Determinants of internal service quality and the relationship with internal customer satisfaction

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Accepted 25 January, 2012

The study seeks to contribute to the knowledge relating to internal service quality by adapting an instrument to measure internal service quality within a functional unit based on the perceptions of internal employees (receivers of service). Whilst service quality and its antecedents have been widely researched through literature and addressed in scholarly academic platforms, research on internal service quality and the relationship with internal customer satisfaction has not been given the same amount of prominence. The survey method with a sample of 229 randomly selected employees was used to collect data from different departments within a petro-chemical company. Factor analysis, correlations and regression analysis was used to analyse the data. The internal service quality dimensions comprise five dimensions namely, credibility, accessibility/tangibility, preparedness, reliability and competence. In terms of the regression analysis, the dimensions accessibility and tangibility, reliability and competence exerted the strongest influence on internal customer satisfaction.

By focusing on internal customer service, providing value, and strategically marketing its service, an internal department can plan and test all aspects of their operational activities through the internal service quality dimensions.

Key words: Internal service quality, service quality, internal services, internal marketing.

INTRODUCTION

Academics and practitioners alike have exhibited considerable interest on the issues that entails the measurement of service quality (Grönroos, 1984; Heskett, 1987; Parasuraman et al., 1988; Caruana and Pitt, 1997). Survival in competitive markets depends on the quality of services provided by internal employees through exceptional customer support to other service units within an organisation (Gilbert, 2000). Effective internal supplier-to-internal customer service becomes a prerequisite to the level of service quality eventually offered to external customers. Internal marketing literature suggests that the way to satisfied customers, is through satisfied employees and that the ability to meet customer requirements is vital, not only between two separate organisations, but also within the same organisation (Heskett et al., 1984). Perhaps the best way to ensure that external customers are satisfied is to establish the idea that every part of an organisation contributes to internal customer service quality through its various micro operations that form an interconnecting network of physical and information flows within the macro operation (Mycroft et al., 2005). Hence, an internal service chain is developed before the product or service reaches the external customers (Paraskevas, 2001). High level of quality built into the internal service chain consequently result in high level of quality products and services offered to external customers.

INTERNAL CUSTOMER SERVICE AND INTERNAL MARKETING

Relationship in marketing literature supports the notion that internal relationships impacts on external customer relationships and the satisfaction of external customers (Lombard, 2010). Underpinning the internal marketing philosophy is the notion that organisations attempting to serve external customers must do so by first serving the
needs of its internal customers (Khan et al., 2011).

The concept of internal marketing first emerged in the early 1980's in service marketing literature (Grönroos, 1981; Berry, 1980). Heskest (1987) observed that this shift towards internal marketing was energised as a consequence of "high-performing service companies had gained their status in large measures by turning the strategic service vision inward". A distinction is made between internal customer service and internal marketing (Berry, 1980). Internal customer service is about how employees from one department serve employees in other departments; while internal marketing is how the organisation mainly through its human resources department serves its employees (Paraskevas, 2001).

Stauss (1995) defined internal customer service as "services provided by distinct organisational units or people working in within a department to other units or employees within an organisation". Nagel and Cilliers (1990) defined the "internal customer as any member of an organisation receiving products or services by other members in an organisation". Back et al. (2010) define internal service quality as employees in a distinct organisational unit or people working in these units provide services to other employees within an organisation. Hence, departments consider themselves as members of a customer service chain within an organisation (Chaston, 1994) which are linked together to satisfy external customers (Jun and Cai, 2010). Berry (1980) appropriately encapsulated the internal marketing by "viewing employees as internal customers, viewing jobs as internal products that satisfy the needs and wants of internal customers while addressing the needs of external customers". Grönroos (1989) explained that internal marketing takes place when "employees display a service-minded and customer-oriented behaviour by an active, marketing-like approach and when marketing-like activities are utilized internally". Christopher et al. (1993) viewed internal marketing as a process of creating market conditions within an organisation to ensure that internal customers' wants and needs are met. Earlier, Shostack (1987) proposed that internal service levels could be improved with service blueprinting. Service blueprinting illustrates the exchange and transactions in flow charts that create value between departments (Voss et al., 2005) that are not customer visible (Lings and Brooks, 1998). Departments receive services and goods from other departments within an organisation. In this manner, certain departments serve as internal suppliers of goods and services to other departments who act as internal customers. To achieve the highest possible value delivered to the external customer, each department within organisations is required to deliver the highest possible value (in the form of outputs) to internal customers (Conduit and Mavondo, 2001). The service delivered internally eventually culminates in the service level delivered to the external customer (Kang et al., 2002). Thus, the service production process is seen as a network of systems built by interrelations and interdependence between various sub-processes (George, 1990) whereby every service operation comprise internal service functions which support one another. "In an ideal working environment, internal service encounters would result in successful interdepartmental relationships" (Paraskevas, 2001).

