

UNIVERSIDADE DO PORTO

ISEE - INSTITUTO SUPERIOR DE ESTUDOS EMPRESARIAIS

**THE COMPONENTS OF
SERVICE QUALITY**

**AN APPLICATION TO THE TRANSPORTATION
INDUSTRY IN PORTUGAL**

JORGE MANUEL PEREIRA DIAS DE MENDES RIBEIRO

M.B.A. THESIS

PORTO

JULY 1993



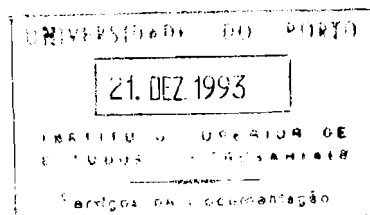
ABSTRACT

This research examines service quality perceptions in the transportation industry. First, it analyses the theory about service quality conceptualization. Then a modified SERVQUAL instrument is developed, and applied to the inter-city bus industry using as subject one of the largest Portuguese bus companies: Resende.

The present investigation critically analyses SERVQUAL: an instrument that its authors - Parasuraman, Zeithaml, and Berry- want to be of general application. It determines the service quality dimensions of the bus industry, and quantifies Resende's service quality.

Five service dimensions are identified: READINESS/RELIABILITY, TRUST, COMFORT, SECURITY, and ACCESS. They are examined in terms of their impact of customers' overall quality perception and their willingness to recommend the firm to a friend. These variables are found to be affected heavily by two dimensions: trust and comfort.

The present investigation's main conclusion is that SERVQUAL is a good starting base to quantify service quality, but it is neither of general nor of direct application. The SERVQUAL instrument would need some adjustments to fit each particular situation.



Times have changed. Portugal is no longer predominantly a manufacturing nation. We are now in the midst of a new service economy, where personal relationships are becoming crucial and even more important than product performance.

No marketing is needed if it simply means discounting.
Sell services through quality.

Perhaps no single word has appeared more often in services literature during the last 12 months than "quality". Designing and marketing high quality services is likely to be a strategic issue through the 1990s.

Adapted from Arch G. Woodside,
from Roger G. Langevin and from Ishikawa

The old wisdom, "what gets measured, gets done," applies directly to achieving meaningful increases in quality.

"Quality does not improve,
until you measure it."

"You only can manage,
what you can measure."

Gordon Paul

CONTENTS

	Page
1. INTRODUCTION - PROBLEM DEVELOPMENT	10
2. NATURE OF SERVICE QUALITY	13
2.1. SERVICE'S UNIQUE CHARACTERISTICS	13
a) Classification of Properties between Goods and Services	13
b) Services' Characteristics	14
c) Expanded Marketing-Mix for Services	15
2.2. CONCEPTUALIZATION OF SERVICE QUALITY	17
2.2.1. THE DIFFERENT MEANINGS OF "QUALITY" IN THE EVERYDAY LANGUAGE	17
2.2.2. PRODUCT-ATTRIBUTE APPROACH TO SERVICE QUALITY	18
2.2.3. CONSUMER-SATISFACTION APPROACH TO SERVICE QUALITY	19
2.2.4. "QUALITY EPIPHENOMENON"	19
2.2.5. TECHNICAL QUALITY, FUNCTIONAL QUALITY AND CORPORATE QUALITY	20
2.2.6. PERCEIVED QUALITY VERSUS OBJECTIVE QUALITY	21
2.2.7. QUALITY AS ATTITUDE	22
2.2.8. QUALITY VERSUS SATISFACTION	22
2.2.9. QUALITY AND VALUE IN THE CONSUMPTION EXPERIENCE	25
2.2.10. EXPECTATIONS COMPARED TO PERCEPTIONS	26
2.2.11. CONCLUSIONS OF SERVICE QUALITY CONCEPTUALIZATION	28
2.3. INVESTIGATION OF SERVICE QUALITY PERCEPTIONS	29
2.3.1. INSIGHTS OBTAINED FROM EXPLORATORY INVESTIGATION AND A SERVICE QUALITY MODEL	29
a) The four Gaps on the organization side of the model	30
b) The Gap on the customers side of the model	34
2.3.2. EXTENDED SERVICE QUALITY MODEL	35
a) The Gap Between Customers and the Organization	35

2.3.3. DETERMINANTS OF PERCEIVED SERVICE QUALITY	39
2.3.4. PROPERTIES IN EVALUATING QUALITY: SEARCH, EXPERIENCE, AND CREDENCE PROPERTIES	41
2.4. SERVQUAL : A MULTI-ITEM SCALE FOR MEASURING PERCEPTIONS OF SERVICE QUALITY	42
2.4.1. DIMENSIONS OF SERVICE QUALITY	42
2.4.2. RELATIVE IMPORTANCE OF SERVQUAL DIMENSIONS	45
2.4.3. APPLICATIONS OF SERVQUAL	47
2.5. CRITICISMS OF THE SERVQUAL	49
2.6. CONCLUSION OF THE PRECEDING REVIEW	55
3. THE STUDY	56
3.1. AN APPLICATION TO BUS INDUSTRY	56
3.2. OTHER BUS TRANSPORTATION INVESTIGATIONS	58
4. METHODOLOGY	60
4.1. DEVELOPMENT OF CUSTOMER SATISFACTION QUESTIONNAIRE	60
4.1.1. DETERMINATION OF BUS CUSTOMER REQUIREMENTS	60
(1) the development approach of the quality dimensions	61
(2) the critical incident approach	61
4.1.2. BUS QUALITY DIMENSIONS AND SATISFACTION ITEMS	63
4.1.3. CUSTOMER SATISFACTION QUESTIONNAIRE CONSTRUCTION	64
a) Items in the questionnaire	64
b) Response format	65
c) The Questionnaire Introduction	68
5. RESULTS	69
5.1. DESCRIPTIVE STATISTICS	69
5.2. CORRELATION	70
5.3. SCALE VALIDITY	71
5.4. THEORETICAL DIMENSIONS	72
5.5. FACTOR ANALYSIS	73
5.6. RELIABILITY ANALYSIS	75
5.7. REGRESSION	76

5.8. VARIANCE ANALYSIS	79
5.9. THE LINKAGE BETWEEN: THE DIMENSIONS, THE QUALITY PERCEPTION AND THE RECOMMENDATION DECISIONS	81
6. DISCUSSION	85
6.1. LIMITATIONS	85
6.2. DISCUSSION	87
7. CONCLUSIONS	90
7.1. CONCLUSIONS	90
7.2. FUTURE RESEARCH	94
7.3. FINAL COMMENTS	98
REFERENCES	101
APPENDIX	109
1- CHARACTERISTICS DESCRIBED AS CRITICAL INCIDENTS	109
2- TRANSPORTATION SERVICE QUALITY ITEMS BY QUALITY DIMENSION	111
3- TRANSPORTATION SERVICE QUALITY SURVEY	113
4 - ITEMS STATISTICS SUMMARY	131
5 - DESCRIPTIVE STATISTICS OF THE QUESTIONNAIRE	132
6 - CORRELATION OF EXPECT, PERC, QUAL ITEMS WITH OQ QUESTION	172
7 - RELIABILITY ANALYSIS OF QUAL WITH THE NINE THEORETICAL DIMENSIONS	175
8 - FACTOR ANALYSIS	184
9 - RELIABILITY ANALYSIS	191
10 - MULTIPLE REGRESSION	296
11 - VARIANCE ANALYSIS - SIGNIFICANT MEAN DIFFERENCES OF SEVERAL VARIABLES	202
12 - CORRELATION BETWEEN DIMENSIONS, OVERALL QUALITY PERCEPTION, AND WILLINGNESS TO RECOMMEND	211
13 - MULTIPLE REGRESSION	212
14 - MULTIPLE REGRESSION	214
15 - REGRESSION BETWEEN OQ AND WR	216
16 - VARIANCE ANALYSIS - SIGNIFICANT MEAN DIFFERENCES OF DIMENSIONS AND HR	218
Q - ITEMS IN THE QUESTIONNAIRE	last page: 220

FIGURES INDEX

	Page
1- TECHNICAL QUALITY AND FUNCTIONAL QUALITY	20
2- PERCEIVED SERVICE QUALITY	27
3- SERVICE QUALITY MODEL	31
4- GAPS MODEL OF SERVICE QUALITY	32
5- GAP 5 AND GAP 6	35
6- EXTENDED CONCEPTUAL SERVICE QUALITY MODEL	37
7- DETERMINANTS OF PERCEIVED SERVICE QUALITY	40
8 - A HYPOTHESIZED LINKAGE GENERAL STRUCTURE OF THE QUALITY-RECOMMENDATION LINKAGE	83
9- A HYPOTHESIZED MODEL OF THE QUALITY-RECOMMENDATION LINKAGE	84

TABLES INDEX

	Page
1- QUALITY CLASSIFICATION BASED ON THREE DIMENSIONS	25
2 - PARASURAMAN, ZEITHAML, AND BERRY DIMENSIONS	44
3 - ALPHA FOR THEORETICAL DIMENSIONS	72
Factors Pattern For QUAL Items:	
4 - Factor 1	73
5 - Factor 2	74
6 - Factor 3	74
7 - Factor 4	74
8 - Factor 5	75
9 - MEAN DIFFERENCE BETWEEN ITEMS AND "HR" QUESTION	80
10 - SERVICE DIMENSIONS AFFECTING PERCEPTIONS OF SERVICE QUALITY	82
11 - SERVICE DIMENSIONS AFFECTING RECOMMENDATION DECISIONS	82

GRAPHICS INDEX

1- RELATIVE IMPORTANCE OF THE SERVQUAL DIMENSIONS	46
---------------------------------------------------	----

ACKNOWLEDGMENTS

The author of this investigation would like to acknowledge some of the people who contributed to this work's completion. His thanks to Dra. Carla Chousal, Professor Carlos Barral, Professor Duane Davis, Professor José Miguez, Professor José Valente, Professor Rui Guimarães, Professor Sarsfield Cabral, Eng. Jorge Poço, Antonieta, Isabel, Cândido, and Álvaro Resende.

A research like this one would not be easy without a supervisor. The author wants to particularly thank Professor Gordon Paul.

1. INTRODUCTION - PROBLEM DEVELOPMENT

Service firm managers face significantly different challenges than do those of their manufacturing counterparts. For example, with the US in the midst of a new service economy, most American business executives see service quality as a greater concern than product quality. Langevin (1988) finds that about 30% of service companies are exploring quality-control opportunities and an additional 40% say they have problems in place.

"Service companies are beginning to understand what their manufacturing counterparts learned in the 1980s: that quality does not improve unless you measure it (Reichheld, and Sasser, 1990 - p. 105)".

As client sensitivity increases, competition expands and intensifies, the issue of evaluating how consumers perceived the quality of services, and how those perceptions affect consumer's behavior and purchase decisions, have become critically important, and are likely to be a strategic issue through the 1990s.

Quality is defined by the customer. A technically perfect service that does not meet customers' expectations will fail. When a service provider knows how consumers evaluate the quality of its service, it will be more able to influence these evaluations in a desired direction and to relate a service idea to customer benefits.

Nowadays, the marketing key is customer service, and the main competitive advantage is quality.

The challenge is to determine what customers want and whether they are satisfied with the company and its service. That is, it is critical that the firm know what are the components of good service and what are the indicators of a poor service before they set up any program. Knowing quality determinants could mean the difference between retaining or losing customers.

Why is high service quality so important to the customer? Simply because it is profitable. The ultimate cost of failing to provide quality is the highest cost any business can pay: an unhappy customer. Satisfied customers with a company are less likely to leave the firm for a competitor and they are more likely to refer the firm to their

friends. This is particularly important in services where referrals are a relevant source of new customers.

The role of service quality is now widely acknowledged as an indicator of customer satisfaction and organizational performance. Many suggested definitions of service quality focus on meeting customer needs and requirements.

In response to a growing interest in service quality the Marketing Science Institute sponsored a research program, much of which was undertaken by Parasuraman, Zeithaml, and Berry (1985,1986,1988).

The present research was undertaken to strengthen understanding of the service quality construct and start Portuguese service quality investigation through the application of a specific instrument, SERVQUAL (Parasuraman, Zeithaml, and Berry 1985, 1986, 1988, 1990), to a selected service.

SERVQUAL is a multiple-item scale designed to measure customers' service quality expectations and perceptions. The SERVQUAL instrument has received considerable recognition in the general service marketing literature as a result of the pioneering work of its authors.

Information gained through this approach can be used to better understand service expectations and consumer perceptions, and to look at trends over time or compare branches or outlets within an organization. A firm's customers can be categorized into several perceived-quality segments by their individual SERVQUAL scores. It can also be used in designing the service product, designing the service delivery system, as input into quality monitoring programs, and for developing employee training.

This model of service quality is derived from the magnitude and direction of five gaps, which include consumer expectations-experiences discrepancies and differences in management, service design, delivery, and communications. From this model, an extended service quality model was developed that included gap 6-*Service Delivery-Perceived Service Gap*.

Once inconsistencies have been identified, strategies and tactics for achieving more congruent expectations and experiences can be initiated. Managing perceived service quality means that the firm has to match the expected service and the perceived service to each other, so that consumer satisfaction is achieved. Regardless, the first step is knowing the determinants of service quality.

Quality in the transportation industry is the focus of the following discussion and experiment. This industry has been paid almost no attention in the marketing literature, specifically in Portugal, and it is of particular importance for many Portuguese companies and citizens.

Service quality is the present investigation's main goal; second, the intention is to analyze SERVQUAL; and, finally, to quantify customers' expectations and perceptions, and to determine the service quality dimensions existing in the bus transportation industry. The transportation service analyzed will be inter-city bus travel, an increasingly competitive industry because some public bus companies have been recently privatized. The focus company will be one of the biggest Portuguese bus companies: **Resende**, supplying regular and charter services, nationwide.

The focus of this examination will be to answer the following questions: What is service quality? What do customers really want? Are all preferences equally expected? and, How is Resende service evaluated?

The first part of this paper reviews the nature of service quality. It reviews the theory underlying service quality conceptualization, Parasuraman, Zeithaml, and Berry's investigation of the subject and their model, and develops an extended service quality model. Finally, it describes the SERVQUAL instrument, and some criticisms of it.

The following chapters analyze and quantify the customer expected and perceived service quality. A modified SERVQUAL instrument is developed and applied to the inter-city bus industry. Customers' expectations and perceptions, service quality dimensions, and the Resende service quality are determined. Finally, a critical analysis of SERVQUAL instrument is made, and areas for future research are described.

2. NATURE OF SERVICE QUALITY

This chapter presents a review of the existing literature about service quality. It begins by examining the unique characteristics of services, because these must be acknowledged to develop a full understanding of service quality. Second, the chapter presents several conceptualizations about service quality. It describes Parasuraman, Zeithaml, and Berry's investigation of service quality perceptions, the conceptual service quality model developed, and the determinants of service quality. Fourth, SERVQUAL, a multi-item scale for measuring perceptions of service quality, is described. Finally, the chapter presents some criticisms of SERVQUAL, and the conclusion of the preceding review.

2.1. SERVICE'S UNIQUE CHARACTERISTICS

Service's characteristics are different from goods' characteristics. This chapter explains service's properties, and distinguishing services characteristics of intangibility, heterogeneity, and inseparability. Finally, it describes an expanded marketing mix for services.

a) Classification of Properties between Goods and Services

A framework for isolating differences in consumer evaluation processes between goods and services is based on the classification of properties distinguished among three categories (Parasuraman, Zeithaml, and Berry 1985; Zeithaml 1981, p.186):

- Search properties - attributes that a consumer can determine before buying a service (as price, and physical facilities).
- Experience properties - attributes that can only be discerned after purchase or during use (as courtesy of employees).
- Credence properties - characteristics that the consumer may find impossible to assess even after purchase and use (as

medical properly performand). Credence properties dominate in many services, especially those provided by professionals and specialists (e.g., auto repair).

In general, offerings high in search properties are easiest to evaluate even before purchase. Offerings high in experience properties are more difficult to evaluate because they must be bought and consumed before assessment is possible. Offerings high in credence properties are hardest to evaluate because the consumer may be unaware of or may lack sufficient knowledge to appraise whether the offerings satisfy given wants or needs even after consumption (example: possess medical, mechanical or law skills sufficient to evaluate whether these services are necessary or are performed properly).

b) Services' Characteristics

Distinguishing services' characteristics of intangibility, heterogeneity, and inseparability make them more difficult to evaluate than goods.

First, most services are **intangible**. They cannot be seen, felt, tasted, or touched in the same manner in which goods can be sensed. They cannot be counted, measured, inventoried, tested, and verified before sale to assure quality. Services cannot be displayed, physically demonstrated or illustrated; therefore they possess few search properties and many experience properties. Because of intangibility, it is difficult to understand how consumers perceive services and evaluate service quality (Bitner 1990; Cowell 1989; Lovelock 1984; Parasuraman, Zeithaml, and Berry 1985; Zeithaml 1981).

Second, services are **heterogeneous**: their performance often varies from producer to producer, from customer to customer, and from day to day. Since service cannot be inventoried, performance depends to some extent on the level of demand. What the firms intend to deliver may be entirely different from what the consumer receives. Heterogeneity results in high experience qualities, for consumers cannot be certain about performance on any given day, even if they use the same service provider on a regular basis (Booms and Bitner 1981; Cowell 1989; Lovelock 1984; Parasuraman, Zeithaml, and Berry 1985; Scmalensee, Bernhardt, and Gust 1985; Zeithaml 1981).

Third, **production and consumption** of many services are **inseparable**. Tangible goods are produced, sold and then consumed separately. But in services, the final elements of the service assembly process usually take place simultaneously with consumption, so that the customer is much more likely to meet the service production

process in operation. Due to this inseparability, the buyer usually participates in producing the service, thereby affecting the performance and quality of the service. The service firm may have less managerial control over quality in labor intensive services, and services where consumer participation is intense (Bitner 1990; Cowell 1989; Lovelock 1984; Parasuraman, Zeithaml, and Berry 1985; Zeithaml 1981).

In sum, the intangibility, heterogeneity, and inseparability of services lead them to possess few search qualities and many experience qualities. Additionally, service marketers most often have limited influence over the delivery of the service and therefore have limited control over service quality. The situation is similar to a good's marketer trying to promote, position, or define an always changing product that the customer has not yet seen.

c) Expanded Marketing-Mix for Services

From this service's unique characteristics, Booms and Bitner (1981) proposed and expanded the marketing mix for services consisting of the four traditional elements (product, price, place, promotion) and three new ones (Cowell 1989):

- **Participants:** All human actors who play a part in service delivery and thus influence the buyer's perceptions: namely, the firm's personnel and other customers in the service environment.
- **Physical Evidence:** The environment in which the service is assembled and where the firm and the customer interact, as well as, any tangible commodities that facilitate performance or communication of the service.
- **Process:** Service assembly actual procedures, mechanisms, and flow of activities by which the service is delivered.

Bitner's (1990) study supported the idea that "*elements of the expanded marketing mix should be included in strategies for improving service encounter satisfaction* (p.79)".

Parasuraman, Zeithaml, and Berry (1985) (it will be referred as PZB) reviewed the existing literature on service quality and concluded that it is **more difficult to evaluate service quality** than the quality of goods. When buying services, fewer

tangible cues exist. In most cases, tangible evidence is limited to the service provider's physical facilities, equipment, and personal. Without tangible evidence on which to evaluate quality; consumers must depend on other cues. Some authors refer to the use of price, physical facilities (such as environmental design, decor, and business cards or stationery), and firm's employees as a cue for quality in situations where no other cues exist. Service's unique characteristics of intangibility, heterogeneity, and inseparability lead them to possess high levels of experience and credence properties, which, in turn, make them more difficult to evaluate than tangible goods (Bitner 1990; Zeithaml 1981).

2.2. CONCEPTUALIZATION OF SERVICE QUALITY

Quality is a topic that can be viewed from different angles, and researchers distinguish between several constructs about service quality. This chapter reviews existing literature about the relevant perspectives of service quality conceptualization.

2.2.1. THE DIFFERENT MEANINGS OF "QUALITY" IN THE EVERYDAY LANGUAGE

Quality in everyday language often tends to express general approval.

However, Klaus (1985) distinguished different meanings for clients, employees and managers of service organizations, and for the general public when they refer to quality in everyday language.

"Quality in service **clients'** minds is some aggregated net value of benefits perceived in the service encounter over what had been expected (Klaus, 1985). From the client's perspective, a service can be divided into two elements: the actual functional service, and the manner in which the service is performed or delivered. Service quality is a term that encompasses both elements, although it is most frequently used to refer to the actual functional service where the service performance and outputs are most easily measured. From the client's viewpoint, satisfaction with a service is a function of both the functional and performance-delivery elements" (Czepiel, 1986).

Organizational meaning of service quality is based on items on customer comment cards, supervisors' checklists of service standards, work procedures' manuals, and business policy statements. **Employees and managers** of service organizations associate quality with the physical, technical specifications and interpersonal aspects of the service.

Public life views quality as the quality of work life, and the quality and effectiveness of essential health, educational, social and other public service. These conceptions include producer, client, and public interests.

In sum, quality has many meanings and the uses and interpretations of service quality in everyday life are quite diverse and vaguely defined.

2.2.2. PRODUCT-ATTRIBUTE APPROACH TO SERVICE QUALITY

The product model of service is used as the basis for a product-attribute approach to service quality (Klaus, 1985). The quality of an item is the sum of its physical and technological attributes. Good quality, then, is taken to be compliance with standards. This conception provides measurability and controllability to management and quality appears to be relatively easy to define and manage. But, this is not so simple in face-to-face service encounters where there is an interpersonal process.

Maynes (1985) defined how quality should be conceptualized and measured in a consumer economist's view. In this normative idea, quality is a weighted average of characteristics, given by the following formula.

$$G(i,j,k) = \frac{\sum W(i,j,m) \cdot Ch(i,j,k,m)}{\sum W(i,j,m)}$$

where:

$G(i,j,k)$ = the quality of the k th variety of the j th product class as assigned by the i th individual.

$W(i,j,m)$ = the weights assigned to the m th characteristic in the j th product class by the i th individual.

$Ch(i,j,k,m)$ = the characteristic score assigned to the m th characteristic of the k th variety in the j th product class by the i th individual.

Weights represent the relative importance of various characteristics. Characteristics represent services that consumers want. Characteristics' scores for particular varieties express the utility obtained from that variety as a ratio to that conferred by an ideal variety. This model is equivalent to the multi-attribute model, but the terms' interpretation differs.

2.2.3. CONSUMER-SATISFACTION APPROACH TO SERVICE QUALITY

At Florida Power & Light, the definition of quality is *"simple but powerful: Quality means customer satisfaction"* (Evelyn 1992, p.9).

Analyzing the service as a dynamic process - that is an interaction between the service organization and the client - is the basis for an understanding of quality that focuses on the subjective perceptions of consumers of the service. Consumers' decisions are enactment of subjective perceptions, which are difficult to grasp. They depend on the personality of the consumer and they have a situation and a time component (Klaus, 1985).

"Satisfaction is the consumer's subjective evaluation of a consumption experience, based on some relationship between the consumer's perceptions and objective attributes of the product" (Klaus, 1985, p.22).

Czepiel (1986) suggested that satisfaction, the result of some comparison process in which expectations are compared with that which is received, can differ from the actual evaluations or the perceptions of service quality.

To understand quality requires the understanding of the concept of physical attributes of a service, as well as, consumer's psychology and culture.

2.2.4. "QUALITY EPIPHENOMENON"

Klaus (1985) argued that service quality is a phenomenon experienced by individuals and is manifested in individual behavior. It is also a dynamic, complex configuration of physical, situation, and behavioral variables. Klaus (1985, p. 24) defined quality as *"the shared experience of gain by participants and stable pattern of behavior associated with a given type of service encounter"*.

2.2.5. TECHNICAL QUALITY, FUNCTIONAL QUALITY AND CORPORATE QUALITY

The results of quality imply the mastering of the process of service delivery as well as the outcome. Two types of service quality exist (Gronroos 1982):

Technical quality - involves what the customer is receiving from the service. Often it can be measured by the consumer in a rather objective manner. Because the service is produced in interaction with the consumer, he will also be influenced by the way in which the technical quality is transferred to him.

Functional quality - involves the manner in which the service is delivered. Figure 1 illustrates these quality dimensions.

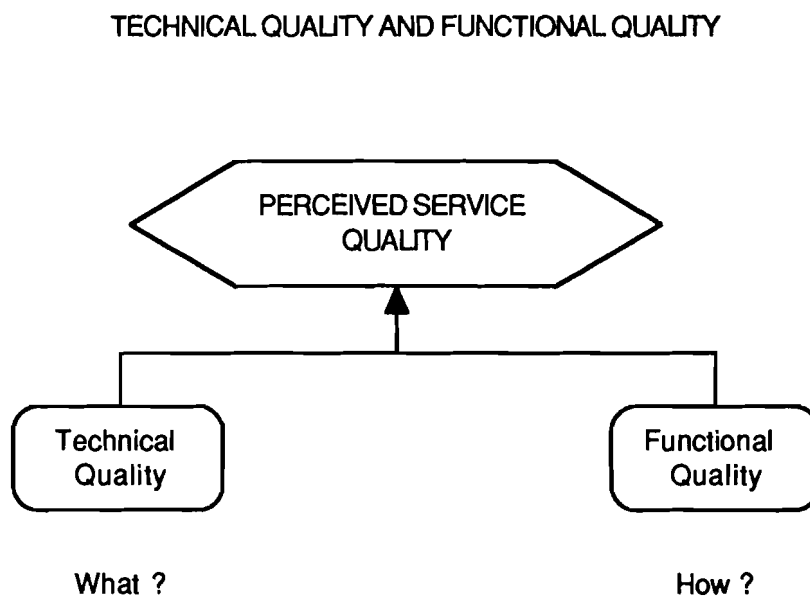


FIGURE 1 (adapted from Gronroos 1982)

Gronroos' (1982) observations suggested that functional quality is more important to the perception of the service than technical quality, at least as long as the latter quality dimension is on a satisfactory level. Moreover, functional quality should be especially important for the many industries in which the technical quality is very similar among the firms in the market.

Another approach is that taken by Lehtinen and Lehtinen's (1991). It was their basic premise that service quality derives from the interaction between a customer and elements in the service organization. In their research they use two different approaches to service quality; a three-dimensional and a two-dimensional analysis.

In the 3-dimensional approach, the dimensions of quality are related to the elements of the service production process. The dimensions are:

1. *Physical quality*, which includes the physical aspects of the service;
2. *Interactive quality*, which derives from the interaction between contact personnel and customer as well as between some customers and other customers; and
3. *Corporate quality*, which involves the company's image or profile. Gronroos (1982, p.26) defines corporate image as "*the result of how the consumers perceived the firm*". The service is the most important part of a company, which its customers see and perceive. Therefore, the corporate image can be expected to be built up mainly by the technical quality and the functional quality of its services. On the other hand, consumers' views of the company, i.e., its corporate image, will influence their expectations of the service (see figure 2 on page 30). It should be noted that the quality dimensions are interrelated. Acceptable technical quality can be thought of as a prerequisite for successful functional quality. On the other hand, according to Gronroos (1982), it seems that consumers can excuse temporary problems with the technical quality if the functional quality is good enough.

The 2-dimensional analytic approach takes time into account. The dimensions used are process quality and output quality. Lehtinen and Lehtinen's (1991) analysis tends to confirm that different criteria and different valuations of these criteria were used by different customer groups.

2.2.6. PERCEIVED QUALITY VERSUS OBJECTIVE QUALITY

Another approach to service quality conceptualization is that taken by PZB (1986), where they looked at perceived versus objective quality. By perceived quality they understand "*the consumers judgment about a products overall excellence or*

superiority". It differs from objective quality, "it is a form of attitude, it is related but not equivalent to satisfaction, and it results from a comparison of expectations with perceptions of performance (p. 3)".

2.2.7. QUALITY AS ATTITUDE

Quality can also be viewed as an attitude held by customers. Customer attitude corresponds to a global evaluation of a service offer, more than to an evaluation of a specific transaction. Bolton (1991) developed a model of customer's attitude toward a service. It is expressed algebraically as:

$$\text{ATTITUDE } t = h (\text{DISCONFIRM } t, \text{PERFORM } t, \text{EXPECTED } t-1, \text{ATTITUDE } t-1)$$

The above equation means that:

a customer's attitude about a service offer at time t (ATTITUDE t) depends on his or her prior attitude (ATTITUDE $t-1$) modified by his or her perceptions of current performance (PERFORM t), prior expectations about performance (EXPECTED $t-1$), and the discrepancy between expectations and subsequent perceptions (DISCONFIRM t).

PZB (1986) supported the notion that service quality is an overall evaluation and it is similar to attitude. Quality acts as a relatively global value judgment. Increasing the proportion of search attributes relative to experience attributes (a condition found in durable and industrial goods), is more likely to result as quality being a cognitive judgment. Conversely, as the proportion of experience attributes increases (as is true in services and packaged goods), quality is more likely to be an effective judgment.

2.2.8. QUALITY VERSUS SATISFACTION

It is interesting to think of satisfaction as a continuum, being satisfaction at one end of the scale. What, then, is the other extreme? and, What is between the extremes? By definition, satisfaction implies complete fulfillment of one's wishes, needs, and expectations.

Berry (1983) argued that there is no better measure than satisfaction to express the ultimate in expectations, delivered benefits, and value received by customers. He distinguished among four elements that characterize customer satisfaction:

Intensity of Satisfaction : a measure of the value of a product attribute or service activity to a customer;

Congruence of Satisfaction: a measure of the difference actual and expected levels of satisfaction.

Ambiguity of Satisfaction: a measure of how clearly the customer can relate satisfaction to a service.

Periodicity of Satisfaction: a measure of the frequency that a customer experiences satisfaction or dissatisfaction.

Berry believes that satisfaction results from alteration of motives as customers enjoy the benefits of service purchase and consumption. Even if satisfaction is related to the customer's general attitude toward the service, it is not the same. The main difference between satisfaction and attitude is that satisfaction assessments relate to a customer's evaluation of a specific transaction whereas attitudes are more general. Consequently, satisfaction eventually becomes an input to a less dynamic attitude (Bitner, 1990; Bolton, 1991).

Satisfaction is a customer's post purchase evaluation of a service offering. On the basis of disconfirmation arising from discrepancies between prior expectations and actual performance, Bolton (1991) developed a simple model of the antecedents of customer satisfaction with a service offering, that can be expressed algebraically as:

$$CS/D t = f (DISCONFIRM t, PERFORM t, EXPECTED t-1)$$

In other words, a customer's satisfaction or dissatisfaction with a service at time t ($CS/D t$) depends on his/her current perceptions of performance ($PERFORM t$), prior expectations about performance ($EXPECTED t-1$), and perceptions of the discrepancy between these two constructs ($DISCONFIRM t$).

PZB (1986) distinguished between perceived service quality and satisfaction. Perceived service quality is a global judgment or attitude relating to the superiority or excellence of the service, whereas satisfaction is related to a specific transaction. So, incidents of satisfaction over time result in perceptions of service quality. This definition suggests that perceived quality is similar to an individual's general attitude toward the firm.

Bitner's (1990) model of service encounter evaluation implies a very close relationship between service encounter satisfaction and perceived service quality. The attitudes and behaviors of service personnel influence perceived service performance. Such behaviors usually are associated with what is called *process* or *functional* quality (the *how* the service delivery) as opposed to the *outcome* or *technical* quality (the *what* of service delivery). Though this relationship is likely to be accepted, many additional factors influence perceived service quality, such as service encounter satisfaction with competing services, perceptions of industry quality standards, word-of-mouth communication, and advertising.

Empirical research in both service quality and service satisfaction confirms the importance of the quality of customer and employee in the assessment of overall quality and/or satisfaction with services (Bitner, Booms, and Tetreault, 1990).

2.2.9. QUALITY AND VALUE IN THE CONSUMPTION EXPERIENCE

Holbrook and Corfman (1985) examined a broad range of quality in various disciplines, and developed a classification of them based on three dimensions. The first dimension contrasts definitions that regard quality as something present *implicitly* in an object as opposed to some *explicit* aspect or function thereof. The second dimension distinguishes between *mechanistic* definitions with those mainly *humanistic* in nature. A third dimension distinguishes *conceptual* definitions from those more *operational* in nature. Combining all three dimensions generates the classification of quality definitions found in the following matrix:

QUALITY CLASSIFICATION BASED ON THREE DIMENSIONS

	IMPLICIT	EXPLICIT
MECHANISTIC	<i>Production Based</i>	<i>Reliability Based</i>
CONCEPTUAL	Classical economics	Ordinary consumer language
OPERATIONAL	Value analysis	Quality control
HUMANISTIC	<i>Qualitative</i>	<i>Features Based</i>
CONCEPTUAL	Microeconomics	Philosophy
OPERATIONAL	Macroeconomics quality of life	Multi-attribute and multicue models

TABLE 1 (source: adapted from Holbrook and Corfman 1985)

Holbrook and Corfman, based on the typology of value in the consumption experience, define quality as extrinsic self-oriented passive value and distinguish it from other closely related kinds of value as beauty, convenience, and fun. The result of Holbrook and Corfman's experimental study indicated that quality was treated by subjects as lying

somewhere between a specific and a global idea of value, i.e., perceived quality acts as a relatively global value judgment that mediates the effects of perceived beauty, convenience, and fun on overall preference.

2.2.10. EXPECTATIONS COMPARED TO PERCEPTIONS

Satisfaction and dissatisfaction often are viewed as opposite ends of a continuum, with disposition being determined as a result of a comparison between expectations and outcome. Satisfaction occurs when outcome meets or exceeds client's expectations. An alternative perspective on satisfaction and dissatisfaction suggests that experienced-based norms are more appropriate than expectations to serve as a benchmark against which product experiences can be compared with. Applying a disconfirmation paradigm to the evaluation of a service encounter suggests that the individual will compare his or her experience with some set of expectations. These expectations may be based, in part or in total, on past relevant experiences, including those gathered indirectly (Brown, and Swartz, 1989).

Perceived quality of a given service will be the outcome of an evaluation process where consumers compare their expectations with the service they perceive they have gotten, i.e., they put the perceived service against the expected service, as indicated in Figure 2 (Gronroos 1982).

PERCEIVED SERVICE QUALITY

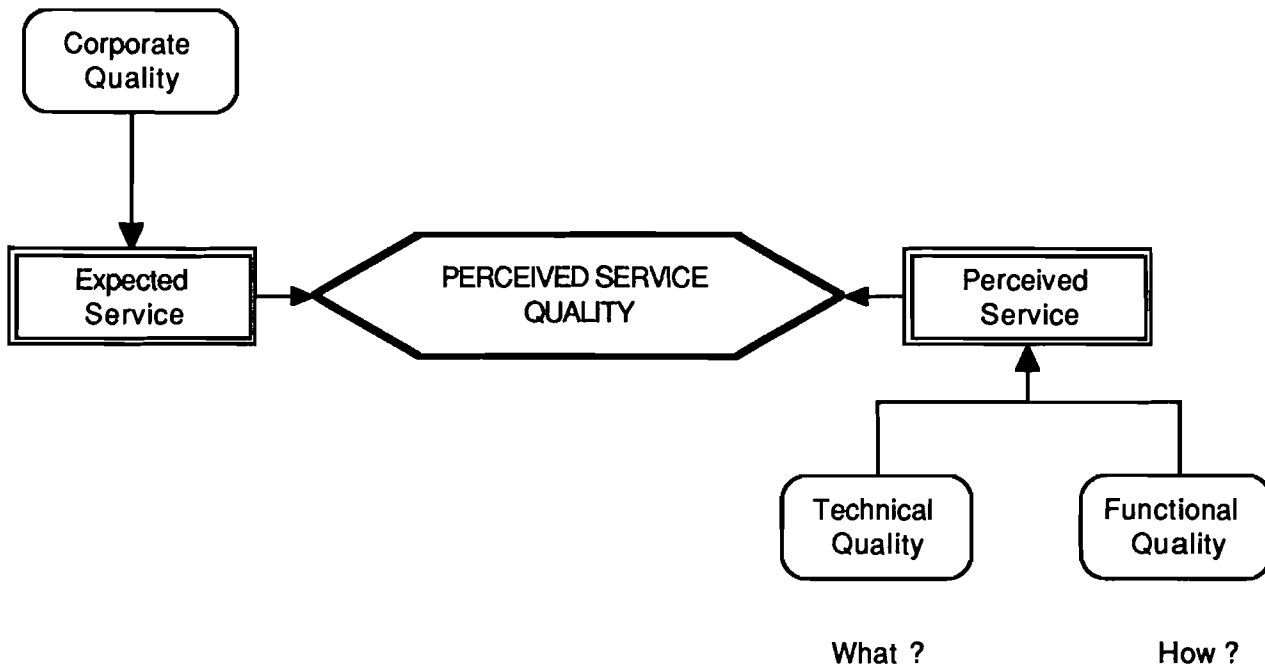


FIGURE 2 (adapted from Gronroos 1982)

Gronroos (1982) drew three conclusions based on consulted studies: 1) the higher the degree of consumer's personal involvement in the consumption process, the more important service performance or outcome will be to perceived service quality; 2) consumer's experience of a service can be expected to be an important influence on his or her post-consumption evaluation of the service; 3) industrial service firms that successfully have rendered or currently render a service often are the only ones solicited when a repeat purchase is to be made.

