Changes in Perceptions of Service Quality Corresponding to Population Growth

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Abstract

Basic service sector employment is often viewed as incorporating a large percentage of low skilled labor or labor that is new to the job market. In times of economic growth and population growth, demand for labor, at all levels, increases. This increase in labor demand also increases labor mobility, as employees are encouraged to find better employment when they gain a more competitive level of skills and experience. This is a concern for employers in the service industries. It is feared that rapid turnover in their workforce will affect the ability of service providers to assure quality in the service delivery. This report is the first step in a proposed longitudinal study that will attempt to measure changes in perceptions of service quality after a period of strong economic growth and population increase.

Keywords: Service quality, Population growth, Labor mobility, Entry level employment.

Introduction

In many of the world’s industrialized nations, the service industry has become a critical contributor to economic development. For several decades, this sector of the economy of many western nations has grown at rates greater than that of the production sector [1, 2]. It may even be argued that as an economy matures and as the standard of living of that economy increases, there is a general shift from production to service as a key driver of economic activity. Because of the importance of the service sector, many studies have been conducted regarding service quality and perceptions of quality in service delivery [1, 3-9].

One area of study regarding the service sector yet to be examined is that of potential changes to service quality during times of economic growth and population growth. Anecdotal expectations by community and business leaders tend to assume that economic growth and population increases will increase the level of labor mobility. As jobs become more readily available, experienced employees will take advantage of the growing market and move toward better career opportunities. In addition, economic activity leading to lower unemployment is expected to increase the level of “churn” or speed at which entry level employees can be considered eligible for better employment.

Those employers who depend on entry level employees are often concerned that their ability to provide a quality service experience to customers will decline as their experienced employees are replaced by lesser skilled workers. This study is the first part of a longitudinal survey to determine if these expectations are correct, and to examine consumer perceptions of service quality during a period of population growth and economic expansion.

Labor and Economic Sectors

A nation’s economy can be divided into five basic sectors for the purpose of categorizing labor and work activity. They are 1) Primary, 2) Secondary, 3) Tertiary, 4) Quaternary, and 5) Quinary. Work in the primary sector extracts or harvests products from the earth. This sector includes the
production of raw materials and basic foods. Activities associated with the primary sector include agriculture, mining, forestry, fishing and quarrying. The packaging and processing of the raw material associated with this sector is also considered to be part of this sector. Work in the secondary sector manufactures finished goods. All of manufacturing, processing, and construction lies within the secondary sector. This includes automobile production, chemical and engineering industries, energy utilities and construction. The tertiary sector of the economy is the service industry. This sector provides business-to-business and business-to-consumer services [10]. Activities associated with this sector include retail and wholesale trades, transportation and distribution, entertainment, restaurants, clerical services, media, tourism, insurance, banking, healthcare, and law. The quaternary sector consists of intellectual activities. Activities associated with this sector include government, culture, libraries, scientific research, education, and information technology. The quinary sector is often considered a branch of the quaternary sector. The quinary sector includes top executives or officials in such fields as government, science, universities, nonprofits, healthcare, and the media [10]. For the purpose of this report, the Tertiary sector of the market is examined as the primary sector for service based industry.

Defining Service and Service Quality

Services are unique in that they are typically produced and consumed simultaneously [7,8]. We usually consider services as intangible products which require a high level of supplier-consumer interaction and involvement [7,8]. Concepts of service quality are rooted in the expectancy disconfirmation theory [11, 12]. Managers and workers producing products in a factory can create a subjective measure of quality based upon the output product’s conformance to production standards. However, because of the high degree of customer interaction, the quality of a service becomes a more subjective measure, depending on both the service delivery ability to meet specifications and the customer’s expectations prior to the service delivery [1, 3, 5, 7, 8]. Service quality has been described as an attitude, similar but not equal to satisfaction, that results from the comparison of expectations with performance [6, 9, 13].

Disconfirmation Theory

The Expectancy Disconfirmation Theory (EDT) is considered by many as the primary foundation for satisfaction models [8,12,14]. According to this theory, satisfaction is determined by the discrepancy between perceived performance and expectation or desires [12, 15]. Customer dissonance between expectations and experienced outcomes leads to unpleasant feelings which the customer will psychologically attempt to resolve either through seeking recourse for satisfaction or changing expectations service quality [16]. The basic model of the Expectancy Disconfirmation Theory is provided in Figure 1.