Like external customers, employees engage in numerous service encounters to satisfy the needs they have in the course of carrying out their job responsibilities (Kang et al., 2002). These internal encounters include relationships between customer-contact staff and back-room staff, managers and the customer-contact staff, managers and the back-room staff, and for large organisations, between head office and each branch (Lewis and Entwistle, 1990). Hence, the basic premise of internal customer service posits that every department in an organisation exists to serve someone, whether it is the external customer or another department (Farner et al., 2001). Individual departments therefore need to view themselves as both customers and suppliers. They receive inputs from another department (their supplier), add value and send the output of their work to another department (their customer). Grönroos (1981) stated that internal marketing should "create an internal environment which supports customer-consciousness among personnel". An organisation therefore comprise an independent chain of individuals and functional units, each taking inputs from one another and turning them out into external customer service. Thus, if the tasks of the front-line employees and departments are not performed efficiently and effectively, the results can be detrimental to service levels provided to customers through poor supply chain performances and the financial-wellbeing of an organisation may be impaired in the final service offered to customers (Voss et al., 2005).

To establish whether such internal service efforts are successful, managers need a means by which internal service quality can be measured. Thus, when an internal delivery system is designed to match internal customer needs, the results entail more efficient internal exchanges among the various organisational members and departments, lower waste, lower costs and improved internal service quality – all pieces of the total quality management (TQM) mosaic (Radcliff and Brooks, 1993). TQM requires all facets of an organisation to be effective as every activity within an organisation, performed by every person affects the quality of services performed by others (Pycraft et al., 2005), implying that errors in the services provided within an organisation will eventually affect the services which ultimately reaches an external customer.

**SERVICE QUALITY AND SATISFACTION**

Service quality forms an integral part of service marketing. Service quality is about performing the service dependably and accurately. When a company performs a
service carelessly, when it makes preventable errors, when it fails to deliver on alluring promises made to attract customers, it unsettles customers’ assurance and weakens its opportunity of earning a reputation for service excellence. From the customer’s perspective, the proof of a service is its flawless performance (Berry and Parasuraman, 1991). Scholars over the years (Parasuraman et al., 1985; Christopher et al., 1993) defined service quality as a global judgment of an attitude relating to the superiority of a service measured by comparing customers’ expectations and perceptions of services actually received.

Two streams of thought have primarily emerged on measuring service quality, namely a European and an American perspective. The proponent of the European perspective (Grönroos, 1984) proposed that service quality comprised three dimensions: functional (the process of service delivery to customers), technical (how the outcomes are generated to customers) and image (how the company views the company). The American perspective was enunciated by Parasuraman et al. (1985; 1988) who proposed a two-part SERVQUAL instrument in measuring service quality. The SERVQUAL instrument (Parasuraman et al., 1988) measures service quality along five dimensions, namely, tangibles, reliability, responsiveness, assurance and empathy. Tangibles entail the appearance of physical facilities, equipment, personnel and communication material, which reflects images of services that consumers use to evaluate quality. Reliability refers to the consistency and dependability of a company’s performance. Responsiveness refers to the willingness to assist customers and provide prompt service. The assurance dimension addresses the competence of the company, the courtesy it extends to its customers and the ability of the company and its employees to instill trust and confidence. Finally, empathy encompasses the caring and individualized attention a company provides to its customers.

Over the years, the SERVQUAL instrument developed by Parasuraman et al. (1988) study has provided framework for the measurement of external service quality and has formed the cornerstone on which other works on service quality have been developed (Sureshchander et al., 2002). The SERVQUAL framework that was widely used across and range of services is based on the gap model (perception minus expectations) (Galloway, 1998). These external service quality dimensions have been previously used in the measurement of internal customer service quality (Chaston, 1994; Nagel and Cilliers, 1990; Reynoso and Moore, 1995; Varey, 1995; Frost and Kumar, 2000). The justification for the use of an external model is based on the premise that the interaction between the company and the external customer is linked in a large network of relationships; many of which commences from within an organisation. The implication is that the principles and techniques for the creation and measurement of external service quality can be transferred to an internal environment (Auty and Long, 1999).