Service quality perceptions result from the comparison of consumer perceptions of actual service performance with consumer expectations. Delivering quality service means conforming to customer expectations on a consistent basis. Satisfaction with services is related to confirmation or disconfirmation of expectations (Bitner 1990; PZB, 1985).

Results of Nyquist, Bitner and Booms (1986) research showed how customer expectations are important to quality. Applying the critical incident approach, a method described in the methodology chapter of this paper, the authors identified communication

difficulties in the service encounter and found out those customer expectations and requests that exceed the firm's ability to perform account for 74 percent of the reported service encounter communication difficulties. This implies that, even if the service delivery system is working at designed levels of service performance with no technical problems, employees can still expect to face a large number of communications difficulties in dealing with customers. Seventy-four percent of all reported difficulties can be attributed to a source other than a poorly performing service delivery system. The gap between the customers' expectations and the firm's performance "*is perhaps the major source of customer dissatisfaction* (Schmalensee 1985, p.16)". If the expectations and experience do not match, then one or the other must be changed.

2.2.11. CONCLUSIONS OF SERVICE QUALITY CONCEPTUALIZATION

There are almost as many definitions of service quality as writers on the subject, which suggests a prevailing confusion about the concept of service quality. However, there are not many field investigations compared to the importance of the subject and the frequent use of the term quality in everyday language.

Depending on the author, the service quality definition is more quantitative or more qualitative, is more technical or more functional, is more product or more customer oriented, is more global or more specific, and some other contrasting views. All of these several constructs about service quality, and the service's unique characteristics, lend us to conclude that service quality is a complex problem.

To analyze service quality one concept needs to be chosen as the study base. The present investigation is going to use PZB (1985) conceptualization of service quality for several reasons. Their perspective appears to represent the dominant paradigm in service quality research, was investigated by other researchers, and the present study author agrees with that concept. Therefore, quality in the present study is related to a global attitude, whereas satisfaction is related to a specific transaction.

The following section reviews PZB (1985, 1988) investigation of service quality perceptions.

2.3. INVESTIGATION OF SERVICE QUALITY PERCEPTIONS

PZB (1985) conducted an extensive exploratory investigation of service quality perceptions in four service businesses. Specifically, in-depth interviews of executives and 12 focus group interviews with consumers were conducted to develop a conceptual model of service quality. A nationally recognized U.S. company from each of the four service businesses - of retail banking, credit card, securities brokerage, and product repair and maintenance - participated in the study. The executives were selected from the several functional areas that could have an impact on quality in service firms. The focus-group interviews of respondents, three for each industry, who were current or recent users of the service being investigated, discussed issues such as the meaning of quality in the context of the service in question, the characteristics the service and its provider should possess to project a high-quality image, and the criteria's customers use in evaluating service quality.

Remarkably consistent patterns emerged from the four sets of executive interviews and from the responses of focus group participants. Although, some perceptions about service quality were specific to the industries selected, commonalities among industries prevailed, which suggest that a general model of service quality could be developed.

2.3.1. INSIGHTS OBTAINED FROM EXPLORATORY INVESTIGATION AND A SERVICE QUALITY MODEL

The most important conclusion from executives' responses was:

"A set of key discrepancies or gaps exist regarding executive perceptions of service quality and the tasks associated with service delivery to customers. These gaps can be a major hurdle in attempting to deliver a service which consumers could perceive as being high quality (PZB 1985, p.44)."

Specifically, five gaps are identified by PZB (1985) (figure 3).

This chapter describes the four gaps on the organization side of the model, gap 5 on the customer's side, and develops an extended service quality model that includes gap 6.

a) The four Gaps on the organization side of the model

Gap 1 refers to the ***Consumer Expectation-Management Gap***, the discrepancy between what customers expect and what management perceived that they expected. This suggests that service firm executives may not always understand: (1) What features individuals perceive as high quality in advance, (2) What features are necessary to meet individual needs, and (3) What levels of performance are necessary to deliver high quality services. This gap will have an impact on the consumer's evaluation of service quality. PZB (1990) find that three factors contribute to Gap 1 (as illustrated in figure 4):

1. *Lack of marketing research orientation*, particularly insufficient marketing research, inadequate use of marketing research findings, and lack of interaction between management and customers,
2. *Insufficient upward communication* from contact employees to management, and
3. *Too many managerial levels* between contact personnel and top management.

SERVICE QUALITY MODEL

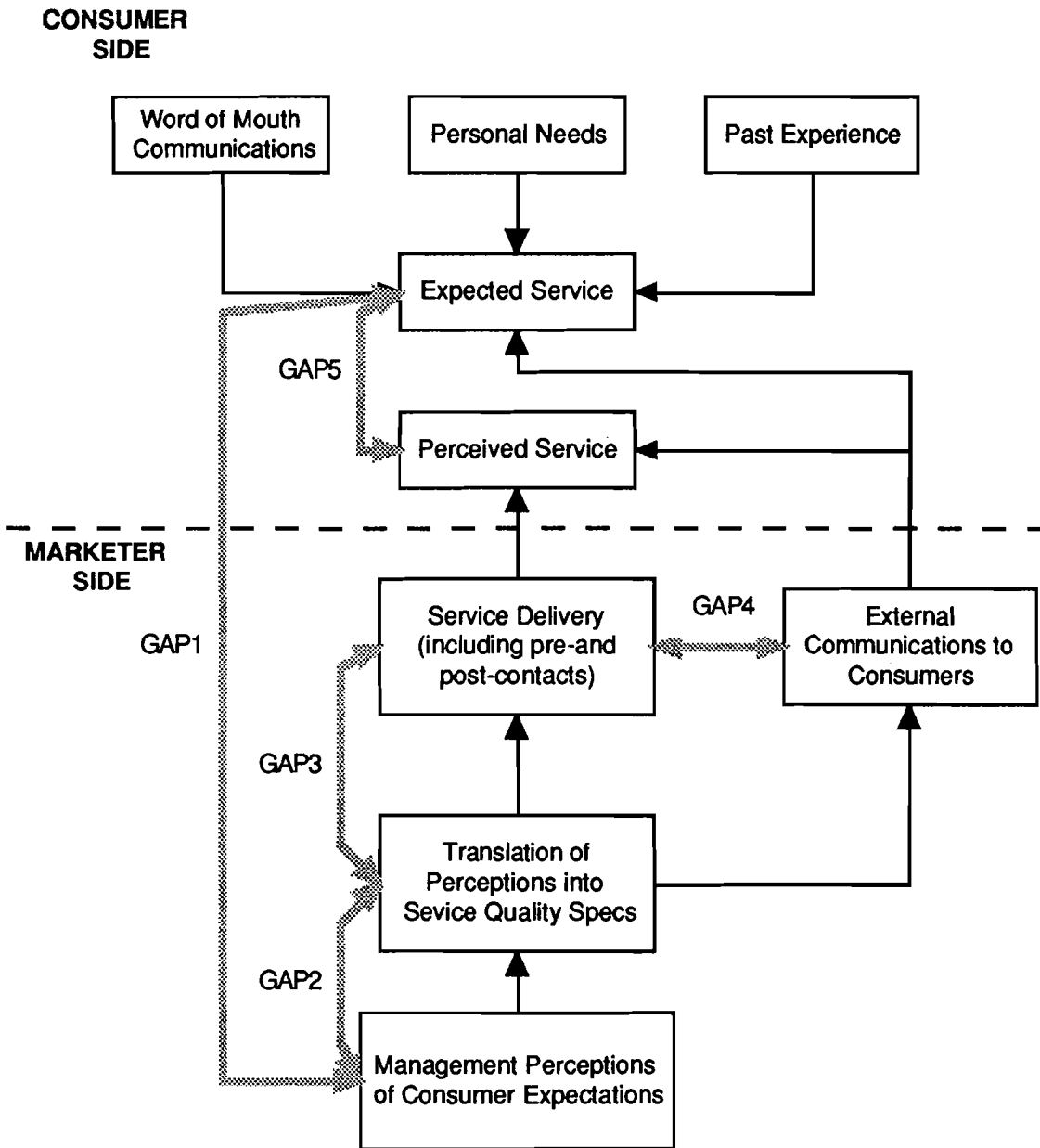


FIGURE 3 (from PZB 1985)

GAPS MODEL OF SERVICE QUALITY

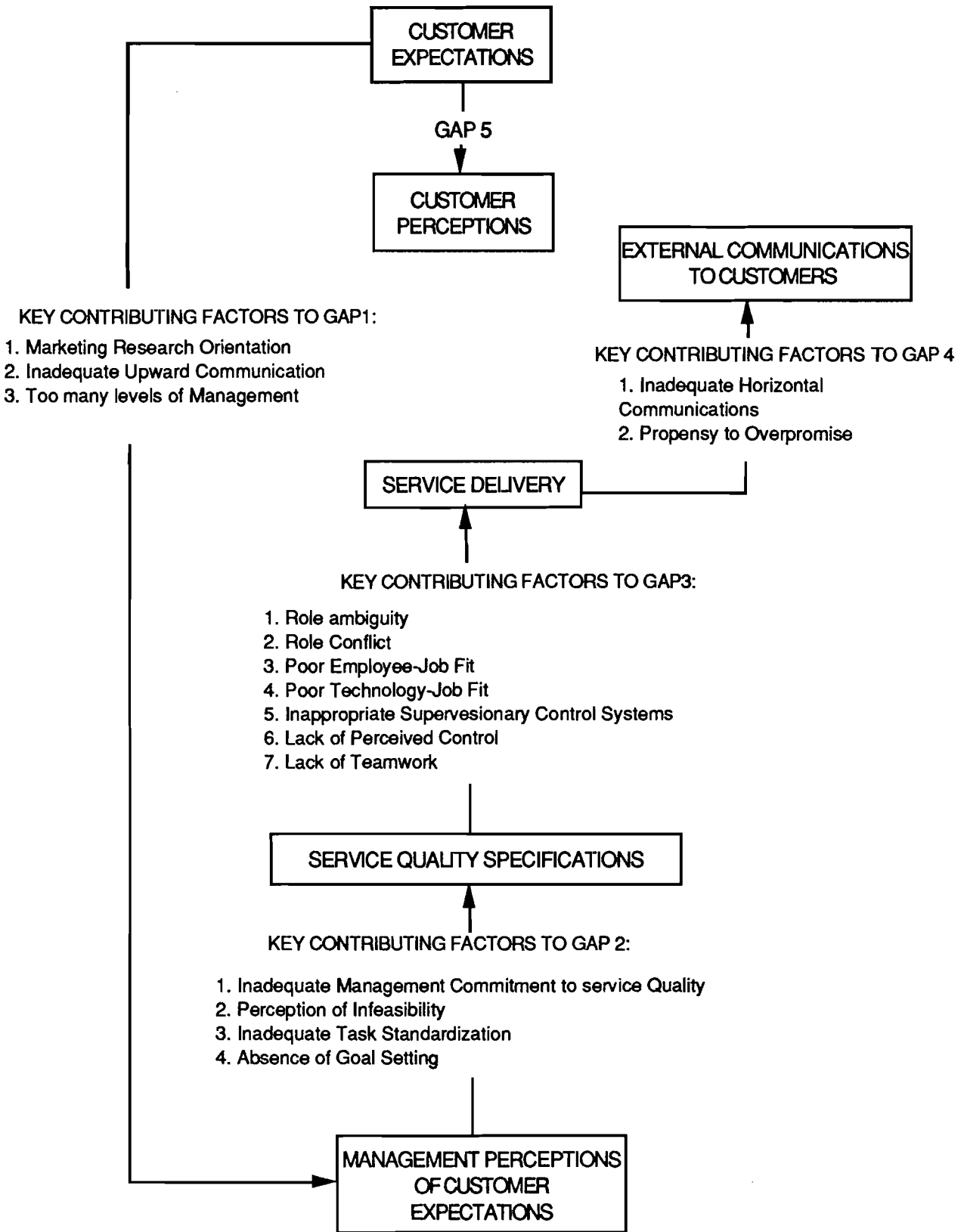


FIGURE 4

Gap 2 refers to the *Management Perception-Service Quality Specification Gap*, i.e., the difference between manager's perceptions of customers' expectations and the actual standards they set for service delivery. Respondents from all four firms admitted difficulty in attempts to meet or exceed consumer expectations. A variety of factors, such as resource constraints, market constraints, and/or management indifference, prevent delivering what the customer expects. This discrepancy is predicted to affect quality perceptions of consumers. PZB (1990) find that four factors contribute to Gap 2 (as illustrated in figure 4):

1. *Inadequate commitment to service quality,*
2. *Lack of perception of feasibility,*
3. *Inadequate task standardization, and*
4. *Absence of goal setting.*

Gap 3 refers to the *Service Quality Specifications-Service Delivery Gap*, the difference between service specifications and the actual service delivery: when employees are unable and/or unwilling to perform the service at the desired level. Executives from all four service firms mentioned the existence of similar difficulties in adhering to formal standards of service quality due to variability in employee performances. Contact personal play a pivotal role on the service quality perceived by consumers. PZB (1990) found that seven factors contribute to Gap 3 (as illustrated in figure 4):

1. *Role ambiguity,*
2. *Role conflict,*
3. *Poor employee-job fit,*
4. *Poor technology-job fit,*
5. *Inappropriate supervisory control systems leading to an inappropriate evaluation/reward system,*
6. *Lack of perceived control on the part of employees, and*
7. *Lack of team work.*

Gap 4 refers to the *Service Delivery-External Communications Gap*, the difference between what a firm promises about a service and what it delivers. External communications can affect consumer perceptions of service quality, through direct influence on consumer expectations. If the firm promises more than can be delivered it

will raise initial expectations but will lower perceptions of quality when promises are not fulfilled. Another way in which external communications could influence service quality perceptions by consumers occurs when companies inform consumers of special efforts to assure quality that is not visible to consumers. So, external communications can affect consumer *expectations* about a service, as well as, consumer *perceptions* of the delivered service. PZB (1990) found that two factors contribute to Gap 4 (as illustrated in figure 4):

1. *Inadequate horizontal communication*, as evidenced by inadequate communication between advertising and operations, between sales people and operations, and between human resources, marketing, and operations, as well as differences in policies and procedures across branches or departments, and
2. *Propensity to over promise* in communications.

These first four gaps are the service provider's side that is likely to affect service quality as perceived by consumers.

b) The Gap on the customers side of the model

Gap 5 refers to the *Expected Service-Perceived Service Gap*, the discrepancy between customers' expectations and perceptions of service quality. From the consumer stand point, good service quality is meeting or exceeding what consumers expected from the service. Perceived service quality is a function of the magnitude and direction of the gap between expected service and perceived service, which, in turn, results from the four gaps on the organization side of the model. As shown in figure 5, customers have expectations and perceptions on each of the quality dimensions.

GAP 5 AND GAP 6

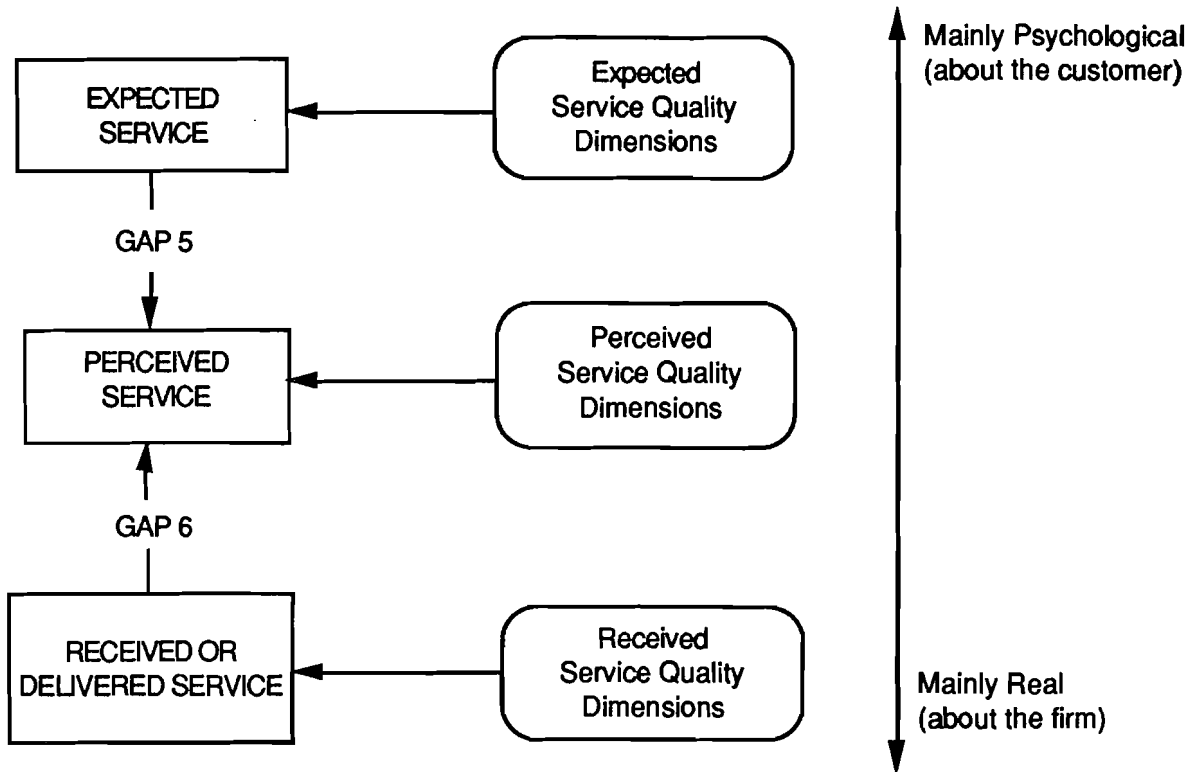


FIGURE 5

2.3.2. EXTENDED SERVICE QUALITY MODEL

It is important to know what customers perceive from a service. Once a firm has satisfied this critical step, it is essential to analyze the real service delivery. This is developed on the extended service quality model that includes gap 6 (see figure 6), based on PZB service quality model.

a) The Gap Between Customers and the Organization

Gap 6 refers to the *Service Delivery-Perceived Service Gap*, the discrepancy between what happens in actual service encounters and customers' perceptions of service quality. A firm is working efficiently when all the service features are correctly

perceived by the customer. If a service has many positive features and those are not perceived by the customer, the service delivery quality is too high compared to the perceptions, which means that the firm is losing efficiency. This is true with services, as well as with products.

If expectations are greater than performance, for example in an expensive restaurant, then although perceived quality may be low, the actual standard of service, in absolute terms will still be higher than in a cheap restaurant. This tautology can add confusion to any discussion of good or bad service quality using an expectation versus performance model.

Service delivery features must be measured on each and all the service quality dimensions. As shown in figure 5, these dimensions are related to the service received, perceived and expected by the customer.

If all the other five gaps are closed, then gap 6 is also closed, that is, gap 6 is like a closing loop of the model and can be used as a confirmation measure. Since it is difficult to accurately measure all the first four gaps, the measurement of gap 6 can be used as a substitute measure, that is, the firm can measure only gap 5 and gap 6. If these two gaps are closed, then customers' expectations are the same as perceptions, and the same as service delivery. In this situation the firm does not need to measure all the other four gaps. When there is a discrepancy in one of gaps 5 or 6 then there is not enough service quality or there is a loss of efficiency. In this situation, something is not well and the firm needs to measure all the four gaps on the organization side of the model to analyze which is the reason for the discrepancy.

It is important, not only to quantify gap 6, but also to analyze the absolute value of the service delivery. This value can be compared with that of the competition.

EXTENDED CONCEPTUAL SERVICE QUALITY MODEL

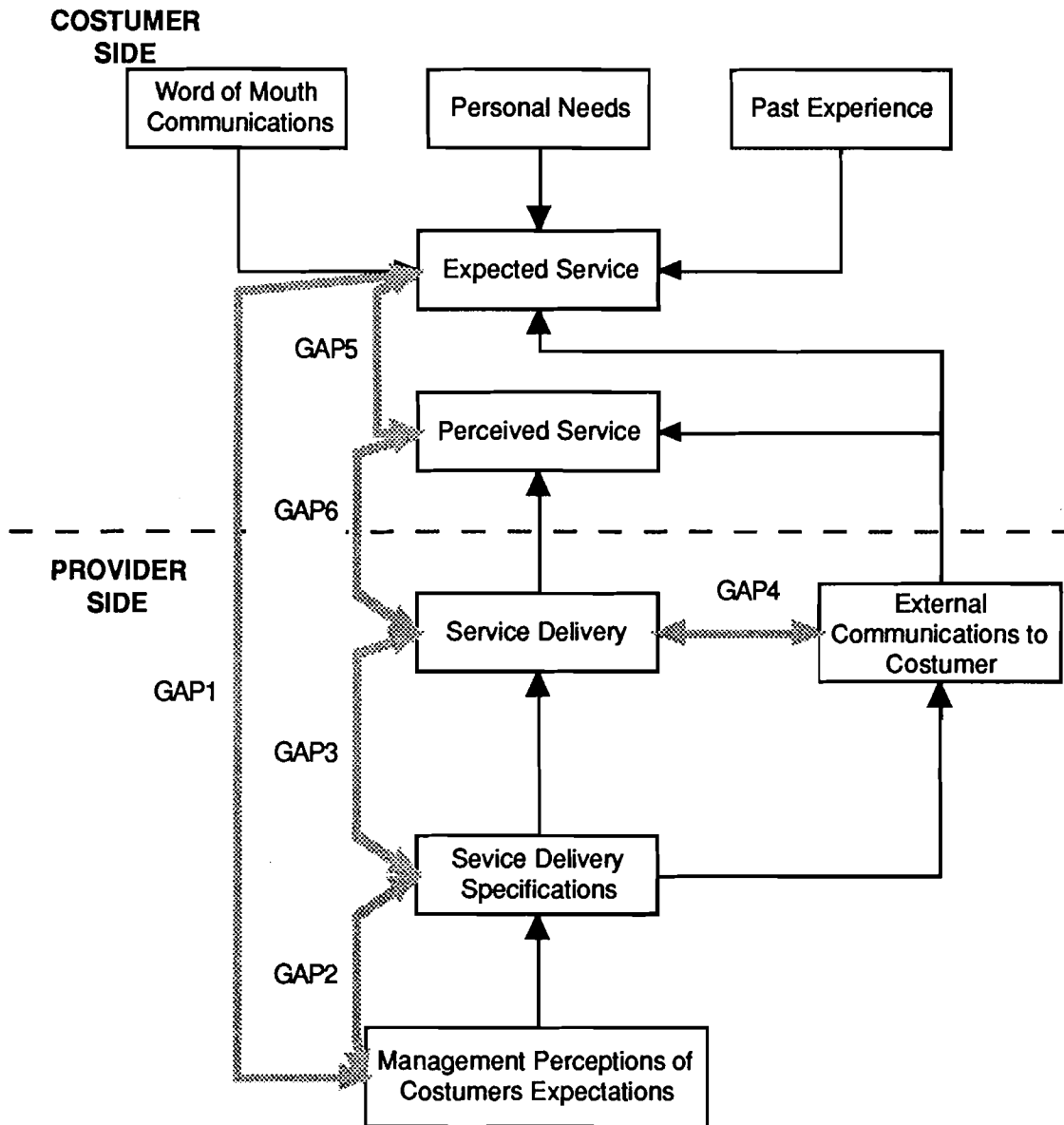


FIGURE 6

This research found that the managers often can not describe exactly what quality of the service delivery is. Its quantification as a gap or as an absolute value is also difficult.

A variety of factors may contribute to Gap 6, including the factors that contribute to the other gaps. Research has to be carried out in this Gap 6 field. The reason for Gap 6 can be due to an inconsistency between search, experience, and credence properties of the delivered service. Organizations offering services that are highly interactive increase the likelihood of misunderstandings between service providers and customers. The customers and the providers have mutual experience and respond to each other's attitudes, moods, mannerisms, and language. For instance, an employee giving 100 percent effort may be understood by the customer to only give a 50 percent effort, as well as the contrary.

To quantify gap 5 and 6 there are three customer analysis levels: real service received by the customer, customer perceived service, and customer expected service. The first level, service delivered by the firm and received by the customer, is mainly real, as illustrated in figure 5. The second level, perceived service, is due to a mixture between the real service received and the customer psychological attitude. The third level, expected service, is mainly psychological. The analyze of each level is difficult to quantify when it is near the psychological side.

Verification and extension of the hypothesis about Gap 6, require more detailed research.

Brown's (1989) investigation of gap analysis of professional service quality concluded that *"gap analysis is a straightforward and appropriate way to identify inconsistencies between provider and client perceptions of service performance. Addressing these gaps seems to be a logical basis for formulating strategies and tactics to ensure consistent expectations and experiences, thus increasing the likelihood of satisfaction and positive quality evaluation"*.

In summary, there are four gaps (1-to-4) on the organization side of the model, one gap (5) on the customer side, and one gap (6) between customers and the organization.

2.3.3. DETERMINANTS OF PERCEIVED SERVICE QUALITY

PZB (1985) conducted focus groups with consumers that revealed 10 key categories in evaluating service quality. These were labeled *service quality determinants* and are described as:

- RELIABILITY is defined as the consistency of performance and dependability. It means that the firm performs the service right the first time and that it honors its promises.
- RESPONSIVENESS concerns the willingness or readiness of employees to provide service, and the timeliness of service.
- COMPETENCE means possession of the required skills and knowledge to perform the service.
- ACCESS involves approachability and ease of contact.
- COURTESY involves politeness, respect, consideration, and friendliness of contact personnel.
- COMMUNICATION means keeping customers informed in language they can understand and listening to them. It may mean that the company has to adjust its language for different customers.
- CREDIBILITY involves truthfulness, believability, honesty, and generally having the customers best interest at heart.
- SECURITY is the freedom from danger, risk, or doubt.
- UNDERSTANDING/KNOWING THE CUSTOMER involves making the effort to understand the customer's needs.
- TANGIBLES include the physical evidence of the service.

Figure 7 presents the model of perceived service quality developed by PZB (1985).

DETERMINANTS OF PERCEIVED SERVICE QUALITY

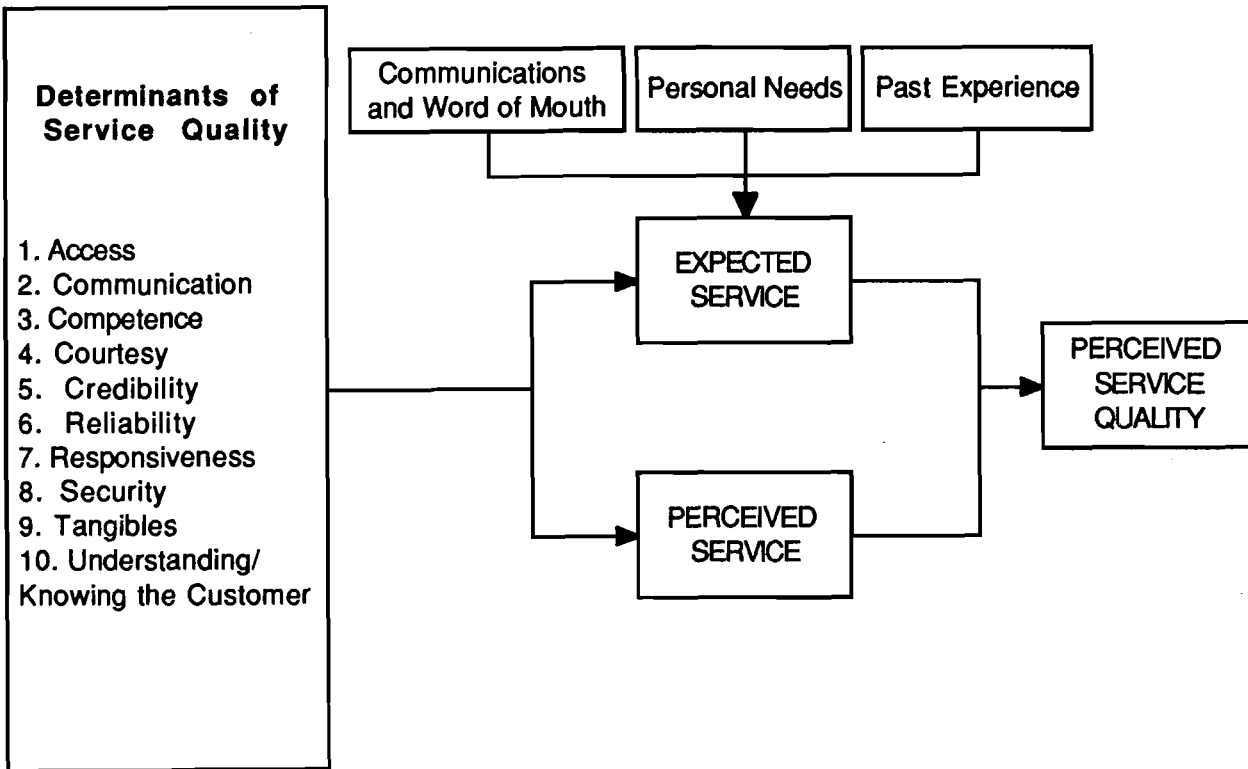


FIGURE 7 (adapted from PZB 1985)

Perceived service quality is the difference (or gap) between consumer expectations and perceptions. Potential overlapping across the 10 criteria and the relative importance of the 10 determinants in molding consumer expectations (which may differ from their relative importance to customers), was studied later on by PZB.

Some authors proposed other service quality dimensions. For instance, Kennedy and Young (1989) argued that quality can be described with several sub categories, each of which can be evaluated by the customer: availability, responsiveness, convenience, timeliness, completeness, and pleasantness.

2.3.4. PROPERTIES IN EVALUATING QUALITY: SEARCH, EXPERIENCE, AND CREDENCE PROPERTIES

In the aforementioned focus groups' consumers use search, experience, and credence properties to describe and define service quality. These three aspects of service quality can be categorized into the 10 service quality determinants and can be arrayed along a continuum ranging from easy to evaluate until difficult to evaluate. Only two determinants - tangibility and credibility - are search properties. Most of the dimensions are experience properties: access, courtesy, reliability, responsiveness, understanding/knowing the customer, and communication. Competence and security determinants fall into the category of credence properties.

From their study, PZB argued that:

- Consumers typically rely on experience properties when evaluating service quality, because few search properties exist with services and because credence properties are too difficult to evaluate.

- When expectations (E) exceed perceptions (P), perceived quality is less than satisfactory and will tend toward totally unacceptable quality, with increased discrepancy between E and P.

When $E=P$, perceived quality is satisfactory.

When $E < P$, perceived quality is more than satisfactory.

2.4. SERVQUAL : A MULTI-ITEM SCALE FOR MEASURING PERCEPTIONS OF SERVICE QUALITY

PZB (1986) developed a multiple-item scale to measure customer perceived quality of a service situation, called SERVQUAL, and discussed the scale's properties and potential applications. For assessing the quality of a firm's services the authors measured customers' perceptions of quality and the scale involves the notion of perceived quality.

To operationalize the SERVQUAL measure, the authors used the disconfirmation of expectations' paradigm. The disconfirmation paradigm suggests that an individual's evaluation of the quality of a service is based on a comparison of that service's actual performance with an individual's prior expectations (how the service should perform). Specifically, the authors developed SERVQUAL as a multidimensional scale for operationalizing Gap 5 (Service Quality = Consumer Service Expectations - Consumer Service Perceptions).

2.4.1. DIMENSIONS OF SERVICE QUALITY

Items for the SERVQUAL scale are derived from the ten dimensions described above and compose the basic structure of the service quality domain. To operationalize the proposed conceptualization of service quality, PZB developed a scale that measured expectations and perceptions separately, with 97 items, for each one, representing various facets of the service-quality dimensions (approximately 10 items per dimension) based on focus group interviews. Each item was recast into a pair of statements - one to measure expectations about firms in general within the service category being investigated and the other to measure perceptions about the particular firm whose service quality was being assessed.

The 97-item instrument was subject to two stages of data collection and refinement. A sample of 200 adult respondents captured through mall intercepts is used to gather initial data. In the first stage, the 97-item instrument was refined by analyzing pooled data (i.e., data from all five service categories considered together) to develop a concise instrument that would be reliable and meaningful in assessing quality in a variety of service sectors. The result of the first scale purification reduced the initial scale from

97 items to 34 items and the original ten dimensions to seven. The second stage evaluated the robustness of the 34-item scale by assessing its component reliability (i.e., alphas) and dimensionality when used to measure the quality of different service firms. Therefore the data from each of the four samples were analyzed separately. Principal axis factoring and oblique rotation reduced the items to 26 and the dimensions to five. These **five dimensions** included three original and two combined dimensions described as:

- **Tangibles** : Physical facilities, equipment, and appearance of personal.
- **Reliability** : Ability to perform the promised service dependably and accurately.
- **Responsiveness** : Willingness to help customers and provide prompt service.
- **Assurance** : Knowledge and courtesy of employees and their ability to convey trust and confidence.
- **Empathy** : Caring, individualized attention the firm provides its customers.

These five dimensions capture facets of all the original ten dimensions, because the last two dimensions - assurance and empathy - contain items representing seven original dimensions - communication, credibility, security, competence, courtesy, understanding/knowing the customers, and access - that did not remain distinct, as described in the next table.

PARASURAMAN, ZEITHAML, AND BERRY DIMENSIONS

Original 10 Dimensions	Final 5 Dimensions
Tangibility	Tangibility
Reliability	Reliability
Responsiveness	Responsiveness
Communication Credibility Security Competence Courtesy	Assurance
Understanding the Customer Access	Empathy

Table 2

Convergent validity was assessed by examining the association between SERVQUAL scores and responses to a question that asked customers overall quality by checking one of four categories - excellent, good, fair, poor. The correspondence between the over all quality ratings and the SERVQUAL scores was examined using one-way ANOVA. The strength and persistence of linkage between the over all categories and the SERVQUAL scores across four independent samples offered strong support for SERVQUAL's convergent validity. The authors assessed for nomological validity by examining whether the construct measured by it was empirically associated with measures of other conceptually related constructs. Respondents in each sample answered two general questions that provided measures of two variables which one could expect to be related conceptually to perceived service quality: (1) whether the respondents would recommend the service to a friend and (2) whether they had ever reported a problem with the services they received from the firm.

The average expectation scores on the five dimensions varied somewhat. However, arranging these scores from highest to lowest within each service category revealed virtually identical rank orders across the categories. Reliability is consistently the most

critical dimension followed in order, for Bank and Credit Card firm's, by assurance, tangibles, responsiveness, and empathy.

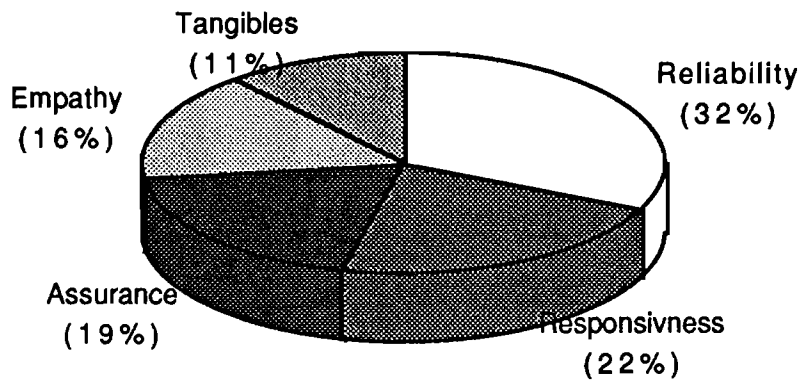
The SERVQUAL scores suggest that even well known, and prestigious firms have room for improving service quality. While the SERVQUAL scores are uniformly negative, a majority of respondents rated the overall quality of the firms they were evaluating as "excellent" or "good". In other words, given the current state of quality in the services sector, even meeting customer expectations may be sufficient to project an excellent-quality image.

2.4.2. RELATIVE IMPORTANCE OF SERVQUAL DIMENSIONS

SERVQUAL treats all items in the scale as equally important. This assumption may not hold in every situation. For example, is the organization's up-to-date equipment as important as its being dependable? Whilst the "*should*" question of expectation will provide an indication of the relative importance of the item to the individual, the gap measurement is no more or less heavily weighted as a result of that information. Therefore, a difference of one scale point on the statement concerning up-to-date equipment is treated exactly the same as a one point scale difference on the dependability statement.