Figure 1: The basic model of the expectancy disconfirmation theory

Expectations - Customer expectations of the service encounter can be formed by many factors, including previous experience with a service provider, advertising, business reputation, customer background, and even the customer’s psychological condition at the time of purchase [12, 17]. Zeithaml et al. [18] stated that service expectation is built on complex considerations, including pre-purchase beliefs and other people’s opinions [12].
Perceived Performance - The customers’ interpretation of the experience after the encounter. This experience can be perceived as better than expected, worse than expected, or as expected [16, 19].

Satisfaction - Customer satisfaction with products and services is an evaluation comparing pre-purchase expectations to subjective post-purchase experiences [12]. Kotler defined satisfaction as a person’s feelings of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectation [20].

Economic Growth and Service Quality

Labor mobility is often considered a “natural characteristic” of an industrial society. It is not unusual for individuals to first gain skills in the tertiary and sometimes secondary sectors of the economy. These sectors often have positions available for lower skilled or non-skilled workers. While some find long-term careers in the tertiary sector, many move to more gainful employment in the secondary, primary, quaternary or quinary sectors as they gain skills, experience, and sometimes training and education [21]. For the purpose of this research project, it is hypothesized that increased labor mobility, caused by a growing economy and growing population base, will cause a decline in overall perceptions of service quality, as experience by consumers.

Economic Growth: The Test Region

To determine if economic growth affects service quality, a region of the United State that is anticipating strong economic growth was selected. As a test case, the five-parish region of Southwest Louisiana consists of Allen, Beauregard, Calcasieu, Cameron, and Jeff Davis parishes and is a recognized metropolitan area commonly referred to as Southwest Louisiana (SWLA). Though severely damaged by Hurricane Rita in 2005, SWLA later prospered as local reconstruction efforts helped offset national economic declines and a collapse of the national housing market. Recent technological breakthroughs in oil and natural gas extraction and refinement as well as lower prices for natural gas are now driving economic activity for the region with considerable growth predicted in the short to mid-term future [10].

Planned industry growth in Southwest Louisiana (SWLA) includes the following project investments [22, 23]:

- Belle Savanne - $230 million capital investment
- Big Lake Fuels - $1.3 billion capital investment
- Boise Inc. - $113 million capital investment
- BP Biofuels - $400 million capital investment
- CB&I/Shaw Modula Solutions - $100 million capital investment
- Cheniere Energy - $20 billion capital investment
- Coushatta Casino Resort - $60 million capital investment
- Golden Nugget/Pinnacle/Ameristar - $580 million capital investment
- IFG Port Holding/New Grain Terminal - $59.5 million capital investment
- Juniper GTL - $100 million capital investment
- Lake Charles Clean Energy (Leucadia) - $2.6 billion capital investment
- Lake Charles LNG (Trunkline LNG Export) - $9 billion capital investment
- Lakes at Morganfield - $350 million capital investment
- Leucadia National Corporation/LC Cogeneration - $2.6 billion capital investment
- Magnolia LNG - $3.5 billion capital investment
- National Hurricane Museum - $66 million capital investment
- SASOL Ethylene Tetramerization - $175 million capital investment
- SASOL GTL & Derivatives - $16 billion capital investment
- Sempra/Cameron LNG - $9 billion capital investment
- Virtual Engineering Operations VEOPS - $100 million capital investment

The subtotal of projected capital investments is over $65 billion. It is anticipated that over
31,000 construction workers will be employed during peak construction years, expected to end between 2018 and 2021 [22, 23]. A more specific projection of workforce needs includes the following [22, 23]:

- New Construction Jobs: 31000+
- New Permanent/Direct Jobs: 6300+
- New Permanent/Indirect Jobs: 6300+
- New Permanent/Induced Jobs: 6200+

After construction is completed, as many as 18,000+ new permanent jobs will be added to the primary and secondary employment sectors to accommodate new production. New employment opportunities typically equate to population growth, as workers and their families move into the area to take advantage of the growing economy. It is predicted that the five-parish area classified as “Southwest Louisiana” may have as many as 50,000 new residents by the year 2020 [24]. This region had a 2010 population of approximately 300,000 [25], for an expected population growth of approximately 17% over a five to eight year period.