Whilst the original SERVQUAL instrument has been revised, refined and reformulated (Parasuraman et al., 1991, 1994) its primary content remains unaltered and the authors claim that SERVQUAL, by making appropriate changes, it can be used by departments and divisions within a company to ascertain the quality of service they provide to employees in other departments and divisions. Debates surrounding the validity and reliability of the SERVQUAL methodology have been lively for many years (Carman, 1990; Buttle, 1996; Cronin and Taylor, 1992). Questions around the number of dimensions, perceptions and expectations score and questions designed to establish an overall quality perception are still debated (Galloway, 1998).

Unfortunately, of the prevalence of articles, which are important in respect of identifying internal service quality dimensions, only a few could be considered as being methodologically useful from a reliability and validity perspective (Kang et al., 2002). Chaston (1994) for example, measured potential gaps in internal service quality by using a modified version of the SERVQUAL instrument.

Young and Varble (1997) assessed internal service quality within a purchasing context by applying the original SERVQUAL measures. Edvardssson et al. (1997) used the SERVQUAL instrument to explore the relationship between the psychosocial work environment and internal service quality. In fact, Edvardssson et al. (1997) noted, that "...our way of measuring internal service quality is inspired by the SERVQUAL instrument", implying that the SERVQUAL instrument guided the development of the measures used. Lings and Brooks (1998) and Frost and Kumar (2000) also propose that the SERVQUAL instrument may be an appropriate tool to measure the quality of service delivered by internal suppliers to their customers.

Satisfaction on the other hand is viewed as transaction specific or cumulative over a series purchase experiences, while service quality is an overall attitude of a long-term attitude to the service offering (Caruana and Pitt, 1997). The transaction-specific perspective indicates that satisfaction is based on the recent purchases experiences (Kuo et al., 2009). The cumulative perspective stresses overall evaluations, indicating that evaluations of customer satisfaction should be based on all the purchase experiences of the customer. Parasuraman et al. (1988) argued that the cumulative perspective is more capable of evaluating the service performance and more effective in predicting consumers’ customer satisfaction.

Motivation for the study

Whilst service quality has been an active area of
research during the last two decades, whereby various models were developed to measure the dimensions of external service quality (Gunawardane, 2011), its measurement to a large extent have focused on external customers (Bellou and Andronikidis, 2008; Miguel et al., 2006). Internal marketing which is distinct from internal customer service quality has also received attention from researchers both internationally and nationally, but not to the same extent and external service quality (Frost and Kumar, 2000).

A modest amount of research on internal service quality has been published over the years (Pitt et al., 1991; Lombard, 2010). A small quantity of research examining internal service quality has been devoted to employees in service units within organisations. As a result, scant attention been paid on serving the needs of internal customers (Bruhn, 2003). Effective internal supplier-customer service quality is also an essential prerequisite to deliver sustainable external customer satisfaction (Bruhn, 2003). Therefore, the measurement of internal service quality is essential for the improvement of higher external customer satisfaction.

Furthermore, a limited amount of research has also been recorded in South Africa on internal customer service quality (Lombard, 2010) and no study of internal employee’s customer services has been conducted in a petro-chemical manufacturing company. Marshall et al. (1988) emphasized that further research is needed to assist organisations to understand the nature and determinant of internal service quality. Due to limited amount of research undertaken on internal customers services, a gap remains which has stimulated this research, especially in manufacturing organisations.

The results drawn from the study can be used by the manufacturing organisations on ensuring higher levels of internal service quality, which can be guided by the dimensions of internal service quality. The results can present evidence supporting the value that the administrative department can provide to the other departments. The results can also assist organisations to understand the nature and determinant of internal service quality. The results can present evidence supporting the value that the administrative department can provide to the other departments. The results can also assist organisations to understand the nature and determinant of internal service quality. The results can present evidence supporting the value that the administrative department can provide to the other departments.

The study seeks to contribute further to the knowledge concerning internal service quality by identifying key dimensions of internal customer service quality within a particular functional unit (administrative unit) based on the perceptions of internal employees from other departments. The secondary purpose of the study was to examine the predictive power of the internal service quality dimensions on internal customer satisfaction.

**RESEARCH DESIGN**

**Population and sample**

The population comprised technology R and D employees from different departments of a petro-chemical company. A database comprised a total of 519 employees in the technology R and D departments. The survey method was used to collect data. A sample of 260 respondents was randomly selected from a list of internal customers which was provided by the administrative department. The administrative department, as an internal service provider purchases a variety of products and services for its internal customers such as provision of office supplies, preparation of reports in addition to packaging of chemical samples on behalf of its internal customers (human resources, chemistry, process research and applied research and development departments). Every second employee on the employee data base was requested to complete the questionnaire. Where the employee was not available, the next employee on the list was approached to complete the questionnaire.