PZB (1990) investigated the relative importance of the SERVQUAL dimensions. PZB asked customers to rate the importance of each SERVQUAL dimension on a scale of 1 (not all important) to 10 (extremely important), and they found that all five dimensions were considered very important. They also questioned the respondents about the dimension they would choose as being the most critical in their assessment of service quality. PZB found that reliability is the most critical dimension, and tangibility the least. Recently, PZB asked customers to allocate a total of 100 points across the five dimensions according to how important they perceived each dimension to be. The average allocations received by the five dimensions are described in graphic 1.

RELATIVE IMPORTANCE OF THE SERVQUAL DIMENSIONS



GRAPHIC 1

One reason can be suggested for these results. Tangible features of the service are essentially constant over time and are mainly service search properties. Therefore, for a current customer, the tangible expected service from a firm is close to the tangible perceived service. On this situation the customer would know the quality ex-ante, would not have surprises and would not evaluate this dimension as very important.

This conclusion does not hold for potential customers when evaluating tangible service quality dimension, nor with current customers when evaluating dimensions that are mainly experience or credence properties of the service. On these situations the perceived service can be very different from the expected service, so the customer can become very disappointed. Consequently, he evaluates the quality dimension as very important.

This could lead to distorted results of the tangible dimension's importance when the respondents are current customers, which is the situation with SERVQUAL.

From investigations about company's performance along the SERVQUAL dimensions, PZB (1990) found that reliability is found to be the most important dimension and has the

most negative SERVQUAL score. Generally, there is a negative correlation between the importance the customer attributes to a dimension and the SERVQUAL score. So, PZB concluded that *"there is a mismatch between the priorities expressed by customers and the levels of quality delivered by the companies"* (p.29), and *"each company is performing most poorly on the facets that are most critical to customers"* (p.30).

One criticism, based on logical thinking, can be pointed out. When a customer is asked to evaluate what is the quality dimension importance, he will, unwittingly, evaluate the difference between perceived minus expected service quality dimension, that is, the most important dimension is the one that he feels less quality.

In summary, the customer can generally distort the service quality dimensions importance when asked directly to evaluate it. There is a tendency to give more importance to the quality dimensions when he usually feels more discrepancy between expectations and perceptions. Contrary, there is a tendency to give less importance to a quality dimension that is mainly a search property of the service, and when customer feels less discrepancy between expectations and perceptions. So, the importance would be very dependable of the actual service quality of a firm. That is, the customer, when asked directly, evaluates the relative importance and not the absolute importance.

2.4.3. APPLICATIONS OF SERVQUAL

SERVQUAL's use is limited to existing or past customers of a firm, because meaningful responses to the perception statements requires respondents to have some knowledge of or experience with the firm being researched. Within this constraint, a variety of potential applications are available. PZB (1988) describe several **applications of SERVQUAL**:

- To assess a given firm's quality along each of the five service dimensions or to provide an overall measure of service quality;
- To determine the relative importance of the five dimensions in influencing customers overall quality perceptions;
- To segment a firm's customers into several perceived-quality groups;
- To track the level of service provided by each locations or branches in a multi-unit location firm;

- To assess a firm's service performance comparing it to its principal competitors.

SERVQUAL is most valuable when it is used periodically to track service quality trends, and when it is used in conjunction with other forms of service quality measurement.

2.5. CRITICISMS OF THE SERVQUAL

Researchers have investigated service quality in several industries that appear to be based largely on PZB's (1985, 1988) proposed dimensions of service quality. Amongst those: Bojanic, 1991; Bolton and Drew, 1991; Brown and Swartz, 1989; Carman, 1990; Cronin and Taylor, 1992; Davis and Paul, 1987; Fick and Ritchie, 1991; Kierl and Mitchell, 1990; Lewis, 1989; Lewis and Mitchell, 1990; Mangold and Babakus, 1991; Reidenbach and Sandifer-Smallwood, 1990; Saleh and Ryan, 1991; Wong and Perry, 1991.

However, a number of recent studies suggest that care must be taken in generalizing

SERVQUAL. Before accepting SERVQUAL as a valid generic measure of perceived service quality that can be used in any service situation, more replication and testing are needed. This chapter will present criticisms about SERVQUAL, written by: Brown and Swartz (1989), Crompton and Mackay (1989) Lewis and Mitchell (1990), Carman (1990), and Bolton and Drew (1991).

Brown and Swartz (1989) explored the concept of service quality and its evaluation from *both* the provider and the client perspectives in the dyadic exchange. The typically high level of personal interactive nature of professional services and their often simultaneous production and consumption indicates that both parties are very important and must be considered. Brown and Swartz used gap analysis as an (appropriate) approach for examining the evaluation of a professional (medical care) service. They claim a simpler model of service quality for evaluating professional services than the one proposed by PZB (1985). Given the professional-client relationship and the unique characteristics of professionals, Brown and Swartz's findings suggest that only three gaps are relevant in the professional services research setting as opposed to the five gaps proposed by PZB (1985). These gaps include:

- (1) an inter-client gap: Client Expectations versus Client Experiences; and two client-professional gaps:
- (2) Client Expectations versus Professional Perceptions of Client Expectations;
and
- (3) Client Experiences versus Professional Perceptions of Client Experiences.

The investigation questionnaire included statements that corresponded to the 10 determinants of service quality proposed by PZB (1985).

Brown and Swartz' results demonstrated that all three gap types influence the evaluation outcome, so there is a need to analyze deeper than the traditional satisfaction and dissatisfaction paradigm when assessing service offerings. Brown and Swartz's findings suggest that the entire service encounter is evaluated, i.e., the interaction with the professional service provider as well as staff interactions and other dimensions.

Crompton and Mackay (1989) investigated the relative importance of the 5 dimensions (proposed by PZB) as perceived by participants in four selected public recreation' programs. It was hypothesized that dimensions of service quality would not be of equal importance to participants in the selected recreation programs, and the hypothesis was supported. Reliability consistently emerged across programs as the most important dimension of service quality, and in three of the four programs empathy received the least support.

Lewis and Mitchell (1990) discussed several problems with SERVQUAL: (1) The treatment of all items in the scale as equally important, (2) Half of the statement being negatively worded, (3) The restriction of consumers' responses to a 7-point scale, and (4) The adjectives used in SERVQUAL statements. From Lewis and Mitchell's perspective, researchers might consider the use of a bipolar semantic differential graphic scale to overcome the problems highlighted with the SERVQUAL measurement tool.

Carman (1990) performed a replication of the SERVQUAL scale with the purpose of testing the SERVQUAL battery and offered suggestions for its use. Carman's new approach investigated six questions related to the SERVQUAL scale:

- (1) How many dimensions and how generic are they?
- (2) How much can item wording be changed to fit a particular service situation?
- (3) What about service situations that include multiple service functions? How much does the quality of the product included in the retailer's service contribute to perceptions?
- (4) How valid is it to analyze the difference between expectations and perceptions?
- (5) Is it always necessary to administer the expectations battery?

(6) What is the relationship between expectations and importance?.

A variation of the original scale was used in four different service settings besides those used in the SERVQUAL: a dental school patient clinic, a business school placement center, a tire store, and an acute care hospital. In all cases, items in the original 10 dimensions were retained. Two-stage scale purification is then performed on the data following the lines used by PZB: exploratory factor analysis and reliability analysis, retaining factors with eigenvalues greater than one. The robustness of PZB factors is somewhat in doubt, and the factors with high reliability are not consistent across the replications. Results indicated that SERVQUAL performed adequately to the first two questions, however, wording and subject of some individual items needs to be customized to each service setting and the remaining four questions were not convincingly addressed by the SERVQUAL scale.

The first question concerned the number and genericness of the dimensions of service quality. Carman found that most of SERVQUAL dimensions are replicated. However, the evidence reported suggests that the PZB dimensions are not completely generic. So, users of these scales should add items on new factors they believe are important for quality. Further, Carman recommended that items on Courtesy and Access be retained as separate dimensions until the data in any particular study indicated the contrary. Also when one of the quality dimensions is particularly important to customers (as can be Responsiveness and Access), it may be recommended to break that dimension into sub dimensions.

The second question concerned the robustness of the wording of SERVQUAL items and how it must be changed to fit a particular service situation. Carman believed that there were some added items that could be recommended, as well as, some items that could be omitted if testing showed them not relevant to the situation. The inclusion of items stated in negative form is desirable when the questionnaire is short. When the instrument gets long, the disadvantages of including reversed items probably outweigh the advantages. Generally, the SERVQUAL instrument provides an adequate starting point for item development. However, all items need validity and reliability checks before commercial application.

The third question concerned service situations that included multiple service functions. Carman found that different service settings led to different contributions of scale items to the identified dimensions. In a hospital setting, which are characterized by multiple service encounters in one stay, exploratory factor analysis results were different from those found in the other service settings. The tangible dimension broke into three sub dimensions as the various hospital functions become the attributes of quality. Thus,

Carman suggested that retailers in a multifaceted environment should measure the quality in each function separately using items that are similar to those in the SERVQUAL instrument. Communication was a factor that PZB grouped into Assurance. However, Carman suggested that in some situations the topics of these communications need to be about each dimension of the service bundle - not just about assurance.

The fourth question concerned the validity of analyzing the differences between expectations and perceptions. Carman stated that, from a theoretical standpoint, expectations should differ between settings: for instance, one does not expect the ambiance of an expensive restaurant at a pizzeria. Moreover, from a practical standpoint, the procedure is even less desirable. SERVQUAL asks the same respondent to complete both the expectations and perceptions form at one time, thus there is not a before and after administration. All responses are ex-post, which can be of little value. Another problem is the practical difficulty to the respondent fill an expectation's battery before receiving the service and a perception battery after the service. Carman suggested that expectations are important because retailers can increase satisfaction by decreasing expectations. Thus, service providers should discover what their customers expect. However, as Carman argued, retailers need not attempt to ascertain expectations at every administration of the perception battery, and certainly the difference between expectations and perceptions should not be factor analyzed. This conclusion presents a dilemma: expectations are important but it is operationally difficult to really know what are customers' expectations.

In the fifth question, Carman offered two suggestions for solving this dilemma of when expectation's information should be obtained. First, he suggested collecting data in terms of perceptions -expectations' differences directly instead of asking questions about each separately. This is particularly useful when norms for expectations are well formulated in the respondent's mind from past experience with similar services. The individual items in the perceptions' battery can then be answered on a five-point scale as a comparison to expectations. Second, Carman argued that expectations derive mainly from experience with similar services, but worth-of-mouth and mass-media also have influence. Therefore, for regular customers of a service, the expectations may be adequate and the mean value of each expectation item can be subtracted from each individual's perception item value. This procedure does not introduce new variability. In either case, he recommended the collection of familiarity information at the time expectation's information is collected. Carman found that expectations change with familiarity and he suggested that factor analysis can then be applied to both perceptions' data and the difference between perceptions and mean expectations. Carman suggested

that, not having major changes in service delivery, expectation's information may be collected as infrequently as tri-annually eliminating the need for a longitudinal design.

The sixth question concerned the relationship between expectations and importance. Here Carman argued that, for most service providers, the importance of a specific service is more relevant than its expected level. He asserted that all, importance, expectations, and perceptions, play roles in evaluating overall service quality. Thus, all three variables should be collected and used in analysis. As suggested with expectations' data, the collection of importance data may not be necessary with every administration of the perception's battery, and mean rather than individual importance weights may be satisfactory for calculating the overall service quality.

In summary, Carman proposed:

1. The wording and subject of some individual items, and the quality dimensions must be customized to each service setting,
2. The collection and treatment of expectations could be different than proposed by PZB, and
3. Importance weights should be collected and included in measures of overall service quality.

Bolton and Drew (1991) utilized a different perspective of the conceptualization and operationalization of service quality which further questions PZB (1985, 1988) model. Bolton and Drew developed a longitudinal model of the effect of a service change on customer perceptions and attitudes about service quality. Unlike previous research listed above, Bolton and Drew's study focused on temporal changes in individual attitudes. The extant literature typically measures the construct and underlying service quality dimensions through cross-industry data rather than attempting to ascertain attitude changes in service quality perceptions over time. Prior research has centered on customers' evaluations of the overall excellence or superiority of a service, and the factors that explain differences among customers' attitudes at a given time. Bolton and Drew criticize this approach because these factors may not be the same as the factors that cause change in a given customer's attitude over time.

Bolton and Drew's exploratory research on customer expectations about telephone service suggests that, in contrast to the customer satisfaction and dissatisfaction paradigm where expectations are defined as anticipated or predicted levels of service performance, expectations about a continuing service are not possessed actively.

Perhaps, as telephone service is characterized by its stability, customers do not explicitly think of expectations about service.

Bolton and Drew concluded that changes over time in individual customers' ratings of quality components are sensitive to the effects of a service change. In contrast, average ratings of perceived service quality are very stable and change slowly, so the effects of a service change become noticeable only in the long run.

2.6. CONCLUSION OF THE PRECEDING REVIEW

The importance of service quality is now well accepted, and service-based organizations are increasing their attention to service excellence in corporate strategy and planning, in anticipation of achieving a differential advantage over competitors.

One basic aspect about services is that their characteristics are different from goods' characteristics, which make service quality more difficult for an individual to evaluate than the quality of goods.

One important conclusion of the preceding review is that there are many concepts about service quality, and that the dominant is based on the disconfirmation of expectations' paradigm. In the conceptualization, consumers compare perceptions of service delivery with a set of expectations, which subsequently affects the level of satisfaction. Expectations are desires and wants of consumers, i.e., what customers feel a service provider should offer. Satisfaction, while closely related to attitudes in this perspective, is mainly related to a specific transaction, whereas perceived service quality is a global judgment or attitude relating to the superiority of the service, i.e., perceived quality is similar to an individual's general attitude toward the firm.

PZB (1985) presented a service quality model based on five gaps, which was developed to a new conceptual model with a sixth gap. However, these models need practical application and validation. Insights obtained from PZB focus groups with customers revealed 10 key categories in evaluating service quality. This 10 service quality dimensions were later refined to 5 dimensions, which are the basis for the SERVQUAL, a multi-item scale for measuring perceptions of service quality.

However, the disconfirmation of expectations' paradigm and the SERVQUAL instrument have recently come under criticisms, as it was revised. Several modifications and potential improvements to this measurement procedure have been suggested, but the proposed new method has not yet been tested or shown to provide more accurate data in empirical studies. The challenge for research is to carry out such tests and experiments. In the mean time, SERVQUAL remains the most reliable tool available for the measurement of service quality in the 1990's.

3. THE STUDY

3.1. AN APPLICATION TO BUS INDUSTRY

The basis and the justification for the present study is dependent on a number of aspects. First, there are relatively few practical applications of the service quality theory presented in the preceding chapters, and the emerging criticisms about it. Second, service quality is relevante for many Portuguese firms. Services in Portugal are growing, becoming more important and more competitive. With the emerging competition there is a strong urgency to know, better than ever before, the customer needs and, particularly, the customer evaluation of service quality. Providing high service quality is increasingly recognized as a critical factor in the success of firms.

Furthermore, there is neither a study about the service quality dimensions nor any application of SERVQUAL in any Portuguese service. One of these services is the transportation industry. Researchers have paid little attention to the travel industry and there has not been any bus replication of the SERVQUAL, nor any extension of the scale to travel industry.

This important industry is the focus of the present study, specifically, the inter-city bus industry because it is a relevant service in Portugal. Transportation played an historical role as a means of developing relations between communities and countries. The transportation importance has not stopped growing as human society becomes more developed. The transportation industry in Portugal is responsible for 5.3% of all the economic production, and for 3.1% of all employment. Terrestrial transportation is the largest (46%) and there are about 90 inter-city bus companies employing more than 6 800 people. About 77% of the Portuguese roads are served by usual inter-city bus, and the passengers are over 508 million (Ministério das Obras Públicas Transportes e Comunicações - Gabinete de Estudos e Planeamento, 1990). The analyzed firm is *Resende*: one of the largest bus companies in Portugal supplying regular and charter services, nationwide.

Accordingly, this study examines the issue of service quality measurement in inter-city bus industry, through the application of a modified SERVQUAL instrument. The present investigation analyses and quantifies the customer expected and perceived

service quality, that is, Gap 5. A company analysis process for service quality begins with gaining an understanding of the nature and extends of Gap 5, and then successively searching for evidence of the other gaps, and taking corrective action wherever necessary. The key to close Gap 5 is to close the others gaps and keep them closed.

Gap 5 was chosen to be analyzed because is the most important gap in a marketing perspective: knowing the customers' thinking, and forecast its reaction. Moreover, a quality investigation of a service industry must start on the marketer side. The customer side of service quality of inter-city bus has not been investigated for any company in Portugal nor for any other country. These were the reasons for analyzing Gap 5.

Knowing what customers expect and how they perceived the service is the first and possibly most critical step in delivering quality service. This study represents an attempt to contribute to a needed service quality research to enhance our understanding of the fundamental nature of it, how it can be measured, and how it can be monitored.

One of the present investigation's goals is to do a critical analysis of SERVQUAL - an instrument that their authors want to be of general application, to determine the service quality dimensions of bus industry, and to quantify the *Resende* service quality. This investigation explores the impact of individual aspects of bus service: on customers' perceptions of service quality, and on their willingness to recommend *Resende*.

The market survey is a sample of one bus company of one travel kind: inter-city between the two main Portuguese cities - Oporto and Lisbon. Therefore, this investigation neither can nor has the goal to find out general theoretical conclusions. It can not develop one main rule about services in general.

It is limited to one investigation about the field of service quality measurement. The following chapters extend the application of the SERVQUAL scale to a selected travel service, examine the performance of the scale to suggest modifications or refinements that may be appropriate for bus services, and develop questions and problems to be researched in the future.

3.2. OTHER BUS TRANSPORTATION INVESTIGATIONS

Published investigations about bus quality services are very limited. This absence occurs because service quality investigation is emerging, due to the services' competition, as a new concern to firm managers. One of the few investigations was developed by Hensher (1990). He developed a model of hierarchical stated response design applied to bus user preferences. This method is one way to achieve the richness of the information gleaned from a larger set of influences on preference and choice behavior, while simultaneously simplifying the task for the respondent. Such a design enables one to distinguish between sets of associated elemental attributes, and uses the idea of generic attributes to link the role of broad categories of influences as well as identify the key elemental attributes underlying each generic attribute.

The application in New South Wales, Australia, focused on the preferences for different types of public bus services. The quantitative model developed and implemented produced a bus preference model capable of predicting an index of relative satisfaction or dissatisfaction for such broad market segments as public commuter services under a given scenario of wait quality, vehicle quality, trip quality, information quality, and fare level.

Hensher's main goal was to investigate the hierarchical stated response designs, and evaluate service designs as a multi-attribute offering to improve services. The empirical study was about bus user preferences.

Hensher's results were as follows:

The wait quality model highlights the importance of waiting time at the bus stop, punctuality, and the availability of a shelter with a seat at the bus stop.

Vehicle quality is very strongly linked to the interior cleanliness of the buses and the modernity (age) of buses.

The trip quality dimension highlights the importance to public users of the opportunity to have a seat, the boarding time, the ride quality and the availability of express services. Long distance public users are generally more satisfied with a given trip quality than other public bus users, with public users on peak period being less satisfied.

All the information quality attributes contribute to explaining differences in relative satisfaction or dissatisfaction for bus service. The dominating elemental attribute is a knowledge of the time that the buses run; thus the introduction of schedules that are easy to remember (e.g., every 60 minute on the hour, as Resende is doing), and the availability of time tables at bus stops is a very attractive feature of information quality.

The generic design combines the four trip qualities studied in the previous designs, the bus fare and the role of connecting buses.

Hensher's models can be used to recover the level of predicted satisfaction associated with the samples current trip, and that associated with a number of image-enhancing strategies. This is what was available but it is not very related with the present study.

4. METHODOLOGY

The first purpose of inter-city bus survey is to ascertain the components of service quality. Although, the SERVQUAL instrument might represent a comprehensive examination of the general service quality dimensions, other quality dimensions specific to any one facility's organization may be included in the questionnaire. Therefore, more items might be needed to represent fully the entire range of possible quality dimensions. This chapter will develop a modified SERVQUAL instrument.

4.1. DEVELOPMENT OF CUSTOMER SATISFACTION QUESTIONNAIRE

The modified SERVQUAL instrument is developed in two phases: first, the determination of bus customer requirements based on a specific determination of their requirements and from Parasuraman, Zeithaml, and Berry findings about service firms in general; second, the construction and test of the customer satisfaction questionnaire. These two phases are described in the next chapters.

4.1.1. DETERMINATION OF BUS CUSTOMER REQUIREMENTS

This first stage of questionnaire development determines what are the main customer requirements for evaluating the quality of bus transportation service. These customer requirements, on which they based their opinion about the service, represent quality dimensions.

To identify these quality dimensions two methods are followed: (1) the development approach of the quality dimensions and (2) the critical incident approach (Hayes, 1992).

(1) the development approach of the quality dimensions

The development approach of the quality dimensions calls for the provider to establish the quality dimensions of its service. Persons involved in the bus transportation service were interviewed and they indicated the following as key quality features of the service:

- Schedule variety;
- Service;
- Ticket office attendance;
- Embarkation and disembarkation attendance;
- Bus, office and toilette cleanness;
- Baggage packing;
- Comfort.

The answers were very general, except for some specific problems that the interviewed people thought to be the most important for the customers (at that specific time).

(2) the critical incident approach

The critical incident approach involves customers in determining the quality dimensions. The method focuses on obtaining information from customers about the service they receive. The strength of this method lies in its utilization of customers in defining customers' requirements. This approach identifies specific performance examples that illustrate organizational performance related to the service that the firm provides.

A critical incident is an example of organizational performance from the customers' perspective, that is, critical incidents are those aspects of organizational performance which customers come in contact directly. A critical incident is a specific example of the service that describes either a positive or a negative performance. This procedure uses two steps. First, customers are interviewed to obtain specific information about the service. Then, this information is categorized into groups, each group reflecting a quality dimension.

In the first step, individual interviewing is used for obtaining specific examples of service quality. The respondents are actual customers and have travelled with the bus company before. Each interviewee is asked to describe some good aspects and some bad aspects of the service they received in the past, to describe moments and reasons for satisfaction and dissatisfaction with the service, to describe an ideal service, to describe the meaning of service quality, important factors to evaluate service quality and performance expectations of the service. The list obtained from these individual interviewees contain incidents that are similar to each other and that are grouped together to form a list of satisfaction items. The categorization process was repeated using the satisfaction items - grouping similar satisfaction items to form a specific customer quality dimension. The critical incidents define the satisfaction items, and the satisfaction items, in turn, define the quality dimensions.

This results in 268 critical incidents grouped in the following quality dimensions:

- Comfort, with about 20% of all critical incidents.
- Tangible, about 20% of all critical incidents.
- Reliability, about 19% of all critical incidents.
- Responsiveness, about 7% of all critical incidents.
- Security, about 6% of all critical incidents.
- Access, about 6% of all critical incidents.
- Competence, about 4% of all critical incidents.
- Courtesy, about 4% of all critical incidents.
- Understanding/knowing the customer, about 1% of all critical incidents.
- New pastime, about 4% of all critical incidents.
- Other new product and services, about 3% of all critical incidents.
- Other features not relevant to the study, about 6% of all critical incidents.

Appendix 1 describes each of these dimensions' characteristics that were referred to as critical incidents.

One relevant quality dimension is "*Pastime*" during the trip. The fact of existing or not that pastime was the main problem referred with this feature and not the amusement quality. This type of complementary services or products contribution to quality perception it is not possible with SERVQUAL. The instrument has two main limitations: (1) it is only applicable to past or current customers of the service, as Parasuraman, Zeithaml, and Berry (1988) referred, and (2) it does not include expectations and contributions about complementary services or products to overall perception of service quality, that can be very important as it seems to be in this case. This is not referred by Parasuraman et Al.

4.1.2. BUS QUALITY DIMENSIONS AND SATISFACTION ITEMS

Eight quality dimensions and a 35-item questionnaire were defined, based on the preceding investigations about bus services and based on Parasuraman, Zeithaml, and Berry general investigations about service firms. The quality dimensions are:

- **Tangibles :** Physical facilities, equipment, and appearance of personal.
- **Reliability :** Ability to perform the promised service dependably and accurately. It means that the firm performs the service right the first time and that it honors its promises.
- **Responsiveness :** Willingness and readiness of employees to help customers and provide prompt service.
- **Security :** Freedom from danger, risk, or doubt. Knowledge and courtesy of employees and their ability to convey trust and confidence.
- **Competence :** Possession of the required skills and knowledge to perform the service.
- **Courtesy :** Politeness, respect, consideration, and friendliness of contact personnel.

- **Understanding/Knowing the Customer** : Make the effort to understand the customer's needs, and caring, individualized attention to them.
- **Access** : Approachability and ease of contact.
- **Comfort** : Have an agreeable ambient, good seats, and every aspect that contributes not to be tired at the end of the trip.

These quality dimensions are analyzed by the survey, to measure the customers' satisfaction level of Resende service.

Appendix 2 describes the items of these quality dimensions.

4.1.3. CUSTOMER SATISFACTION QUESTIONNAIRE CONSTRUCTION

a) Items in the questionnaire

Some items in the questionnaire are based on SERVQUAL 22-items instrument, eight items are from Parasuraman, Zeithaml, and Berry 34-item instrument that were not included in the 22-items and that seem to be relevant for this kind of service industry. Many of these items wording were changed. The questionnaire also contains five items about comfort that were revealed important for customers' quality perception. The selected satisfaction items are those that best represent each particular quality dimension.

The questionnaire is less confusing and more meaningful from the respondent's standpoint and easier to understand and to complete. The items are relevant, concise, and unambiguous. They are written clearly to reflect only one thought. Negative sentences or items that reflect bad aspects of the service were avoided because this kind of item construction is difficult to interpret and some respondents have low comprehension level of instructions. The reason for reverse wording is to keep the respondent attentive and to avoid nay-saying or halo effects. In a long questionnaire, many respondents find this change in wording difficult to comprehend, and thus they misread the item. In a balance between all these reasons, it was chosen to have only one item that reflects a bad aspect of the service: item number 10 (appendix 3). Initially, when the questionnaire was tested with more negative items, as is defined in the SERVQUAL, some respondents

had difficulty interpreting them, and this could lead to a distortion of results. The item that reflects a bad aspect of the service that was kept in the questionnaire was easy to interpret.

The questionnaire has one overall quality evaluation question. It has one question about the willingness to recommend the service to a friend, with "Yes" or "No" answering, for assessing nomological validity.

Resende management asked to include in the questionnaire three questions about overall satisfaction with the service of three other brands.

Finally, the questionnaire has some questions to categorize the kind of customer. One question differentiates between customers that have used Resende services for more or less than 10 times. The questionnaire asked for sex, age, profession, and instruction level.

At the end of the questionnaire there is a space for suggestions and criticisms.

b) Response format

The scaling method chose for the questionnaire was **Likert scaling**. The method is designed to allow customers to respond in varying degrees to each item that describes the service. The scale represents a bipolar continuum with the low end representing a negative response and the high end representing a positive response. This questionnaire uses the *agree to disagree* continuum.

This response format is simple and the scales developed using the Likert method yield higher reliability coefficients with fewer items than other scales (Hayes, 1992).

Although, Parasuraman, Zeithaml, and Berry choose a scale with seven response options, this modified SERVQUAL uses **five scale responses option** for two reasons. The first one is due to the low education level of some customers that would answer the survey. With more options they would become more confused than with only 5 options (remember that it was necessary to make the questionnaire easy to understand and to complete). The second reason for the five response option format was due to questionnaire reliability. Although, from a statistical perspective, the reliability of the questionnaire increases with the scale number of response options, it seems to level off after five scale points, suggesting minimal incremental utility of using more than five scale points (Hayes, 1992). Reidenbach, and Sandifer-Smallwood (1990) also used a

modified SERVQUAL operationalized by using a 5-point bipolar scale format, as well as, Hensher (1990) and Tse, and Wilton (1988).

Like Parasuraman et Al, a scale ranging from *Strongly Disagree* = 1 to *Strongly Agree* = 5 was chosen, but, contrary to Parasuraman et Al, with **verbal labels** for scale points 2 through 4: 2=*Disagree*; 3=*Neutral*; 4=*Agree*. When the questionnaire was tested, without these verbal explanations, some respondents revealed difficulty in remembering the scale labels when they turned to the second page. The format with verbal labels for intermediary scale points revealed easier to understand and to respond. Support for this operationalization is given by Hayes, (1992), and Reidenbach, and Sandifer-Smallwood (1990). Before data analysis, scale values were reversed for items phrased negatively, i.e., item number 10.

Like Parasuraman, Zeithaml, and Berry, this modified SERVQUAL uses the format of a **pair of statements pertaining to each item** - one to assess expectations and the other to assess perceptions - instead of designing each item to directly assess the discrepancy between respondents' expectations and perceptions. The difference between the ratings, i.e., the perceptions minus expectations score by item, is a measure of perceived service quality.

There are five reasons for the pair of statements format for the nature of scale items:

1st) The service-quality construct, as defined earlier, involves the discrepancy between expectations and perceptions.

2nd) A scale that measures expectations and perceptions separately can help uncovers reasons underlying a specific service-quality image. For instance, if the image is poor, the scale ratings can suggest if it is due to high expectations, poor perceptions, or both.

3th) A scale that measures perceptions separately can be used to compute Gap 6 (see the extended service quality model developed) and help uncover reasons underlying specific differences between service quality perceptions and real service delivery.

4th) The range of values spanned by the differences between two 1-to-5 ratings' scales, on the expectation and perception statements, is wider, thereby offering a more sensitive measure and a more reliable questionnaire, than the range of scale values with one statement per item. The potential range difference score is -4 to +4.

5th) Answering expectations and perceptions separately, the respondent can imagine better each of the situations than with one statement per item to directly assess the discrepancy between expectations and perceptions, providing a less confusing and more meaningful questionnaire.

However, it can be pointed out that this leads to two criticisms:

1st) Using one statement per item would produce a more scanty instrument than using a pair of statements per item.

2nd) It can be forecast that there is a tendency for the respondent, when answering positive statements about expectations, to use only the neutral and positive side of the scale ratings, that is, the 3-to-5 points' scale. On the contrary, when the respondent answers expectations' items that reflect a negative connotation (a bad aspect of the service), there would be a tendency to use only the 1-to-3 points' scale. The reason for this forecast is logical: - Anyone expects to receive a bad service in any feature of it! This would reduce the potential range difference score of -4 to +4 to a real range difference score of -4 to +2. This real range score means that the questionnaire reliability increment with a pair of statements per item, over one statement per item, would not be so much as it could be expected with the potential range scores. Anyway, this difference would not annul any one of the advantages pointed out of a pair of statements per item over one statement per item. Moreover, there is the possibility to know which are the negative answers about expectations defined as positive, and, consequently, to analyze the reason for these unexpected answers.

The questionnaire has **35-items representing eight service quality dimensions**, as can be seen in appendix 2. The items are in a random order. The complete questionnaire is included in appendix 3 with the original one in Portuguese. For each item there are a pair of statements: one to measure expectations about bus service quality in general and the other to measure perceptions about *Resende* company service quality in particular. The expectation statements, like in SERVQUAL, formed the first half of the instrument and the perception statements the second half.

The total questionnaire has 9 pages. Although, the length of the questionnaire may seem a little bit long, it is due to a big font letter size and spacing. This format is used to make the questionnaire easy to read, because they were to be answered during the bus trip.

Nevertheless, there is a potential disadvantage with this format due to the likelihood that the respondents may skip one or more pages.

c) The Questionnaire Introduction

The questionnaire introduction is, like the one of SERVQUAL, brief, explains its purpose and provides instructions for completing the questionnaire.

5. RESULTS

This chapter presents and summarizes data from the questionnaires, descriptive statistics, reliability and internal consistency analysis.

The questionnaire was administered by the author, helped by the bus hostess. Most of them were answered during the trip. The on-board survey was administered to a sample of 217 Resende bus users. The survey design required data at three levels: expectation items, perception items, and social-demographic details. The sample covers a range of travel time from Oporto-Lisbon bus users of *Resende*. For each sampled bus run, all persons over the age of fourteen years were given a survey form plus pencil.

The survey was answered by 217 respondents, and 35 were not considered for several reasons (mainly because many questions were not answered). So, the valid answers are 181. Several other researchers used a sample of, approximately, the same size: Carman (1990); Churchill, and Surprenant (1982); Reidenbach, and Sandifer-Smallwood (1990); Parasuraman, Zeithaml, and Berry (1988).

Questions 1 to 35 about expectations are ascribed as EXPECT1 to EXPECT35. Questions 1 to 35 about perceptions are referred as PERC1 to PERC35, and the measures of perceived service quality (the difference Perception minus Expectation scores) are ascribed as QUAL1 to QUAL35 (see last page which contains all items).

5.1. DESCRIPTIVE STATISTICS

The mean and variance of each item of EXPECT, PERC and QUAL are described in appendix 4.

Appendix 5 shows more detailed results from the survey: the frequencies of each item, and several descriptive statistics (mean, standard deviation, and some others) in the following order: 1. EXPECT; 2. PERC; 3. QUAL; 4. Other Questions.

Expectations present low frequency with value "1" (strongly disagree) and "2" (disagree), and high frequency with value "4" (agree) and "5" (strongly agree). The

cumulative percentage of value "1" and "2" is always less than 12.3% (this limit value is EXPECT18). On the contrary, the cumulative percentage of value "4" and "5" is always more than 58.1% (this limit value is EXPECT18). This expectation answers asymmetry was forecast because there is a tendency for the respondent, when answering positive statements about expectations, to use only the neutral and positive side of the scale ratings, that is, the 3-to-5 points' scale. The overall expectation mean is 4.285 (appendix 4).

The quality perception of *Resende* service in the items is good, considering that an evaluation with a mean higher than "3" is positive and the opposite is negative. The perception's frequency means are higher than "3" except for a few items: PERC8 (mean=2.909), PERC10 (mean=2.977), and PERC16 (mean=2.909). The overall perception mean is 3.456, and there are only three items with "negative" mean (less than "3").

The QUAL frequency for each item is similar to a normal curve. The means are always negatives with no exception, so the general quality is bad. The overall QUAL mean is -0.830.

However, the mean of the question about overall *Resende* service quality is 3.464, that is, a "positive" (higher than "3") mean and a good service evaluation. This value is higher than the same mean for *Caima*, *Frota Azul*, and *Renex*.

The WR question ("Would you Recommend *Resende* to a friend") has a "positive" mean of 3.617. The HR question ("Have you ever Recommended *Resende* to other people" - "Yes" or "No") has 74.9% of positive ("Yes") answers. So, the general willingness to recommend is good.

5.2. CORRELATION

The correlation between EXPECT items and the OQ (Overall Quality of *Resende*) revealed that there are only four EXPECT items which correlate relatively well with OQ, as described in appendix 6.

The correlation between PERC items and OQ revealed that only four items have low correlation. The correlation values are always positive, which is logical.

As expected, QUAL items and OQ are all positively correlated, and only five items have low correlation.

The correlation between the OQ (Overall Quality of Resende) and the WR (Would you Recommend Resende to a friend) is high (0.6216) as forecast, and shown in appendix 6.

5.3. SCALE VALIDITY

A scale's trait and content validity are necessary conditions for a scale construct validity, that is, the extent to which a scale fully and unambiguously captures the underlying, unobservable construct it is intended to measure (Parasuraman, Zeithaml, and Berry, 1988). The questionnaire's high reliability and internal consistencies provide support for its trait validity. The questionnaire has content validity: (1) the scale appears to measure what is supposed to, and (2) the scale items capture key factors of the unobservable construct being measured. The reasons are the procedures used in developing it and because the questionnaire was based on SERVQUAL, which content validity has been verified (Parasuraman, Zeithaml, and Berry, 1988).

5.4. THEORETICAL DIMENSIONS

The reliability analysis of QUAL scale with the nine theoretical dimensions (appendix 7) results in the following Alpha de Cronbach:

ALPHA FOR THEORETICAL DIMENSIONS

DIMENSION	STANDARDIZED ALPHA
TANGIBLE	.6365
RELIABILITY	.7543
RESPONSIVENESS	.7086
SECURITY	.7807
COMPETENCE	.6017
COURTESY	.6341
UNDERST./KNOWING CUST.	.7883
ACCESS	.1626
COMFORT	.6582

TABLE 3

These results present a quite low standardized alpha between 0.6 and 0.8, and 0.16 for "access" dimension. The alpha minimally acceptable level of .70 recommended for basic research (Churchill, and Surprenant, 1982) is obtained only on four dimensions.

5.5. FACTOR ANALYSIS

A factor analysis of QUAL items using an orthogonal rotation with varimax procedure, reduced the 35 QUAL items to nine factors with eigenvalues greater than 1.0. Only 5 factors were retained for subsequent analysis, which explained more than 4% of the percentage of item variance. The resultant factor structure explains 52.6% of the item variance (appendix 8). The five dimensions, their percentage of variance explained and item loadings are listed in the tables below.

