A Survey of Senior Care Organizations Residents’ Perceptions in Rural Taiwan

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ABSTRACT

The senior-care market has been on the rise in rural Taiwan. Soaring competition among senior-care operators has led to escalating consumer demands on performances, driving the industry to become more customer-oriented. The authors examined the relationship between service quality of senior care and customer satisfaction in Taiwan based on Parasuraman, Zeithaml and Berry’s SERVQUAL ten dimensions. Multiple regression was conducted to test the relationship. The statistical results showed that access and courtesy are significantly and positively related to customer satisfaction. This finding, among others, suggests that senior-care operators in Taiwan might have overlooked the above mentioned two dimensions as factors leading to customer satisfaction and, ultimately, to a sustainable competitive advantage. To pinpoint what the customers really need, the Senior Care Organizations in Taiwan should keep communicating with their customers, to identify the priority dimensions towards customer satisfaction. For example, facility policies and staff training that maximize resident participation in daily decision making should be encouraged. Keywords: customer perception, senior care, customer satisfaction, Taiwan, business strategy

INTRODUCTION

Between 2011, when the first baby boomers turn 65, and 2030, when the entire cohort reaches that age, the population of the seniors in Taiwan is projected to increase dramatically (Ministry of Interior Taiwan Department of Social Affairs, 2007). Due to rapid progresses in health and technology, the life expectancy of Taiwan residents has extended. Council for Economic Development and Planning, a government agency affiliated to Administration Yuan estimates that the old-age population in Taiwan will continue to increase until 2020 (Chiu, 2002). As the older population becomes more diverse in terms of ethnicity, independence, health, economic status and education, services targeting older adults will need to be more flexible to meet their demands (Lee, 2002). There has been an apparent need for care, especially among the seniors living in rural Taiwan, where the young generations tend to leave homes. Currently, the Senior Care Organizations (SCOs) have been one of the best choices available to the elderly living in rural areas of Taiwan (Lee, 2007).

The main purpose of the present study was to identify the focus of company business strategy at SCOs through assessing the senior customers’ perceptions of the satisfaction with the service provided in rural areas of Taiwan. The SCOs, in order to achieve a sustainable competitive advantage, might need to invest more effort on certain priority dimensions of customer satisfaction. This advantage, in turn, will allow the SCOs to either maintain or advance their standings in the market. It is an advantage that enables a senior-care provider to survive against its competitors over a long period of time.

LITERATURE REVIEW

According to Taiwan’s Ministry of Interior of Social Affairs (2007), senior welfare organizations (SWOs) can be divided into five categories: long-term care organizations, senior-care organizations (SCOs), retirement home organizations, senior culture organizations, and services organizations.
Senior-Care Organizations in Rural Taiwan

Ministry of Interior of Social Affairs (2007) estimated the number of senior citizens in Taiwan, as of October 2007, at 3,085,275, about 10.2% of the total population. The same agency reveals that, as of October 2007, there were about 1,015 SWOs providing long term care, senior care and home care to the seniors, with a capacity of around 62,000 beds while only 46,000 seniors actually lived in those facilities. The occupancy rate was 74.19%. On an extended time line, though, among the five types of SWOs, the occupancy rate in the SCOs reportedly increased from 1.04% in 1993 to 2.26% in 2005 (Ministry of Interior Department of Statistics, 2008).

According to Tsai (2004), most scholars believe that there exists an “urban bias” in Taiwan. Lipton (2005) explains, “Urban Bias Thesis (UBT) proposes that urban classes in poorer countries use their social power to bias (distort) a range of public policies against members of the rural classes.” Lipton maintains that this bias involves (a) an allocation, to persons or organizations located in towns or (b) a disposition among the powerful urban classes to allocate resources in this way. Urban bias, so defined, is currently being witnessed in Taiwan’s senior-care industry. The latest investigation indicates that the number of SCOs in Taiwan stands at 948 (Ministry of Interior of Social Affairs, 2007). SCOs are mostly established in big cities of Taiwan. For example, there are about 172 SCOs in Taipei County and 190 in Taipei City (Ministry of Interior of Social Affairs, 2007). Options are relatively limited for the rural seniors. More and more seniors living in rural areas, however, are asking for a greater supply of senior-care facilities (Tsai, 2004).