**Survey instrument**

The scale items were adapted from validated measures of prior studies (Parasuraman et al., 1899; Finn et al., 1996; Frost and Kumar, 2000; Varey, 1995). The items were modified to measure the employees’ perceptions of internal service quality. Where
necessary, items were worded to capture internal rather than external service quality. Pre-testing for the study was undertaken with 10 different employees, in the R and D departments, so as to ensure that the wording and the questions were appropriate and related to the study. Changes were made to a draft questionnaire with regard to re-phrasing, sequence, and appropriateness of the internal service quality attributes. The variables regarding internal service quality were transformed to a 5-point Likert scale where “completely fails to meet my expectation” = 1 and “exceeds my expectation” = 6, were used in section A. Section A total comprised a total of 25 items. Section B comprised three questions based on the Likert scale format with 1 = strongly agree and 5 = strongly disagree relating to internal customer satisfaction. The measure of overall satisfaction also provided an opportunity to verify the predictive validity of the internal service quality measure. Section C of the questionnaire sought to collect information on gender and the unit (department) that employees worked in.

**Data collection**

Internal employees were requested to complete a self-administered questionnaire. To maintain anonymity, completed questionnaires were dropped through internal post at the administration office. A maximum of three reminders were used either by telephone and/or email to request respondents to submit their completed questionnaire. A total of 11 questionnaires were rejected due to errors or incomplete responses. A total of 229 questionnaires were used for analysis representing approximately a 44% of the population.

**RESULTS AND DISCUSSION**

Data analysis comprised four distinct phases namely, a descriptive analysis of the sample, an assessment of the underlying dimensions of internal service quality, Pearson correlation coefficients and regression analysis.

**Sample composition**

Frequency analysis was first conducted on the respondents’ demographic characteristics. Male respondents (n = 120; 52%) were marginally more than females (n = 109; 48%) in the sample. The sample distributions in terms of divisions or units were as follows: human resources (n = 10; 4%), chemistry (n = 111; 49%), process research (n = 48%) in the sample. The sample distributions in terms of the respondents’ demographic characteristics. Male respondents (n = 120; 52%) were marginally more than females (n = 109; 48%) in the sample. The sample distributions in terms of divisions or units were as follows: human resources (n = 10; 4%), chemistry (n = 111; 49%), process research (n = 48%) in the sample.

**Factor analysis**

The principal components factoring procedure was used and varimax rotation using Kaiser normalization was applied in order to obtain a factor structure. Varimax rotation was used in order to minimize the number of variables with high loading on a factor, thereby enhancing the interpretability of factors (Malhotra and Birks, 2003). Variable loading of 0.40 and above were retained (Churchill and Iacobucci, 2002). Item reduction and scale purification was then undertaken whereby items with low factor loadings, communalities and low-item-to-total correlations were investigated (Chandon et al., 1997; Aldaigaan and Buttle, 2002). The iterative process was rerun several times until a clear factor structure emerged. The final factor structure, eigenvalues, the coefficient alpha values is reported in Table 1. The eigenvalues in respect of the five dimensions ranged from 7.73 to 1.00. Together, these factors accounted for 63% of the variance, which according to Malhotra (2004) is considered satisfactory. Factor one, labeled credibility comprised six variables and accounted for 39.66% of the variance. The credibility factor relates *inter-alia* to aspects of efficiency, honesty, feedback and courtesy afforded by the administrative personnel. Since the intangible nature of services and the inseparability of production and consumption of services, it is difficult for customers to undertake prior evaluation of a service. Thus, the trustworthiness and authenticity of the internal supplier of service becomes a crucial determinant in internal service quality evaluation (Malhotra et al., 1994).

The second factor, labeled accessibility and tangibility, comprised four variables and accounted for 6.59% of the variance. This factor incorporates issues relating to cooperation, consistency of services, accessibility and the physical appearance of the materials and products provided by the administrative personnel. Since production and consumption of a service is inseparable, a customer’s ease of contact with and timely access to the service supplier becomes crucial.

The third factor, preparedness comprised four variables and accounted for 6.07% of the variance. This factor accentuate those aspects such as guidance, flexibility, demonstrative skills, and an understanding internal customers specific needs in service quality evaluation. The premise of knowing and understanding customer needs serve as the underlying basis behind relationship marketing (Malhotra et al., 1994).

