

PRIORITIZING SERVICE QUALITY MEASUREMENT CRITERIA IN CHARTER BUS TRANSPORTATION SERVICES WITH AHP

ABSTRACT

The aim of this study is to prioritize and compare the expected criteria which how clients and the business manager assess the quality of charter bus transportation service in a Brazilian transport company. To reach the goal, surveys were conducted in groups of passengers and the business manager of a charter transportation service company using a combined model based on the SERVQUAL and the Analytic Hierarchy Process Model (AHP). Representative samplings of passengers and manager were interviewed during August of 2014 and data was analyzed using the *Superdecisions*® software. By the pairwise comparison, it was possible to find out the global weights of the passengers' expectations of the service criteria and the manager's perception of such expectations. The SERVQUAL "Gaps 1" among the priorities and ranking positions pointed out criteria that the company should prioritize. The results allowed us to conclude that combining AHP with SERVQUAL provides a powerful quality management tool for decision-making and matching the clients' needs at the company analyzed.

Keywords: Service Quality, SERVQUAL, Charter transportation services, Analytic Hierarchy Process (AHP).

1. Introduction

The SERVQUAL model is supposed to assess the clients' expectations and perceptions of the service quality purchased, but it does not provide any better understanding about the most important criteria considered for measuring the service quality. Using the AHP combined to the SERVQUAL model enabled a transportation company to understand the discrepancies between the clients' expectations when evaluate the transportation service quality and the managers' perception of such expectations.

2. Literature Review

Although the SERVQUAL proposed by Parasuraman, Zeithaml and Berry (1988) has been used in different service quality fields, the model does not prioritize the criteria that are involved during the service quality evaluation. The SERVQUAL assumes each evaluation criterion has the same weight of importance into its quality dimensions and it could not be true for every client. Some studies succeeded in combining the AHP methodology to different models in order to obtain priorities when assessing the service quality criteria (BUYOKOZKAN; ÇIFÇI; GULERYUZ, 2011; DHILLON; PRASHER, 2014).

3. Objectives

The purposes of this study are: (1) to order the quality criteria of a charter transport service (bus) under customers' viewpoint (expectations); (2) to order the quality criteria of the same service under the manager's viewpoint; (3) compare (1) with (2) in order to identify the "gap 1" failure – SERVQUAL.

4. Research Design

To set the AHP hierarchy four of the original SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance) were employed with their respective criteria. The criteria that compound the original dimensions were firstly tailored to the reality of the company based on brainstorming with clients. These adapted questionnaires were systematically applied to 60 passengers (distributed in 5 groups) and the manager of the company during August 2014. The passengers and manager were asked to compare these criteria based on the judgments of the AHP method and importance scale.

5. Data/Model Analysis

The *Superdecisions*® software was employed to ensure the reliability of the model and to obtain the global weights. The samples used for the study were just with consistent indices (just passengers' judgments with the C.I up to 0, 10). By obtaining the geometric mean of all the respondents' global weights, it was possible to rank the most relevant criteria in each and the "gaps 1" (manager's global priorities – passengers' global priorities) showing the discrepancies among their ranking position and their global weights.

| Ranking position | Manager's prioritized criteria | Global weight (%) | Ranking position | Passengers' prioritized criteria | Global weight (%) | Gap 1 (%) |
|------------------|--------------------------------|-------------------|------------------|----------------------------------|-------------------|-----------|
| 1 | Aid provided | 22,76 | 4 | Aid provided | 8,13 | 14,63 |
| 2 | Driver's reliability | 14,44 | 2 | Driver's reliability | 20,92 | -6,48 |
| 3 | Driver's training | 14,44 | 1 | Driver's training | 22,15 | -7,7 |
| 4 | Reliability | 8 | 6 | Reliability | 6,67 | 1,34 |
| 5 | Modern equipment | 7,89 | 12 | Modern equipment | 3,03 | 4,86 |
| 6 | Company physical environment | 4,89 | 7 | Company physical environment | 4,71 | 0,13 |
| 7 | Driver's good manners | 4,81 | 3 | Driver's good manners | 8,19 | -3,38 |
| 8 | Punctuality | 4,7 | 5 | Punctuality | 6,8 | -2,1 |
| 9 | Certification of the company | 4,7 | 11 | Certification of the company | 3,35 | 1,35 |
| 10 | Helpful drivers | 3,24 | 9 | Helpful drivers | 4,01 | -0,77 |
| 11 | Driver's expertise | 3,24 | 10 | Driver's expertise | 3,41 | -0,16 |
| 12 | Matching the passengers' needs | 3,24 | 13 | Matching the passengers' needs | 2,92 | 0,32 |
| 13 | Conservation of the buses | 2,14 | 8 | Conservation of the buses | 4,07 | -1,93 |
| 14 | Driver's proper dress | 1,51 | 14 | Driver's proper dress | 1,64 | -0,12 |

6. Limitations and conclusions

According to the findings, the prioritized criteria enabled the company to use the expectations ranking in order to perform better services. The study also contributed to identify the discrepancies among the manager's and passengers' global weights pointing out the difference between what the passengers expected about the service and the manager's perception of these expectations. These "gaps 1" may describe failures in performing the service whereas the passengers overvalued criteria that the manager did not assume (negative gaps). As a study limitation there is a need in reviewing the evaluation of the clients' expectations periodically because it may change during the time. So it is suggested the periodical application of the AHP method.

Key References

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