Moreover, senior welfare organizations’ statistics (Ministry of Interior of Social Affairs, 2007) shows that the supply is falling short of the demand in rural Taiwan. Take Taichung County as an example, while about 3,562 people have requested SWOs, the available facilities could accommodate only 1,945 people. The authors of the present study conducted an interview with H. Chang, Dean of the E.L.F.C.T. Senior Care Organization in Tungshih Township, Taichung County, said that this problem of short supply is clearly felt in his nonprofit senior care organization (Personal communication, October 4, 2007). This shortage, on the other hand, suggests business potential in rural areas in Taiwan. More and more seniors, in rural Taiwan are looking for professional care through SCOs. Research indicates that the number of retirement homes and SCOs went from 765 in 2002 to 983 in 2007 (Ministry of Interior of Social Affairs, 2007). Currently, Taiwan’s central government has encouraged local authorities and civil unions to actively build SCOs (Ministry of Interior of Social Affairs, 2007).

In the future, more and more SCOs will jump into this rural market in Taiwan. To enhance the competitive advantage of SCOs in rural Taiwan, it is important to focus on rural senior customers’ satisfaction dimensions in their evaluations of the SCOs. Studies (e.g., Jun and Cai, 2001; Jun et al., 2004; Nwankwo, 2007; Petrochuk, 1999; Lee, 2002) have showed that companies have to know and understand the dimensions of their customers’ satisfaction in order to sustain their competitiveness in the marketplace.

Definition of Customer Satisfaction

Customer satisfaction has attracted a great deal of attention in the literature because of its potential influence on consumer behavioral intentions and customer retention (Cronin et al., 2000). The authors of the present study used the theory by Parasuraman, et al. (1985), who developed a general list of ten dimensions on customer satisfaction (see the detail definition of each dimension on Table 1). Service quality is measured by calculating the difference in scores between the customer’s expected level of service and level of service delivered. Several studies have shown that a high level of customer service quality can exert a positive influence on customer satisfaction (Parasuraman et al., 1988; Cronin and Taylor, 1992; Zeithaml et al., 1996; Ramsaran-Fowdar, 2006).

<table>
<thead>
<tr>
<th>Table 1: Parasuraman et al’s ten dimensions of service quality (Source: Parasuraman et al., 1985, p. 6-7)</th>
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</thead>
<tbody>
<tr>
<td><strong>Access</strong></td>
</tr>
<tr>
<td><strong>Communication</strong></td>
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<tr>
<td><strong>Competence</strong></td>
</tr>
<tr>
<td><strong>Courtesy</strong></td>
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<tr>
<td><strong>Credibility</strong></td>
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<tr>
<td><strong>Reliability</strong></td>
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<tr>
<td><strong>Responsiveness</strong></td>
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</table>
RESEARCH DESIGN

Based on the above-mentioned research findings, a quantitative analysis using survey and statistical methods was conducted to identify possible answers to the research question (listed below).

Instrument Development

The survey instrument was based on the combined designs by Nwankwo (2007) drawing on Parasuraman et al’s (1985) ten service quality dimensions (i.e., access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles, and employee’s understanding of their customers). The authors developed a questionnaire that asked the sample to evaluate SCOs’ service quality as well as their customer satisfaction in rural areas of Taiwan. The questionnaire consisted of 21 Likert-scale items. Nearly half of the items are phrased positively, and half negatively. A positively worded statement is one for which a very satisfied participant would select strongly agree. A negatively worded statement is one for which a very satisfied participant would elect strongly disagree. (Stamps, 1997).

Population and Samples

Creswell (2002) states that for a quantitative correlational study the results should apply to as many people as possible; therefore, a sample was chosen that was representatives of the population. The sample is a subset of the population that meets the study criteria. A larger sample more closely reflects the characteristic of a larger population (Colling, 2003).

The authors hired Focus Survey Research Company to conduct the questionnaire survey and collect the data. The target population was the 19,815 seniors living in 580 private SCOs in rural areas of Taiwan, where a random sample was selected to participate the survey through drop-off and face-to-face interviews. According to several scholars’ studies (i.e., Tsai, 1996; Chuang, 2000) the eighteen counties are the rural areas in Taiwan including villages and towns. In order to obtain a reliable output, substantial consideration had to be given to the sample size (n) and the number of predictors (K). A recommended ratio is identified by Tabachnick and Fidell (1996), who put the simple rule of thumb as \( n \geq 50 + 8K \). Therefore, for the present study the sample size is 130 (K=10).