The fourth factor labeled reliability comprised three variables and accounted for 5.50% of the variance. The emphasis of this factor is on performing services right the first time, with timely and accurate provision of services and information. This was the only factor that incorporated most of the variables of the reliability dimension in the SERVQUAL scale. The fifth factor labeled competence comprised three variables and accounted for 5.03% of the variance. The emphasis on this dimension is on the provision and handling of information and understanding internal customer problems and complaints. This dimension varies significantly from SERVQUAL scale but similar to Lings and Brooks (1998) internal service quality competence dimension.

Other studies on internal service quality also reported on dimensions that varied and were not totally in congruence with the SERVQUAL scale (Brooks et al., 1999). Table 2 summarizes the dimensions of internal service quality identified in literature, a comparison with the SERVQUAL instrument and the dimensions that emerged from the current study.
### Table 1. Factor loading matrix and psychometric evaluation of the scale.

<table>
<thead>
<tr>
<th>Scale item no</th>
<th>Factor 1 (credibility)</th>
<th>Factor 2 (accessibility/tangibility)</th>
<th>Factor 3 (preparedness)</th>
<th>Factor 4 (reliability)</th>
<th>Factor 5 (competence)</th>
<th>Item-to-total correlation</th>
<th>Alpha if item deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.603</td>
<td>0.579</td>
<td>0.619</td>
<td>0.572</td>
<td>0.605</td>
<td>0.603</td>
<td>0.813</td>
</tr>
<tr>
<td>2</td>
<td>0.722</td>
<td>0.673</td>
<td>0.633</td>
<td>0.670</td>
<td>0.606</td>
<td>0.793</td>
<td>0.814</td>
</tr>
<tr>
<td>3</td>
<td>0.560</td>
<td>0.569</td>
<td>0.562</td>
<td>0.582</td>
<td>0.578</td>
<td>0.812</td>
<td>0.801</td>
</tr>
<tr>
<td>4</td>
<td>0.658</td>
<td>0.582</td>
<td>0.567</td>
<td>0.572</td>
<td>0.567</td>
<td>0.812</td>
<td>0.692</td>
</tr>
<tr>
<td>5</td>
<td>0.667</td>
<td>0.635</td>
<td>0.605</td>
<td>0.605</td>
<td>0.605</td>
<td>0.808</td>
<td>0.808</td>
</tr>
<tr>
<td>6</td>
<td>0.588</td>
<td>0.605</td>
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<td>0.605</td>
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<td>0.808</td>
<td>0.808</td>
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<td>0.542</td>
<td>0.706</td>
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<tr>
<td>8</td>
<td>0.677</td>
<td>0.633</td>
<td>0.633</td>
<td>0.633</td>
<td>0.633</td>
<td>0.657</td>
<td>0.657</td>
</tr>
<tr>
<td>9</td>
<td>0.723</td>
<td>0.567</td>
<td>0.567</td>
<td>0.567</td>
<td>0.567</td>
<td>0.692</td>
<td>0.692</td>
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<tr>
<td>10</td>
<td>0.619</td>
<td>0.477</td>
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<td>0.477</td>
<td>0.739</td>
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<tr>
<td>11</td>
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<td>12</td>
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<td>19</td>
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</tr>
<tr>
<td>20</td>
<td></td>
<td>0.788</td>
<td></td>
<td>0.788</td>
<td></td>
<td>0.517</td>
<td></td>
</tr>
</tbody>
</table>

