The preceding sections have described two important findings: first, they have confirmed that factors that have been significant for traditional information systems are important here as well. While some of these findings might be expected, there is a need to confirm that literature-derived variables are indeed important in the modern web-based context. Second, these six factors showed a positive and significant correlation with a Webmaster-generated Web design importance measure. In this second measure the Webmasters served as consumer surrogates. The webmasters might not serve as a surrogate for all consumer groups but they certainly represent a substantial segment of B2C consumers.

The six factors that were identified in this study will benefit businesses that are engaged in a design, or continuing redesign of a website to be used for EC. While it is easy to build a web site to announce a company’s presence, it is an entirely different matter to build a website that will attract customers and elicit purchase transactions from them. Obviously the products and/or services that are offered will have a bearing on the extent of customer activity, but so too will the design of the website. From this research, business managers and Web designers should pay close attention to the features of information quality, learning capability, playfulness, system quality, system use, and service quality provided through their websites. The variables that compose these factors should prove fruitful to designers.

Because this study used Webmasters as customer surrogates to obtain a composite website design importance rating, future research might obtain data from real customers using applicable parts of the survey instrument to confirm research results from Webmasters. In addition, a comparative study between large and small business enterprises on the perception of design quality of websites are needed to establish an entire picture of critical success factors of conducting electronic commerce activities on websites.

Academicians might use these results as a scientifically derived base for continuing assessment of website design factors. As these factors were analyzed at one point in time and only for designers of websites that are used in very large businesses, there could be factors that have been omitted or are more or less important in other EC contexts. Still, the academic base of these factors that includes information systems and marketing variables that have been found to be important in systems design literature should be relevant as a foundation in other studies.

References


Appendix A: Webmaster Questionnaire

Please share your thoughts about the critical design factors of a website. This survey is completely voluntary and your responses will be confidential. If you would like a copy of the results, please request by e-mail to cc2@cobl#msstate.edu.

Please rate the following in Section A, B, C, D, E, and F by checking the number that corresponds most closely to your perception of its critical (importance) to the Web site design.

1 = completely unimportant
2 = moderately unimportant
3 = somewhat unimportant
4 = neither important/unimportant
5 = somewhat important
6 = moderately important
7 = completely important

Section A: In order to attract customers, please consider indicators to enhance Information Quality of a website.

| (1) flexible information presentation (appropriate amounts of sound, graphic, text, image, animation uses considering users’ hardware constraints) | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (2) customized information presentation (provide different user interfaces for different types of customers) | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (3) information that is relevant to the customer (such as company, product, service information) | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (4) provide a feature to compare products/services with those of competitors | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (5) provide a feature to differentiate products/services with those of competitors | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (6) provide accurate information | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (7) provide price information | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (8) provide complete products/services descriptions | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (9) provide timely information | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (10) enhance perceived quality of products/services | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (11) meet ethical standards (such as no misleading or deceptive info.) | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |

| (12) Provide information to support business objectives | 1 2 3 4 5 6 7 |
| Does your website incorporate this design factor? | Yes No |
### Section B: In order to attract customers, please consider indicators to enhance Learning Component of a website.

1. **well organized hyperlinks**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. **a help function**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. **customized search functions**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

4. **interactive feedback between customers and business**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. **interactive communications among the customers**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

### Section C: In order to attract customers, please consider indicators to enhance Playfulness of a website.

1. **user enjoyment during the website visit**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. **user participation/interaction during the website visit**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. **user excitement during the website visit**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

4. **charming features to attract customers**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. **capturing the user’s attention during the website visit**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Overall, items in above sections represent the critical success factors for the design of a website to ATTRACT customers completely disagree completely agree

### Section D: In order to gain customers trust, please consider indicators to enhance System Quality of a website.

1. **provide security**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. **design to include information on all functional areas involved in the business process**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. **balanced security and ease of use payment methods (such as credit card, cash, electronic check, etc.)**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

4. **high speed of accessing the web site**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. **case of correcting server’s errors such as run time error, inability to connect, etc.**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

6. **insure correct transactions**
   - **Does your website incorporate this design factor?**
   - **Yes** No  
   | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
Section E: In order to gain customers' trust, please consider indicators to enhance System Use of a website.

1. customers control a transaction process
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

2. gaining customers' confidence during the transaction
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

3. providing ease of use for the transaction
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

4. allowing customers to track-order status
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

5. keeping the customers' information confidential
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

Overall, items in sections D and E represent factors for a well-designed website, to encourage customers to TRUST on-line transactions.

1. the site is reliable
   *completely disagree* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *completely agree*

2. the site is dependable
   *completely disagree* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *completely agree*

3. the site is trustworthy
   *completely disagree* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *completely agree*

Section F: In order to obtain customer satisfaction, please consider indicators to enhance Service Quality of a website.

1. provide quick responsiveness to customers
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

2. provide assurance to solve customers’ problems
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

3. empathy to customers’ problems
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

4. provide follow-up services to customers
   *Does your website incorporate this design factor?*
   Yes | No
   --- | ---
   1 | 2 | 3 | 4 | 5 | 6 | 7

Overall, items in sections F represent well-designed factors for a website to obtain CUSTOMER SATISFACTION.

1. the site meets customer demands
   *completely disagree* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *completely agree*

2. customer will be pleased for the service
   *completely disagree* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *completely agree*

Overall, items in above sections provide an adequate representation of well-designed factors for an electronic market on a website (for example, to attract customers on-line, make them trustfully purchase, and obtain customer satisfaction).

completely disagree | 1 | 2 | 3 | 4 | 5 | 6 | 7 | *completely agree*