The Research Study: SERVQUAL and Critical Incident Technique

To determine initial consumer opinions of service quality in the SWLA region, this study utilizes the Critical Incident Technique (CIT) to apply the SERVQUAL scale. SERVQUAL is a scale that assesses client satisfaction based upon the difference between client expectations and service performance [18, 26]. Developed by Parasuraman, Zeithaml and Berry [9], the SERVQUAL model is widely used in studying the customers’ perception of services received from the various service providers [27]. The model has been used in the study of many types of services, including hospital outpatient services [28,29] public services [30] private healthcare [31] library services [32] business to business sales and services [33] information technology [34-36] education services [37] and logistics services [38].

The SERVQUAL model consists of five main dimensions, tangibility, reliability, responsiveness, assurance and empathy [9].

- Tangibles: physical facilities, equipment, external appearance of store and appearance of personnel.
- Reliability: company’s potential of performing the promised service dependably and accurately.
- Responsiveness: company’s willingness to help customers and provide prompt service.
- Assurance: employees’ knowledge and courtesy levels and their ability to inspire trust and confidence. This dimension also includes competence, courtesy, credibility, and security.
- Empathy: caring and personalized attention that the firm provides to its customers. This dimension also includes access, communication and understanding the customer.

To apply the scale, this study utilizes the Critical Incident Technique (CIT). Developed by John Flanagan [39], CIT is “a set of procedures for collecting direct observations of human behavior in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles. The critical incident technique outlines procedures for collecting observed incidents having special significance and meeting systematically defined criteria” [39]. CIT has shown useful in qualitative research and provides a step-by-step approach to collecting and analyzing information about human activities and their significance to the people involved [40].

According to Flanagan [39] “an incident is critical if it makes a ‘significant’ contribution, either positively or negatively to the general aim of the activity and it should be capable of being critiqued or analyzed.”

In this test, respondents were randomly chosen while at several local shopping centers. Using CIT, they were asked to reflect upon a recent service encounter. First, they were asked the type of business where this encounter occurred. Then, the researcher read a list of questions and recorded the response. The questionnaire used in this study incorporated a Likert scale of 1 to 5, with 1=No, 3=Mostly, and
Seventy five responses were collected. Table 1 indicates the gender and age ranges of the respondents. The majority of respondents were female as is expected in a typical US shopping environment.

Survey Findings

Demographics

Table 1: Gender and age

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Age</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>32</td>
<td>18-30</td>
<td>44</td>
<td>58.6%</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>31-45</td>
<td>10</td>
<td>13.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>46-55</td>
<td>7</td>
<td>9.3%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>55+</td>
<td>9</td>
<td>12.0%</td>
</tr>
<tr>
<td>Unreported</td>
<td>5</td>
<td></td>
<td></td>
<td>.06%</td>
</tr>
</tbody>
</table>

Table 2 reports the nature of the service encounter that each respondent was recalling as a critical incident. The majority were listed as restaurant encounters. The second largest reporting was a rather generic term of “retail”, but it is interpreted to represent an in-store retail purchase encounter. The final category of “other” is made up of single item encounters that included a carwash, gas station, museum, phone company, and plumbing service.

Table 2: Service Encounters

<table>
<thead>
<tr>
<th>Service Area</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurant</td>
<td>46.6%</td>
</tr>
<tr>
<td>Retail</td>
<td>24.0%</td>
</tr>
<tr>
<td>Banking</td>
<td>14.7%</td>
</tr>
<tr>
<td>Mechanic Shop</td>
<td>2.6%</td>
</tr>
<tr>
<td>Medical Office</td>
<td>2.6%</td>
</tr>
<tr>
<td>Hair/Nail Salon</td>
<td>2.6%</td>
</tr>
<tr>
<td>Other</td>
<td>6.9%</td>
</tr>
</tbody>
</table>

Reliability

Cronbach’s Alpha is used as a lower bound estimate of the reliability of a psychometric test. As a typical rule of thumb, values of 0.70 or higher are desired. In this survey, all factors accept. Tangibles achieved the benchmark measure (Table 3). It is assumed at this point that the and may arise from two basic issues. First, given that respondents could choose any service activity they had experienced, it is possible that a significant number of respondents were reflecting upon a service encounter that did not require written or tangible materials. Second, it is also possible that employee dress and/or faculty low reliability of the factor Tangibles may be art of the nature of this particular study attractiveness were considered issues of concern by the respondents and in their opinion were not part of the service expectation. Results of the survey are provided in Table 4. Overall, customers appear satisfied with the service experiences as reported via the critical incidence technique.
### Table 4: Survey Results