Factors Pattern For QUAL Items

F A C T O R 1 - READINESS/RELIABILITY DIMENSION	Loading
13-Customers should expect prompt service from employees to pack the luggage and to show the customers their seats	.66
15-Bus hostess should be very friendly	.54
17-Arrived time-table should be held	.59
21-Time-table for start a trip should be held	.65
24-Employees always have to be willing to help customers	.56
Coefficient ALPHA = .7744 STANDARDIZED ITEM ALPHA = .7809 Percentage of Variance Explained = 32.6 %	

Table 4 - Factor 1

F A C T O R 2 - TRUST DIMENSION	Loading
3-The firms should have their customers' best interest at heart	.52
4-Customers should be able to trust these firms' employees	.56
5-Employees should get adequate support from the firms to do their jobs well	.63
7-These firms should be dependable	.77
11-Employees should know what are the needs of their customers	.58
18-The transportation firms should give customers individual attention	.51
Coefficient ALPHA = .8457 STANDARDIZED ITEM ALPHA = .8473	
Percentage of Variance Explained = 5.9 %	

Table 5 - Factor 2

F A C T O R 3 - COMFORT DIMENSION	Loading
12-Busses should be very comfortable	.52
22-Busses should have roomy seats	.67
25-Physical facilities should be keeping well clean	.62
34-Busses should have an agreeable temperature	.70
Coefficient ALPHA = .7686 STANDARDIZED ITEM ALPHA = .7725	
Percentage of Variance Explained = 5.3 %	

Table 6 - Factor 3

F A C T O R 4 - SECURITY DIMENSION	Loading
2-Drivers should drive in a pleasant and safe manner	.73
19-Customers should feel secure traveling in the busses	.68
20-Employees should be knowledgeable	.74
Coefficient ALPHA = .8031 STANDARDIZED ITEM ALPHA = .8115	
Percentage of Variance Explained = 4.6%	

Table 7 - Factor 4

F A C T O R 5 - ACCESS DIMENSION	Loading
10-It is to be expected that these firms' telephone lines will be busy much of the time	.63
26-Customers should buy tickets without delay	.61
29-Ticket office employees should be very friendly	.66
Coefficient ALPHA = .5795 STANDARDIZED ITEM ALPHA = .5811 Percentage of Variance Explained = 4.1%	

Table 8 - Factor 5

Factor 1 represents perceptions of prompt and friendly service from employees, and reliability of records and time-table. It is labeled a "Readiness/Reliability" dimension.

Factor 2 is interpreted as a "Trust" dimension. It covers several perceptions of the firm understand customers and being dependable.

Factor 3 is a "Comfort" dimension, containing items related to perceptions of feeling well during the trip.

Factor 4 pertains to a safe trip. Thus, it is labeled "Security".

Factor 5 represents perceptions of an easy and quick interaction between customers and the firm. It is labeled an "Access" dimension.

Other factorial analysis without some items results in different factors compositions.

5.6. RELIABILITY ANALYSIS

Coefficient alpha for each dimension is reported in table 2 to 6, and in appendix 9. These reliability's coefficients are higher than .70, except 0.58 for "access" dimension. So, four of the five coefficients are mainly substantial and compare favorably with the .70 level recommended for basic research (Churchill, and Surprenant, 1982).

5.7. REGRESSION

Some regressions were computed using the stepwise method to determine which are the items that better explain the overall service quality evaluation. In appendix 10 can be seen the regression results. The dependent variable was OQ.

The regression of EXPECT (Expectation items) result in three items:

EXPECT16 - These firms should keep places records accurately

EXPECT15 - Bus hostess should be very friendly

EXPECT27 - Trips should be rapid

with the following results:

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
EXPECT16	-.264062	.086360	-.241831	-3.058	.0026
EXPECT15	.203026	.083350	.191579	2.436	.0160
EXPECT27	-.138418	.064814	-.169197	-2.136	.0343
(Constant)	4.287795	.482410		8.888	.0000

The regression of PERC (perception items) result in six items:

PERC35 - Busses should be up-to-date

PERC7 - These firms should be dependable

PERC3 - The firms should have their customers' best interest at heart

PERC28 - Employees should give customers personal attention

PERC25 - Physical facilities should be keeping well clean

PERC6 - Busses should be beautiful

with the following results:

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
PERC35	.292204	.057110	.346850	5.117	.0000
PERC7	.240746	.061867	.262935	3.891	.0002
PERC3	.205905	.053205	.259371	3.870	.0002
PERC28	.146647	.054603	.167938	2.686	.0081
PERC25	-.120633	.047091	-.172621	-2.562	.0115
PERC6	.151230	.060555	.167216	2.497	.0137
(Constant)	.221160	.225085		.983	.3276

The regression of QUAL items results in four items:

- QUAL3** - The firms should have their customers' best interest at heart
- QUAL35** - Busses should be up-to-date
- QUAL22** - Busses should have roomy seats
- QUAL18** - The transportation firms should give customers individual attention

with the following results:

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
QUAL3	.168861	.053572	.262122	3.152	.0020
QUAL35	.180081	.044697	.278952	4.029	.0001
QUAL22	.128293	.040508	.231755	3.167	.0019
QUAL18	.110829	.047629	.190227	2.327	.0216
(Constant)	1.615283	.180174		8.965	.0000

The variables that better explain the overall service quality are not always the same. They differ in conformity with EXPECT, PERC or QUAL item. Moreover, the complexity of the evaluative process, as indicated by the number of significant items in each

EXPECT, PERC or QUAL, also varies. The more complex evaluative process is that of PERC, followed by that of QUAL, and then that of EXPECT.

5.8. VARIANCE ANALYSIS

A variance analysis was used to test the significance of the mean difference between PERC (perception items) and the HR (Have you ever Recommended Resende to other people). The same methodology was used to test the mean difference between QUAL items and the same question (HR) - the results are in appendix 11.

Most of the PERC means with HR="1" (Yes answer) are higher than with HR="2" (Not answer). Which is logical, because the respondents that better evaluate each item are the respondents that have ever Recommended *Resende* to other people (HR="1"). However, there are some PERC (and QUAL) mean with HR="1" (Yes answer) that are lower than with HR="2" (Not answer) : PERC 1; PERC 14; PERC 29; QUAL 1; QUAL 8; QUAL 9; QUAL 14; QUAL 15; QUAL 29. This is not logical. It means that the respondents that had never recommended *Resende* to other people are those which better evaluate the perception in that particular item. However, when this happens, the mean differences between "Yes" and "No" answers are not statistically significant.

It was considered a significant mean difference when significant level is $\leq .05$, i.e., there is 95% certainty to be different. The items with significant mean difference (have always the "Yes" answer mean higher than the "No" answer mean) are described in the next table.

MEAN DIFFERENCE BETWEEN ITEMS AND "HR" QUESTION

ITEM	SIG. LEVEL
PERC 4	.0345
PERC 6	.0063
PERC 7	.0009
PERC 25	.0538
PERC 27	.0193
PERC 33	.0075
PERC 34	.0172
QUAL 7	.0027
QUAL 18	.0162
QUAL 27	.0566
QUAL 33	.0005
QUAL 34	.0142

TABLE 9

The mean difference between OQ (Overall Quality of Resende) and HR (Have you ever Recommended Resende to other people) is significant, as it would be forecast. The same can be said about WR (Would you Recommend Resende to a friend) and HR, as described in appendix 11.

5.9. THE LINKAGE BETWEEN: THE DIMENSIONS, THE QUALITY PERCEPTION AND THE RECOMMENDATION DECISIONS

This chapter answers the following question: How to increase the customers' likelihood to recommend the firm for potential customers? It studies the association between customers' perceptions of the quality of service provided by a firm and their willingness to recommend the firm to their friends, i.e., the impact of quality perceptions on willingness to recommend. The conclusions based on the results of this chapter are described later in the conclusion chapter.

Appendix 12 presents the mean, and the standard deviation for each dimension. It shows the correlation between dimensions (factor 1 to 5), overall quality perception (OQ question), and willingness to recommend (WR and HR questions). Most of the variables are significantly positively correlated.

A multiple regression model using stepwise method was used to find the dimensions that explain the overall quality perception and the recommendation decision.

The independent variables were the five dimensions. The dependent variables were:

1. The overall service quality question (OQ) - appendix 13.
2. The WR ("Would you Recommend Resende to a friend") - appendix 14.

Appendix 15 presents the regression results between OQ and WR variables.

A variance analysis was used to test the significance of the mean difference between the dimensions and WR variable. Any of them is statistically significant.

From the regression of the 5 dimensions to OQ, the Comfort (Factor 3) and the Trust (Factor 2) are the service dimensions that load on the overall quality perception. Comfort and Trust explain 39% (R^2) of the variance in the overall quality perception, as shown in the table below (and in appendix 13).

TABLE 10 - SERVICE DIMENSIONS AFFECTING PERCEPTIONS OF QUALITY

R ²	DIMENSIONS	B	Beta	T	Sig T
.39	Comfort	.314638	.401999	5.007	.0000
	Trust	.266136	.305306	3.802	.0002
	(Constant)	1.745979		9.177	.0000

Interestingly, the same dimensions -Comfort and Trust- play the most important role in willingness to recommend the service to a friend, as shown in the table below (and in appendix 14).

TABLE 11 - SERVICE DIMENSIONS AFFECTING RECOMMENDATION DECISIONS

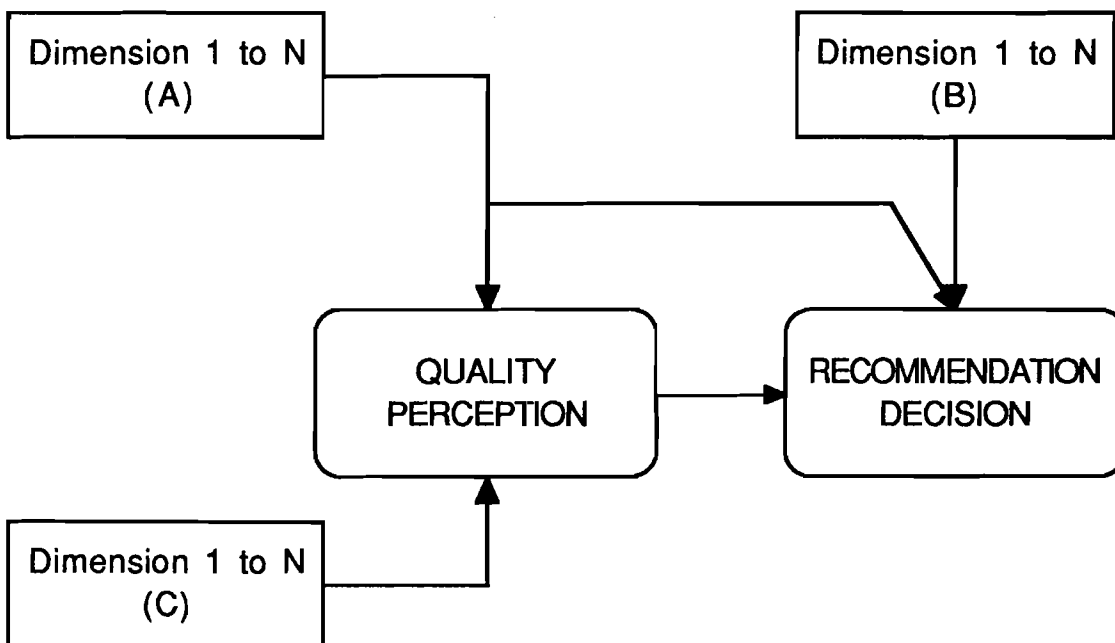
R ²	DIMENSIONS	B	Beta	T	Sig T
.28	Trust	.314372	.385500	4.379	.0000
	Comfort	.149155	.203700	2.314	.022
	(Constant)	2.204312		11.293	.0000

These two dimensions explain 28% (R²) of the variance in a recommendation decision.

One objective of this investigation is to explore the impact of individual aspects of transportation on customers' perceptions of service quality, and their willingness to recommend *Resende*. Accordingly, the research method enables one to examine a hypothesized linkage model among the two dependent variables. Customer's

recommendation to other potential users is an exceptionally strong form of advertising. One would expect this recommendation decision to be influenced strongly by the customer's perceptions of the quality of the service received. Hence, this quality-recommendation linkage is explored. In its most fundamental form, the relationship might be described as shown in the next figure.

A HYPOTHESIZED LINKAGE GENERAL STRUCTURE OF THE QUALITY-RECOMMENDATION LINKAGE



- A - Dimensions that affect quality perception and recommendation decisions
- B - Dimensions that only affect recommendation decisions
- C - Dimensions that only affect quality perception

FIGURE 8

This relationship suggests that the customers' perception of the quality of service is affected directly by the service dimensions. Further, these specific service perceptions also affect the recommendation decision. The customers' quality evaluation in turn directly affects their willingness to recommend the firm.

These linkages are based on the proposition that the customers' willingness to recommend the firm is, in part, a function of the quality of the service received. Thus,

from the evidence presented, one hypothetical model of this linkage is offered with correlation evidence of the strength of the individual linkages, as shown in figure 9.

A HYPOTHESIZED MODEL OF THE QUALITY-RECOMMENDATION LINKAGE

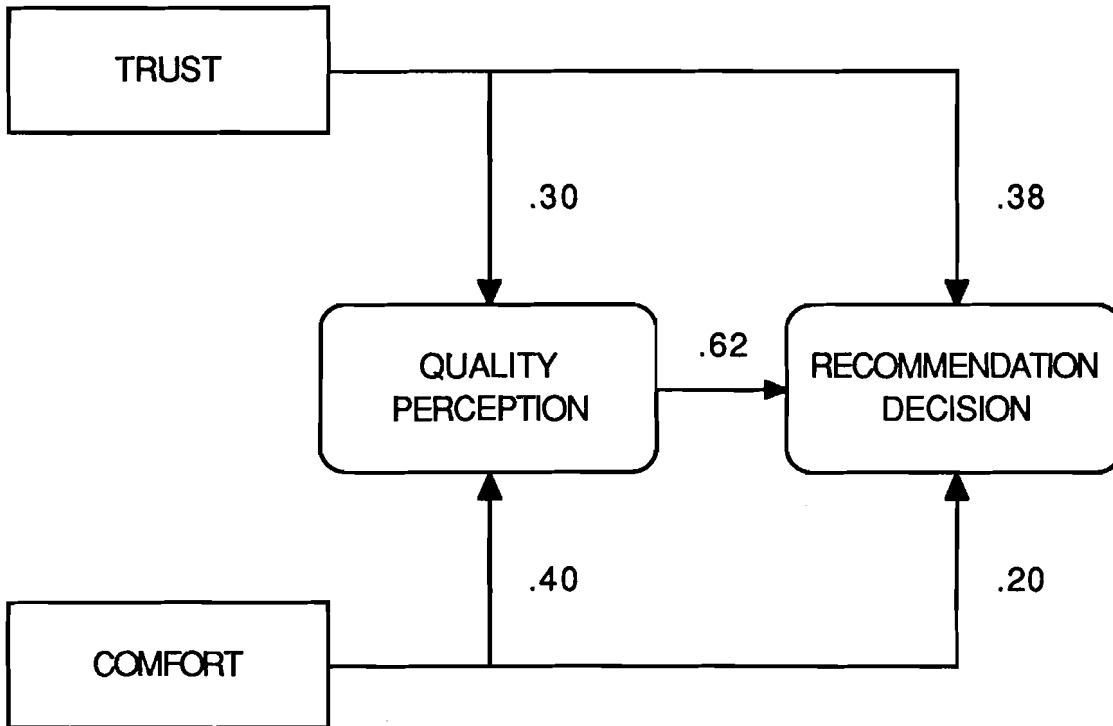


FIGURE 9

Two dimensions of service affect the overall perception of quality: trust and comfort. The biggest relative impact is comfort.

Service perceptions positively and strongly influence the recommendation decision, which is also influenced to a lesser degree by trust and comfort.

6. DISCUSSION

This chapter presents the study limitations, and the investigation discussion of the results presented in the previous chapter.

6.1. LIMITATIONS

Before drawing conclusions from this investigation, one should note its major limitations. First, the study employed a small sample of inter-city bus customers clearly atypical of the general consuming population of transportation. These types of studies as such do not give general answers. They only help in grasping specific situations. However, the research work suggests that there are fairly general conclusions in certain situations. The author's procedures for data analysis may have introduced some search bias. Though many of their findings represent true hypothesis testing, results concerning the relationship among value judgments must be regarded as tentative until validated on new sets of data.

When testing the administration of the scales to consumers, difficulties have been found as a result of half of the statements being negatively worded. The two separate lists of statements for the same items lead to additional drawbacks. Respondents may be initially unsure about the exact difference between the two statements, especially about the meaning of the word "should" because of the change of definition of expectation used in the service quality literature. They may also have difficulty in remembering to rate companies in general as opposed to rate what they want or expect from that particular company. Therefore, constant reinforcement of the points is needed if meaningful data are to be collected.

One limitation is due to the concepts. Expectations are defined by Parasuraman, Zeithaml, and Berry (1986) as desire and wants of consumers, i.e., what customers feel a service provider should offer versus what a service provider would offer. However, the satisfaction's literature, holds that expectations are consumer predictions about outcomes. With SERVQUAL and the present study what are customers really

answering? A mix between the two? The relative importance of the items is relevant. SERVQUAL treats all items in the scale as equally important. This assumption may not hold in every situation. The methodology used does not evaluate nor quantify the possibility and the contribution of an augmented service to the quality perception.

The limitations described means that it is not possible confidently to generalize the findings. The investigation, however, offers a basis for generalization in future studies that may rectify these limitations.

6.2. DISCUSSION

The translation of the SERVQUAL from English to Portuguese revealed one difficulty: the kind and strength of the **adjectives** used in the questionnaire statements can modify completely the respondent perspective. These adjectives are crucial in the measurement of expectations and perceptions. They provide the point of reference for the statement with which the respondent can agree or disagree. The problem lies in how much one can express positive or negative feelings about the statement. Presumably, if one strongly disagrees that a firm is providing more "up-to-date" equipment than one is indicating, how out-of-date is it? A few years out-of-date or is it antiquated? Similarly, if one strongly agrees that the firm is providing up-to-date equipment, does up-to-date include futuristic equipment or equipment that may be seen as before its time? The adjective's choice is crucial. This problem makes the SERVQUAL instrument not so directly applicable and not so general as desirable by their authors.

It is possible to describe a more complicated situation than the aforementioned. Item 27 ("trips should be rapid") is desirable, but may mean: not slow, as rapid as possible, hold to the time-table, or very quickly. It is easy to understand that in many services rapidness is always desirable, and that the quality perception is positively correlated with rapidness for all the customers. This is not true for the transportation industry. As mentioned during the critical incident approach, there are some customers who consider rapidness to be more important than others who may privilege security, i.e., "trip rapid" is positively correlated with quality until a certain point and this point is different from customer to customer. This point can be called the "*break-even-point*" of the item.

In order to have a feature well measured, an item must be able to discriminate, i.e., must load heavily in one, and only one factor. This does not happen with item 18 ("Transportation firms should give customers **individual attention**"). This item loads on trust dimension (with .51) and loads on factor 1 (readiness/reliability) with .45. Moreover, Item 18 could not be considered because there is some bad interpretation of the individual service attention. Some respondents consider individual attention as a bad aspect of the service and some respondents as a good aspect of it. During the critical incident approach some customers said: "I do not like individual attention because there are discernment. Some customers are better served than me."

This conclusion is based on two facts:

- in the critical incident approach some respondents mentioned some customers' treatment discrimination;
- in the expectations score, this is the item with the highest percentage of answers "1" and "2" ("Strongly disagrees" and "Disagree").

Solomon, Surprenant, Czepiel, and Gutman (1985) refer that it may be postulated that satisfaction is positively related to predictability for low involvement services, and positively related to flexibility/individualization in the case of high involvement services. The point to stress here is that greater individualization of services does not necessarily result in a more positive service experience. Instead the subjective outcome depends upon the unique demands of the situation.

There are three indications that the *Resende* service quality is good or, at least, "positive":

1. Respondents in the critical incident approach mentioned that they were generally satisfied with the service;
2. The perception evaluation mean by item are mainly "positive", and the mean of these means is 3.456;
3. The mean of the OQ (Overall Quality evaluation question) is 3.464.

However, the QUAL evaluation indicates that the *Resende* service quality is "negative" (-.830).

The discrepancy between these results means that the QUAL score must be changed, that is, the zero of the scale must be lower (go left); in other words, the difference Perception minus Expectation scores must be added by one or two points.

The application of regression analysis in order to find the items that best explain the OQ (Overall Quality evaluation) reveals that these items are different as the regression is based on EXPECT, PERC or QUAL items. Moreover, the dimensions are different if the factor analysis is done on EXPECT, PERC or QUAL items.

Another important aspect is that the factorial analysis is very unstable. The results are very different when some items are taken off. The items are very related internally one to each other, so, with a little change they do new groups (factors).

A check of appendix 12 (Correlation between dimensions 1 to 5, overall quality perception, and willingness to recommend) indicates several of the dimensions are correlated, which is not surprising as a certain amount of overlap among the dimensions would be expected. Too much interrelation of the independent measures can affect the relative explanatory contribution of the dependent measure because the beta may be over- or underestimated. Accordingly, the importance of the individual dimensions must be interpreted with care.

The percentage of variance explained by each dimension is high for the first one - Readiness/Reliability-, but it is very little (less than 6%) for the others.

Comfort and trust dimensions affect heavily the customers' overall quality perception and their willingness to recommend the firm to a friend.

7. CONCLUSIONS

This chapter describes the conclusions of this investigation, some fields for future research, and final comments.

7.1. CONCLUSIONS

The present investigation supports evidence that the **additive logic can not be used**. Therefore, the global quality perception is not the sum of all the pieces. Some factors link to features not directly perceivable. For instance, the security dimension connects psychologically with other features as employees knowledge. The instability of the factor analysis confirms that the items and, therefore, the dimensions are very interactive. This interaction would appear to support that the additive logic is not true.

The discussion done in the previous chapter about the possibility of not including item 18 ("customers individual attention"), and about the influence of the adjectives used in the questionnaire means that **SERVQUAL is not general for all the services**. So, its application needs some precautions. This conclusion is strongly supported for the new dimensions result of the modified SERVQUAL developed. There is one specific dimension, comfort, that is very important for transportation, but it is not general for all services.

Parasuraman, Zeithaml, and Berry could have done a statistical conclusion mistake saying that SERVQUAL is general for quantifying any service quality industry. This conclusion is based on the readings done about service quality, on the statistical calculations done and, generally, based on all the investigation. They started with many items and purified them successively until getting 22 items organized in 5 dimensions. This purification process based always on the same service business and without tests in other service industrys can only give good final statistical results. These results, based in four diversified service businesses, make them to think that SERVQUAL items are general for any service industry.

They started with 10 dimensions, and reduced them to the final 5 dimensions. This number of dimension reduction with more global definition for each one, can make them of more general application. However, these dimensions can not fit very well for some particular situation. For instance, they merge "Security" in "Assurance" but in transportation service the "Security" is fundamental, and there are other dimensions as "Comfort".

Moreover, Parasuraman, Zeithaml, and Berry never analyzed the effect of a service change on customer perceptions and attitudes about service quality, neither the effect of the cross-cultural differences.

For each particular service business there are specific quality items, and their importance is not constant over time. It is a function of the service level development and the company and brand development.

For instance, if all the bus companies are seen as equally good at a specific dimension (e.g., security), the customer thinks about this factor as a given fact. In this situation, the customer would not give much importance to that dimension (security). When security is not completely satisfied, then it would become highly correlated with the overall quality evaluation, that is, it would be very important and a service rejection cause (mainly if there are competitors better in this dimension - security).

This is an extreme: when dimensions completely satisfy the customer, he thinks about them as a given fact and does not give importance to them. Other extreme: dimensions that the customer is not used to (e.g., augmented service) and are not sensed as important. In the middle are the most important dimensions. The problem is that any dimension in an extreme can become so, or more, important than any one in the middle. It is a function of the service level development and/or the company and brand development. This is one reason for the need of frequent service quality measurement. In sum, the kind of dimensions and their relative importance are situation and time-specific.

The examination of SERVQUAL instrument has identified a number of concerns and shortcomings: the problems associated with using a combination of positively and negatively worded scale items, and the scale of the quality measurement. While none of these problems serves to invalidate the results of the application of the scale, they do have an effect upon some interpretations that may be drawn.

Accurate measures of customer perceptions of service quality make it possible to estimate the relative impact of how the execution of each service act affects customer assessment of the overall quality of the service experience, behavioral intention to use the service again when needed, and **willingness to recommend**.

Substantial evidence is now available that customers' perceptions of service quality performance of specific acts are very predictive of their overall satisfactions and willingness to use the service again, if needed.

From the results it can be concluded that *Resende* and the others inter-city bus companies must pay attention to the *TRUST* and *COMFORT* dimensions. Some characteristics are not relevant to inter-city bus industry. For instance, confidentiality of personnel records can be very important for the bank industry but not for bus. Other factors, as Readiness/Reliability, Security, and Access, were not significant. The reason is that these factors are not critical to the perception of service quality. Remember that the SERVQUAL instrument is applied to current or past customers of a service, that is, customers that are used to the service. The factors relevant to inter-city bus can be separate in three groups:

- 1- Factors presented in all the competitors bus companies;
- 2- Factors presented in various degrees in each company, and;
- 3- Factors not presented in any company.

Current customers of a service sense these different groups. Factors presented in various degrees in each company are more critical to the perception of service quality, and the customer feel them as very important. Factors presented in all the companies or not presented in any one are the less important to the customer perception of service quality. This is the reason that can explain why only some factors are significant to the service quality perception.

This study seem to indicate that there are some dimensions specific for each service industry, and some of them are very important to the customers' perceptions of service quality, and to their willingness to recommend the firm to their friends. Each service industry must be studied in order to find the factors that are specific to it, and to determine the most important dimensions to the customer perception of service quality, and willingness to recommend the firm.

The factorial analysis instability, the discrepancy between results when the computation is based on EXPECT, PERC or QUAL items, and some other aspects mentioned on the discussion chapter, support the evidence that the SERVQUAL instrument is not so general as it is mentioned by Parasuraman, Zeithaml, and Berry. The present investigations main conclusion is that SERVQUAL is a good starting base for a questionnaire to quantify service quality, but it is neither of general nor of direct application. SERVQUAL needs some adjustments to fit each particular situation. Therefore, service quality needs more research.

7.2. FUTURE RESEARCH

Service quality investigation is starting the first steps, so there are many fields for future research. This chapter presents the most critical ones and the investigation fields that are directly connected with this study.

Before accepting SERVQUAL or any other instrument as a valid generic measure of perceived service quality that can be used in any service situation, **more replication and testing are needed.**

It is not entirely clear from the original Parasuraman, Zeithaml, and Berry work whether the conceptualization of service quality in the instrument was focused on the last experience a consumer could recall or on a more enduring feeling about the excellence of the service. Much work still needs to be done to clarify the differences between satisfaction and the more enduring attitude and their relationship to service quality.

The **scale**, as presently constructed, has several inadequacies. It does not take into account any relationship that may exist between the levels of expectations and performance and the cost of that service. It makes difficult the capturing of the influence of situation factors. Such factors may strongly condition expectations concerning what level of service is possible or appropriate. The scale also does not adequately include service-specific factors and, as such, do not lend themselves to inclusion in a generic type of measure.

Furthermore, the relative ranking of the dimensions as perceived by customers might change in the future. This study does not contribute to determine what is the two dimensional relations (*"plan"*) that does the relation between the dimensions and the general service quality evaluation over time, that is, depending from the actual service quality. Future research can be done to determine the relation between the dimensions and the general service quality evaluation under different state of service quality, and trying to determine what is the *"plan"* that does the relation between the dimensions and the general service quality evaluation over time, that is, depending on the actual service quality.

However, the author thinks that it is more precise to determine the single relation between the dimensions and the general service quality perception.

In the extended service quality model developed, the gap between customers' expectations and perceptions of service quality (Gap 5), and the gap between service delivered and perceived service (Gap 6) result from the four gaps on the organization's side of the model.

This model can be used as a framework for understanding and researching service quality in organizations. Particularly, it can help to answer critical questions, about service quality at inter-city bus travel, such as the following: (1) What are the reasons for gap 5 in inter-city bus travel? (2) Which of the four service-quality gaps is (are) most critical in explaining service-quality variation? (3) What are the main organizational factors responsible for the size of each of the four service-quality gaps?

Research needs to be done focusing in the provider's side of the gap's model, validating and quantifying the four gaps of Parasuraman, Zeithaml, and Berry and the sixth gap of the extended model. Research is needed to quantify each of the keys conceptual factors that are described to contribute to each of the 1-to-4 gaps (as illustrated in figure 4, page 36), and analyzing, defining, and quantifying the key conceptual factors affecting the size of gap 6 (figure 6, page 41). There is also need to quantify gap 6 on each of the service quality dimensions.

Other interesting fields for future research are:

- a) Analyze other kind of transportation, the relative importance of service quality dimensions, and to do a comparison between results.
- b) The impact of service problems on the quality perceptions. How does a recent service problem experience by a customer influence his/her perceptions of quality? and, What is the improvement of service quality perceptions due to a satisfactory resolution of service problems?
- c) As mentioned in the discussion chapter, the zero of the QUAL scale must be lower (go left), in other words, the difference Perception minus Expectation scores must be added by one or two points. This statistical study is another field for future research.
- d) The influence of the kind and strength of the adjectives used in the questionnaire statements on the respondent perspective.

e) The *"break-even-point"* of some items. For instance, the "trip rapid" is positively correlated with quality until a certain point after which the security is more important than the rapid. The maximum quality is at the item *"break-even-point"*.

f) Temporal changes in individual attitudes and develop a longitudinal model of the effect of a service change on customer perceptions and attitudes about service quality.

g) The effect of the cross-cultural differences.

h) Develop one model to weigh up some items to forecast the overall quality. If only a few items are necessary, the frequent quality measure is easier, and the model will be more helpful.

i) The influence and management of expectations. What is the relationship between expectations and past-experience? How do the experience influence expectations? Does a "negative" quality past-experience low the expectations, so followed by a normal quality transaction give a high quality evaluation?

j) What is the relation between expectations and importance of each dimension?

From the critical incident approach done in this investigation, it can be said that would be interesting to evaluate the importance to the customer and the influence in the overall service quality evaluation of:

- good and clean toilette in the ticket office and in busses;
- good movies and other amusements and pastime in busses;
- increment the buying ticket waiting line respect with waiting numbers;
- descartable head back;
- two kind of services with two prices;
- time-table and other communication increments;
- public telephone at the ticket office;
- number and place of stops;
- baggage keeping at the ticket office;
- tickets' reservation without previous confirmation and payment.

Features like the described can improve considerably the overall quality evaluation and make it better than the competition. The last two features can be crucial in the customers' decision process of bus company choice.

The methodology used does not evaluate nor quantify the possibility and the contribution of an **augmented service** to the quality perception. Hensher (1990) developed a model capable of predicting an index of relative satisfaction or dissatisfaction for public bus services in New South Wales, Australia. Specifically, in inter-city bus service would be interesting to investigate the following situation: when the overall service quality is good or is as good as the competition, what would be the advantage (or the difference) of a service augmentation in the quality.

7.3. FINAL COMMENTS

The present research represents a first effort to assess the relevance and usefulness of one general scale designed to measure levels of service quality in transportation industry. The results of this effort demonstrate the usefulness of the SERVQUAL approach, but they also identified several apparent problems that needed to be addressed if the scale is to gain wider acceptance.

From a managerial point of view, the research done identifies key factors that influence bus perceptions. By focusing on the individual items comprising the factors and adding to those items where relevant, bus administrators can generate a checklist of dimensions useful for training as well as for managing bus operations. Replication of the research by the same or a similar approach ultimately will produce a sounder knowledge of the bus service components that will enhance bus perceptions of the service.

The challenge of providing a high-quality service becomes less difficult when firms know what their customers expect from a service and what they feel important for quality. Identifying the dimensions that are most important indicates the direction that management should take in investigating its efforts and resources to increase the probability of customers' experiencing a positive psychological outcome from the service. Given the centrality of service quality to the mission of travel services, research towards a better understanding of the nature of service quality should be a primary concern. To the best of our knowledge, work in this area has not been reported in the travel literature. It is hoped that the initial research effort reported here will stimulate interest among others to invest research effort in this area, and stimulate Portuguese interest to investigate service quality field.

The service quality determinants and their relative importance have important consequences for both research and management.

Issues such as the identified in this investigation and others must be addressed by the continuing evolution of the SERVQUAL instrument. Despite some concerns, it is important to emphasize that SERVQUAL has made an important and valuable contribution to the area of perceived service quality measurement. While the problems and limitations of the instrument do not invalidate its usefulness, care must be taken in the interpretation of the results derived from its present formulation. Hopefully, the

findings of this study will contribute to the continuing enhancement of the SERVQUAL approach in particular and to an overall understanding of service quality in general.

REFERENCES AND APPENDIX

REFERENCES

Bateson, John E. G. (1985), "Researching the Service Consumer," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 60-62.

Berry, Leonard L., and A. Parasuraman (1991), *Marketing Services: Competing Through Quality*. New York: Free Press.

Berry, Dick (1983), *Managing Service for Results*, Instrument Society of America.

Bitner, Mary Jo, Jody D. Nyquist, and Bernard H. Booms (1985), "The Critical Incident as a Technique For Analyzing the Service Encounter," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 48-51.

Bitner, Mary Jo, Bernard H. Booms, and Mary Stanfield Tetreault (1990), "The Service Encounter: Diagnosing Favourable and Unfavorable Incidents," *Journal of Marketing*, 54 (1), 71-84.

Bitner, Mary Jo (1990), "Evaluating Service Encounters: The Effects of Physical Surrounding and Employee Responses," *Journal of Marketing*, 54 (2), 69-82.

Blackman, Barry A. (1986), "Making a Service More Tangible Can Make It More Manageable," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 291-302.

Bojanic, David C. (1991), "Quality Measurement in Professional Services Firms," *Journal of Professional Services Marketing*, 7 (2), 27-36.

Bolton, Ruth N., and James H. Drew (1991), "A Longitudinal Analysis of the Impact of Service Changes on Customer Attitudes," *Journal of Marketing*, 55 (1), 1-9

Booms, Bernard H. and Mary J. Bitner (1981), "Marketing Strategies and Organizations Structures for Service Firms," in James H. Donnelly and William R. George, eds., *Marketing of Services*, Chicago: American Marketing Association, 47-51.

Brown, Stephen W., and Teresa A. Swartz (1989), "A Gap Analysis of Professional Service Quality," *Journal of Marketing*, 53 (April), 92-98.

Caldwell, Bernice (1989), "Health Lawyers Probe the Cost and Quality Nexus", *Employee Benefit Plan Review*, 44 (2), 30-31.

Carman, James M. (1990), "Consumer Perceptions of Service Quality: An Assessment of the SERVQUAL Dimensions", *Journal of Retailing*, 66 (1), 33-55.

Castro, Fernando (1989), "Gestão da Qualidade: Uma Experiência na Hotelaria e Restauração," *Congresso Nacional da Qualidade das Indústrias de Serviços e dos Serviços das Indústrias*, Maio.

Chase, Richard B., and Robert H. Hayes (1991), "Beefing Up Operations in Service Firms", *Sloan Management Review*, Fall, 15-26.

Churchill, Jr. Gilbert A., and Carol Surprenant (1982), "An Investigation Into the Determinants of Customer Satisfaction", *Journal of Marketing Research*, 19 (November), 491-504.

Clist, Todd (1985), "Marriott Philosophies," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 13-14.

Cobra, Marcos, and Flávio A. Zwarg (1989), *Marketing de Serviços: Conceitos e Estratégias*, McGraw-Hill.

Cowell, Donald (1989), *The Marketing of Services*, Heisemenn Professional Publishing.

Crompton, John L. and Kelly J. Mackay (1989), "Users' Perceptions of the Relative Importance of Service Quality Dimensions in Selected Public Recreations Programs," *Leisure Sciences*, 11, 367-375.

Cronin, Jr. J. Joseph, and Steven A. Taylor (1992), "Measuring Service Quality: A Reexamination and Extension," *Journal of Marketing*, 56 (July), 55-68.

Crosby, Philip B. (1979), *Quality is Free: The Art of Making Quality Certain*, McGraw-Hill Book Co.

Crosby, W. E. (1985), "American Airlines - A Commitment to Excellence," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 10-12.

Curry, David J., and David J. Faulds (1985), "The Measurement of Quality Competition in Strategic Groups," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 269-294.

Czepiel, John A., Michael R. Solomon, Carol F. Surprenant, and Evelyn G. Gutman (1986), "Service Encounters: An Overview," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 3-15.

Daniel, A. Lynn (1992), "Overcome the Barriers to Superior Customer Service," *The Journal of Business Strategy*, January/February, 18-24.

Davidow, William H., and Bro Uttal (1989), "Service Companies: Focus or Falter - Without a Strategy, You Don't Know Who Your Customers Are," *Harvard Business Review*, July-August, 77-85.