Research Question and Hypothesis

Research Question of this study: is there a significant relationship between the senior customers’ satisfaction and the ten dimensions of SCOs’ service (i.e., access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles, and employee’s understanding of their customers) in rural Taiwan?

Hypothesis: The senior customer satisfaction is highly correlated with the ten dimensions (i.e., access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles, and employee’s understanding of their customers) in rural Taiwan’s senior-care industry.

The dependant variable of this study is customer satisfaction. The independent valuables of this study are the ten dimensions. These ten dimensions are the most critical factors to measure the customer satisfaction of service quality in SCOs in rural Taiwan. Multiple regression was conducted to test the relationship.

RESULTS AND DISCUSSION

Responses to the Survey

In the present study, data were gathered during the period of June to July 2008, from a total of effective 392 SCOs respondents in Taiwan by the Focus Research Company. The data collection for this research study was hired by the professional survey company Focus Research Company which operated under the authors’ directions. Each participant
was provided the following: (a) letter of introduction, (b) informed consent form, (c) survey questionnaires. 392 out of the 420 people had responded to the inquiry during this drop-off collection phase, with the response rate being around 93%. On the basis of the data set obtained during the initial collection phase, some modifications on the questionnaire design were made to reduce the response time and, thus, to increase the response rate.

Pre-Analysis Data Screening

An evaluation of missing data and outliers (i.e., extreme values) led to the elimination of 92 cases, reducing the number of responses to 300 for further statistical analyses. The test of data normality, linearity, and homoscedasticity were also conducted in order to satisfy the general assumptions in multivariate statistical testing. Mertler and Vannatta (2005) suggested that “when the assumptions of linearity, normality, and homoscedasticity are met, residuals will create an approximate rectangular distribution with a concentration of scores along the center” (p.55). The scatterplots revealed that the residual plot created a rectangle shape with scores concentrated in the center, suggesting that the collected data set had satisfied the general assumptions of normality, linearity, and homoscedasticity in multivariate statistical testing.

Statistical Results and Discussions

Tables 2, 3 and 4 present three primary outputs of multiple regression. A review of the tolerance statistics presented in Table 4 indicated that all IVs were tolerated in the model (with the tolerance statistics exceeding 0.1). Mertler and Vannata (2005) state, “…if the tolerance value for a given IV is less than 0.1, multicollinearity is a distinct problem” (p. 169). Thus, collinearity is not a serious problem for the current data. The model summary (see Table 2) and the ANOVA summary (Table 3) indicate that the overall model of the ten IVs is significantly related to the customer satisfaction [Adjusted $R^2 = .496$, F (10, 289) = 30.377, p<.005]. Therefore, the results supported the hypothesis that the 10 dimensions are significantly correlated with the senior customer satisfaction in the SCOs. In addition, the statistical results also showed that access and courtesy are particularly significantly and positively related to customer satisfaction. Competence cannot be neglected. The statistical results here led to the development of a multiple regression function using beta weight (see Table 4).

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change F Change Df1 Df2 Sig. F Change</td>
</tr>
<tr>
<td>1</td>
<td>.716(a)</td>
<td>.512</td>
<td>.496</td>
<td>.57649</td>
<td>.512</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100.954</td>
<td>10</td>
<td>10.095</td>
<td>30.377</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>96.046</td>
<td>289</td>
<td>.332</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>197.000</td>
<td>299</td>
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<table>
<thead>
<tr>
<th>Model</th>
<th>Standardized Coefficients</th>
<th>Correlations</th>
<th>Collinearity Statistics</th>
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<tr>
<td></td>
<td>Beta</td>
<td>t</td>
<td>Sig.</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.591</td>
<td>.555</td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td>.168</td>
<td>2.395</td>
<td>.017</td>
</tr>
<tr>
<td>Communication</td>
<td>.042</td>
<td>.592</td>
<td>.554</td>
</tr>
<tr>
<td>Competence</td>
<td>.108</td>
<td>1.787</td>
<td>.075</td>
</tr>
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</table>
The general model for the hypothesis of present study:

\[ Y = 0.168X_{\text{Access}} + 0.042X_{\text{Communication}} + 0.108X_{\text{Competence}} + 0.199X_{\text{Courtesy}} + 0.092X_{\text{Credibility}} + 0.097X_{\text{Reliability}} + 0.091X_{\text{Responsiveness}} + 0.035X_{\text{Security}} + 0.043X_{\text{Tangibles}} - 0.011X_{\text{Understanding}}. \]

