

Demographic analysis of service quality | results chapter



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This section presents the findings about the respondents profile in terms of their age, gender, level of education and monthly income. The data are shown in frequencies and percentage.

4. 1. 1 Age & Gender

The respondents have been classified into six groups of age: less than 18 years old; between 19-25 years old; between 26-35 years old; between 36-45 years old; between 46-55 years old; 56 years old and above.

Table 4. 1 indicates that there were no respondents whose age was less than 18 years old. Around one-fifth (33 or 21. 6 percent) of the respondents whose age was between 19-25 years old. More than half (78 or 51. 0 percent) of the respondents whose age was between 26-35 years old. About (33 or 21. 6 percent) of the respondents whose age was between 36-45 years old. Only (8 or 5. 2 percent) respondents whose age was between 46-55 years old and only one person whose age was 56 years old and above.

4. 1. 2 Level of education

The respondents have been classified into six groups of educational level: high school, diploma (two years), bachelor's degree, master's degree, doctoral degree and other.

Table 4. 3 indicates that there were almost (11 or 7. 2 percent) of the respondents who had high school. About (5 or 3. 3 percent) of the respondents who had diploma (two years). About one-third (52 or 34. 0 percent) of the respondents who had bachelor's degree. More than third (60 or 39. 2 percent) of the respondents who had master's degree. About (23 or

15 percent) of the respondents who had doctoral degree and about (2 or 1. 3 percent) holding other types of certificates.

4. 1. 3 Monthly Income

The respondents have been classified into seven groups of monthly income: Less than 2, 999; 3, 000 - 5, 999; 6, 000 - 8, 999; 9, 000 - 11, 999; 12, 000 - 14, 999; 15, 000 - 19, 999 and More than 20, 000 SAR per month.

Table 4. 4 shows that there were almost (12 or 7. 8 percent) of the respondents who had less than 2, 999 SAR income. About (15 or 9. 8 percent) had between 3K - 5, 999 SAR. About (22 or 14. 4 percent) had between 6K - 8, 999 SAR. About 17. 6 and 17. 0 percent had less than 12K and 15K respectively. The majority (28 or 18. 3 percent) of respondents had between 15K - 19, 999 SAR per month and about (23 or 15. 0 percent) have had more than 20K SAR as monthly income.

4. 2 Level of Selected Variables

This part discusses the respondents' level of agreement on system quality factors, information quality factors and service quality factors. The findings are presented in frequencies, percentages, and means. The discussion also emphasizes the data sufficiency and variables effect on e-Commerce growth within Saudi Arabia.

4. 2. 1 Level of agreement based on system quality

In terms of System Quality Approach, it can be seen in Table 4. 5 that 58 (37. 9 percent) of the respondents are " Strongly Agree", while 29 (19 percent) of the respondents are " Agree" and 28 (18. 3 percent) " Somewhat Agree".

Twenty-two (14.4 percent) of the respondents are "Not Sure". Ten (6.5 percent) are "Somewhat Disagree" while 2 (1.3 percent) of them are "Disagree". Only 4 respondents (2.6 percent) are "Strongly Disagree".

The findings indicated factor 2 (Ease of Use) as the highest level of agreement among the respondents ($M= 5.66$, $SD= 1.531$) in this category. On the other hand, factor 4 (Reliability) had the lowest level of agreement among the respondents ($M= 5.34$, $SD= 1.717$).

In the case of the factor analysis, one important aspect is to test the assumptions. The two key techniques used are the Kaiser-Meyer-Olkin (KMO) sampling adequacy test and the Bartlett test for sphericity. The KMO tests the appropriateness of the data, while the Bartlett tests for correlations. For system quality, these tests are shown on Table 4.7.

As shown on Table 4.7, the KMO is 0.898. According to Field (2005, p650), the recommended minimum KMO is 0.5. Values between 0.5 and 0.7 are considered as mediocre. KMO of values between 0.7 and 0.8 are considered as good, while values above 0.8 are considered as great. Based on the KMO of 0.898 produced in this analysis, it has been justified that the factor analysis was appropriate for this data.