Davies, Duane, and Gordon Paul (1987), "Identifying Components of Service Quality: The Case of Health and Fitness Industry," Unpublished Working Paper. Department of Marketing, University of Central Florida.

Evelyn, John J., and Neil J. DeCarlo (1992), "Customer Focus Helps Utility See The Light," *The Journal of Business Strategy*, January/February, 8-12.

Ferreira, Maria da Conceição Lobão, and Paulo J. Gonçalves de Andrade (1989), "Como Avaliar a Qualidade em Serviços?," *Congresso Nacional da Qualidade das Indústrias de Serviços e dos Serviços das Indústrias*, Maio.

Fick, Gavin R., and J. R. Brent Ritchie (1991), "Measuring Service Quality in the Travel and Tourism Industry", *Journal of Travel Research*, 30 (2), 2-9.

Fiebelkorn, Sandra L. (1986), "Retail Service Encounter Satisfaction: Model and Measurement," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 181-194.

Ganhão, Fernando Nogueira (1991), *A Qualidade Total*. APQ (Associação portuguesa para a Qualidade).

Gronroos, Christian (1982), "Service Quality and the Consumer Relation of Service Firms and Institutions," in Christian Gronroos, eds., *Strategic Management and Marketing in the Service Sector*, 20-35.

Gutman, Jonathan, and Scott D. Alden (1985), "Adolescents' Cognitive Structures of Retail Stores and Fashion Consumption: A Means-End Chain Analysis of Quality," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 99-114.

Hart, Christopher W. L. (1988), "The Power of Unconditional Service Guarantees: No-quibble Guarantees Are Self-fulfilling - They Promise Quality and Produce It," *Harvard Business Review*, July-August, 54-62.

Hart, Christopher W. L., James L. Heskett, and W. Earl Sasser, Jr. (1990), "The Profitable Art of Service Recovery: How the Best Companies Turn Complaining Customers Into Loyal Ones," *Harvard Business Review*, July-August, 148-156.

Hauser, John R., and Don Clausing (1988), "The House of Quality: Design is a Team Effort, But How Do Marketing and Engineering Talk to Each Other?," *Harvard Business Review*, May-June, 63-73.

Hayes, Bob E. (1992), *Measuring Customer Satisfaction: Development and Use of Questionnaires*, ASQC Quality Press.

Hensher, David A. (1990), "Hierarchical Stated Response Designs - An Application to Bus User Preferences," *Logistics & Transportation Review (Canada)*, 26 (4), 299-321.

Holbrook, Morris B. and Kim P. Corfman (1985), "Quality and Value in the Consumption Experience: Phaedrus Rides Again," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 31-57.

Instituto Nacional de Estatística (1991), "Estatísticas dos Transportes e Comunicações", INE.

Ishikawa, Kaoru (1985), *What Is Total Quality Control? The Japanese Way*, ASQC Quality Press, Prentice-Hall, Inc.

Júnior, António de Almeida (1989), "A Qualidade em Serviços: Também Aqui, Ela Matal," *Congresso Nacional da Qualidade das Indústrias de Serviços e dos Serviços das Indústrias*, Maio.

Kanter, Rosabeth Moss (1991), "Service Quality: You Get What You Pay For," *Harvard Business Review*, September-October, 8-9.

Kennedy, David A., and Barbara J. Young (1989), "Managing Quality in Staff Areas", *Quality Progress*, 22 (10), 87-91.

Kierl, Charles, and Paul Mitchell (1990), "How to Measure Industrial Service Quality," *Industrial Marketing Digest (UK)*, 15 (1), 35-46.

Klaus, Peter G. (1986), "Quality Epiphenomenon: The Conceptual Understanding of Quality in Face-to-Face Service Encounters," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 17-33.

Langevin, Roger G. (1988), "Service Quality: Essential Ingredients," *Review of Business*, 9 (3), 3-5.

Lehtinen, Uolevi, Jarmo R. Lehtinen (1991), "Two Approaches to Service Quality Dimensions", *Services Industries Journal*, 11 (3), 287-303.

Lewis, Barbara R. (1989), "Quality in the Service Sector: A Review," *International Jrnal of Bank Marketing (UK)*, 7 (5), 4-12.

Lewis, Barbara R. and Vincent W. Mitchell (1990), "Defining and Measuring the Quality of Customer Service", *Marketing Intelligence & Planning (UK)*, 8 (6), 11-17.

Lovelock, Christopher H. (1984), *Services Marketing*, Englewood Cliffs, NJ: Prentice Hall.

Lovelock, Christopher H. (1991), *Services Marketing*, Englewood Cliffs, NJ: Prentice Hall.

Mangold, W. Glynn, and Emin Babakus (1991), "Service Quality: The Front-Stage vs. the Back-Stage Perspective," *Journal of Services Marketing*, 5 (4), 59-70.

Maynes, E. Scott (1985), "Quality as a Normative Concept: A Consumer Economist's Views," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 193-206.

Ministério das Obras Públicas Transportes e Comunicações- Gabinete de Estudos e Planeamento (1990) "O Sector dos Transportes em Portugal (Continente)", *Ministério das Obras Públicas Transportes e Comunicações*.

Miller, Thomas O. (1992), "A Customer's Definition of Quality," *The Journal of Business Strategy*, January/February, 4-7.

Monroe, Kent B., and R. Krishnan (1985), "The Effect of Price on Subjective Product Evaluations," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 209-232.

Morais, José (1991), "Consultadoria na Qualidade em Serviços," *2º Congresso da Qualidade em Serviços*, Maio.

Morgan, Leonard A. (1985), "The Importance of Quality," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 61-64.

Nyquist, Jody D., Mary J. Bitner and Bernard H. Booms (1986), "Identifying Communication Difficulties in the Service Encounter: A Critical Incident Approach," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 195-212.

Olshavsky, Richard W. (1985), "Perceived Quality in Consumer Decision Making: An Integrated Theoretical Perspective," in Jacob Jacoby and Jerry C. Olson, eds., *Perceived Quality: How Consumers View Stores and Merchandise*, Lexington, MA: Lexington Books, 3-30.

Parasuraman, A., Valerie Zeithaml, and Leonard Berry (1985), "A Conceptual Model of Service Quality and its Implications for Future Research," *Journal of Marketing*, 49 (Fall), 41-50.

Parasuraman, A., Valerie Zeithaml, and Leonard Berry (1986), "SERVQUAL: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality," Marketing Science Institute, Cambridge, Massachusetts.

Parasuraman, A., Valerie A. Zeithaml, and Leonard Berry (1988), "SERVQUAL: A Multiple-Item Scale for Measuring Customer Perceptions of Service Quality," *Journal of Retailing*, 64 (Spring), 12-40.

Pereira, Carlos Jordão (1989), "Liderança Através da Qualidade: Processo de Implantação numa Empresa de Serviços," *Congresso Nacional da Qualidade das Indústrias de Serviços e dos Serviços das Indústrias*, Maio.

Pires, Ramos (1991), "Sistema de Gestão da Qualidade, Caminho para a Qualidade Total," *2º Congresso da Qualidade em Serviços*, Maio.

Quinlan, Michael R. (1991), "How Does Service Drive the Service Company? Success in Services Means More Than Just Pleasing the Customer," *Harvard Business Review*, November-December, 146-156.

Reichheld, Frederick F., and W. Earl Sasser, Jr. (1990), "Zero Defections: Quality Comes to Services," *Harvard Business Review*, September-October, 105-111.

Reidenbach, R. Eric, and Beverly Sandifer-Smallwood (1990), "Exploring Perceptions of Hospital Operations by a Modified SERVQUAL Approach," *Jrnl of Health Care Marketing*, 10 (4), 47-55.

Rose, Frank (1991), "Now Quality Means Service Too," *Fortune*, April 22, 97-108.

Rudie, Mary J., and H. Brant Wansley (1985), "The Merrill Lynch Quality Program," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 7-9.

Saleh, Farouk, and Chris Ryan (1991), "Analysing Service Quality in the Hospitality Industry Using the SERVQUAL Model," *Service Industries Journal*, 11(3), 324-345.

Schlissel, Martin R. (1986), "The Consumer of Household Services in the Marketplace: An Empirical Study," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 303-319.

Schmalensee, Diane H., Kenneth Bernhardt, and Nancy Gust (1985), "Keys to Successful Service Marketing: Customer Orientation, Creed; Consistency," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 15-18.

Schrambach, Gérard (1991), "La Mesure de la Qualité Dans les Sociétés de Service", *La Revue Banque*, 512 (Janvier), 20-22.

Shostack, G. Lynn (1986), "Planning the Service Encounter," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 243-253.

Shycon, Harvey N. (1992), "Improving Customer Service: Measuring the Payoff," *The Journal of Business Strategy*, January/February, 13-17.

Solomon, Michael R., Carol F. Surprenant, John A. Czepiel, and Evelyn G. Gutman (1985), "A Role Theory Perspective on Dyadic Interactions: The Service Encounter," *Journal of Marketing*, 49 (Winter), 99-111.

Surprenant, Carol F., and Michael R. Solomon (1985), "Dimensions of Personalization," in Thomas M. Bloch, Gregory D. Upah, and Valerie A. Zeithaml, eds., *Services Marketing in a Changing Environment*, Chicago: American Marketing Association, 56-59.

Tomé, João Boléo (1991), *Portugal e a Europa no Mercado Mundial da Qualidade*. APQ (Associação portuguesa para a Qualidade).

Tse, David K., and Peter C. Wilton (1988), "Models of Consumer Satisfaction Formation: An Extension," *Journal of Marketing Research*, 25 (May), 204-212.

Upah, Gregory D., and James W. Fulton (1986), "Situation Creation in Service Marketing," in John A. Czepiel, Michael R. Solomon, and Carol F. Surprenant, eds., *The Service Encounter: Managing Employee/Customer Interaction in Service Businesses*, Lexington, MA: Lexington Books, 255-563.

Watson, Charles E. (1992), "The Meaning of Service in Business," *Business Horizons*, January/February, 55-61.

Wong, Su Mon, and Chad Perry (1991), "Customer Service Strategies in Financial Retailing", *International Journal of Bank Marketing*, 9 (3), 11-16.

Woodside, Arch G. (1991), "What Is Quality and How Much Does It Really Matter?", *Journal of Health Care Marketing*, 11 (4), 61-67.

Zeithaml, Valerie A. (1981), "How Consumer Evaluation Processes Differ Between Goods and Services," in James H. Donnelly and William R. George, eds., *Marketing of Services*, Chicago: American Marketing Association, 186-190.

Zeithaml, Valerie A., A. Parasuraman, and Leonard L. Berry (1990), *Delivering Quality Service: Balancing Customers Perceptions and Expectations*. New York: Free Press.

APPENDIX 1. CHARACTERISTICS DESCRIBED AS CRITICAL INCIDENTS

The characteristics described as critical incidents were the following (by quantity of references):

-Comfort, with about 20% of all critical incidents:

- Air conditioning and temperature
- Comfort in general
- Area for smokers
- Seat space
- Food and drinks
- Others

-Tangible, about 20%:

- Cleanness
- Up-to-date equipment
- Food and drink
- Movies
- Others

-Reliability, about 19%:

- Two tickets for the same place
- Schedule
- Movies
- Book-seats
- Toilette
- Sell food and drink
- Others

-Responsiveness, about 7%:

- Readiness
- Baggage packaging promptness and readiness
- Sell food and drink
- Sell tickets

-Security, about 6%:

-Passengers' security during the trip

-Baggage packaging security

-Access, about 6%:

-Schedule variety

-Competence, about 4%:

-Professionalism

-Speak foreign languages

-Courtesy, about 4%:

-Respect and friendliness

-Understanding/knowing the customer, about 1%:

-Problems resolution

-Caring attention to customers

-Customers' discrimination

-New pastime, about 4%:

-Music

-Video

-Newspapers and magazines

-Others

-Other new product and services, about 3%:

-Sell other products (food variety and cigarettes) during the trip

-Baggage keeping at the ticket office

-Front window curtain

-Others

-Others, not relevant to the study, about 6%.

APPENDIX 2. TRANSPORTATION SERVICE QUALITY ITEMS BY QUALITY DIMENSION

TANGIBLE

Busses should be up-to-date
Busses should be beautiful
Employees should be well dressed and appear neat
Physical facilities should be keeping well clean

RELIABILITY

Time-table for start a trip should be held
When customers have problems, these firms should be sympathetic and reassuring
These firms should be dependable
Arrived time-table should be held
These firms should keep places records accurately

RESPONSIVENESS

Customers should expect prompt service from employees to pack the luggage and to show the customers their seats
Employees always have to be willing to help customers
Employees should try to respond to customers requests promptly
Customers should buy tickets without delay
Trips should be rapid

SECURITY

Customers should feel secure traveling in the busses
Customers should be able to trust these firms' employees
Customers should be able to feel safe with the baggage packing and treatment
Drivers should drive in a pleasant and safe manner

COMPETENCE

Employees should be knowledgeable
Employees should get adequate support from the firms to do their jobs well

COURTESY

Employees should be polite
Ticket office employees should be very friendly
Bus hostess should be very friendly

UNDERSTANDING/KNOWING THE CUSTOMER

The transportation firms should give customers individual attention
Employees should give customers personal attention
Employees should know what are the needs of their customers
The firms should have their customers' best interest at heart

ACCESS

They should have schedules convenient to all their customers
It is to be expected that these firms' telephone lines will be busy much of the time (a)
Ticket office should be located at an easy access place

COMFORT

Busses should be very comfortable
Busses should have an agreeable temperature
Busses should have a distinct area for smokers
It should there be several kind of food selling during the trip
Busses should have roomy seats

(a) Item which reflect a bad aspect of the service

ENDIX 3. TRANSPORTATION SERVICE QUALITY SURVEY

TRANSPORTATION SERVICE QUALITY SURVEY

This survey deals with your opinions of transportation services. Please show the level to which you think firms offering transportation services should possess the features described by each statement. Do this by picking one of the five numbers to each statement. If you strongly agree that these firms should possess a feature, circle the number 5. If you strongly disagree that these firms should possess a feature, circle 1. If your feelings are not strong, circle one of the numbers in the middle. There are no right or wrong answers. Your identification is necessary.

Thank you for taking time to answer the following survey.

The example below indicates an answer with 3, which means one neutral opinion:

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Example: Busses should be big	1	2	3	4	5

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
They should have schedules convenient to all their customers	1	2	3	4	5
Drivers should drive in a pleasant and safe manner	1	2	3	4	5
The firms should have their customers' best interest at heart	1	2	3	4	5
Customers should be able to trust these firms' employees	1	2	3	4	5

Employees should get adequate support from the firms to do their jobs well	1	2	3	4	5
Busses should be beautiful	1	2	3	4	5
These firms should be dependable	1	2	3	4	5
It should there be several kind of food selling during the trip	1	2	3	4	5
Employees should be well dressed and appear neat	1	2	3	4	5
It is to be expected that these firms' telephone lines will be busy much of the time	1	2	3	4	5
Employees should know what are the needs of their customers	1	2	3	4	5
Busses should be very comfortable	1	2	3	4	5
Customers should expect prompt service from employees to pack the luggage and to show the customers their seats	1	2	3	4	5
Customers should be able to feel safe with the baggage packing and treatment	1	2	3	4	5
Bus hostess should be very friendly	1	2	3	4	5
These firms should keep places records accurately	1	2	3	4	5
Arrived time-table should be held	1	2	3	4	5

The transportation firms should give customers individual attention	1	2	3	4	5
Customers should feel secure traveling in the busses	1	2	3	4	5
Employees should be knowledgeable	1	2	3	4	5
Time-table for start a trip should be held	1	2	3	4	5
Busses should have roomy seats	1	2	3	4	5
When customers have problems, these firms should be sympathetic and reassuring	1	2	3	4	5
Employees always have to be willing to help customers	1	2	3	4	5
Physical facilities should be keeping well clean	1	2	3	4	5
Customers should buy tickets without delay	1	2	3	4	5
Trips should be rapid	1	2	3	4	5
Employees should give customers personal attention	1	2	3	4	5
Ticket office employees should be very friendly	1	2	3	4	5
Employees should try to respond to customers requests promptly	1	2	3	4	5
Busses should have a distinct area for smokers	1	2	3	4	5

Employees should be polite	1	2	3	4	5
Ticket office should be located at an easy access place	1	2	3	4	5
Busses should have an agreeable temperature	1	2	3	4	5
Busses should be up-to-date	1	2	3	4	5

RESENDE SERVICE QUALITY SURVEY

survey deals with your opinions of Resende services. Please show the extent to which you believe Resende has the feature described by each statement. Do these on the survey above.

	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
Resende schedules are convenient to all their customers	1	2	3	4	5
Drivers drive in a pleasant and safe manner	1	2	3	4	5
Resende has their customers' best interest at heart	1	2	3	4	5
Customers trust Resende's employees	1	2	3	4	5
Employees get adequate support from Resende to do their jobs well	1	2	3	4	5
Resende busses are beautiful	1	2	3	4	5
Resende is dependable	1	2	3	4	5
There are several kind of food selling during the trip	1	2	3	4	5
Employees are well dressed and appear neat	1	2	3	4	5
Resende's telephone lines are busy much of the time	1	2	3	4	5

Employees know what are the needs of their customers	1	2	3	4	5
Busses are very comfortable	1	2	3	4	5
Customers receive prompt service from employees to pack the luggage and to show them their seats	1	2	3	4	5
Customers feel safe with Resende baggage packing and treatment	1	2	3	4	5
Bus hostess are very friendly	1	2	3	4	5
Resende keep places records accurately	1	2	3	4	5
Arrived time-table is held	1	2	3	4	5
Resende give customers individual attention	1	2	3	4	5
Customers feel secure traveling in the Resende busses	1	2	3	4	5
Employees are knowledgeable	1	2	3	4	5
Time-table for start a trip is held	1	2	3	4	5
Busses have roomy seats	1	2	3	4	5
When customers have problems, Resende is sympathetic and reassuring	1	2	3	4	5
Employees always are willing to help customers	1	2	3	4	5

Physical facilities are kept well clean	1	2	3	4	5
Customers can buy tickets without delay	1	2	3	4	5
Trips are rapid	1	2	3	4	5
Employees give customers personal attention	1	2	3	4	5
Ticket office employees are very friendly	1	2	3	4	5
Employees respond to customers requests promptly	1	2	3	4	5
Busses have a distinct area for smokers	1	2	3	4	5
Employees are polite	1	2	3	4	5
Ticket office is located at an easy access place	1	2	3	4	5
Busses have an agreeable temperature	1	2	3	4	5
Resende has up-to-date busses	1	2	3	4	5

Items which reflect a bad aspect of the service

Mark in the answer adequate to your case:

How would you rate the overall quality of Resende:

very fair ___ fair ___ average ___ good ___ great ___

Would you recommend Resende to a friend:

never ___ not ___ possibly ___ yes ___ always ___

Have you ever recommended Resende to other people? Yes ___ Not ___

Approximate number of times you have ever travel in Resende:

less than 10 ___ more than 10 ___

How would you rate the overall quality of Caima:

very fair ___ fair ___ average ___ good ___ great ___

How would you rate the overall quality of Frota Azul:

very fair ___ fair ___ average ___ good ___ great ___

How would you rate the overall quality of Renex:

very fair ___ fair ___ average ___ good ___ great ___

Please answer the following:

Sex: Male ___ Female ___

Age: until 18 ___ 19-29 ___ 30-39 ___

40-49 ___ 50 - over ___

Occupation: Professional ___ Sales ___

Manager or Administrator ___ Student ___

Secretary ___ Skilled ___

Teacher ___ Military ___

Laborer ___ Other _____

dies:

4^a class ____

6^a class ____

Secondary school ____

High level ____

suggestions or critics:

Thank you very much for your precious collaboration.

INQUÉRITO SOBRE A QUALIDADE DO SERVIÇO DE TRANSPORTES

O objectivo deste inquérito é conhecer as suas opiniões sobre a qualidade do serviço de transportes. Para isso, pedimos-lhe que nos dê a sua opinião sobre um dos aspectos indicados, escolhendo um dos números 1 a 5. Se concordar fortemente atribua a classificação 5 e se discordar fortemente atribua a classificação 1. Para graus intermédios utilize as restantes classificações. Marque um círculo à volta do número que escolher. Não há respostas certas ou erradas. A sua identificação não é necessária.

Se já lhe agradecemos a atenção dispensada a este inquérito.

O exemplo seguinte mostra uma resposta com a classificação 3, que representa uma opinião neutra:

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
Exemplo: As camionetas devem ser grandes	1	2	3	4	5

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
de esperar que as empresas tenham horários convenientes para todos os seus clientes	1	2	3	4	5
Os condutores devem ter uma condução agradável e segura	1	2	3	4	5
de esperar que as empresas tenham os interesses dos seus clientes na melhor atenção	1	2	3	4	5
Os empregados devem inspirar confiança aos clientes	1	2	3	4	5

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
--	---------------------	----------	--------	----------	---------------------

Os empregados devem ter o suporte adequado para fazer o seu trabalho bem feito	1	2	3	4	5
As camionetas devem ser bonitas	1	2	3	4	5
As empresas devem inspirar confiança	1	2	3	4	5
Deve haver diversos tipos de comida à venda na camioneta	1	2	3	4	5
Os empregados devem estar bem vestidos e aseados	1	2	3	4	5
As linhas telefónicas da empresa podem estar ocupadas a maior parte do tempo	1	2	3	4	5
É de esperar que os empregados conheçam as necessidades dos seus clientes	1	2	3	4	5
As camionetas devem ser muito confortáveis	1	2	3	4	5
Deve-se esperar um serviço rápido dos empregados ao arrumar as bagagens e ao indicar os lugares aos clientes	1	2	3	4	5
Os clientes devem sentir que a sua bagagem fica bem guardada e com segurança	1	2	3	4	5
A assistente de viagem deve ser muito simpática	1	2	3	4	5

DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
------------------------	----------	--------	----------	------------------------

As empresas devem reservar os lugares sem cometerem erros	1	2	3	4	5
Os horários de chegada devem ser cumpridos	1	2	3	4	5
As empresas devem prestar atenção individual a cada cliente	1	2	3	4	5
Durante a viagem os clientes devem sentir segurança	1	2	3	4	5
Cada empregado deve ser especialista nas suas funções	1	2	3	4	5
Os horários de partida devem ser cumpridos	1	2	3	4	5
As camionetas devem ter lugares espaçosos	1	2	3	4	5
Quando os clientes têm problemas as empresas devem ouvi-los com interesse e simpatia	1	2	3	4	5
Os empregados devem estar prontos a ajudar os clientes (exemplo: a arrumar as bagagens)	1	2	3	4	5
As instalações devem ser mantidas bem limpas	1	2	3	4	5
Os clientes devem poder comprar os bilhetes sem demoras	1	2	3	4	5
As viagens devem ser rápidas	1	2	3	4	5
Os empregados devem prestar atenção pessoal a cada cliente	1	2	3	4	5

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
Os empregados das bilheteiras devem ser muito simpáticos	1	2	3	4	5
Os empregados devem procurar satisfazer os pedidos dos clientes com rapidez	1	2	3	4	5
As camionetas devem ter uma área distinta para fumadores	1	2	3	4	5
Os empregados devem ser amáveis	1	2	3	4	5
A bilheteira deve estar localizada num sítio de fácil acesso	1	2	3	4	5
As camionetas devem ter uma temperatura agradável	1	2	3	4	5
As camionetas devem ser modernas	1	2	3	4	5

INQUÉRITO SOBRE A QUALIDADE DO SERVIÇO DA RESENDE

Objectivo deste inquérito é conhecer as suas opiniões sobre a qualidade do serviço prestado pela Empresa de Transportes Resende. Para isso, pedimos-lhe que nos dê a sua opinião sobre cada um dos aspectos indicados, procedendo de uma forma idêntica à do inquérito anterior.

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
A Resende tem horários convenientes para todos os seus clientes	1	2	3	4	5
Os condutores da Resende têm uma condução agradável e segura	1	2	3	4	5
A Resende tem os interesses dos seus clientes na melhor atenção	1	2	3	4	5
Os empregados da Resende inspiram confiança aos clientes	1	2	3	4	5
Os empregados da Resende têm o suporte adequado para fazer o seu trabalho bem feito	1	2	3	4	5
As camionetas da Resende são limpas	1	2	3	4	5
A Resende inspira confiança	1	2	3	4	5
Há diversos tipos de comida à venda na camioneta da Resende	1	2	3	4	5
Os empregados da Resende estão bem vestidos e asseados	1	2	3	4	5

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
--	---------------------	----------	--------	----------	---------------------

As linhas telefónicas da Resende estão ocupadas a maior parte do tempo	1	2	3	4	5
Os empregados da Resende conhecem as necessidades dos seus clientes	1	2	3	4	5
As camionetas da Resende são muito confortáveis	1	2	3	4	5
Os empregados da Resende são rápidos ao arrumar as bagagens e ao indicar os lugares aos clientes	1	2	3	4	5
Os clientes sentem que a sua bagagem fica bem guardada e com segurança	1	2	3	4	5
As assistentes de viagem da Resende são muito simpáticas	1	2	3	4	5
A Resende reserva os lugares sem cometer erros	1	2	3	4	5
Os horários de chegada da Resende são cumpridos	1	2	3	4	5
A Resende presta atenção individual a cada cliente	1	2	3	4	5
Durante a viagem os clientes da Resende sentem segurança	1	2	3	4	5
Cada empregado é especialista nas suas funções	1	2	3	4	5

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
Os horários de partida da Resende são cumpridos	1	2	3	4	5
As camionetas têm lugares espaçosos	1	2	3	4	5
Quando os clientes têm problemas a Resende ouve-os com interesse e simpatia	1	2	3	4	5
Os empregados da Resende estão prontos a ajudar os clientes (exemplo: para arrumar as bagagens)	1	2	3	4	5
As instalações são mantidas bem limpas	1	2	3	4	5
Os clientes compram os bilhetes sem demoras	1	2	3	4	5
As viagens da Resende são rápidas	1	2	3	4	5
Os empregados prestam atenção pessoal a cada cliente	1	2	3	4	5
Os empregados das bilheteiras da Resende são muito simpáticos	1	2	3	4	5
Os empregados da Resende satisfazem os pedidos dos clientes com rapidez	1	2	3	4	5
As camionetas da Resende têm uma área distinta para fumadores	1	2	3	4	5
Os empregados são amáveis	1	2	3	4	5

	DISCORDO FORTEMENTE	DISCORDO	NEUTRO	CONCORDO	CONCORDO FORTEMENTE
--	------------------------	----------	--------	----------	------------------------

A bilheteira da Resende está localizada num sítio de fácil acesso

1 2 3 4 5

As camionetas da Resende têm uma temperatura agradável

1 2 3 4 5

As camionetas da Resende são modernas

1 2 3 4 5

Responda com uma cruz a resposta adequada ao seu caso:

1. Como é que avalia a qualidade geral da Resende:

Muito fraca ___ fraca ___ média ___ boa ___ ótima ___

2. Recomendaria a Resende a um amigo:

Nunca ___ não ___ possivelmente ___ sim ___ sempre ___

3. Já recomendou a Resende a outras pessoas? Sim ___ Não ___

4. Quantas vezes aproximado de vezes que já viajou na Resende: menos de 10 ___

mais de 10 ___

5. Como é que avalia a qualidade geral da Caima:

Muito fraca ___ fraca ___ média ___ boa ___ ótima ___

6. Como é que avalia a qualidade geral da Frota Azul:

Muito fraca ___ fraca ___ média ___ boa ___ ótima ___

7. Como é que avalia a qualidade geral da nova Renex:

Muito fraca ___ fraca ___ média ___ boa ___ ótima ___

favor responda ao seguinte:

Sexo : Homem _____ Mulher _____

Idade : até 18 _____ 19-29 _____ 30-39 _____

40-49 _____ mais de 50 _____

Ocupação : Profissão Liberal _____ Vendedor _____

Gestor ou Administrador _____ Estudante _____

Administrativo / Secretária _____ Técnico _____

Professor _____ Militar _____

Operário _____ Outro _____

Qualificação: 4^a classe _____

Ciclo _____

Liceu _____

Estudos superiores _____

Sugestões ou comentários que pretenda fazer:

Obrigado pela preciosa colaboração prestada.

APPENDIX 4. ITEMS STATISTICS SUMMARY

This appendix presents the items mean and variance for EXPECT, PERC, and QUAL.

ITEM	EXPECTATIONS		PERCEPTIONS		QUALITY	
	Mean	Variance	Mean	Variance	Mean	Variance
1	3,9	1,048	3,6	0,777	-0,2	1,568
2	4,8	0,259	3,9	0,507	-0,9	0,843
3	4,5	0,396	3,4	0,838	-1,1	1,239
4	4,5	0,518	3,7	0,640	-0,8	1,203
5	4,4	0,404	3,4	0,843	-1,0	1,218
6	3,8	0,715	3,6	0,693	-0,1	1,130
7	4,5	0,464	3,6	0,705	-0,9	1,285
8	3,8	0,763	2,9	0,865	-0,9	1,661
9	4,4	0,391	3,9	0,594	-0,5	0,838
10	3,9	0,980	3,0	0,795	-0,9	1,593
11	3,7	0,840	3,1	0,685	-0,6	1,283
12	4,7	0,310	3,3	0,860	-1,3	1,159
13	4,1	0,774	3,2	1,104	-0,9	2,095
14	4,7	0,439	3,2	1,102	-1,4	1,376
15	4,4	0,474	4,1	0,557	-0,3	0,720
16	4,5	0,495	2,9	1,371	-1,6	2,004
17	4,3	0,617	3,4	0,934	-1,0	1,698
18	3,6	0,853	3,2	0,676	-0,4	1,368
19	4,7	0,269	3,8	0,487	-0,8	0,656
20	4,2	0,504	3,6	0,725	-0,7	1,052
21	4,6	0,334	3,8	0,825	-0,8	1,105
22	4,4	0,464	3,2	0,994	-1,2	1,647
23	4,5	0,507	3,1	0,849	-1,4	1,195
24	4,3	0,517	3,3	0,975	-1,0	1,459
25	4,7	0,230	3,5	1,033	-1,2	1,265
26	4,2	0,521	3,6	0,742	-0,6	1,211
27	4,0	0,809	3,7	0,508	-0,3	1,361
28	3,8	0,664	3,4	0,690	-0,4	1,162
29	4,1	0,537	3,5	0,744	-0,6	1,139
30	4,1	0,459	3,4	0,680	-0,7	1,177
31	4,4	1,249	3,3	1,392	-1,1	1,943
32	4,2	0,529	3,7	0,608	-0,5	0,834
33	4,4	0,400	4,0	0,427	-0,4	0,699
34	4,7	0,238	3,0	1,258	-1,6	1,644
35	4,4	0,430	3,5	0,779	-0,9	1,255
MEAN	4,3		3,5		-0,8	

APPENDIX 5. DESCRIPTIVE STATISTICS OF THE QUESTIONNAIRE

This appendix presents the answers' frequency to each item, and several descriptive statistics (mean, standard deviation, and some others) - in the following order: 1. EXPECT; 2. PERC; 3. QUAL; 4. Other Questions.

NOTE: Answers referred with value "9" are the missing cases.

1. EXPECTATIONS ITEMS

EXPECT1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	5	2.8	2.8	2.8
disagree	2.0	17	9.4	9.4	12.2
neutral	3.0	27	14.9	15.0	27.2
agree	4.0	80	44.2	44.4	71.7
strongly agree	5.0	51	28.2	28.3	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	
Mean	3.861	Std err	.076	Median	4.000
Mode	4.000	Std dev	1.024	Variance	1.048
Kurtosis	.316	S E Kurt	.360	Skewness	-.887

EXPECT2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
neutral	3.0	2	1.1	1.1	1.7
agree	4.0	31	17.1	17.1	18.8
strongly agree	5.0	147	81.2	81.2	100.0
	Total	181	100.0	100.0	
Mean	4.785	Std err	.038	Median	5.000
Mode	5.000	Std dev	.509	Variance	.259
Kurtosis	17.304	S E Kurt	.359	Skewness	-3.372

EXPECT3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	1	.6	.6	.6
neutral	3.0	10	5.5	5.5	6.1
agree	4.0	66	36.5	36.5	42.5
strongly agree	5.0	104	57.5	57.5	100.0
	Total	181	100.0	100.0	
Mean	4.508	Std err	.047	Median	5.000
Mode	5.000	Std dev	.629	Variance	.396
Kurtosis	.683	S E Kurt	.359	Skewness	-1.047

EXPECT4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	1	.6	.6	1.1
neutral	3.0	15	8.3	8.3	9.4
agree	4.0	50	27.6	27.6	37.0
strongly agree	5.0	114	63.0	63.0	100.0
	Total	181	100.0	100.0	
Mean	4.519	Std err	.053	Median	5.000
Mode	5.000	Std dev	.719	Variance	.518
Kurtosis	3.022	S E Kurt	.359	Skewness	-1.607

EXPECT5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
neutral	3.0	8	4.4	4.4	5.0
agree	4.0	80	44.2	44.2	49.2
strongly agree	5.0	92	50.8	50.8	100.0
	Total	181	100.0	100.0	
Mean	4.448	Std err	.047	Median	5.000
Mode	5.000	Std dev	.636	Variance	.404
Kurtosis	3.565	S E Kurt	.359	Skewness	-1.244

EXPECT6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	4	2.2	2.2	3.4
neutral	3.0	67	37.0	37.4	40.8
agree	4.0	69	38.1	38.5	79.3
strongly agree	5.0	37	20.4	20.7	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	
Mean	3.754	Std err	.063	Median	4.000
Mode	4.000	Std dev	.845	Variance	.715
Kurtosis	-.046	S E Kurt	.361	Skewness	-.184

EXPECT7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
neutral	3.0	7	3.9	3.9	5.0
agree	4.0	67	37.0	37.2	42.2
strongly agree	5.0	104	57.5	57.8	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	
Mean	4.506	Std err	.051	Median	5.000
Mode	5.000	Std dev	.681	Variance	.464
Kurtosis	6.317	S E Kurt	.360	Skewness	-1.899

EXPECT8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	7	3.9	4.0	4.5
neutral	3.0	58	32.0	33.0	37.5
agree	4.0	66	36.5	37.5	75.0
strongly agree	5.0	44	24.3	25.0	100.0
	9.0	5	2.8	Missing	
	Total	181	100.0	100.0	
Mean	3.824	Std err	.066	Median	4.000
Mode	4.000	Std dev	.874	Variance	.763
Kurtosis	-.493	S E Kurt	.364	Skewness	-.221

EXPECT9

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	1	.6	.6	.6
neutral	3.0	11	6.1	6.1	6.7
agree	4.0	88	48.6	48.9	55.6
strongly agree	5.0	80	44.2	44.4	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	
Mean	4.372	Std err	.047	Median	4.000
Mode	4.000	Std dev	.626	Variance	.391
Kurtosis	.146	S E Kurt	.360	Skewness	-.612

EXPECT10

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	4	2.2	2.3	2.3
disagree	2.0	15	8.3	8.5	10.7
neutral	3.0	26	14.4	14.7	25.4
agree	4.0	80	44.2	45.2	70.6
strongly agree	5.0	52	28.7	29.4	100.0
	9.0	4	2.2	Missing	
	Total	181	100.0	100.0	
Mean	3.910	Std err	.074	Median	4.000
Mode	4.000	Std dev	.990	Variance	.980
Kurtosis	.480	S E Kurt	.363	Skewness	-.918

EXPECT11

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	5	2.8	2.8	2.8
disagree	2.0	15	8.3	8.4	11.2
neutral	3.0	37	20.4	20.8	32.0
agree	4.0	96	53.0	53.9	86.0
strongly agree	5.0	25	13.8	14.0	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	
Mean	3.680	Std err	.069	Median	4.000
Mode	4.000	Std dev	.917	Variance	.840
Kurtosis	.773	S E Kurt	.362	Skewness	-.877

EXPECT12

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	1	.6	.6	.6
neutral	3.0	5	2.8	2.8	3.4
agree	4.0	45	24.9	25.1	28.5
strongly agree	5.0	128	70.7	71.5	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	
Mean	4.676	Std err	.042	Median	5.000
Mode	5.000	Std dev	.557	Variance	.310
Kurtosis	3.082	S E Kurt	.361	Skewness	-1.719

EXPECT13

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	9	5.0	5.0	6.6
neutral	3.0	15	8.3	8.3	14.9
agree	4.0	90	49.7	49.7	64.6
strongly agree	5.0	64	35.4	35.4	100.0
	Total	181	100.0	100.0	
Mean	4.122	Std err	.065	Median	4.000
Mode	4.000	Std dev	.880	Variance	.774
Kurtosis	2.021	S E Kurt	.359	Skewness	-1.280

EXPECT14

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	1	.6	.6	1.7
neutral	3.0	4	2.2	2.2	3.9
agree	4.0	44	24.3	24.3	28.2
strongly agree	5.0	130	71.8	71.8	100.0
	Total	181	100.0	100.0	
Mean	4.652	Std err	.049	Median	5.000
Mode	5.000	Std dev	.663	Variance	.439
Kurtosis	10.190	S E Kurt	.359	Skewness	-2.717