**Eigenvalues:** 7.93 1.31 1.21 1.11 1.00

**% of variance:** 39.66 6.59 6.07 5.57 5.03

**Cumulative %:** 39.66 46.25 52.33 57.91 62.94

**Cronbach α:** 0.83 0.76 0.78 0.79 0.66

**Overall Cronbach α:** 0.92

### Table 2. Dimensions of internal service quality reported in literature.

<table>
<thead>
<tr>
<th>Study</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gremler et al. (1994)</td>
<td>Recovery, adaptability and spontaneity</td>
</tr>
<tr>
<td>Chaston (1994)</td>
<td>Reliability, willingness to help, prompt service, trust, tangibles, personal attention</td>
</tr>
<tr>
<td>Reynoso and Moores (1995)</td>
<td>Tangibles, reliability, promptness, flexibility, confidentiality, professionalism, helpfulness, communication, preparedness</td>
</tr>
<tr>
<td>Boshoff and Mels (2005)</td>
<td>Tangibles, reliability, responsiveness, assurance, and empathy</td>
</tr>
<tr>
<td>Caruana and Pitt (1997)</td>
<td>Service reliability and management of expectations</td>
</tr>
<tr>
<td>Young and Varble (1997)</td>
<td>Tangibles, reliability, responsiveness, assurance, and empathy</td>
</tr>
<tr>
<td>Lings and Brooks (1998)</td>
<td>Reliability, responsiveness, credibility, competence, courtesy, communication, access, proactive decision making and attention to detail</td>
</tr>
<tr>
<td>Kuei (1999)</td>
<td>Reliability, responsiveness, assurance and empathy</td>
</tr>
<tr>
<td>Frost and Kumar (2000)</td>
<td>Tangibles, reliability, responsiveness, assurance and empathy</td>
</tr>
<tr>
<td>Gilbert (2000)</td>
<td>Personal service and technical competence</td>
</tr>
<tr>
<td>Paraskevas (2001)</td>
<td>Professionalism, dependability, conscientiousness, communications and consideration</td>
</tr>
<tr>
<td>Kang et al. (2002)</td>
<td>Reliability, assurance, tangibles, empathy, and responsiveness</td>
</tr>
<tr>
<td>Bruhn (2003)</td>
<td>Competence, reliability, accessibility, friendliness, reaction speed, time, flexibility, customization, added value, cost-benefit, transparency in services and cost transparency</td>
</tr>
<tr>
<td>Bourata et al. (2009)</td>
<td>Reliability, responsiveness, empathy, safety, tangibles, professionalism and interest</td>
</tr>
<tr>
<td>Parasuraman et al. (1988)</td>
<td>Tangibles, reliability, responsiveness, assurance, and empathy</td>
</tr>
<tr>
<td>Current study</td>
<td>Credibility, accessibility and tangibility, preparedness, reliability and competence</td>
</tr>
</tbody>
</table>

*Source: Adapted from: Gunawardene (2011).*
Whereas Parasuraman et al. (1988) SERVQUAL model is in part encapsulated in this scale, the types of dimensions lends support to the findings of Carman (1990), Buttle (1996) and Babakus and Boulier (1992) that the service quality construct much depends on the service industry under investigation, its service settings and its related service attributes. For example, Reynoso and Moore’s (1995) study reported ten dimensions of internal service quality. The description of the dimensions were different than those of the SERVQUAL instrument, but examination of the content of the dimensions suggested that there were some similarities with the original SERVQUAL measure. The findings of Frost and Kumar (2000) did not concur with the findings of Parasuraman et al. (1985), whose research found reliability as a dimension to have the most significant influence of all the SERVQUAL dimensions on the overall perception of service quality. Caruana and Pitt (1997) revealed that the five broad categories reported by Parasurumen, et al. (1988) refer to two factors namely service reliability and the management of expectations. In the current study, the competence dimension reported the most significant influence on internal customer satisfaction.

The difference between the external and internal service quality dimensions identified in the current study may be explained by the standardized nature of the work involved in value adding activities undertaken by the administrative personnel. Interactions involving value-adding functions, as either internal supplier or internal customer, require attention in detail to ensure that the standardized operational nature of the work is not compromised. The main driver for internal service quality appears to be the external customer, who makes demands on the internal customer. Internal customers in turn make demands on the administrative department within the value chain. This implies that an internal service quality wave front, driven by the external customer, moves through the organisation backward along the value chain and out towards the support functions; in this case the administrative staff (Brooks et al., 1999). The ramifications of this are that attempting to improve service quality by concentrating only on customers facing staff is inappropriate.

Correlations

In examining, the relationship between the internal service quality dimensions and satisfaction correlation coefficient α was used to analyze the bi-variate relationship between the five factors and satisfaction. The range of possible values ranges from -1.00 for a perfect negative correlation to +1.00 for a perfect positive correlation (Malhotra and Birks, 2003). The level of association between the internal service quality and internal customer satisfaction is reported in Table 3. The correlations between credibility (r=0.428), accessibility and tangibility (r=0.497), preparedness (r=0.425), reliability (r=0.425) and competence (r=427) are positive at p <0.01 indicating that internal service quality is significantly correlated to internal customer satisfaction.