Bartlett's measure tests the null hypothesis that the original correlation matrix is an identity matrix. For factor analysis to work, it is necessary for some variables to have relationships; if the R-matrix were an identity, then all correlation coefficients would be zero. Hence there is a need to test for significance (have $p < 0.05$). A large result indicates that R-matrix is not an identity matrix. For regulatory requirement, Bartlett's test is highly

significant ($p = 0.000$), indicating that the factor analysis was appropriate for this data.

The results of the more robust factor analysis techniques for system quality show that a single solution explained about 75% of the variance as shown on Table 4. 8 below.

4. 2. 2 Level of agreement based on information quality

In terms of Information Quality Approach, it can be seen in Table 4. 7 that 46 (30. 1 percent) of the respondents are " Strongly Agree", while 36 (23. 5 percent) of the respondents are " Agree" and 39 (25. 5 percent) " Somewhat Agree". Seventeen (11. 1 percent) of the respondents are " Not Sure". Nine (5. 9 percent) are " Somewhat Disagree" while 2 (1. 3 percent) of them are " Disagree". Only 4 respondents (2. 6 percent) are " Strongly Disagree".

The findings indicated factor 6 (Simplicity) as the most influential factor amongst the respondents ($M= 5. 64$, $SD= 1. 431$) in this category. On the other hand, factor 4 (Personalization) had the lowest level of agreement among the respondents ($M= 5. 16$, $SD= 1. 506$).

The factor analysis produced a single factor solution with an explanatory variance of 78% (Table 4. 11). The KMO was 0. 913 and Bartlett test ($p = 0.000$), indicating the appropriateness of the factor analysis.

4. 2. 3 Level of agreement based on service quality

In terms of Service Quality Approach, it can be seen in Table 4. 9 that 46 (30. 1 percent) of the respondents are " Strongly Agree", while 36 (23. 5 percent) of the respondents are " Agree" and 39 (25. 5 percent) " Somewhat Agree".

Seventeen (11.1 percent) of the respondents are "Not Sure". Nine (5.9 percent) are "Somewhat Disagree" while 2 (1.3 percent) of them are "Disagree". Only 4 respondents (2.6 percent) are "Strongly Disagree".

The findings indicated factor 2 (Understanding) as the highest level of agreement among the respondents ($M= 5.32$, $SD= 1.370$) in this category. On the other hand, factor 5 (Dedication) had the lowest level of agreement among the respondents ($M= 4.96$, $SD= 1.589$).

Again, the factor analysis produced a single factor solution with an explanatory variance of 67% (Table 4.13). The KMO was 0.900 and Bartlett test ($p = 0.000$), indicating the appropriateness of the factor analysis.

4.3 Reliability Analysis Test

Reliability can be defined as the degree to which an experiment, test, or measuring procedure would produce the same result on repeated trials (Writing guides, 2009). Furthermore, reliability could be defined as the degree to which measures are free from error and thus yield consistent results (Zikmund, 2003).

There are several different types of reliability coefficients such as Split half reliability, Guttman, Parallel, Strictly parallel and Cronbach's alpha.

Cronbach's alpha is one of the most commonly used measures because it can be interpreted as a correlation coefficient and it ranges in value from 0 to 1 (Coakes and Steed, 2003). Hence, Cronbach's alpha was used as a measurement of reliability for each variable in this study.

From the analysis done on the instruments listed under each variable in the questionnaire, Table 4. 14 shows that Cronbach's Alpha for the variables system quality, information quality, and service quality are 0. 931, 0. 943, and 0. 898 respectively. The internal consistency reliability of the measures can be considered as " great" as it achieved more than 0. 8 Alpha values (Field, 2005, p. 668).

4. 4 Demographic effect on the dimensions' factors

As stated in chapter three, the effect of demographic differences is to be examined wither it effect the significance of factors in each dimension or not.

The following hypothesis was built to test this issue:

H0: Demographic differences have no impact on variables' significance in an IS model.

H1: The importance of success variables in an IS model vary due to demographic differences.

To cautiously investigate this issue, a comparison was made between cases with different demographic (from same category) in each on of the three dimensions (i. e. System Quality, Information Quality, and Service Quality) to clearly mark any differences that might exist. A detailed list of all the mean comparison made is included in appendix B.

4. 4. 1 Age difference effect on system quality

To measure the influence of age on system quality, several comparisons have been made to investigate the case. In general, all tests showed an increase in system quality demanding along with the increase in age.