**CONCLUSION AND RECOMMENDATIONS**

Competition in the SCOs for senior people has been upheld as a means of increasing efficiency, driving down prices and raising the quality. Choices are made available to meet user expectations of healthcare and to improve service provision. Optimizing the management and process of care transitions of senior peoples is important to senior-care providers.

**Reducing the Complexity and Fragmentation of the Care Profess System**

For senior service providers, it is important to reduce the complexity and fragmentation of the care process system (Clarfield et al., 2001). It seems essential to encourage the SCOs either to provide a range of services across the care continuum or to develop partnerships with other providers whose services complement their own (Coleman, et al., 2004; Cheek et al., 2006). This needs senior-care organization to adopt its policies practicable. This strategy could also limit the number of agencies a senior resident customer has to deal with, thereby reducing the complexity of the care system.

On the other hand, information technology available through the online comprehensive service may also be the best strategy to reduce the system complexity of the SCOs. Survey result by Vuori and Holmlund-Rytkonen (2005) revealed that people older than 50 are the second fastest-growing group on the Internet, trailing only the 16-to-24-year-olds. A recent survey of people 55 years and older by Dell Corporation found that over 75% of respondents would be likely to purchase a personal computer if they know they had someone to help them use it (Mahoney, 1999). The Internet service is quickly becoming an ideal method to present information to an aging audience (Angel, 1999). It could improve service coordination while enhancing stakeholders’ knowledge and understanding of available services.

**Educating the Employees**

Other regulatory and policy constraints, such as requirements for employees training, will also pose a block to future competition among senior-care providers (Knibb, 2006). Therefore, providing quality services to the seniors is a multidimensional activity; employees’ qualities are the key to customer satisfaction of the service quality (Cheek et al., 2006). If SCOs did not expend money training their employees on new and improved methods of carrying out business simply lag behind. Companies that have an employee performance management system have developed an affordable way to keep staffs trained and educated on the best possible methods. Cheek (2004) suggests that senior health-care related education and training should focus on short term, curative, episodic care provides a limited basis for developing worker that can contribute to the provision of services prompting positive, long term outcomes for senior people. For the SCOs in Taiwan, education and training should emphasize access and courtesy, and how these factors may be employed to enhance the senior-customer satisfaction.
**SCHOLARLY CONTRIBUTIONS**

The SCOs managers often become so caught up in daily administration that they fail to recognize that the satisfaction of the ultimate customers goes unmeasured and in many instances is totally ignored. The present study is a pioneer in conducting empirical studies to develop a diagnostic instrument for senior-customer satisfaction. This instrument may be an effective tool of evaluating ultimate customer satisfaction in way of developing future employee training programs. The results of the present study suggest that the SCOs in the rural areas of Taiwan should customize their employee training programs to focus on friendly services and knowledgeable personnel with positive attitudes. On the other hand, the findings suggest that the SCOs service providers might have overlooked the above-mentioned two priority dimensions of customer satisfaction which may have helped them gain a sustainable competitive advantage in Taiwan.

**LIMITATIONS**

Some of the surveyed senior residents in SCOs were not in good health, and their responses could have been biased or misleading. In addition, the administrators at the surveyed SCOs sometimes interrupted the survey process and therefore may have lowered the accuracy of data. Furthermore, as the study sample was taken from Taiwan, the results of the present study may not be generalized to other regions of Taiwan.

One other limitation of the study is the lack of data on the senior residents’ family members who might have significant impacts upon the senior customer satisfaction. For the future study may also focus on the residents’ family members’ view and satisfaction. Several scholars have proved that the elderly and their families expressed general satisfaction with the use of supports and service (Cheek et al., 2006; Buelow and Fee, 2000; Gregory et al., 2007). Pairing the seniors’ and their family members’ responses may an interesting and useful approach to understanding the essence of senior-customer satisfaction.

**REFERENCES**