Regression analysis

Correlation however, only measures a linear relationship and does not necessarily infer a causal relationship between variables. The study proceeded to predict causal relationship between internal service quality and internal customer satisfaction with the use of multiple regression analysis. Table 4 reports on the results of the multiple regression analysis computed in order to establish the predictive power of the five internal service quality dimensions on internal customer satisfaction. The five internal service quality dimensions were used as the independent variable and internal customer satisfaction was used as the dependent variable. In terms of the relationship between the individual dimensions of internal service quality and internal customer satisfaction rating, the adjusted R² = 0.35 suggests that the internal service quality dimensions explained 35% of the variance in the internal customers’ overall satisfaction rating. The dimensions accessibility and tangibility, reliability and competence were statistically significant at p < 0.000 and depicted positive relationships with internal customer satisfaction, inferring that the administrative department’s performance levels on these dimensions are strongly associated with internal customer satisfaction than the other dimensions. Of the factors, competence of the internal staff showed the strongest association with overall service satisfaction. Aspects such as willingness to cooperate, consistency of service, performing services right the first time, meeting deadlines and the provision of accurate information were effective in influencing customers’ internal customer satisfaction. The beta coefficients in Table 3 indicate that factor 1 (credibility) and factor 3 (assurance and preparedness) makes insignificant contribution to satisfaction. Satisfaction was primarily predicted by factor 5-competence (β = 0.186), factor 2-accessibility and tangibility (β = 0.184) and factor 4-reliability (β = 0.171), ranging from the highest to the lowest contributions. Whilst assurance and preparedness showed insignificant relationship between internal service quality and internal customer satisfaction, theory supports such relationship, which is evident in the basic needs dimension of Kano’s quality model (Zhang and von Dran, 2002). Basic quality is the minimum quality of service acceptable to the customer (Shen et al., 2000) and encompasses aspects consumers take for granted. Their presence goes unnoticed, but their absence will generate complaints and dissatisfaction. Customer satisfaction do not rise with a high performance of these services (Tan and Pawitra, 2000) as these services are naturally expected and customers normally do not verbalise or
Table 3. Correlations between internal service quality dimensions and satisfaction.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Factor 1 Credibility</th>
<th>Factor 2 Accessibility and tangibility</th>
<th>Factor 3 Preparedness</th>
<th>Factor 4 Reliability</th>
<th>Factor 5 Competence</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1 credibility</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 2 accessibility and tangibility</td>
<td>0.668**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 3 Preparedness</td>
<td>0.572**</td>
<td>0.666**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 4 reliability</td>
<td>0.615**</td>
<td>0.611**</td>
<td>0.564**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factor 5 competence</td>
<td>0.684**</td>
<td>0.628**</td>
<td>0.602**</td>
<td>0.604**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.428**</td>
<td>0.497**</td>
<td>0.425**</td>
<td>0.508**</td>
<td>0.427**</td>
<td>1</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4. Regression analysis between internal service quality dimensions and satisfaction.

<table>
<thead>
<tr>
<th>Variable to enter: Independent</th>
<th>Beta</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Factor 1 credibility</td>
<td>0.111</td>
<td>-0.111</td>
<td>0.168</td>
</tr>
<tr>
<td>Factor 2 accessibility and tangibility</td>
<td>0.184</td>
<td>-0.184</td>
<td>0.012*</td>
</tr>
<tr>
<td>Factor 3 Assurance and preparedness</td>
<td>0.095</td>
<td>-0.095</td>
<td>0.207</td>
</tr>
<tr>
<td>Factor 4 reliability</td>
<td>0.171</td>
<td>-0.171</td>
<td>0.017*</td>
</tr>
<tr>
<td>Factor 5 competence</td>
<td>0.186</td>
<td>-0.186</td>
<td>0.008*</td>
</tr>
</tbody>
</table>

R² = 0.604; R²adj = 0.365; Adjusted R² = 0.351; F=5.223; * p < 0.000

RELIABILITY AND VALIDITY

Owing to the multidimensionality of the internal service construct, the internal consistency reliability of the five-factor solution was established by computing the coefficient alpha value (Cronbach α). The standardized coefficient alpha for the entire scale was 0.92. The results are reported in Table 1. The coefficient alpha values obtained from factors one to five were 0.83; 0.77; 0.78; 0.79 and 0.66, respectively. The internal consistency reliability values for factors one to four were considered adequate that is, above 0.70 (Nunnally, 1978), whereas factor five indicates marginal acceptance. The reliability value for factor five is deemed acceptable, as this was an exploratory study (Hair et al., 1998). In addition, the high coefficient alpha value reported for the total internal service quality scale (Cronbach α = 0.92) supported the inclusion of the fifth dimension.

To ensure that the internal service quality scale satisfies content validity, a mixed methodology research process was followed. Content validity was also established by pre-testing the questionnaire. Discriminant validity, in this context, refers to the ability of the research instrument to assess the uni-dimensionality of underlying dimensions. Evidence of reliability and validity confirm the construct validity of the measuring instrument (Bosch et al., 2003).