EXPECT15

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	2	1.1	1.1	1.1
neutral	3.0	15	8.3	8.3	9.4
agree	4.0	73	40.3	40.3	49.7
strongly agree	5.0	91	50.3	50.3	100.0
	Total	181	100.0	100.0	
Mean	4.398	Std err	.051	Median	5.000
Mode	5.000	Std dev	.689	Variance	.474
Kurtosis	.453	S E Kurt	.359	Skewness	-.916

EXPECT16

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	5	2.8	2.8	2.8
neutral	3.0	7	3.9	3.9	6.6
agree	4.0	67	37.0	37.0	43.6
strongly agree	5.0	102	56.4	56.4	100.0
	Total	181	100.0	100.0	
Mean	4.470	Std err	.052	Median	5.000
Mode	5.000	Std dev	.703	Variance	.495
Kurtosis	2.342	S E Kurt	.359	Skewness	-1.440

EXPECT17

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	3	1.7	1.7	2.8
neutral	3.0	15	8.3	8.3	11.0
agree	4.0	77	42.5	42.5	53.6
strongly agree	5.0	84	46.4	46.4	100.0
	Total	181	100.0	100.0	
Mean	4.315	Std err	.058	Median	4.000
Mode	5.000	Std dev	.785	Variance	.617
Kurtosis	2.861	S E Kurt	.359	Skewness	-1.386

EXPECT18

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	4	2.2	2.2	2.2
disagree	2.0	18	9.9	10.1	12.3
neutral	3.0	53	29.3	29.6	41.9
agree	4.0	80	44.2	44.7	86.6
strongly agree	5.0	24	13.3	13.4	100.0
	9.0	2	1.1	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.570	Std err	.069	Median	4.000
Mode	4.000	Std dev	.924	Variance	.853
Kurtosis	.081	S E Kurt	.361	Skewness	-.510

EXPECT19

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	1	.6	.6	.6
neutral	3.0	1	.6	.6	1.1
agree	4.0	55	30.4	30.7	31.8
strongly agree	5.0	122	67.4	68.2	100.0
	9.0	2	1.1	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	4.665	Std err	.039	Median	5.000
Mode	5.000	Std dev	.519	Variance	.269
Kurtosis	2.600	S E Kurt	.361	Skewness	-1.429

EXPECT20

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	1	.6	.6	1.1
neutral	3.0	20	11.0	11.1	12.2
agree	4.0	91	50.3	50.6	62.8
strongly agree	5.0	67	37.0	37.2	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	4.233	Std err	.053	Median	4.000
Mode	4.000	Std dev	.710	Variance	.504
Kurtosis	1.587	S E Kurt	.360	Skewness	-.844

EXPECT21

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
neutral	3.0	2	1.1	1.1	1.7
agree	4.0	68	37.6	37.6	39.2
strongly agree	5.0	110	60.8	60.8	100.0
	Total	181	100.0	100.0	

Mean	4.580	Std err	.043	Median	5.000
Mode	5.000	Std dev	.578	Variance	.334
Kurtosis	6.633	S E Kurt	.359	Skewness	-1.716

EXPECT22

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	2	1.1	1.1	1.1
neutral	3.0	14	7.7	7.8	8.9
agree	4.0	75	41.4	41.7	50.6
strongly agree	5.0	89	49.2	49.4	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	

Mean	4.394	Std err	.051	Median	4.000
Mode	5.000	Std dev	.681	Variance	.464
Kurtosis	.509	S E Kurt	.360	Skewness	-.899

EXPECT23

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	1	.6	.6	1.7
neutral	3.0	8	4.4	4.4	6.1
agree	4.0	64	35.4	35.4	41.4
strongly agree	5.0	106	58.6	58.6	100.0
	Total	181	100.0	100.0	

Mean	4.497	Std err	.053	Median	5.000
Mode	5.000	Std dev	.712	Variance	.507
Kurtosis	5.643	S E Kurt	.359	Skewness	-1.905

EXPECT24

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	6	3.3	3.3	3.3
neutral	3.0	10	5.5	5.5	8.8
agree	4.0	91	50.3	50.3	59.1
strongly agree	5.0	74	40.9	40.9	100.0
Total		181	100.0	100.0	

Mean	4.287	Std err	.053	Median	4.000
Mode	4.000	Std dev	.719	Variance	.517
Kurtosis	1.492	S E Kurt	.359	Skewness	-1.035

EXPECT25

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
neutral	3.0	2	1.1	1.1	1.1
agree	4.0	48	26.5	26.8	27.9
strongly agree	5.0	129	71.3	72.1	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	

Mean	4.709	Std err	.036	Median	5.000
Mode	5.000	Std dev	.479	Variance	.230
Kurtosis	.269	S E Kurt	.361	Skewness	-1.237

EXPECT26

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	4	2.2	2.2	2.2
neutral	3.0	19	10.5	10.5	12.7
agree	4.0	90	49.7	49.7	62.4
strongly agree	5.0	68	37.6	37.6	100.0
Total		181	100.0	100.0	

Mean	4.227	Std err	.054	Median	4.000
Mode	4.000	Std dev	.722	Variance	.521
Kurtosis	.464	S E Kurt	.359	Skewness	-.730

EXPECT27

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	8	4.4	4.4	6.1
neutral	3.0	33	18.2	18.3	24.4
agree	4.0	83	45.9	46.1	70.6
strongly agree	5.0	53	29.3	29.4	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	
Mean	3.972	Std err	.067	Median	4.000
Mode	4.000	Std dev	.900	Variance	.809
Kurtosis	.864	S E Kurt	.360	Skewness	-.876

EXPECT28

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	11	6.1	6.1	6.1
neutral	3.0	49	27.1	27.1	33.1
agree	4.0	87	48.1	48.1	81.2
strongly agree	5.0	34	18.8	18.8	100.0
	Total	181	100.0	100.0	
Mean	3.796	Std err	.061	Median	4.000
Mode	4.000	Std dev	.815	Variance	.664
Kurtosis	-.367	S E Kurt	.359	Skewness	-.293

EXPECT29

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	2	1.1	1.1	2.2
neutral	3.0	22	12.2	12.2	14.4
agree	4.0	104	57.5	57.8	72.2
strongly agree	5.0	50	27.6	27.8	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	
Mean	4.100	Std err	.055	Median	4.000
Mode	4.000	Std dev	.733	Variance	.537
Kurtosis	2.722	S E Kurt	.360	Skewness	-1.019

EXPECT30

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	4	2.2	2.2	2.8
neutral	3.0	14	7.7	7.8	10.6
agree	4.0	115	63.5	64.2	74.9
strongly agree	5.0	45	24.9	25.1	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	
Mean	4.112	Std err	.051	Median	4.000
Mode	4.000	Std dev	.678	Variance	.459
Kurtosis	3.082	S E Kurt	.361	Skewness	-1.016

EXPECT31

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	11	6.1	6.2	6.2
disagree	2.0	4	2.2	2.2	8.4
neutral	3.0	12	6.6	6.7	15.2
agree	4.0	34	18.8	19.1	34.3
strongly agree	5.0	117	64.6	65.7	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	
Mean	4.360	Std err	.084	Median	5.000
Mode	5.000	Std dev	1.117	Variance	1.249
Kurtosis	2.897	S E Kurt	.362	Skewness	-1.928

EXPECT32

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	3	1.7	1.7	2.8
neutral	3.0	10	5.5	5.6	8.4
agree	4.0	100	55.2	55.9	64.2
strongly agree	5.0	64	35.4	35.8	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	
Mean	4.235	Std err	.054	Median	4.000
Mode	4.000	Std dev	.727	Variance	.529
Kurtosis	3.995	S E Kurt	.361	Skewness	-1.367

EXPECT33

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	1	.6	.6	.6
neutral	3.0	12	6.6	6.7	7.2
agree	4.0	88	48.6	48.9	56.1
strongly agree	5.0	79	43.6	43.9	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	4.361	Std err	.047	Median	4.000
Mode	4.000	Std dev	.632	Variance	.400
Kurtosis	.094	S E Kurt	.360	Skewness	-.603

EXPECT34

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
neutral	3.0	1	.6	.6	.6
agree	4.0	60	33.1	33.3	33.9
strongly agree	5.0	119	65.7	66.1	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	4.656	Std err	.036	Median	5.000
Mode	5.000	Std dev	.488	Variance	.238
Kurtosis	-.988	S E Kurt	.360	Skewness	-.805

EXPECT35

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	2	1.1	1.1	1.1
neutral	3.0	11	6.1	6.1	7.2
agree	4.0	81	44.8	45.0	52.2
strongly agree	5.0	86	47.5	47.8	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	4.394	Std err	.049	Median	4.000
Mode	5.000	Std dev	.656	Variance	.430
Kurtosis	.723	S E Kurt	.360	Skewness	-.864

2. PERCEPTIONS ITEMS

PERC1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	2	1.1	1.1	1.1
disagree	2.0	20	11.0	11.1	12.2
neutral	3.0	47	26.0	26.1	38.3
agree	4.0	89	49.2	49.4	87.8
strongly agree	5.0	22	12.2	12.2	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	

Mean	3.606	Std err	.066	Median	4.000
Mode	4.000	Std dev	.881	Variance	.777
Kurtosis	-.016	S E Kurt	.360	Skewness	-.524

PERC2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	6	3.3	3.3	3.3
neutral	3.0	41	22.7	22.8	26.1
agree	4.0	104	57.5	57.8	83.9
strongly agree	5.0	29	16.0	16.1	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	

Mean	3.867	Std err	.053	Median	4.000
Mode	4.000	Std dev	.712	Variance	.507
Kurtosis	.179	S E Kurt	.360	Skewness	-.364

PERC3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	26	14.4	14.6	16.3
neutral	3.0	66	36.5	37.1	53.4
agree	4.0	65	35.9	36.5	89.9
strongly agree	5.0	18	9.9	10.1	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	

Mean	3.388	Std err	.069	Median	3.000
Mode	3.000	Std dev	.915	Variance	.838

PERC4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	7	3.9	3.9	5.6
neutral	3.0	52	28.7	29.2	34.8
agree	4.0	94	51.9	52.8	87.6
strongly agree	5.0	22	12.2	12.4	100.0
	9.0	3	1.7	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.702	Std err	.060	Median	4.000
Mode	4.000	Std dev	.800	Variance	.640
Kurtosis	1.156	S E Kurt	.362	Skewness	-.683

PERC5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	4	2.2	2.2	2.2
disagree	2.0	24	13.3	13.5	15.7
neutral	3.0	61	33.7	34.3	50.0
agree	4.0	72	39.8	40.4	90.4
strongly agree	5.0	17	9.4	9.6	100.0
	9.0	3	1.7	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.416	Std err	.069	Median	3.500
Mode	4.000	Std dev	.918	Variance	.843
Kurtosis	-.174	S E Kurt	.362	Skewness	-.346

PERC6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	13	7.2	7.3	7.8
neutral	3.0	61	33.7	34.1	41.9
agree	4.0	79	43.6	44.1	86.0
strongly agree	5.0	25	13.8	14.0	100.0
	9.0	2	1.1	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.637	Std err	.062	Median	4.000
Mode	4.000	Std dev	.833	Variance	.693
Kurtosis	-.157	S E Kurt	.361	Skewness	-.236

PERC7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	13	7.2	7.3	9.0
neutral	3.0	48	26.5	27.0	36.0
agree	4.0	94	51.9	52.8	88.8
strongly agree	5.0	20	11.0	11.2	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	

Mean	3.646	Std err	.063	Median	4.000
Mode	4.000	Std dev	.839	Variance	.705
Kurtosis	.711	S E Kurt	.362	Skewness	-.702

PERC8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	15	8.3	8.6	8.6
disagree	2.0	37	20.4	21.1	29.7
neutral	3.0	74	40.9	42.3	72.0
agree	4.0	47	26.0	26.9	98.9
strongly agree	5.0	2	1.1	1.1	100.0
	9.0	6	3.3	Missing	
Total		181	100.0	100.0	

Mean	2.909	Std err	.070	Median	3.000
Mode	3.000	Std dev	.930	Variance	.865
Kurtosis	-.436	S E Kurt	.365	Skewness	-.380

PERC9

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	12	6.6	6.7	6.7
neutral	3.0	28	15.5	15.6	22.3
agree	4.0	107	59.1	59.8	82.1
strongly agree	5.0	32	17.7	17.9	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	

Mean	3.888	Std err	.058	Median	4.000
Mode	4.000	Std dev	.771	Variance	.594
Kurtosis	.551	S E Kurt	.361	Skewness	-.698

PERC10

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	9	5.0	5.1	5.1
disagree	2.0	39	21.5	22.0	27.1
neutral	3.0	82	45.3	46.3	73.4
agree	4.0	41	22.7	23.2	96.6
strongly agree	5.0	6	3.3	3.4	100.0
	9.0	4	2.2	Missing	
Total		181	100.0	100.0	
Mean	2.977	Std err	.067	Median	3.000
Mode	3.000	Std dev	.892	Variance	.795
Kurtosis	-.089	S E Kurt	.363	Skewness	-.101

PERC11

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	5	2.8	2.8	2.8
disagree	2.0	33	18.2	18.5	21.3
neutral	3.0	78	43.1	43.8	65.2
agree	4.0	59	32.6	33.1	98.3
strongly agree	5.0	3	1.7	1.7	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	
Mean	3.124	Std err	.062	Median	3.000
Mode	3.000	Std dev	.828	Variance	.685
Kurtosis	-.235	S E Kurt	.362	Skewness	-.356

PERC12

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	34	18.8	18.9	20.6
neutral	3.0	57	31.5	31.7	52.2
agree	4.0	72	39.8	40.0	92.2
strongly agree	5.0	14	7.7	7.8	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	
Mean	3.333	Std err	.069	Median	3.000
Mode	4.000	Std dev	.928	Variance	.860
Kurtosis	-.559	S E Kurt	.360	Skewness	-.245

PERC13

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	11	6.1	6.1	6.1
disagree	2.0	38	21.0	21.1	27.2
neutral	3.0	42	23.2	23.3	50.6
agree	4.0	77	42.5	42.8	93.3
strongly agree	5.0	12	6.6	6.7	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	
Mean	3.228	Std err	.078	Median	3.000
Mode	4.000	Std dev	1.051	Variance	1.104
Kurtosis	-.667	S E Kurt	.360	Skewness	-.439

PERC14

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	11	6.1	6.2	6.2
disagree	2.0	33	18.2	18.5	24.7
neutral	3.0	55	30.4	30.9	55.6
agree	4.0	63	34.8	35.4	91.0
strongly agree	5.0	16	8.8	9.0	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	
Mean	3.225	Std err	.079	Median	3.000
Mode	4.000	Std dev	1.050	Variance	1.102
Kurtosis	-.521	S E Kurt	.362	Skewness	-.314

PERC15

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	3	1.7	1.7	1.7
neutral	3.0	33	18.2	18.9	20.6
agree	4.0	86	47.5	49.1	69.7
strongly agree	5.0	53	29.3	30.3	100.0
	9.0	6	3.3	Missing	
Total		181	100.0	100.0	
Mean	4.080	Std err	.056	Median	4.000
Mode	4.000	Std dev	.746	Variance	.557
Kurtosis	-.385	S E Kurt	.365	Skewness	-.383

PERC16

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	25	13.8	14.3	14.3
disagree	2.0	39	21.5	22.3	36.6
neutral	3.0	52	28.7	29.7	66.3
agree	4.0	45	24.9	25.7	92.0
strongly agree	5.0	14	7.7	8.0	100.0
	9.0	6	3.3	Missing	
Total		181	100.0	100.0	
Mean	2.909	Std err	.089	Median	3.000
Mode	3.000	Std dev	1.171	Variance	1.371
Kurtosis	-.868	S E Kurt	.365	Skewness	-.060

PERC17

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	6	3.3	3.4	3.4
disagree	2.0	30	16.6	17.0	20.5
neutral	3.0	44	24.3	25.0	45.5
agree	4.0	83	45.9	47.2	92.6
strongly agree	5.0	13	7.2	7.4	100.0
	.	1	.6	Missing	
	9.0	4	2.2	Missing	
Total		181	100.0	100.0	
Mean	3.381	Std err	.073	Median	4.000
Mode	4.000	Std dev	.967	Variance	.934
Kurtosis	-.313	S E Kurt	.364	Skewness	-.560

PERC18

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	5	2.8	2.8	2.8
disagree	2.0	28	15.5	15.6	18.4
neutral	3.0	84	46.4	46.9	65.4
agree	4.0	57	31.5	31.8	97.2
strongly agree	5.0	5	2.8	2.8	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	
Mean	3.162	Std err	.061	Median	3.000
Mode	3.000	Std dev	.822	Variance	.676
Kurtosis	.072	S E Kurt	.361	Skewness	-.309

PERC19

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	7	3.9	3.9	3.9
neutral	3.0	39	21.5	21.9	25.8
agree	4.0	108	59.7	60.7	86.5
strongly agree	5.0	24	13.3	13.5	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	
Mean	3.837	Std err	.052	Median	4.000
Mode	4.000	Std dev	.698	Variance	.487
Kurtosis	.462	S E Kurt	.362	Skewness	-.471

PERC20

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	11	6.1	6.2	7.9
neutral	3.0	69	38.1	39.0	46.9
agree	4.0	72	39.8	40.7	87.6
strongly agree	5.0	22	12.2	12.4	100.0
	9.0	4	2.2	Missing	
Total		181	100.0	100.0	
Mean	3.559	Std err	.064	Median	4.000
Mode	4.000	Std dev	.852	Variance	.725
Kurtosis	.280	S E Kurt	.363	Skewness	-.299

PERC21

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	4	2.2	2.3	2.3
disagree	2.0	17	9.4	9.6	11.9
neutral	3.0	20	11.0	11.3	23.2
agree	4.0	107	59.1	60.5	83.6
strongly agree	5.0	29	16.0	16.4	100.0
	9.0	4	2.2	Missing	
Total		181	100.0	100.0	
Mean	3.791	Std err	.068	Median	4.000
Mode	4.000	Std dev	.909	Variance	.825
Kurtosis	1.156	S E Kurt	.363	Skewness	-1.090

PERC22

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	7	3.9	3.9	3.9
disagree	2.0	45	24.9	24.9	28.7
neutral	3.0	43	23.8	23.8	52.5
agree	4.0	77	42.5	42.5	95.0
strongly agree	5.0	9	5.0	5.0	100.0
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.199	Std err	.074	Median	3.000
Mode	4.000	Std dev	.997	Variance	.994
Kurtosis	-.821	S E Kurt	.359	Skewness	-.341

PERC23

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	13	7.2	7.3	7.3
disagree	2.0	23	12.7	12.9	20.2
neutral	3.0	90	49.7	50.6	70.8
agree	4.0	44	24.3	24.7	95.5
strongly agree	5.0	8	4.4	4.5	100.0
	9.0	3	1.7	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.062	Std err	.069	Median	3.000
Mode	3.000	Std dev	.922	Variance	.849
Kurtosis	.280	S E Kurt	.362	Skewness	-.342

PERC24

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	9	5.0	5.0	5.0
disagree	2.0	27	14.9	15.1	20.1
neutral	3.0	52	28.7	29.1	49.2
agree	4.0	78	43.1	43.6	92.7
strongly agree	5.0	13	7.2	7.3	100.0
	9.0	2	1.1	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.330	Std err	.074	Median	4.000
Mode	4.000	Std dev	.987	Variance	.975
Kurtosis	-.197	S E Kurt	.361	Skewness	-.561

PERC25

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	11	6.1	6.1	6.1
disagree	2.0	19	10.5	10.6	16.7
neutral	3.0	39	21.5	21.7	38.3
agree	4.0	93	51.4	51.7	90.0
strongly agree	5.0	18	9.9	10.0	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	

Mean	3.489	Std err	.076	Median	4.000
Mode	4.000	Std dev	1.017	Variance	1.033
Kurtosis	.292	S E Kurt	.360	Skewness	-.873

PERC26

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	19	10.5	10.6	12.2
neutral	3.0	40	22.1	22.2	34.4
agree	4.0	101	55.8	56.1	90.6
strongly agree	5.0	17	9.4	9.4	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	

Mean	3.611	Std err	.064	Median	4.000
Mode	4.000	Std dev	.861	Variance	.742
Kurtosis	.504	S E Kurt	.360	Skewness	-.800

PERC27

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	8	4.4	4.4	5.0
neutral	3.0	49	27.1	27.2	32.2
agree	4.0	106	58.6	58.9	91.1
strongly agree	5.0	16	8.8	8.9	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	

Mean	3.711	Std err	.053	Median	4.000
Mode	4.000	Std dev	.713	Variance	.508
Kurtosis	.975	S E Kurt	.360	Skewness	-.636

PERC28

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	27	14.9	15.0	15.6
neutral	3.0	69	38.1	38.3	53.9
agree	4.0	72	39.8	40.0	93.9
strongly agree	5.0	11	6.1	6.1	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	
Mean	3.361	Std err	.062	Median	3.000
Mode	4.000	Std dev	.831	Variance	.690
Kurtosis	-.427	S E Kurt	.360	Skewness	-.170

PERC29

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	3	1.7	1.7	1.7
disagree	2.0	16	8.8	8.9	10.6
neutral	3.0	61	33.7	34.1	44.7
agree	4.0	80	44.2	44.7	89.4
strongly agree	5.0	19	10.5	10.6	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	
Mean	3.536	Std err	.064	Median	4.000
Mode	4.000	Std dev	.863	Variance	.744
Kurtosis	.191	S E Kurt	.361	Skewness	-.432

PERC30

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	4	2.2	2.2	2.2
disagree	2.0	15	8.3	8.3	10.6
neutral	3.0	75	41.4	41.7	52.2
agree	4.0	74	40.9	41.1	93.3
strongly agree	5.0	12	6.6	6.7	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	
Mean	3.417	Std err	.061	Median	3.000
Mode	3.000	Std dev	.825	Variance	.680
Kurtosis	.484	S E Kurt	.360	Skewness	-.425

PERC31

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	16	8.8	9.2	9.2
disagree	2.0	28	15.5	16.1	25.3
neutral	3.0	43	23.8	24.7	50.0
agree	4.0	61	33.7	35.1	85.1
strongly agree	5.0	26	14.4	14.9	100.0
	9.0	7	3.9	Missing	
Total		181	100.0	100.0	
Mean	3.305	Std err	.089	Median	3.500
Mode	4.000	Std dev	1.180	Variance	1.392
Kurtosis	-.700	S E Kurt	.366	Skewness	-.399

PERC32

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	1	.6	.6	.6
disagree	2.0	12	6.6	6.7	7.3
neutral	3.0	40	22.1	22.5	29.8
agree	4.0	103	56.9	57.9	87.6
strongly agree	5.0	22	12.2	12.4	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	
Mean	3.747	Std err	.058	Median	4.000
Mode	4.000	Std dev	.780	Variance	.608
Kurtosis	.677	S E Kurt	.362	Skewness	-.681

PERC33

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
disagree	2.0	6	3.3	3.4	3.4
neutral	3.0	21	11.6	11.7	15.1
agree	4.0	121	66.9	67.6	82.7
strongly agree	5.0	31	17.1	17.3	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	
Mean	3.989	Std err	.049	Median	4.000
Mode	4.000	Std dev	.653	Variance	.427
Kurtosis	1.617	S E Kurt	.361	Skewness	-.722

PERC34

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	19	10.5	10.7	10.7
disagree	2.0	41	22.7	23.0	33.7
neutral	3.0	42	23.2	23.6	57.3
agree	4.0	66	36.5	37.1	94.4
strongly agree	5.0	10	5.5	5.6	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	3.039	Std err	.084	Median	3.000
Mode	4.000	Std dev	1.122	Variance	1.258
Kurtosis	-.909	S E Kurt	.362	Skewness	-.297

PERC35

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
strongly disagree	1.0	4	2.2	2.2	2.2
disagree	2.0	19	10.5	10.6	12.8
neutral	3.0	61	33.7	34.1	46.9
agree	4.0	79	43.6	44.1	91.1
strongly agree	5.0	16	8.8	8.9	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	

Mean	3.469	Std err	.066	Median	4.000
Mode	4.000	Std dev	.882	Variance	.779
Kurtosis	.154	S E Kurt	.361	Skewness	-.476

3. QUALITY ITEMS

QUAL1

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	1	.6	.6	.6
	-3.0	7	3.9	3.9	4.5
	-2.0	15	8.3	8.4	12.8
	-1.0	48	26.5	26.8	39.7
	.0	67	37.0	37.4	77.1
	1.0	27	14.9	15.1	92.2
	2.0	10	5.5	5.6	97.8
	3.0	4	2.2	2.2	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	

Mean	-.246	Median	.000	Mode	.000
Std dev	1.252	Variance	1.568	Kurtosis	.545
Skewness	.007				

QUAL2

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	6	3.3	3.3	3.3
	-2.0	33	18.2	18.3	21.7
	-1.0	95	52.5	52.8	74.4
	.0	37	20.4	20.6	95.0
	1.0	6	3.3	3.3	98.3
	2.0	2	1.1	1.1	99.4
	3.0	1	.6	.6	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	

Mean	-.922	Median	-1.000	Mode	-1.000
Std dev	.918	Variance	.843	Kurtosis	2.212
Skewness	.633				

QUAL3

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	18	9.9	10.1	11.8
	-2.0	41	22.7	23.0	34.8
	-1.0	60	33.1	33.7	68.5
	.0	49	27.1	27.5	96.1
	1.0	6	3.3	3.4	99.4
	2.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	

Mean	-1.124	Median	-1.000	Mode	-1.000
Std dev	1.113	Variance	1.239	Kurtosis	-.203
Skewness	-.250				

QUAL4

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	5	2.8	2.8	4.5
	-2.0	33	18.2	18.5	23.0
	-1.0	76	42.0	42.7	65.7
	.0	44	24.3	24.7	90.4
	1.0	15	8.3	8.4	98.9
	2.0	1	.6	.6	99.4
	4.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	

Mean	-.831	Median	-1.000	Mode	-1.000
Std dev	1.097	Variance	1.203	Kurtosis	2.091
Skewness	.232				

QUAL5

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	12	6.6	6.7	8.4
	-2.0	44	24.3	24.7	33.1
	-1.0	61	33.7	34.3	67.4
	.0	49	27.1	27.5	94.9
	1.0	8	4.4	4.5	99.4
	3.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
Total		181	100.0	100.0	

Mean	-1.045	Median	-1.000	Mode	-1.000
Std dev	1.104	Variance	1.218	Kurtosis	.519
Skewness	-.063				

QUAL6

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	3	1.7	1.7	1.7
	-2.0	14	7.7	7.9	9.6
	-1.0	39	21.5	22.0	31.6
	.0	74	40.9	41.8	73.4
	1.0	38	21.0	21.5	94.9
	2.0	8	4.4	4.5	99.4
	3.0	1	.6	.6	100.0
	9.0	4	2.2	Missing	
Total		181	100.0	100.0	

Mean	-.107	Median	.000	Mode	.000
Std dev	1.063	Variance	1.130	Kurtosis	.272
Skewness	-.185				

QUAL7

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	2	1.1	1.1	1.1
	-3.0	10	5.5	5.6	6.8
	-2.0	31	17.1	17.5	24.3
	-1.0	69	38.1	39.0	63.3
	.0	54	29.8	30.5	93.8
	1.0	7	3.9	4.0	97.7
	2.0	2	1.1	1.1	98.9
	3.0	1	.6	.6	99.4
	4.0	1	.6	.6	100.0
	9.0	4	2.2	Missing	
	Total	181	100.0	100.0	

Mean	-.853	Median	-1.000	Mode	-1.000
Std dev	1.134	Variance	1.285	Kurtosis	2.220
Skewness	.346				

QUAL8

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	6	3.3	3.5	3.5
	-3.0	16	8.8	9.4	12.9
	-2.0	32	17.7	18.7	31.6
	-1.0	41	22.7	24.0	55.6
	.0	61	33.7	35.7	91.2
	1.0	14	7.7	8.2	99.4
	3.0	1	.6	.6	100.0
	9.0	10	5.5	Missing	
	Total	181	100.0	100.0	

Mean	-.936	Median	-1.000	Mode	.000
Std dev	1.289	Variance	1.661	Kurtosis	-.084
Skewness	-.388				

QUAL9

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	6	3.3	3.4	3.4
	-2.0	16	8.8	9.0	12.4
	-1.0	49	27.1	27.5	39.9
	.0	95	52.5	53.4	93.3
	1.0	9	5.0	5.1	98.3
	2.0	3	1.7	1.7	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-.472	Median	.000	Mode	.000
Std dev	.916	Variance	.838	Kurtosis	1.067
Skewness	-.575				

QUAL10

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	4	2.2	2.3	2.3
	-3.0	13	7.2	7.4	9.7
	-2.0	38	21.0	21.7	31.4
	-1.0	56	30.9	32.0	63.4
	.0	47	26.0	26.9	90.3
	1.0	11	6.1	6.3	96.6
	2.0	5	2.8	2.9	99.4
	3.0	1	.6	.6	100.0
	9.0	6	3.3	Missing	
	Total	181	100.0	100.0	

Mean	-.931	Median	-1.000	Mode	-1.000
Std dev	1.262	Variance	1.593	Kurtosis	.321
Skewness	.078				

QUAL11

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	3	1.7	1.7	3.4
	-2.0	27	14.9	15.4	18.9
	-1.0	49	27.1	28.0	46.9
	.0	74	40.9	42.3	89.1
	1.0	12	6.6	6.9	96.0
	2.0	6	3.3	3.4	99.4
	3.0	1	.6	.6	100.0
	9.0	6	3.3	Missing	
	Total	181	100.0	100.0	

Mean	-.554	Median	.000	Mode	.000
Std dev	1.133	Variance	1.283	Kurtosis	1.075
Skewness	-.200				

QUAL12

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	2	1.1	1.1	1.1
	-3.0	25	13.8	14.0	15.2
	-2.0	45	24.9	25.3	40.4
	-1.0	71	39.2	39.9	80.3
	.0	28	15.5	15.7	96.1
	1.0	6	3.3	3.4	99.4
	2.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-1.326	Median	-1.000	Mode	-1.000
Std dev	1.076	Variance	1.159	Kurtosis	-.034
Skewness	.049				

QUAL13

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	5	2.8	2.8	2.8
	-3.0	24	13.3	13.3	16.1
	-2.0	23	12.7	12.8	28.9
	-1.0	57	31.5	31.7	60.6
	.0	51	28.2	28.3	88.9
	1.0	11	6.1	6.1	95.0
	2.0	5	2.8	2.8	97.8
	3.0	3	1.7	1.7	99.4
	4.0	1	.6	.6	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	

Mean	-.894	Median	-1.000	Mode	-1.000
Std dev	1.447	Variance	2.095	Kurtosis	.583
Skewness	.227				

QUAL14

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	8	4.4	4.5	4.5
	-3.0	26	14.4	14.6	19.1
	-2.0	42	23.2	23.6	42.7
	-1.0	67	37.0	37.6	80.3
	.0	29	16.0	16.3	96.6
	1.0	5	2.8	2.8	99.4
	2.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-1.427	Median	-1.000	Mode	-1.000
Std dev	1.173	Variance	1.376	Kurtosis	-.124
Skewness	-.156				

QUAL15

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	1	.6	.6	.6
	-2.0	13	7.2	7.4	8.0
	-1.0	52	28.7	29.7	37.7
	.0	83	45.9	47.4	85.1
	1.0	25	13.8	14.3	99.4
	2.0	1	.6	.6	100.0
	9.0	6	3.3	Missing	
	Total	181	100.0	100.0	

Mean	-.309	Median	.000	Mode	.000
Std dev	.849	Variance	.720	Kurtosis	.080
Skewness	-.274				

QUAL16

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	22	12.2	12.6	12.6
	-3.0	23	12.7	13.1	25.7
	-2.0	40	22.1	22.9	48.6
	-1.0	49	27.1	28.0	76.6
	.0	34	18.8	19.4	96.0
	1.0	4	2.2	2.3	98.3
	2.0	3	1.7	1.7	100.0
	9.0	6	3.3	Missing	
	Total	181	100.0	100.0	

Mean	-1.577	Median	-1.000	Mode	-1.000
Std dev	1.416	Variance	2.004	Kurtosis	-.479
Skewness	-.069				

QUAL17

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	6	3.3	3.4	3.4
	-3.0	19	10.5	10.7	14.1
	-2.0	27	14.9	15.3	29.4
	-1.0	55	30.4	31.1	60.5
	.0	58	32.0	32.8	93.2
	1.0	8	4.4	4.5	97.7
	2.0	3	1.7	1.7	99.4
	4.0	1	.6	.6	100.0
	9.0	4	2.2	Missing	
	Total	181	100.0	100.0	

Mean	-.972	Median	-1.000	Mode	.000
Std dev	1.303	Variance	1.698	Kurtosis	.769
Skewness	-.100				

QUAL18

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	2	1.1	1.1	1.1
	-3.0	4	2.2	2.3	3.4
	-2.0	22	12.2	12.4	15.8
	-1.0	48	26.5	27.1	42.9
	.0	71	39.2	40.1	83.1
	1.0	23	12.7	13.0	96.0
	2.0	4	2.2	2.3	98.3
	3.0	3	1.7	1.7	100.0
	9.0	4	2.2	Missing	
	Total	181	100.0	100.0	

Mean	-.407	Median	.000	Mode	.000
Std dev	1.169	Variance	1.368	Kurtosis	1.010
Skewness	-.066				

QUAL19

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	6	3.3	3.4	3.4
	-2.0	23	12.7	13.1	16.5
	-1.0	89	49.2	50.6	67.0
	.0	55	30.4	31.3	98.3
	1.0	2	1.1	1.1	99.4
	2.0	1	.6	.6	100.0
	9.0	5	2.8	Missing	
	Total	181	100.0	100.0	

Mean	-.847	Median	-1.000	Mode	-1.000
Std dev	.810	Variance	.656	Kurtosis	.887
Skewness	-.288				

QUAL20

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	1	.6	.6	2.3
	-2.0	30	16.6	17.0	19.3
	-1.0	62	34.3	35.2	54.5
	.0	67	37.0	38.1	92.6
	1.0	10	5.5	5.7	98.3
	2.0	2	1.1	1.1	99.4
	3.0	1	.6	.6	100.0
	9.0	5	2.8	Missing	
	Total	181	100.0	100.0	

Mean	-.682	Median	-1.000	Mode	.000
Std dev	1.026	Variance	1.052	Kurtosis	1.568
Skewness	-.190				

QUAL21

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	4	2.2	2.3	2.3
	-3.0	11	6.1	6.2	8.5
	-2.0	17	9.4	9.6	18.1
	-1.0	63	34.8	35.6	53.7
	.0	74	40.9	41.8	95.5
	1.0	8	4.4	4.5	100.0
	9.0	4	2.2	Missing	
	Total	181	100.0	100.0	

Mean	-.780	Median	-1.000	Mode	.000
Std dev	1.051	Variance	1.105	Kurtosis	1.010
Skewness	-1.017				

QUAL22

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	5	2.8	2.8	2.8
	-3.0	29	16.0	16.1	18.9
	-2.0	36	19.9	20.0	38.9
	-1.0	51	28.2	28.3	67.2
	.0	47	26.0	26.1	93.3
	1.0	10	5.5	5.6	98.9
	2.0	2	1.1	1.1	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	

Mean	-1.200	Median	-1.000	Mode	-1.000
Std dev	1.283	Variance	1.647	Kurtosis	-.563
Skewness	-.117				

QUAL23

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	8	4.4	4.5	4.5
	-3.0	17	9.4	9.6	14.0
	-2.0	59	32.6	33.1	47.2
	-1.0	55	30.4	30.9	78.1
	.0	37	20.4	20.8	98.9
	1.0	2	1.1	1.1	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-1.427	Median	-1.000	Mode	-2.000
Std dev	1.093	Variance	1.195	Kurtosis	-.246
Skewness	-.320				

QUAL24

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	6	3.3	3.4	3.4
	-3.0	15	8.3	8.4	11.7
	-2.0	32	17.7	17.9	29.6
	-1.0	50	27.6	27.9	57.5
	.0	65	35.9	36.3	93.9
	1.0	10	5.5	5.6	99.4
	2.0	1	.6	.6	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	

Mean	-.955	Median	-1.000	Mode	.000
Std dev	1.208	Variance	1.459	Kurtosis	-.068
Skewness	-.570				

QUAL25

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	10	5.5	5.6	5.6
	-3.0	13	7.2	7.3	12.9
	-2.0	32	17.7	18.0	30.9
	-1.0	77	42.5	43.3	74.2
	.0	42	23.2	23.6	97.8
	1.0	4	2.2	2.2	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	
Mean	-1.213	Median	-1.000	Mode	-1.000
Std dev	1.125	Variance	1.265	Kurtosis	.363
Skewness	-.751				