<table>
<thead>
<tr>
<th>Factor/Items</th>
<th>N</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tangibles</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the staff dressed appropriately?</td>
<td>74</td>
<td>4.54</td>
<td>.779</td>
</tr>
<tr>
<td>Were the facilities attractive?</td>
<td>74</td>
<td>4.02</td>
<td>.890</td>
</tr>
<tr>
<td>Were written material easy to understand?</td>
<td>67</td>
<td>4.49</td>
<td>.725</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If a response was promised in a certain time, did it happen?</td>
<td>61</td>
<td>3.81</td>
<td>1.284</td>
</tr>
<tr>
<td>Was the service performed right the first time?</td>
<td>73</td>
<td>4.17</td>
<td>1.097</td>
</tr>
<tr>
<td>Was the service performed to your expectations?</td>
<td>75</td>
<td>4.04</td>
<td>1.167</td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If there was a problem, did they respond quickly?</td>
<td>59</td>
<td>3.88</td>
<td>1.287</td>
</tr>
<tr>
<td>Did they answer your questions appropriately?</td>
<td>70</td>
<td>4.12</td>
<td>1.075</td>
</tr>
<tr>
<td>Did staff provide service in an effective and efficient manner?</td>
<td>75</td>
<td>4.08</td>
<td>1.12</td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the staff appear to know what they are doing?</td>
<td>74</td>
<td>4.31</td>
<td>.890</td>
</tr>
<tr>
<td>Did you feel that staff answered your questions accurately and truthfully?</td>
<td>65</td>
<td>4.12</td>
<td>1.053</td>
</tr>
<tr>
<td>Are you confident that the service provided was done correctly?</td>
<td>71</td>
<td>4.36</td>
<td>.929</td>
</tr>
<tr>
<td><strong>Empathy</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did the staff members have a pleasant demeanor?</td>
<td>74</td>
<td>3.95</td>
<td>1.638</td>
</tr>
<tr>
<td>Were staff ever rude or demeaning during the interaction?</td>
<td>74</td>
<td>4.24</td>
<td>1.322</td>
</tr>
<tr>
<td>Was it easy to talk with the staff members about your concerns?</td>
<td>62</td>
<td>3.88</td>
<td>1.242</td>
</tr>
<tr>
<td>When you contacted the service provider, did the staff person listen to your problems and demonstrate understanding and concern?</td>
<td>47</td>
<td>3.93</td>
<td>1.186</td>
</tr>
</tbody>
</table>

In general, the factor of “Tangibles” shows the greatest overall satisfaction with lower variation in customer opinions. However, the lower reliability score for the factor “Tangibles” suggests that consumers are likely satisfied with the business facilities, staff dress, and written materials, but they also may consider this of less importance regarding their overall satisfaction of the service experience. The remaining factors, while overall scoring above average in consumer satisfaction, also show considerable variation in customer opinions, indicating a wide range of customer experiences from very satisfied to very unsatisfied.

**Limitations and Recommendations**

This is the first part of a two-part longitudinal study to determine if economic growth and population growth will have a negative effect on consumer perceptions of service quality. It is anticipated that this study will be repeated five years after the original survey to determine if there has been a significant change in consumer attitudes regarding service quality. The methodology will be repeated but with a different list of randomly selected volunteers.

In general, it appears that consumers in the Southwest Louisiana region are generally satisfied with their current service encounter experiences. Most service quality measurement criteria were ranked as average or above average.

There are several limitations regarding the methodology and measurement instrument used. While SERVQUAL is a well known instrument for determining consumer perceptions of the service quality experience, other measurement instruments have claimed to provide more accurate assessments of service quality opinions. Likewise, the critical incident technique is well respected as a methodology for qualitative study. However, each respondent’s recollection of a service experience can differ as can each respondent’s expectations for quality in the service delivery process.

Despite limitations, the basic methodology should provide sufficient feedback to suggest whether the chain of events...
inspired by economic growth, namely population growth, increased labor mobility, and an increase in hiring for non-skilled workers into the tertiary markets will have an overall affect on service quality. In general, consumer opinions of service quality in the SWLA region appear to be above average. A second test will determine if these opinions have changed over time.

References