In assessing discriminate and construct validity of the research instrument, exploratory factor analysis was conducted. In each step of this procedure, scale purification was undertaken where individual items were removed from the research instrument to improve the discriminant and construct validity until all items demonstrated acceptable levels of discriminant validity (that is all the items load on a common factor only with no cross-loadings) and construct validity (that is all the items relating to each dimension have factor loadings of at least 0.40). The results of the multiple regression analysis provide evidence of predictive validity whereby a causal relationship was established between three factors and internal customer satisfaction.

LIMITATIONS

Limitation to the study was that the research was conducted on one site only. More data can be collected from other administrative departments of other types of companies to refine the measures described herein. Similar measurement development process can be undertaken in service departments within the organisation for example, the Human Resources Department. Some universality of items may be possible across other service departments, but each service department may require a set of items tailored to the unique aspects of that service. The use of a single case-based approach to this research prevents generalization of these results to
other organisations. The study concentrated on one organisation within the service sector and it is possible that there are differences in internal service quality application between both organisations within the same industrial sector and organisations in different industrial sectors. It is also important to note that while the five dimensions were found to be important indicators of internal service quality, there may be other dimensions of internal service quality that may also be important.

**Conclusion**

A valid and reliable measure of internal service quality has been validated which can be used as a tool by administrative managers to improve internal service quality within the organisation. Previous research suggests that service quality measurement tends to be context-bound and service-type dependent (Jun and Cai, 2010). Therefore generic service quality instruments need to be modified before being applied in a specific situation. If quality services are to be delivered, employees must view themselves as an important link in the value chain. However, if employees endure poor quality of service from their colleagues and the organisation as a whole, it is likely that services will suffer. The internal service culture may be difficult to create in large bureaucratic organisations where there are few mechanisms for receiving feedback about services (McDermott and Emerson, 1991). Vandermerwe and Gilbert (2001) aptly sums up that internal services if not properly coordinated, can become the next competitive battlefield in businesses unless suppliers and recipients of internal services take responsibility for change in internal services.

**RECOMMENDATIONS**

High levels of internal service quality lead to satisfied internal customers, which leads to high levels of cooperation between client and customer departments (Finn et al., 1996). Whilst many service quality attributes may influence an employee's perception of internal service quality, the results infer that some attributes have a greater impact on overall perception of internal service quality. The findings do not mean that a service organisation should neglect other quality dimensions. It is important for the organisation to provide adequate service on all dimensions and then to establish which dimension require more attention within the organisation. If the administrative department personnel understand what dimensions their internal customers use to judge internal service quality, appropriate actions can be taken to monitor and enhance performance on those dimensions and remedy internal service failures (Jun and Cai, 2010). An organisation should have a checklist of best practices with regard to the dimensions of internal service quality and should monitor whether such practices are implemented. With this knowledge of internal service quality dimensions, service departments can judge how well employees performed on each dimension and managers can identify weaknesses in order to implement corrective actions.

In terms of the regression analysis, the findings reveal that competence is the most influential dimension to achieve internal customer satisfaction. The administrative personnel should be adequately trained in this regard. Management should make every effort to provide regular training programmes to enhance their levels of competency.

This study provides a foundation for internal service quality evaluation that can be used by managers of an administrative department as a feedback mechanism. Measuring a department’s performance gives managers a benchmark for tracking the effect of modifying components of the internal service quality delivery system. Tracking results over time is critical because improving internal service quality should be an ongoing process. In addition, internal customer expectations will change as departments react to the changing needs of external customers. Measuring internal customer service quality provides a quantitative baseline for comparing results over extended time periods and enables fact-based decision-making (Forst, 2002).

By focusing on internal customer service, providing value, and strategically marketing its service, an internal department can increase its value to the organisation and in fact reduce the likelihood that it will become a candidate for outsourcing of the administrative services. Programmes focusing on internal customer service can build accountability, improve employees’ understanding of how to meet or exceed customer expectations and creates an internal culture that serves as a foundation for total quality management. Interdepartmental cooperation needs to be harnessed whereby departments view their internal role as part of an entire process and to make the necessary attempts to increase service levels they provide to other departments downstream toward the external customer (Voss et al., 2005). Interdepartmental orientation serves as the impetus for departments (internal supplier of service) to provide high levels of service to other departments (internal customers).

In measuring internal service quality, it is important to adapt the SERVQUAL items to fit an internal context within an organisation. Dimensions that were found to have a significant influence on internal customer satisfaction of the unit should be monitored to ensure that employees are receiving a high level of internal service on essential dimensions.

**REFERENCES**