QUAL26

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	7	3.9	3.9	5.6
	-2.0	20	11.0	11.1	16.7
	-1.0	60	33.1	33.3	50.0
	.0	72	39.8	40.0	90.0
	1.0	13	7.2	7.2	97.2
	2.0	5	2.8	2.8	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	
Mean	-.611	Median	-.500	Mode	.000
Std dev	1.100	Variance	1.211	Kurtosis	1.004
Skewness	-.464				

QUAL27

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	1	.6	.6	.6
	-3.0	1	.6	.6	1.1
	-2.0	23	12.7	12.8	14.0
	-1.0	47	26.0	26.3	40.2
	.0	67	37.0	37.4	77.7
	1.0	29	16.0	16.2	93.9
	2.0	9	5.0	5.0	98.9
	3.0	1	.6	.6	99.4
	4.0	1	.6	.6	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	
Mean	-.257	Median	.000	Mode	.000
Std dev	1.166	Variance	1.361	Kurtosis	.799
Skewness	.214				

QUAL28

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	5	2.8	2.8	2.8
	-2.0	24	13.3	13.3	16.1
	-1.0	48	26.5	26.7	42.8
	.0	77	42.5	42.8	85.6
	1.0	19	10.5	10.6	96.1
	2.0	6	3.3	3.3	99.4
	3.0	1	.6	.6	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	

Mean	-.428	Median	.000	Mode	.000
Std dev	1.078	Variance	1.162	Kurtosis	.364
Skewness	4.6111E-04				

QUAL29

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	2	1.1	1.1	1.1
	-3.0	6	3.3	3.4	4.5
	-2.0	24	13.3	13.5	18.0
	-1.0	49	27.1	27.5	45.5
	.0	79	43.6	44.4	89.9
	1.0	16	8.8	9.0	98.9
	2.0	1	.6	.6	99.4
	3.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-.573	Median	.000	Mode	.000
Std dev	1.067	Variance	1.139	Kurtosis	.998
Skewness	-.470				

QUAL30

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	3	1.7	1.7	1.7
	-3.0	5	2.8	2.8	4.5
	-2.0	25	13.8	14.0	18.5
	-1.0	66	36.5	37.1	55.6
	.0	64	35.4	36.0	91.6
	1.0	9	5.0	5.1	96.6
	2.0	6	3.3	3.4	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-.685	Median	-1.000	Mode	-1.000
Std dev	1.085	Variance	1.177	Kurtosis	1.080
Skewness	-.225				

QUAL31

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	9	5.0	5.3	5.3
	-3.0	18	9.9	10.5	15.8
	-2.0	34	18.8	19.9	35.7
	-1.0	43	23.8	25.1	60.8
	.0	56	30.9	32.7	93.6
	1.0	5	2.8	2.9	96.5
	2.0	4	2.2	2.3	98.8
	3.0	2	1.1	1.2	100.0
	9.0	10	5.5	Missing	
	Total	181	100.0	100.0	
Mean	-1.064	Median	-1.000	Mode	.000
Std dev	1.394	Variance	1.943	Kurtosis	.188
Skewness	-.055				

QUAL32

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	1	.6	.6	.6
	-3.0	2	1.1	1.1	1.7
	-2.0	17	9.4	9.7	11.4
	-1.0	60	33.1	34.1	45.5
	.0	83	45.9	47.2	92.6
	1.0	10	5.5	5.7	98.3
	2.0	2	1.1	1.1	99.4
	3.0	1	.6	.6	100.0
	9.0	5	2.8	Missing	
	Total	181	100.0	100.0	
Mean	-.494	Median	.000	Mode	.000
Std dev	.913	Variance	.834	Kurtosis	2.067
Skewness	-.176				

QUAL33

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-3.0	3	1.7	1.7	1.7
	-2.0	12	6.6	6.7	8.4
	-1.0	51	28.2	28.7	37.1
	.0	98	54.1	55.1	92.1
	1.0	11	6.1	6.2	98.3
	2.0	3	1.7	1.7	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	
Mean	-.376	Median	.000	Mode	.000
Std dev	.836	Variance	.699	Kurtosis	1.374
Skewness	-.427				

QUAL34

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	16	8.8	9.0	9.0
	-3.0	33	18.2	18.6	27.7
	-2.0	38	21.0	21.5	49.2
	-1.0	51	28.2	28.8	78.0
	.0	37	20.4	20.9	98.9
	1.0	2	1.1	1.1	100.0
	9.0	4	2.2	Missing	
	Total	181	100.0	100.0	

Mean	-1.627	Median	-1.000	Mode	-1.000
Std dev	1.282	Variance	1.644	Kurtosis	-.904
Skewness	-.253				

QUAL35

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	-4.0	2	1.1	1.1	1.1
	-3.0	15	8.3	8.4	9.6
	-2.0	34	18.8	19.1	28.7
	-1.0	57	31.5	32.0	60.7
	.0	58	32.0	32.6	93.3
	1.0	11	6.1	6.2	99.4
	2.0	1	.6	.6	100.0
	9.0	3	1.7	Missing	
	Total	181	100.0	100.0	

Mean	-.927	Median	-1.000	Mode	.000
Std dev	1.120	Variance	1.255	Kurtosis	-.198
Skewness	-.340				

4. OTHERS QUESTIONS

OQ - How would you rate the overall quality of Resende

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very fair	1.0	1	.6	.6	.6
fair	2.0	11	6.1	6.1	6.6
average	3.0	84	46.4	46.4	53.0
good	4.0	73	40.3	40.3	93.4
great	5.0	12	6.6	6.6	100.0
Total		181	100.0	100.0	

Mean	3.464	Std err	.055	Median	3.000
Mode	3.000	Std dev	.734	Variance	.539
Kurtosis	.194	S E Kurt	.359	Skewness	-.045

WR - Would you recommend Resende to a friend

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
never	1.0	2	1.1	1.1	1.1
not	2.0	6	3.3	3.3	4.4
possibly	3.0	63	34.8	35.0	39.4
yes	4.0	97	53.6	53.9	93.3
always	5.0	12	6.6	6.7	100.0
	9.0	1	.6	Missing	
Total		181	100.0	100.0	

Mean	3.617	Std err	.053	Median	4.000
Mode	4.000	Std dev	.711	Variance	.506
Kurtosis	1.236	S E Kurt	.360	Skewness	-.608

HR - Have you ever recommended Resende to other people

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
yes	1.0	134	74.0	74.9	74.9
no	2.0	45	24.9	25.1	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	

Mean	1.251	Std err	.033	Median	1.000
Mode	1.000	Std dev	.435	Variance	.189
Kurtosis	-.672	S E Kurt	.361	Skewness	1.156

DF - Approximate number of times you have ever travel in Resende

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
less than 10	1.0	57	31.5	31.7	31.7
more than 10	2.0	122	67.4	67.8	99.4
	3.0	1	.6	.6	100.0
	9.0	1	.6	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	1.689	Std err	.035	Median	2.000
Mode	2.000	Std dev	.476	Variance	.227
Kurtosis	-1.147	S E Kurt	.360	Skewness	-.665

DG - How would you rate the overall quality of Caima

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
very fair	1.0	5	2.8	3.1	3.1
fair	2.0	21	11.6	13.0	16.1
average	3.0	84	46.4	52.2	68.3
good	4.0	44	24.3	27.3	95.7
great	5.0	7	3.9	4.3	100.0
	9.0	20	11.0	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.168	Std err	.065	Median	3.000
Mode	3.000	Std dev	.823	Variance	.678
Kurtosis	.466	S E Kurt	.380	Skewness	-.185

DH - How would you rate the overall quality of Frota Azul

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.0	3	1.7	2.0	2.0
	2.0	9	5.0	6.0	8.0
	3.0	68	37.6	45.3	53.3
	4.0	63	34.8	42.0	95.3
	5.0	7	3.9	4.7	100.0
	9.0	31	17.1	Missing	
		-----	-----	-----	
	Total	181	100.0	100.0	
Mean	3.413	Std err	.062	Median	3.000
Mode	3.000	Std dev	.761	Variance	.580
Kurtosis	.920	S E Kurt	.394	Skewness	-.488

DI - How would you rate the overall quality of Renex

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.0	6	3.3	4.2	4.2
	2.0	7	3.9	4.9	9.0
	3.0	62	34.3	43.1	52.1
	4.0	53	29.3	36.8	88.9
	5.0	16	8.8	11.1	100.0
	9.0	37	20.4	Missing	
	Total	181	100.0	100.0	

Mean	3.458	Std err	.076	Median	3.000
Mode	3.000	Std dev	.907	Variance	.823
Kurtosis	.684	S E Kurt	.401	Skewness	-.472

DJ - Sex

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
male	1.0	119	65.7	66.5	66.5
female	2.0	60	33.1	33.5	100.0
	9.0	2	1.1	Missing	
	Total	181	100.0	100.0	

Mean	1.335	Std err	.035	Median	1.000
Mode	1.000	Std dev	.473	Variance	.224
Kurtosis	-1.521	S E Kurt	.361	Skewness	.704

DK - Age

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
until 18	1.0	12	6.6	6.7	6.7
19-29	2.0	99	54.7	55.0	61.7
30-39	3.0	31	17.1	17.2	78.9
40-49	4.0	21	11.6	11.7	90.6
50-over	5.0	17	9.4	9.4	100.0
	9.0	1	.6	Missing	
	Total	181	100.0	100.0	

Mean	2.622	Std err	.081	Median	2.000
Mode	2.000	Std dev	1.084	Variance	1.175
Kurtosis	-.048	S E Kurt	.360	Skewness	.932

DL - Occupation

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
professional	.0	4	2.2	2.6	2.6
manager or administrator	1.0	14	7.7	9.0	11.5
secretary	2.0	11	6.1	7.1	18.6
teacher	3.0	15	8.3	9.6	28.2
laborer	4.0	12	6.6	7.7	35.9
sales	5.0	20	11.0	12.8	48.7
student	6.0	6	3.3	3.8	52.6
skilled	7.0	39	21.5	25.0	77.6
military	8.0	16	8.8	10.3	87.8
other	10.0	19	10.5	12.2	100.0
	9.0	25	13.8	Missing	
Total		181	100.0	100.0	

Mean	5.487	Std err	.226	Median	6.000
Mode	7.000	Std dev	2.827	Variance	7.993
Kurtosis	-.930	S E Kurt	.386	Skewness	-.153

DM - Studies

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
4 ^a class	1.0	25	13.8	14.0	14.0
6 ^a class	2.0	27	14.9	15.1	29.1
secondary school	3.0	67	37.0	37.4	66.5
high level	4.0	60	33.1	33.5	100.0
	9.0	2	1.1	Missing	
Total		181	100.0	100.0	

Mean	2.905	Std err	.076	Median	3.000
Mode	3.000	Std dev	1.021	Variance	1.041
Kurtosis	-.728	S E Kurt	.361	Skewness	-.610

APPENDIX 6. CORRELATION OF EXPECT, PERC, QUAL ITEMS WITH OQ QUESTION

This appendix presents: 1. The correlation's variables EXPECT with OQ; 2. The correlation's variables PERC with OQ; 3. The correlation's variables QUAL with OQ; and, 4. The correlations variables OQ with WR.

1. CORRELATION /VARIABLES expect1 to expect35 with OQ

Correlations: OQ (How would you rate the overall quality of Resende)

EXPECT1	-.0509
EXPECT2	-.1343
EXPECT3	-.0848
EXPECT4	-.1016
EXPECT5	-.0644
EXPECT6	.1487
EXPECT7	-.0153
EXPECT8	.0729
EXPECT9	.1061
EXPECT10	-.0544
EXPECT11	-.0917
EXPECT12	-.0928
EXPECT13	-.1071
EXPECT14	-.0064
EXPECT15	.1051
EXPECT16	-.2425*
EXPECT17	-.1038
EXPECT18	-.2048*
EXPECT19	-.0405
EXPECT20	.0807
EXPECT21	-.0169
EXPECT22	-.1916*
EXPECT23	-.0099
EXPECT24	.0647
EXPECT25	-.1409
EXPECT26	-.0936
EXPECT27	-.1856*
EXPECT28	-.0211
EXPECT29	.0650
EXPECT30	-.1529
EXPECT31	.0299
EXPECT32	.0926
EXPECT33	.0268
EXPECT34	-.1014
EXPECT35	-.0022

N of cases: 159 1-tailed Signif: * - .01 ** - .001

" . " is printed if a coefficient cannot be computed

2. CORRELATION /VARIABLES PERC1 to PERC35 with OQ

Correlations: OQ (How would you rate the overall quality of Resende)

PERC1	.2344*
PERC2	.3809**
PERC3	.5953**
PERC4	.4817**
PERC5	.4359**
PERC6	.5464**
PERC7	.5970**
PERC8	.2947**
PERC9	.4260**
PERC10	.0096
PERC11	.2826**
PERC12	.5385**
PERC13	.3911**
PERC14	.3811**
PERC15	.3612**
PERC16	.4352**
PERC17	.3329**
PERC18	.4642**
PERC19	.4094**
PERC20	.4798**
PERC21	.3666**
PERC22	.4724**
PERC23	.4245**
PERC24	.4144**
PERC25	.3785**
PERC26	.1842
PERC27	.4262**
PERC28	.4898**
PERC29	.2381*
PERC30	.4212**
PERC31	.1670
PERC32	.4046**
PERC33	.1644
PERC34	.4224**
PERC35	.5994**

N of cases: 142 1-tailed Signif: * - .01 ** - .001

" . " is printed if a coefficient cannot be computed

3. CORRELATION /VARIABLES QUAL1 to QUAL35 with OQ

Correlations: OQ (How would you rate the overall quality of Resende)

QUAL1	.2598*
QUAL2	.3575**
QUAL3	.5295**
QUAL4	.3766**
QUAL5	.4018**
QUAL6	.3148**
QUAL7	.4289**
QUAL8	.1956
QUAL9	.2695**
QUAL10	.0655
QUAL11	.2543*
QUAL12	.4855**
QUAL13	.3300**
QUAL14	.3962**
QUAL15	.2171*
QUAL16	.4474**
QUAL17	.3314**
QUAL18	.4934**
QUAL19	.3900**
QUAL20	.3681**
QUAL21	.3614**
QUAL22	.4897**
QUAL23	.3475**
QUAL24	.3197**
QUAL25	.4022**
QUAL26	.2805**
QUAL27	.4031**
QUAL28	.4256**
QUAL29	.0946
QUAL30	.3997**
QUAL31	.1215
QUAL32	.2764**
QUAL33	.0716
QUAL34	.4167**
QUAL35	.4620**

N of cases: 131 1-tailed Signif: * - .01 ** - .001

" . " is printed if a coefficient cannot be computed

4. CORRELATION /VARIABLES OQ with WR.

Correlations: WR

OQ	.6216**
----	---------

N of cases: 180 1-tailed Signif: * - .01 ** - .001

" . " is printed if a coefficient cannot be computed

APPENDIX 7. RELIABILITY ANALYSIS OF QUAL WITH THE NINE THEORETICAL DIMENSIONS

This appendix presents the reliability analysis results of QUAL with the nine theoretical dimensions: Tangibility, Reliability, Responsiveness, Security, Competence, Courtesy, Understanding/Knowing the Customer, Access, and Comfort.

**RELIABILITY ANALYSIS - SCALE
(TANGIBILITY)**

- 1. QUAL35
- 2. QUAL6
- 3. QUAL9
- 4. QUAL25

CORRELATION MATRIX

	QUAL35	QUAL6	QUAL9	QUAL25
QUAL35	1.0000			
QUAL6	.4611	1.0000		
QUAL9	.0853	.2276	1.0000	
QUAL25	.4547	.3493	.2490	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	13.3969	8.4874	2.9133	4

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.3045	.0853	.4611	.3758	5.4082	.0193

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL35	10.2443	4.8476	.4841	.3172	.5342
QUAL6	9.4275	5.1082	.4912	.2616	.5314
QUAL9	9.8931	6.6346	.2376	.0930	.6862
QUAL25	10.6260	4.7590	.4999	.2645	.5215

RELIABILITY COEFFICIENTS 4 ITEMS

ALPHA = .6461 STANDARDIZED ITEM ALPHA = .6365

R E L I A B I L I T Y A N A L Y S I S - S C A L E
(Reliability)

- 1. QUAL21
- 2. QUAL23
- 3. QUAL7
- 4. QUAL17
- 5. QUAL16

CORRELATION MATRIX

	QUAL21	QUAL23	QUAL7	QUAL17	QUAL16
QUAL21	1.0000				
QUAL23	.3396	1.0000			
QUAL7	.3147	.3227	1.0000		
QUAL17	.5390	.3246	.3421	1.0000	
QUAL16	.4160	.3867	.4303	.3883	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	14.1374	17.7656	4.2149	5

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.3804	.3147	.5390	.2243	1.7127	.0045

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM- TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL21	10.9389	12.4116	.5641	.3558	.6912
QUAL23	11.6183	13.1147	.4630	.2170	.7240
QUAL7	11.0611	13.1962	.4819	.2419	.7188
QUAL17	11.0916	11.3146	.5443	.3463	.6950
QUAL16	11.8397	10.3664	.5561	.3199	.6957

RELIABILITY COEFFICIENTS 5 ITEMS

ALPHA = .7500 STANDARDIZED ITEM ALPHA = .7543

R E L I A B I L I T Y A N A L Y S I S - S C A L E
(Responsiveness)

- 1. QUAL13
- 2. QUAL24
- 3. QUAL26
- 4. QUAL27

CORRELATION MATRIX

	QUAL13	QUAL24	QUAL26	QUAL27
QUAL13	1.0000			
QUAL24	.4506	1.0000		
QUAL26	.3862	.2641	1.0000	
QUAL27	.4988	.2504	.4182	1.0000

OF CASES = 131.0

STATISTICS FOR	MEAN	VARIANCE	STD DEV	# OF
SCALE	13.0992	13.8132	3.7166	VARIABLES 4

INTER-ITEM	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
CORRELATIONS	.3781	.2504	.4988	.2484	1.9919	.0092

ITEM-TOTAL STATISTICS

	SCALE	SCALE	CORRECTED	SQUARED	ALPHA
	MEAN	VARIANCE	ITEM-	MULTIPLE	IF ITEM
	IF ITEM	IF ITEM	TOTAL	CORRELATION	DELETED
	DELETED	DELETED	CORRELATION		
QUAL13	10.0763	6.9172	.6082	.3807	.5695
QUAL24	10.1221	8.9850	.4198	.2126	.6912
QUAL26	9.7634	9.4128	.4574	.2254	.6695
QUAL27	9.3359	8.7786	.5142	.3086	.6363

RELIABILITY COEFFICIENTS 4 ITEMS

ALPHA = .7091 STANDARDIZED ITEM ALPHA = .7086

R E L I A B I L I T Y A N A L Y S I S - S C A L E
(SECURITY)

- 1. QUAL19
- 2. QUAL4
- 3. QUAL14
- 4. QUAL2

CORRELATION MATRIX

	QUAL19	QUAL4	QUAL14	QUAL2
QUAL19	1.0000			
QUAL4	.5200	1.0000		
QUAL14	.5395	.3815	1.0000	
QUAL2	.5906	.4243	.3699	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	11.8092	9.3402	3.0562	4

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4710	.3699	.5906	.2207	1.5965	.0076

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL19	8.6947	5.7830	.7084	.5136	.6487
QUAL4	8.6718	5.5607	.5331	.3034	.7273
QUAL14	9.3206	5.1426	.5192	.3069	.7479
QUAL2	8.7405	6.1783	.5562	.3694	.7165

RELIABILITY COEFFICIENTS 4 ITEMS

ALPHA = .7646 STANDARDIZED ITEM ALPHA = .7807

R E L I A B I L I T Y A N A L Y S I S - S C A L E
(COMPETENCE)

- 1. QUAL20
- 2. QUAL5

CORRELATION MATRIX

	QUAL20	QUAL5
QUAL20	1.0000	
QUAL5	.4304	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	6.2595	3.4706	1.8629	2

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4304	.4304	.4304	.0000	1.0000	.0000

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL20	2.9771	1.2533	.4304	.1852	.
QUAL5	3.2824	1.1735	.4304	.1852	.

RELIABILITY COEFFICIENTS 2 ITEMS

ALPHA = .6015 STANDARDIZED ITEM ALPHA = .6017

R E L I A B I L I T Y A N A L Y S I S - S C A L E
(COURTESY)

- 1. QUAL32
- 2. QUAL29
- 3. QUAL15

CORRELATION MATRIX

	QUAL32	QUAL29	QUAL15
QUAL32	1.0000		
QUAL29	.4986	1.0000	
QUAL15	.3631	.2367	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	10.5267	4.4820	2.1171	3

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.3662	.2367	.4986	.2620	2.1068	.0137

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL32	7.0611	2.2885	.5561	.3123	.3730
QUAL29	7.1374	1.9656	.4477	.2522	.5326
QUAL15	6.8550	2.8326	.3376	.1360	.6545

RELIABILITY COEFFICIENTS 3 ITEMS

ALPHA = .6282 STANDARDIZED ITEM ALPHA = .6341

R E L I A B I L I T Y A N A L Y S I S - S C A L E
(UNDERSTANDING/KNOWING THE CUSTOMER)

- 1. QUAL18
- 2. QUAL28
- 3. QUAL11
- 4. QUAL3

CORRELATION MATRIX

	QUAL18	QUAL28	QUAL11	QUAL3
QUAL18	1.0000			
QUAL28	.6527	1.0000		
QUAL11	.4004	.3489	1.0000	
QUAL3	.5970	.5544	.3396	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	13.2366	13.2128	3.6349	4

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4822	.3396	.6527	.3131	1.9219	.0168

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL18	9.6641	7.0402	.7039	.5237	.6790
QUAL28	9.7328	7.7819	.6565	.4728	.7079
QUAL11	9.9160	8.9852	.4246	.1832	.8188
QUAL3	10.3969	8.0105	.6210	.4106	.7260

RELIABILITY COEFFICIENTS 4 ITEMS

ALPHA = .7892 STANDARDIZED ITEM ALPHA = .7883

RELIABILITY ANALYSIS - SCALE (ACCESS)

1. QUAL1
2. QUAL10
3. QUAL33

CORRELATION MATRIX

	QUAL1	QUAL10	QUAL33
QUAL1	1.0000		
QUAL10	-.0326	1.0000	
QUAL33	.0556	.1593	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	10.5191	3.9131	1.9782	3

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.0608	-.0326	.1593	.1919	-4.8875	.0074

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL1	6.8092	2.2941	.0030	.0049	.2549
QUAL10	7.3969	2.3181	.0540	.0271	.0943
QUAL33	6.8321	2.9100	.1519	.0291	-.0672

RELIABILITY COEFFICIENTS 3 ITEMS

ALPHA = .1165 STANDARDIZED ITEM ALPHA = .1626

RELIABILITY ANALYSIS - SCALE (COMFORT)

- 1. QUAL12
- 2. QUAL34
- 3. QUAL31
- 4. QUAL8
- 5. QUAL22

CORRELATION MATRIX

	QUAL12	QUAL34	QUAL31	QUAL8	QUAL22
QUAL12	1.0000				
QUAL34	.4690	1.0000			
QUAL31	.1375	.1878	1.0000		
QUAL8	.2500	.3832	.1087	1.0000	
QUAL22	.4242	.4064	.1248	.2885	1.0000

OF CASES = 131.0

STATISTICS FOR SCALE	MEAN	VARIANCE	STD DEV	# OF VARIABLES
	13.9542	16.6287	4.0778	5

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.2780	.1087	.4690	.3603	4.3133	.0175

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL12	11.2977	11.8107	.4817	.2879	.5690
QUAL34	11.5191	10.5439	.5546	.3349	.5245
QUAL31	11.0076	13.0999	.1917	.0408	.6968
QUAL8	10.8550	11.4480	.3761	.1703	.6130
QUAL22	11.1374	10.9502	.4599	.2508	.5708

RELIABILITY COEFFICIENTS 5 ITEMS

ALPHA = .6511 STANDARDIZED ITEM ALPHA = .6582

APPENDIX 8. FACTOR ANALYSIS

This appendix presents the factor analysis of QUAL items using an orthogonal rotation with varimax procedure.

FACTOR /VARIABLES QUAL1 TO QUAL35 /ROTATION VARIMAX.

- - - - F A C T O R A N A L Y S I S - - - -

Analysis Number 1 Listwise deletion of cases with missing values

Extraction 1 for Analysis 1, Principal-Components Analysis (PC)

Initial Statistics:

Variable	Communality	* Factor	Eigenvalue	Pct of Var	Cum Pct
QUAL1	1.00000	* 1	11.41425	32.6	32.6
QUAL2	1.00000	* 2	2.06663	5.9	38.5
QUAL3	1.00000	* 3	1.85288	5.3	43.8
QUAL4	1.00000	* 4	1.62538	4.6	48.5
QUAL5	1.00000	* 5	1.43740	4.1	52.6
QUAL6	1.00000	* 6	1.32481	3.8	56.3
QUAL7	1.00000	* 7	1.31028	3.7	60.1
QUAL8	1.00000	* 8	1.08184	3.1	63.2
QUAL9	1.00000	* 9	1.02893	2.9	66.1
QUAL10	1.00000	* 10	.98271	2.8	68.9
QUAL11	1.00000	* 11	.90602	2.6	71.5
QUAL12	1.00000	* 12	.82233	2.3	73.9
QUAL13	1.00000	* 13	.74298	2.1	76.0
QUAL14	1.00000	* 14	.72087	2.1	78.0
QUAL15	1.00000	* 15	.69468	2.0	80.0
QUAL16	1.00000	* 16	.68804	2.0	82.0
QUAL17	1.00000	* 17	.62116	1.8	83.8
QUAL18	1.00000	* 18	.54946	1.6	85.3
QUAL19	1.00000	* 19	.52449	1.5	86.8
QUAL20	1.00000	* 20	.48502	1.4	88.2
QUAL21	1.00000	* 21	.47127	1.3	89.6
QUAL22	1.00000	* 22	.41360	1.2	90.8
QUAL23	1.00000	* 23	.38437	1.1	91.9
QUAL24	1.00000	* 24	.36397	1.0	92.9
QUAL25	1.00000	* 25	.33533	1.0	93.9
QUAL26	1.00000	* 26	.31621	.9	94.8
QUAL27	1.00000	* 27	.30856	.9	95.6
QUAL28	1.00000	* 28	.25288	.7	96.4
QUAL29	1.00000	* 29	.24187	.7	97.1
QUAL30	1.00000	* 30	.22251	.6	97.7
QUAL31	1.00000	* 31	.20804	.6	98.3
QUAL32	1.00000	* 32	.18306	.5	98.8
QUAL33	1.00000	* 33	.15870	.5	99.3
QUAL34	1.00000	* 34	.14149	.4	99.7
QUAL35	1.00000	* 35	.11799	.3	100.0

PC Extracted 9 factors.

Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
QUAL1	.33602	-.11710	-.05947	.50953	.19470
QUAL2	.57459	.00650	-.37532	-.02025	-.09786
QUAL3	.73764	-.07419	-.22652	.08239	.17708
QUAL4	.61878	-.16664	-.18712	-.27291	.25163
QUAL5	.69876	-.27715	-.10734	-.12345	.20992
QUAL6	.40189	-.09973	.42745	-.16111	.34775
QUAL7	.60797	-.29780	-.03479	.00468	.49939
QUAL8	.32783	.16813	.26727	.46708	-.31568
QUAL9	.40449	.04247	.00078	-.38854	-.05103
QUAL10	.31419	.54150	-.03336	-.14017	-.05422
QUAL11	.47278	-.31373	-.04518	.03194	.18044
QUAL12	.61122	-.26790	.48693	-.10733	-.07825
QUAL13	.72172	.05783	-.16945	.00398	-.31754
QUAL14	.64579	-.25531	.02888	-.17116	-.25018
QUAL15	.52645	.03269	-.07975	-.31645	-.35822
QUAL16	.62718	-.21171	-.01241	.04806	-.14361
QUAL17	.61424	.01312	-.29860	.21559	-.11090
QUAL18	.73273	-.13321	-.22225	.03784	.01194
QUAL19	.74530	-.07108	-.15541	-.20822	-.14292
QUAL20	.63343	-.16526	-.19333	-.22817	-.11689
QUAL21	.61635	.01154	-.19272	.24856	-.16711
QUAL22	.57332	-.09317	.26175	.09335	-.07057
QUAL23	.58784	.06970	.22241	-.10218	-.08265
QUAL24	.55219	.14885	.18035	-.12517	-.13116
QUAL25	.62760	-.15027	.33561	-.06320	.09507
QUAL26	.48864	.32950	-.05824	-.01691	.33459
QUAL27	.60207	.21275	-.12292	.44293	.16949
QUAL28	.72956	.14721	-.17122	.13152	.14684
QUAL29	.37013	.55674	-.00657	-.22941	.18642
QUAL30	.68403	.25834	-.09683	.16773	-.07620
QUAL31	.26349	.42232	.24260	.04007	.27445
QUAL32	.59344	.49800	.22200	-.19924	-.02706
QUAL33	.29534	.35659	.00616	.04842	.02668
QUAL34	.57356	-.08983	.29198	.33963	-.17547
QUAL35	.49942	-.11735	.57265	.11107	-.04163

	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9
QUAL1	.09902	.31984	.05944	.26500
QUAL2	-.04258	.23435	-.30338	.29778
QUAL3	-.10352	-.09517	-.13645	.03069
QUAL4	-.19398	.12113	-.07115	-.01412
QUAL5	-.01193	-.04399	.01111	-.15415
QUAL6	.50707	-.02145	-.00058	.06541
QUAL7	.05484	-.10491	.13017	-.01811
QUAL8	.14217	.34855	.15203	.04585
QUAL9	.18156	.48875	.22395	-.25780
QUAL10	.06794	-.17017	-.21234	-.10332
QUAL11	-.10705	-.00288	.43225	-.04545
QUAL12	.07689	.10965	-.05842	.03108
QUAL13	.08593	-.20072	-.03296	-.15749
QUAL14	.00959	.03342	-.14079	-.08068
QUAL15	.36333	.01826	.14284	.16038
QUAL16	-.26266	-.34515	.03419	-.10091
QUAL17	.30616	-.11194	.07127	-.07043
QUAL18	-.07196	-.09595	.15428	-.08709
QUAL19	-.04218	.14538	-.02366	.24253
QUAL20	-.13442	.25510	-.05575	.27887
QUAL21	.15737	-.25794	.10495	.12674
QUAL22	-.19288	.04604	-.07884	-.33874
QUAL23	-.02438	-.25368	.10617	.33532
QUAL24	-.05092	-.39196	.27296	.02171
QUAL25	-.15004	.07505	-.20748	-.16390
QUAL26	.21140	-.05685	-.22287	.05056
QUAL27	.28707	-.03379	-.04976	-.19365
QUAL28	.03545	.03797	.02878	.02331
QUAL29	-.03330	.17461	-.09470	-.11295
QUAL30	-.18480	.09036	-.20380	-.23529
QUAL31	-.37860	-.09058	.08864	.37923
QUAL32	-.07206	-.06255	.11635	.01402
QUAL33	-.19747	.28969	.49018	-.11464
QUAL34	-.35339	.11140	-.11668	.02763
QUAL35	.19619	-.02418	-.19252	.06836

Final Statistics:

Variable	Communality	* Factor	Eigenvalue	Pct of Var	Cum Pct
QUAL1	.61355	* 1	11.41425	32.6	32.6
QUAL2	.71849	* 2	2.06663	5.9	38.5
QUAL3	.67840	* 3	1.85288	5.3	43.8
QUAL4	.64103	* 4	1.62538	4.6	48.5
QUAL5	.66188	* 5	1.43740	4.1	52.6
QUAL6	.76292	* 6	1.32481	3.8	56.3
QUAL7	.74023	* 7	1.31028	3.7	60.1
QUAL8	.69190	* 8	1.08184	3.1	63.2
QUAL9	.70744	* 9	1.02893	2.9	66.1
QUAL10	.50497	* *			
QUAL11	.55794	* *			
QUAL12	.72242	* *			
QUAL13	.72735	* *			
QUAL14	.60249	* *			
QUAL15	.69151	* *			
QUAL16	.66073	* *			
QUAL17	.64171	* *			
QUAL18	.65137	* *			
QUAL19	.73075	* *			
QUAL20	.69566	* *			
QUAL21	.62524	* *			
QUAL22	.57987	* *			
QUAL23	.60582	* *			
QUAL24	.62367	* *			
QUAL25	.64019	* *			
QUAL26	.56312	* *			
QUAL27	.77130	* *			
QUAL28	.62618	* *			
QUAL29	.58770	* *			
QUAL30	.71717	* *			
QUAL31	.68678	* *			
QUAL32	.71271	* *			
QUAL33	.59380	* *			
QUAL34	.72010	* *			
QUAL35	.68600	* *			

Varimax Rotation 1, Extraction 1, Analysis 1 - Kaiser Normalization.

 Varimax converged in 22 iterations.

Rotated Factor Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
QUAL1	-.02052	.21760	.04636	.17327	-.05350
QUAL2	.15027	.12733	.09963	<u>.72944</u>	.25241
QUAL3	.28268	<u>.51557</u>	.26192	.35601	.28690
QUAL4	.01228	<u>.55947</u>	.20965	.47427	.19423
QUAL5	.23144	<u>.62742</u>	.28129	.28046	.13168
QUAL6	.04641	.26112	.02247	-.01451	.16460
QUAL7	.12786	<u>.76730</u>	.10728	.10502	.07453
QUAL8	.20687	-.27789	.31215	.01808	-.00505
QUAL9	.01555	.14051	.09202	.30296	.16069
QUAL10	.24579	-.11542	.06833	.05350	<u>.63143</u>
QUAL11	.22203	<u>.58254</u>	.13403	.07681	-.21388
QUAL12	.13642	.14551	<u>.52420</u>	.25536	-.05631
QUAL13	<u>.65703</u>	.16083	.32314	.27434	.27625
QUAL14	.32576	.18953	.44329	.44100	.03757
QUAL15	<u>.53547</u>	-.04049	-.05089	.45514	.08694
QUAL16	.48947	.37406	.47103	.15239	-.01609
QUAL17	<u>.58943</u>	.26089	.05528	.18081	.22625
QUAL18	.45215	<u>.51076</u>	.25161	.27542	.11204
QUAL19	.31643	.23773	.19767	<u>.67544</u>	.12597
QUAL20	.15548	.23775	.18188	<u>.73752</u>	.02294
QUAL21	<u>.65141</u>	.20736	.09579	.18844	.11611
QUAL22	.15267	.22644	<u>.67148</u>	.04170	.13417
QUAL23	.42447	.11695	.17715	.24812	.07653
QUAL24	<u>.56631</u>	.17056	.20960	.00434	.12481
QUAL25	.01329	.29911	<u>.61969</u>	.19458	.17673
QUAL26	.10509	.23952	-.01843	.14091	<u>.61164</u>
QUAL27	.35907	.29237	.16780	-.06443	.47589
QUAL28	.31430	.38549	.16308	.27209	.37602
QUAL29	-.04998	.05059	.05955	.14614	<u>.65904</u>
QUAL30	.24612	.16722	.49628	.23082	.49480
QUAL31	-.06539	.07409	.07249	.03002	.25759
QUAL32	.29953	.02889	.22418	.12102	.47919
QUAL33	.07979	.11265	.07225	-.02715	.14529
QUAL34	.13303	.06996	<u>.70496</u>	.19291	-.01650
QUAL35	.14892	-.00457	.48653	.05550	.06527

	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9
QUAL1	.07999	.72075	.06968	-.00246
QUAL2	-.07089	.24995	.00100	-.08052
QUAL3	-.00051	.18662	.08904	-.11078
QUAL4	.04752	-.06943	.05136	.10746
QUAL5	.17296	.00129	-.06879	.06989
QUAL6	.81039	.07758	.01931	.04066
QUAL7	.28257	.14426	.07955	-.00701
QUAL8	.13418	.59770	.05622	.30932
QUAL9	.23156	-.05125	-.23058	.67228
QUAL10	.01602	-.11448	.10432	.02744
QUAL11	.06282	.11966	.11512	.26109
QUAL12	.56275	.04802	.07986	.11874
QUAL13	.01675	.03095	-.08745	.07008
QUAL14	.20647	-.06324	-.13126	.06480
QUAL15	.33068	-.04757	-.05652	.26652
QUAL16	-.05166	-.07610	.14372	-.08220
QUAL17	.05301	.32267	-.17516	.04090
QUAL18	-.02402	.12436	.03245	.13135
QUAL19	.13409	.07696	.12559	.15255
QUAL20	.06165	.06710	.10117	.13739
QUAL21	.04314	.29455	.08151	-.06693
QUAL22	.09658	.05423	-.01116	.14920
QUAL23	.31470	-.00231	.46274	.00097
QUAL24	.17894	-.15163	.36903	.15219
QUAL25	.30008	.00224	.07057	.04904
QUAL26	.23657	.16824	.10539	-.07092
QUAL27	.09155	.52680	-.10994	.01117
QUAL28	.05511	.32294	.11984	.12282
QUAL29	.04010	-.03176	.16554	.30561
QUAL30	-.15179	.21534	.02128	.11989
QUAL31	.00941	.09877	.77067	.02714
QUAL32	.18693	-.06189	.41919	.33637
QUAL33	-.16332	.19558	.26929	.64050
QUAL34	.00554	.31696	.25008	.00372
QUAL35	.60451	.18512	.11093	-.08799

Factor Transformation Matrix:

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
FACTOR 1	.45868	.43051	.43160	.41944	.31636
FACTOR 2	.05935	-.40198	-.18465	-.17145	.73999
FACTOR 3	-.20013	-.27038	.47716	-.35415	-.13227
FACTOR 4	.11015	-.04508	.19897	-.36956	-.09740
FACTOR 5	-.50767	.67144	-.26145	-.23943	.27406
FACTOR 6	.26927	-.13420	-.44050	-.09546	.14086
FACTOR 7	-.56002	-.15161	.07218	.39009	-.03383
FACTOR 8	.29996	.22590	-.30156	-.28562	-.41519
FACTOR 9	-.00849	-.18727	-.39219	.48217	-.23848

	FACTOR 6	FACTOR 7	FACTOR 8	FACTOR 9
FACTOR 1	.23105	.20537	.14191	.16212
FACTOR 2	-.17169	.05426	.35451	.25635
FACTOR 3	.62734	-.06363	.33453	.08200
FACTOR 4	-.24832	.81906	.00114	-.26011
FACTOR 5	.18032	.11001	.17869	-.11875
FACTOR 6	.62591	.22555	-.49377	-.00623
FACTOR 7	.00667	.39611	-.23110	.54269
FACTOR 8	-.04854	.06193	.26640	.66101
FACTOR 9	.18773	.23718	.58494	-.29670

APPENDIX 9. RELIABILITY ANALYSIS

This appendix presents the reliability analysis for the 5 dimensions of the modified SERVQUAL.