The ease of use and system flexibility features' significance increases with respect to the increase in age as described in Table 4. 14. " Youth are careless & risk takers, while elders are more conservative & risk averse" this statement can be clearly observed when monitoring (Reliability & Security) which increases with the growth of age.

Consequently, the effect of age difference on system quality could be undoubtedly seen in this matter.

4. 4. 2 Level of education effect on information quality

To test the indirect effect of education level on the information quality dimension, three comparisons have been carried out.

First, both doctoral and master's equally " Agree" on the importance of information accuracy; high school level, on the other hand, are " Not Sure" about that. While diploma holders " Strongly Agree" with the importance of dynamic contents, bachelor's degree holders see less significance, thus, they tend to " Somewhat Agree" with that statement. Unlike bachelor's degree holders who " Somewhat Agree" with the importance of information simplicity, doctoral degree holders do " Agree" on its weight for information quality.

By looking at the three comparisons made, it could be clearly stated that the effect of education level is significant in this situation.

4. 4. 3 Gender difference effect on service quality

Different gender has different interpretation of service quality provided by e-commerce support centres. To test the indirect effect of gender difference on the service's quality provided, a small comparison has been made.

Women tend to be more concerned about service centre willingness to help (commitment) and they " Agree" on the importance of human interaction ability in support centres. Men, on the other hand, give less attention " Somewhat Agree" to these two aspects. An interesting case to be noticed in this context is the privacy protection. In a conventional society such as Saudi Arabia, people tend to be more conservative when it comes to giving personal information. In such society, women are expected to be more conservative than men. Results, however, revealed that men were actually more sensitive toward privacy protection than women as shown in Table 4. 17.

Accordingly, it could be concluded that gender differences have an effect on service quality dimension as shown here.

4. 4 Summary of Findings

The study revealed a number of interesting cases that need some attention in order to understand the behavior and logical reasoning behind it; in order to help build a better e-Commerce system that is more considerate and sensitive to the needs of targeted consumers.

Some of interesting ranking information, regarding the participants, that could be found from the previous tables includes:

Age: More than half (51%) of the respondents are between 26-35 years old. This indicates the fact that Saudi Arabia is a young nation with a median age of 24. 9 years (male: 26 years, female: 23. 4 years) (The World Fact book, 2010).

Gender: The majority (72. 5 %) of the participants are males. This is due to cultural limitation of contact between the two genders (women segregation) within the country. The minority was done via relatives.

Education: More than (88 %) of the participants are holders of bachelor, master's, or doctoral degrees. This is understandable since the online survey was circulated amongst Saudi Students in the UK & Saudi Arabia.

The findings indicate that simplicity (Ease of use) was the most pointed feature amongst the various system quality factors. A user friendly designed system with simple navigation ability seemed more important to consumers than reliability power, robustness or even security standards. Thus, e-Commerce marketing strategy should focus on sending the image of a simple & user friendly e-Commerce system rather than focusing on the facts of security or multi-access capabilities (i. e. PC & Mobile, 24/7, ...etc).

As for Information quality measures, the findings indicated that simplicity was again the key factor acquired by consumers. Although completeness and accuracy were of high demands (5. 47 & 5. 58 means), keeping it simple, straight forward, and in understandable terms was most favorite feature. This is obvious when compared to comprehensiveness which might leads to long lists of annoying terms and conditions catalog.

The ability of e-Commerce support centers to understand consumers' specific needs was the most important factor of service quality. An argument might be that, a well committed and knowledgeable support personal would not be helpful if the consumer needs were mistakenly interpreted.

Based on the data of 153 respondents, the multi-items measures were subjected to a series of validity and reliability checks. For the multi-item scale, the set of factors that correspond to each dimension was initially subjected to an examination of Cronbach's alpha and item-to-total correlations test.

Thus, all measures appeared to be uni-dimensional, internally consistent, reliable and valid for analysis of the model. Furthermore, this chapter has examined the influence of demographic effects on the dimensions' (System, Information and Service) factors prioritization process. The relationship was conducted by computing the differences measures of the means and Standard Deviations, which supported the hypotheses that all the variables have a significance impact on e-Commerce growth and adoption in Saudi Arabia.