Coefficient alpha de Cronbach for each dimension is computed.

Reliability - Alpha de Cronbach

```

/VARIABLES qual1 to qual35
/SCALE (factor1) qual13 qual15 qual17 qual21 qual24/SUMMARY ALL
/scale (factor2) qual3 qual4 qual5 qual7 qual11 qual18/summary all
/scale (factor3) qual12 qual22 qual25 qual34/summary all
/scale (factor4) qual2 qual19 qual20 /summary all
/scale (factor5) qual10 qual26 qual29 /summary all.
  
```

***** METHOD 2 (COVARIANCE MATRIX) WILL BE USED FOR THIS ANALYSIS *****

RELIABILITY ANALYSIS - SCALE (FACTOR 1)

1. QUAL13
2. QUAL15
3. QUAL17
4. QUAL21
5. QUAL24

OF CASES = 131.0

ITEM MEANS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	3.1832	2.9771	3.6718	.6947	1.2333	.0815

ITEM VARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	1.4636	.6991	2.1764	1.4773	3.1131	.3202

INTER-ITEM COVARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.5957	.3503	1.0451	.6948	2.9837	.0544

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4162	.2701	.5449	.2749	2.0178	.0077

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL13	12.8931	10.6962	.6590	.4410	.6924
QUAL15	12.2443	15.3245	.4900	.2474	.7575
QUAL17	12.8702	12.3446	.5688	.3993	.7255
QUAL21	12.7176	13.3735	.6083	.3889	.7164
QUAL24	12.9389	13.2732	.4671	.2539	.7612

RELIABILITY COEFFICIENTS 5 ITEMS

ALPHA = .7744 STANDARDIZED ITEM ALPHA = .7809

RELIABILITY ANALYSIS - SCALE (FACTOR 2)

- 1. QUAL3
- 2. QUAL4
- 3. QUAL5
- 4. QUAL7
- 5. QUAL11
- 6. QUAL18

OF CASES = 131.0

ITEM MEANS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	3.1539	2.8397	3.5725	.7328	1.2581	.0679

ITEM VARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	1.2512	1.0249	1.5389	.5140	1.5015	.0310

INTER-ITEM COVARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.5973	.3325	.8309	.4984	2.4989	.0156

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4804	.2744	.6095	.3351	2.2211	.0089

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL3	16.0840	17.7544	.6782	.5063	.8101
QUAL4	15.7863	18.8463	.5943	.4099	.8263
QUAL5	15.9466	17.3894	.7264	.5406	.8005
QUAL7	15.8473	18.6534	.6571	.4447	.8156
QUAL11	15.6031	19.2874	.4797	.2680	.8485
QUAL18	15.3511	17.2757	.6410	.4408	.8182

RELIABILITY COEFFICIENTS 6 ITEMS

ALPHA = .8457 STANDARDIZED ITEM ALPHA = .8473

RELIABILITY ANALYSIS - SCALE (FACTOR 3)

1. QUAL12
2. QUAL22
3. QUAL25
4. QUAL34

OF CASES = 131.0

ITEM MEANS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	2.6698	2.4351	2.8168	.3817	1.1567	.0290

ITEM VARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	1.4355	1.1965	1.7046	.5082	1.4247	.0584

INTER-ITEM COVARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.6513	.6058	.7500	.1442	1.2381	.0025

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4592	.4064	.5097	.1034	1.2544	.0018

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL12	8.0229	8.6072	.5849	.3518	.7078
QUAL22	7.8626	7.8117	.5538	.3193	.7247
QUAL25	7.9084	8.2992	.6142	.3855	.6918
QUAL34	8.2443	8.1399	.5380	.2961	.7313

RELIABILITY COEFFICIENTS 4 ITEMS

ALPHA = .7686 STANDARDIZED ITEM ALPHA = .7725

RELIABILITY ANALYSIS - SCALE (FACTOR 4)

- 1. QUAL2
- 2. QUAL19
- 3. QUAL20

OF CASES = 131.0

ITEM MEANS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	3.1552	3.0687	3.2824	.2137	1.0697	.0127

ITEM VARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.8775	.7022	1.1735	.4713	1.6712	.0665

INTER-ITEM COVARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.5056	.4305	.6059	.1753	1.4073	.0065

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.5893	.5098	.6675	.1576	1.3092	.0050

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL2	6.3969	3.0874	.5960	.3729	.7850
QUAL19	6.3511	2.8911	.7274	.5302	.6647
QUAL20	6.1832	2.3200	.6584	.4660	.7423

RELIABILITY COEFFICIENTS 3 ITEMS

ALPHA = .8031 STANDARDIZED ITEM ALPHA = .8115

RELIABILITY ANALYSIS - SCALE (FACTOR 5)

1. QUAL10
2. QUAL26
3. QUAL29

OF CASES = 131.0

ITEM MEANS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	3.2824	3.1221	3.3893	.2672	1.0856	.0200

ITEM VARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	1.2729	1.1627	1.4004	.2377	1.2044	.0143

INTER-ITEM COVARIANCES	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.4007	.3817	.4136	.0319	1.0835	.0002

INTER-ITEM CORRELATIONS	MEAN	MINIMUM	MAXIMUM	RANGE	MAX/MIN	VARIANCE
	.3162	.2879	.3366	.0487	1.1692	.0005

ITEM-TOTAL STATISTICS

	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
QUAL10	6.7252	3.2316	.3739	.1411	.5034
QUAL26	6.5115	3.3903	.3821	.1490	.4880
QUAL29	6.4580	3.4194	.4114	.1696	.4466

RELIABILITY COEFFICIENTS 3 ITEMS

ALPHA = .5795 STANDARDIZED ITEM ALPHA = .5811

APPENDIX 10. MULTIPLE REGRESSION

This appendix presents the stepwise regression method of: 1. EXPECT, 2. PERC, and 3. QUAL items with the dependent variable OQ.

1. EXPECT REGRESSION

REGRESSION /VARIABLES EXPECT1 to EXPECT35 OQ /DESCRIPTIVES /DEPENDENT OQ
/METHOD STEPWISE .

Listwise Deletion of Missing Data

N of Cases = 159 (because it was eliminated the respondents that miss
one question)

	OQ
EXPECT1	-.051
EXPECT2	-.134
EXPECT3	-.085
EXPECT4	-.102
EXPECT5	-.064
EXPECT6	.149
EXPECT7	-.015
EXPECT8	.073
EXPECT9	.106
EXPECT10	-.054
EXPECT11	-.092
EXPECT12	-.093
EXPECT13	-.107
EXPECT14	-.006
EXPECT15	.105
EXPECT16	-.242
EXPECT17	-.104
EXPECT18	-.205
EXPECT19	-.040
EXPECT20	.081
EXPECT21	-.017
EXPECT22	-.192
EXPECT23	-.010
EXPECT24	.065
EXPECT25	-.141
EXPECT26	-.094
EXPECT27	-.186
EXPECT28	-.021
EXPECT29	.065
EXPECT30	-.153
EXPECT31	.030
EXPECT32	.093
EXPECT33	.027
EXPECT34	-.101
EXPECT35	-.002
OQ	1.000

*** MULTIPLE REGRESSION ***

Dependent Variable.. OQ

Block Number 1. Method: Stepwise Criteria PIN .0500 POUT
.1000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
EXPECT16	-.264062	.086360	-.241831	-3.058	.0026
EXPECT15	.203026	.083350	.191579	2.436	.0160
EXPECT27	-.138418	.064814	-.169197	-2.136	.0343
(Constant)	4.287795	.482410		8.888	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
EXPECT1	.013691	.013981	.886812	.174	.8625
EXPECT2	-.061913	-.060775	.802428	-.756	.4510
EXPECT3	-.023849	-.023961	.873864	-.297	.7665
EXPECT4	-.038056	-.038141	.876385	-.474	.6364
EXPECT5	.003112	.003143	.881238	.039	.9689
EXPECT6	.136622	.137534	.882621	1.723	.0869
EXPECT7	.015735	.015865	.890157	.197	.8442
EXPECT8	.126549	.127084	.858036	1.590	.1139
EXPECT9	.097458	.099785	.875339	1.245	.2152
EXPECT10	-.013164	-.013583	.896908	-.169	.8664
EXPECT11	-.040962	-.042479	.887823	-.528	.5985
EXPECT12	-.066580	-.067486	.872745	-.839	.4026
EXPECT13	-.002783	-.002628	.793561	-.033	.9740
EXPECT14	.066102	.067141	.884793	.835	.4050
EXPECT17	.071853	.062178	.666311	.773	.4406
EXPECT18	-.128034	-.126304	.846372	-1.580	.1161
EXPECT19	.059644	.058311	.817946	.725	.4696
EXPECT20	.107040	.111210	.903856	1.389	.1669
EXPECT21	.092071	.089916	.825495	1.120	.2643
EXPECT22	-.121491	-.118173	.804934	-1.477	.1418
EXPECT23	.017278	.016952	.856556	.210	.8336
EXPECT24	.074024	.075834	.888322	.944	.3468
EXPECT25	-.042741	-.041652	.820055	-.517	.6057
EXPECT26	.028718	.026934	.762937	.334	.7386
EXPECT28	.063387	.060287	.797018	.750	.4547
EXPECT29	.026391	.025270	.776256	.314	.7542
EXPECT30	-.031430	-.029138	.753663	-.362	.7180
EXPECT31	.065586	.068956	.906890	.858	.3924
EXPECT32	.113522	.111955	.845808	1.398	.1641
EXPECT33	.069029	.069391	.853611	.863	.3894
EXPECT34	-.049765	-.050417	.892830	-.626	.5319
EXPECT35	.014473	.014178	.853823	.176	.8606

End Block Number 1 PIN = .050 Limits reached.

2. PERC REGRESSION

```
regression /variables PERC1 to PERC35 OQ / descriptives /dependent OQ  
/method  
stepwise.  
Listwise Deletion of Missing Data  
N of Cases = 142
```

* * * * MULTIPLE REGRESSION * * * *

	OQ
PERC1	.234
PERC2	.381
PERC3	.595
PERC4	.482
PERC5	.436
PERC6	.546
PERC7	.597
PERC8	.295
PERC9	.426
PERC10	.010
PERC11	.283
PERC12	.538
PERC13	.391
PERC14	.381
PERC15	.361
PERC16	.435
PERC17	.333
PERC18	.464
PERC19	.409
PERC20	.480
PERC21	.367
PERC22	.472
PERC23	.425
PERC24	.414
PERC25	.378
PERC26	.184
PERC27	.426
PERC28	.490
PERC29	.238
PERC30	.421
PERC31	.167
PERC32	.405
PERC33	.164
PERC34	.422
PERC35	.599
OQ	1.000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
PERC35	.292204	.057110	.346850	5.117	.0000
PERC7	.240746	.061867	.262935	3.891	.0002
PERC3	.205905	.053205	.259371	3.870	.0002
PERC28	.146647	.054603	.167938	2.686	.0081
PERC25	-.120633	.047091	-.172621	-2.562	.0115
PERC6	.151230	.060555	.167216	2.497	.0137
(Constant)	.221160	.225085		.983	.3276

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
PERC1	.029670	.045706	.588881	.530	.5972
PERC2	.017817	.023350	.477875	.270	.7873
PERC4	.020088	.023682	.517585	.274	.7843
PERC5	-.058337	-.070988	.537051	-.824	.4115
PERC8	.031190	.047400	.572414	.549	.5837
PERC9	.057058	.078365	.563816	.910	.3645
PERC10	-.044340	-.072029	.600208	-.836	.4047
PERC11	-.060129	-.086608	.592069	-1.006	.3161
PERC12	.015511	.016603	.426722	.192	.8479
PERC13	.024362	.034110	.582801	.395	.6934
PERC14	.059775	.082036	.580296	.953	.3424
PERC15	.008004	.011369	.586638	.132	.8955
PERC16	.010277	.013733	.565618	.159	.8739
PERC17	-.014931	-.021533	.579058	-.249	.8035
PERC18	.016436	.019881	.544892	.230	.8183
PERC19	-.050780	-.066162	.589975	-.768	.4441
PERC20	.038240	.049999	.583979	.580	.5632
PERC21	.004688	.006632	.563643	.077	.9389
PERC22	.122052	.163888	.580518	1.923	.0566
PERC23	-.073831	-.092439	.577539	-1.075	.2845
PERC24	.046716	.064833	.589749	.752	.4533
PERC26	-.052099	-.079171	.598332	-.919	.3596
PERC27	-.019366	-.025601	.577002	-.296	.7673
PERC29	-.031172	-.045199	.592033	-.524	.6013
PERC30	.023249	.029285	.541640	.339	.7350
PERC31	-.042231	-.065799	.598005	-.763	.4466
PERC32	.041113	.056154	.584926	.651	.5161
PERC33	-.030757	-.048309	.599769	-.560	.5765
PERC34	.062110	.083534	.537178	.970	.3336

End Block Number 1 PIN = .050 Limits reached.

3. QUAL REGRESSION

```
regression /variables qual1 to qual35 OQ / descriptives /dependent OQ  
/method  
stepwise.  
Listwise Deletion of Missing Data  
N of Cases = 131
```

	OQ
QUAL1	.260
QUAL2	.358
QUAL3	.530
QUAL4	.377
QUAL5	.402
QUAL6	.315
QUAL7	.429
QUAL8	.196
QUAL9	.269
QUAL10	.065
QUAL11	.254
QUAL12	.485
QUAL13	.330
QUAL14	.396
QUAL15	.217
QUAL16	.447
QUAL17	.331
QUAL18	.493
QUAL19	.390
QUAL20	.368
QUAL21	.361
QUAL22	.490
QUAL23	.348
QUAL24	.320
QUAL25	.402
QUAL26	.280
QUAL27	.403
QUAL28	.426
QUAL29	.095
QUAL30	.400
QUAL31	.121
QUAL32	.276
QUAL33	.072
QUAL34	.417
QUAL35	.462
OQ	1.000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
QUAL3	.168861	.053572	.262122	3.152	.0020
QUAL35	.180081	.044697	.278952	4.029	.0001
QUAL22	.128293	.040508	.231755	3.167	.0019
QUAL18	.110829	.047629	.190227	2.327	.0216
(Constant)	1.615283	.180174		8.965	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
QUAL1	.059329	.077258	.590108	.866	.3880
QUAL2	.058819	.068707	.506781	.770	.4428
QUAL4	.050501	.057682	.530148	.646	.5195
QUAL5	-.080492	-.081804	.507372	-.918	.3606
QUAL6	.050050	.060046	.586453	.673	.5025
QUAL7	.107512	.123406	.569965	1.390	.1669
QUAL8	.012594	.016484	.600270	.184	.8541
QUAL9	.098207	.127620	.591877	1.439	.1528
QUAL10	-.070100	-.094442	.588795	-1.061	.2909
QUAL11	-.028008	-.034635	.587527	-.387	.6991
QUAL12	.103770	.106972	.557861	1.203	.2313
QUAL13	-.105158	-.114737	.546602	-1.291	.1990
QUAL14	.038117	.043892	.578080	.491	.6241
QUAL15	-.061034	-.076076	.582440	-.853	.3953
QUAL16	.070271	.076580	.563941	.859	.3921
QUAL17	.026223	.031247	.579228	.350	.7273
QUAL19	-.009958	-.010906	.565250	-.122	.9031
QUAL20	.050613	.059353	.574921	.665	.5074
QUAL21	-.028334	-.031704	.558725	-.355	.7235
QUAL23	.036881	.044993	.583995	.504	.6155
QUAL24	-.003659	-.004427	.594967	-.049	.9606
QUAL25	-.069570	-.072941	.577056	-.818	.4151
QUAL26	.036833	.046312	.565073	.518	.6051
QUAL27	.041052	.047092	.566687	.527	.5991
QUAL28	.009608	.009552	.488971	.107	.9151
QUAL29	-.078235	-.104523	.593486	-1.175	.2422
QUAL30	.009610	.010658	.557100	.119	.9053
QUAL31	-.013640	-.018360	.587636	-.205	.8377
QUAL32	-.053313	-.065202	.594725	-.731	.4664
QUAL33	-.065250	-.087667	.602350	-.984	.3271
QUAL34	.022177	.024461	.586749	.274	.7849

End Block Number 1 PIN = .050 Limits reached.

APPENDIX 11. VARIANCE ANALYSIS - SIGNIFICANT MEAN DIFFERENCES OF SEVERAL VARIABLES

This appendix presents the significant mean differences of:

1. PERC items with HR question
2. QUAL items with HR question, and
3. the mean difference of OQ with HR and WR with HR.

An analysis of variance was computed.

1. SIGNIFICANT MEAN DIFFERENCES BETWEEN 'PERC' ITEMS AND 'HR' QUESTION

Summaries of PERC by levels of HR and Analysis of Variance

Summaries of PERC4
By levels of HR - HAVE YOU EVER RECOMMENDEDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population					
			3.7062	.8003	177
HR	1.0	yes	3.7803	.7648	132
HR	2.0	no	3.4889	.8692	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups	2.8499	1	2.8499	4.5392
Sig.				.0345

With fewer than three groups, the relationship is linear

Within Groups	109.8732	175	.6278
---------------	----------	-----	-------

Eta = .1590 Eta Squared = .0253

Summaries of PERC6
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.6215	.8245	177
HR	1.0	yes	3.7197	.7942	132
HR	2.0	no	3.3333	.8528	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups .0063	5.0096	1	5.0096	7.6480

With fewer than three groups, the relationship is linear

Within Groups	114.6288	175	.6550	
Eta = .2046		Eta Squared = .0419		

Summaries of PERC7
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.6420	.8365	176
HR	1.0	yes	3.7634	.7320	131
HR	2.0	no	3.2889	1.0140	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups .0009	7.5403	1	7.5403	11.4179

With fewer than three groups, the relationship is linear

Within Groups	114.9086	174	.6604	
Eta = .2482		Eta Squared = .0616		

Summaries of PERC25
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.4831	1.0153	178
HR	1.0	yes	3.5672	.9613	134
HR	2.0	no	3.2273	1.1384	44

Analysis of Variance

Source	Sig.	Sum of Squares	D.F.	Mean Square	F
Between Groups	.0538	3.8266	1	3.8266	3.7705

With fewer than three groups, the relationship is linear

Within Groups		178.6228	176	1.0149	
		Eta = .1448	Eta Squared = .0210		

Summaries of PERC27
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.7022	.7100	178
HR	1.0	yes	3.7744	.6585	133
HR	2.0	no	3.4889	.8153	45

Analysis of Variance

Source	Sig.	Sum of Squares	D.F.	Mean Square	F
Between Groups	.0193	2.7416	1	2.7416	5.5797

With fewer than three groups, the relationship is linear

Within Groups		86.4775	176	.4913	
		Eta = .1753	Eta Squared = .0307		

Summaries of PERC33
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.9774	.6480	177
HR	1.0	yes	4.0530	.5837	132
HR	2.0	no	3.7556	.7733	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups .0075	2.9697	1	2.9697	7.3259

With fewer than three groups, the relationship is linear

Within Groups	70.9399	175	.4054	
Eta = .2005		Eta Squared = .0402		

Summaries of PERC34
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.0284	1.1183	176
HR	1.0	yes	3.1439	1.1130	132
HR	2.0	no	2.6818	1.0734	44

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups .0172	7.0473	1	7.0473	5.7893

With fewer than three groups, the relationship is linear

Within Groups	211.8106	174	1.2173	
Eta = .1794		Eta Squared = .0322		

2. SIGNIFICANT MEAN DIFFERENCES BETWEEN 'QUAL' ITEMS AND 'HR' QUESTION

Summaries of QUAL by levels of HR and Analysis of Variance

Summaries of QUAL7
By levels of HR - HAVE YOU EVER RECOMMENDEDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.1371	1.1160	175
HR	1.0	yes	3.2846	1.0210	130
HR	2.0	no	2.7111	1.2725	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups .0027	10.9949	1	10.9949	9.2464

With fewer than three groups, the relationship is linear

Within Groups	205.7137	173	1.1891
Eta = .2252		Eta Squared = .0507	

Summaries of QUAL18
By levels of HR - HAVE YOU EVER RECOMMENDEDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.5943	1.1749	175
HR	1.0	yes	3.7176	1.1850	131
HR	2.0	no	3.2273	1.0754	44

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups .0162	7.9174	1	7.9174	5.8969

With fewer than three groups, the relationship is linear

Within Groups	232.2769	173	1.3426
Eta = .1816		Eta Squared = .0330	

Summaries of QUAL27
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.7175	1.1478	177
HR	1.0	yes	3.8120	1.0741	133
HR	2.0	no	3.4318	1.3189	44

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups	4.7795	1	4.7795	3.6831
Sig. .0566				

With fewer than three groups, the relationship is linear

Within Groups	227.0962	175	1.2977
---------------	----------	-----	--------

Eta = .1436 Eta Squared = .0206

Summaries of QUAL33
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.6136	.8340	176
HR	1.0	yes	3.7405	.7999	131
HR	2.0	no	3.2444	.8300	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups	8.2406	1	8.2406	12.6346
Sig. .0005				

With fewer than three groups, the relationship is linear

Within Groups	113.4867	174	.6522
---------------	----------	-----	-------

Eta = .2602 Eta Squared = .0677

Summaries of QUAL34
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			2.3600	1.2738	175
HR	1.0	yes	2.4962	1.2732	131
HR	2.0	no	1.9545	1.1999	44

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups Sig.	9.6628	1	9.6628	6.1310
Within Groups	272.6572	173	1.5761	

With fewer than three groups, the relationship is linear

Eta = .1850 Eta Squared = .0342

3. SIGNIFICANT MEAN DIFFERENCES BETWEEN 'OQ', 'WR' AND 'HR' QUESTIONS

CORRELATIONS /VARIABLES OQ with WR.

Correlations: WR

OQ .6216**

N of cases: 180 1-tailed Signif: * - .01 ** - .001

" . " is printed if a coefficient cannot be computed

MEANS /TABLES OQ WR by HR /OPTIONS /STATISTICS 1.

Summaries of OQ - HOW WOULD YOU RATE THE OVERALL QUALITY OF RESENDE
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population					
			3.4525	.7280	179
HR	1.0	yes	3.5149	.7016	134
HR	2.0	no	3.2667	.7804	45

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups	2.0762	1	2.0762	3.9828
Within Groups	92.2701	177	.5213	
Eta = .1483		Eta Squared = .0220		

Summaries of WR - WOULD YOU RECOMMEND RESENDE TO A FRIEND
 By levels of HR - HAVE YOU EVER RECOMMENDED RESENDE TO OTHER PEOPLE

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.6067	.7070	178
HR	1.0	yes	3.7239	.6179	134
HR	2.0	no	3.2500	.8387	44

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F
Between Groups Sig.	7.4383	1	7.4383	16.1556
Within Groups	81.0336	176	.4604	
Eta = .2900		Eta Squared = .0841		

APPENDIX 12. CORRELATION BETWEEN DIMENSIONS, OVERALL QUALITY PERCEPTION, AND WILLINGNESS TO RECOMMEND

This appendix presents the mean, and the standard deviation for each dimension. It shows the correlation between dimensions (factor 1 to 5), overall quality perception (OQ question), and willingness to recommend (WR and HR questions).

CORRELATIONS /VARIABLES FACTOR1 FACTOR2 FACTOR3 FACTOR4 FACTOR5 OQ WR HR /STATISTICS 1.

Variable	Cases	Mean	Std Dev			
FACTOR1	144	3.2056	.8366			
FACTOR2	144	3.1852	.8232			
FACTOR3	144	2.6719	.9168			
FACTOR4	144	3.1713	.7715			
FACTOR5	144	3.2708	.8663			
OQ	144	3.4375	.7166			
WR	144	3.6042	.6713			
HR	144	1.2431	.4304			

Correlations:	FACTOR1	FACTOR2	FACTOR3	FACTOR4	FACTOR5	OQ
FACTOR1	1.0000	.6291**	.5121**	.5887**	.3794**	.4135**
FACTOR2	.6291**	1.0000	.5857**	.6331**	.3056**	.5414**
FACTOR3	.5121**	.5857**	1.0000	.4846**	.2822**	.5819**
FACTOR4	.5887**	.6331**	.4846**	1.0000	.2882**	.4285**
FACTOR5	.3794**	.3056**	.2822**	.2882**	1.0000	.1795
OQ	.4135**	.5414**	.5819**	.4285**	.1795	1.0000
WR	.3775**	.5048**	.4295**	.3884**	.2939**	.5951**
HR	-.0543	-.1444	-.0756	-.0420	-.0465	-.0751

N of cases: 144 1-tailed Signif: * - .01 ** - .001

Correlations:	WR	HR
FACTOR1	.3775**	-.0543
FACTOR2	.5048**	-.1444
FACTOR3	.4295**	-.0756
FACTOR4	.3884**	-.0420
FACTOR5	.2939**	-.0465
OQ	.5951**	-.0751
WR	1.0000	-.1972*
HR	-.1972*	1.0000

N of cases: 144 1-tailed Signif: * - .01 ** - .001

" . " is printed if a coefficient cannot be computed

APPENDIX 13. MULTIPLE REGRESSION

This appendix presents the stepwise regression method of the five dimensions with the dependent variable OQ.

```
-----  
COMPUTE factor1 = (qual13+qual15+qual17+qual21+qual24)/5.  
compute factor2 = (qual3+qual4+qual5+qual7+qual11+qual18)/6.  
compute factor3 = (qual12+qual22+qual25+qual34)/4.  
compute factor4 = (qual2+qual19+qual20)/3.  
compute factor5 = (qual10+qual26+qual29)/3.  
-----
```

```
REGRESSION /VARIABLES FACTOR1 FACTOR2 FACTOR3 FACTOR4 FACTOR5 OQ /DEPENDENT OQ  
The raw data or transformation pass is proceeding  
181 cases are written to the compressed active file.  
/METHOD STEPWISE .  
-----
```

***** MULTIPLE REGRESSION *****

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. OQ

Block Number 1. Method: Stepwise Criteria PIN .0500 POUT .1000

Equation Number 1 Dependent Variable.. OQ

Variable(s) Entered on Step Number
1.. FACTOR3

Multiple R .58082
R Square .33735
Adjusted R Square .33272
Standard Error .58411

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	24.83827	24.83827
Residual	143	48.78931	.34118

F = 72.80023 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
FACTOR3	.454598	.053280	.580818	8.532	.0000
(Constant)	2.219610	.150421		14.756	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
FACTOR1	.165603	.176088	.749222	2.132	.0348
FACTOR2	.305306	.303990	.656949	3.802	.0002
FACTOR4	.192670	.207067	.765385	2.522	.0128
FACTOR5	.018279	.021544	.920543	.257	.7977

Variable(s) Entered on Step Number

2.. FACTOR2

Multiple R	.63134
R Square	.39859
Adjusted R Square	.39011
Standard Error	.55842

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	29.34689	14.67345
Residual	142	44.28069	.31184

F = 47.05503 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
FACTOR3	.314638	.062844	.401999	5.007	.0000
FACTOR2	.266136	.069992	.305306	3.802	.0002
(Constant)	1.745979	.190251		9.177	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
FACTOR1	.042678	.042250	.516840	.502	.6164
FACTOR4	.070435	.069151	.497559	.823	.4118
FACTOR5	-.029263	-.035609	.635515	-.423	.6729

End Block Number 1 PIN = .050 Limits reached.

APPENDIX 14. MULTIPLE REGRESSION

This appendix presents the stepwise regression method of the five dimensions with the dependent variable WR.

REGRESSION /VARIABLES FACTOR1 FACTOR2 FACTOR3 FACTOR4 FACTOR5 WR /DEPENDENT WR
/METHOD STEPWISE .

***** MULTIPLE REGRESSION *****

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. WR

Block Number 1. Method: Stepwise Criteria PIN .0500 POUT .1000

Equation Number 1 Dependent Variable.. WR

Variable(s) Entered on Step Number

1.. FACTOR2

Multiple R .50481
R Square .25484
Adjusted R Square .24959
Standard Error .58150

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	16.42110	16.42110
Residual	142	48.01640	.33814

F = 48.56249 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
FACTOR2	.411671	.059074	.504814	6.969	.0000
(Constant)	2.292918	.194303		11.801	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
FACTOR1	.099196	.089322	.604197	1.065	.2887
FACTOR3	.203700	.191258	.656915	2.314	.0221
FACTOR4	.114876	.103017	.599247	1.230	.2208
FACTOR5	.153953	.169812	.906594	2.046	.0426

Variable(s) Entered on Step Number
2.. FACTOR3

Multiple R .53113
R Square .28210
Adjusted R Square .27191
Standard Error .57279

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	2	18.17752	9.08876
Residual	141	46.25998	.32808

F = 27.70246 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
FACTOR2	.314372	.071794	.385500	4.379	.0000
FACTOR3	.149155	.064464	.203700	2.314	.0221
(Constant)	2.204312	.195185		11.293	.0000

----- Variables not in the Equation -----

Variable	Beta In	Partial	Min Toler	T	Sig T
FACTOR1	.053564	.047846	.510045	.567	.5718
FACTOR4	.078785	.070787	.497545	.840	.4025
FACTOR5	.133154	.148291	.635514	1.774	.0782

End Block Number 1 PIN = .050 Limits reached.

APPENDIX 15. REGRESSION BETWEEN OQ AND WR

This appendix presents the regression results between OQ and WR variables.

REGRESSION /VARIABLES OQ WR /DEPENDENT WR /METHOD ENTER.

* * * * MULTIPLE REGRESSION * * * *

Listwise Deletion of Missing Data

Equation Number 1 Dependent Variable.. WR

Block Number 1. Method: Enter

Equation Number 1 Dependent Variable.. WR

Variable(s) Entered on Step Number

1.. OQ

Multiple R .62164
R Square .38644
Adjusted R Square .38299
Standard Error .55868

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	34.99215	34.99215
Residual	178	55.55785	.31212

F = 112.11021 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
OQ	.601240	.056784	.621643	10.588	.0000
(Constant)	1.532369	.201207		7.616	.0000

End Block Number 1 All requested variables entered.

2. REGRESSION /VARIABLES OQ WR /DEPENDENT OQ /METHOD ENTER.

***** MULTIPLE REGRESSION *****

Listwise Deletion of Missing Data

Equation Number 1 . Dependent Variable.. OQ

Block Number 1. Method: Enter

Variable(s) Entered on Step Number

1.. WR

Multiple R .62164
R Square .38644
Adjusted R Square .38299
Standard Error .57764

Analysis of Variance

	DF	Sum of Squares	Mean Square
Regression	1	37.40740	37.40740
Residual	178	59.39260	.33367

F = 112.11021 Signif F = .0000

----- Variables in the Equation -----

Variable	B	SE B	Beta	T	Sig T
WR	.642739	.060703	.621643	10.588	.0000
(Constant)	1.142095	.223725		5.105	.0000

End Block Number 1 All requested variables entered.

APPENDIX 16. VARIANCE ANALYSIS - SIGNIFICANT MEAN DIFFERENCES OF DIMENSIONS AND HR

This appendix presents the significant mean differences of:
 -Dimensions items with HR question
 An analysis of variance was computed.

MEANS /TABLES FACTOR1 FACTOR2 FACTOR3 FACTOR4 FACTOR5 BY HR /STATISTICS 1.

Summaries of FACTOR1
 By levels of HR

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.2036	.8368	165
HR	1.0		3.2397	.7928	126
HR	2.0		3.0872	.9677	39

Total Cases = 181
 Missing Cases = 16 OR 8.8 PCT.

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	.6926	1	.6926	.9891	.3214
Within Groups	114.1452	163	.7003		
Eta = .0777		Eta Squared = .0060			

Summaries of FACTOR2
 By levels of HR

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.1975	.8100	162
HR	1.0		3.2625	.7399	120
HR	2.0		3.0119	.9693	42

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	1.9537	1	1.9537	3.0153	.0844
Within Groups	103.6697	160	.6479		
Eta = .1360		Eta Squared = .0185			

Summaries of FACTOR3
By levels of HR

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			2.6497	.9087	172
HR	1.0		2.7023	.8733	131
HR	2.0		2.4817	1.0068	41

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	1.5194	1	1.5194	1.8491	.1757
Within Groups	139.6881	170	.8217		
Eta = .1037		Eta Squared = .0108			

Summaries of FACTOR4
By levels of HR

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.1657	.7527	171
HR	1.0		3.2005	.7405	128
HR	2.0		3.0620	.7877	43

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	.6175	1	.6175	1.0905	.2978
Within Groups	95.6879	169	.5662		
Eta = .0801		Eta Squared = .0064			

Summaries of FACTOR5
By levels of HR

Variable	Value	Label	Mean	Std Dev	Cases
For Entire Population			3.3018	.8524	169
HR	1.0		3.3438	.8493	127
HR	2.0		3.1746	.8593	42

Analysis of Variance

Source	Sum of Squares	D.F.	Mean Square	F	Sig.
Between Groups	.9039	1	.9039	1.2460	.2659
Within Groups	121.1500	167	.7254		
Eta = .0861		Eta Squared = .0074			

APPENDIX Q. ITEMS IN THE QUESTIONNAIRE

- 1 They should have schedules convenient to all their customers
 - 2 Drivers should drive in a pleasant and safe manner
 - 3 The firms should have their customers' best interest at heart
 - 4 Customers should be able to trust these firms' employees
 - 5 Employees should get adequate support from the firms to do their jobs well
 - 6 Busses should be beautiful
 - 7 These firms should be dependable
 - 8 It should there be several kind of food selling during the trip
 - 9 Employees should be well dressed and appear neat
 - 10 It is to be expected that these firms' telephone lines will be busy much of the time
 - 11 Employees should know what are the needs of their customers
 - 12 Busses should be very comfortable
 - 13 Customers should expect prompt service from employees to pack the luggage and to show the customers their seats
 - 14 Customers should be able to feel safe with the baggage packing and treatment
 - 15 Bus hostess should be very friendly
 - 16 These firms should keep places records accurately
 - 17 Arrived time-table should be held
 - 18 The transportation firms should give customers individual attention
 - 19 Customers should feel secure traveling in the busses
 - 20 Employees should be knowledgeable
 - 21 Time-table for start a trip should be held
 - 22 Busses should have roomy seats
 - 23 When customers have problems, these firms should be sympathetic and reassuring
 - 24 Employees always have to be willing to help customers
 - 25 Physical facilities should be keeping well clean
 - 26 Customers should buy tickets without delay
 - 27 Trips should be rapid
 - 28 Employees should give customers personal attention
 - 29 Ticket office employees should be very friendly
 - 30 Employees should try to respond to customers requests promptly
 - 31 Busses should have a distinct area for smokers
 - 32 Employees should be polite
 - 33 Ticket office should be located at an easy access place
 - 34 Busses should have an agreeable temperature
 - 35 Busses should be up-to-date
- OQ How would you rate the overall quality of Resende
- W R Would you recommend Resende to a friend
- H R Have you ever recommended Resende to other people? (Y/N)