Internal service quality and employees' perceptions of rail commuter services' quality in Johannesburg

Abstract

Public transport especially commuter rail in large cities is difficult to manage in terms of meeting commuters' expectations. Johannesburg, which is served by the Gautrain and Metrorail which serve different customer segments, faces huge service quality problems. This study investigates employee perceptions of service quality offered to rail commuters. A descriptive research design was applied. Independent samples t-test was used to test the differences in employee perceptions. Canonical correlation analysis (CCA) was used to investigate the relationship between internal service quality (ISQ) and employee perceptions of service quality offered to customers. A significant difference between Gautrain and Metrorail employees' perceptions of service quality was established. A direct positive relationship was established between ISQ and employee perceptions of service quality. Although Metrorail offers a highly subsidised service it still struggles to meet its customers' expectations, hence it should focus on ISQ to improve its overall service quality. The low service quality at Metrorail and the likely customer segment that Gautrain targets could be discouraging public transport adoption by the middle level commuters who might not be covered by the two operators. The findings make a contribution to urban public transport literature by establishing a relationship between ISQ and external customer service quality.

Key phrases

Canonical correlation analysis; Gautrain; internal service quality; Johannesburg; Metrorail; rail commuter; transport.

1. INTRODUCTION

Cities across the globe are struggling to develop safe public transport systems that can accommodate as many passengers as possible to reduce the negative effects associated with the use of private cars such as congestion, noise and pollution de Oña, de Oña & Calvo (2012:11164). Rail transport is considered a safe mode that can accommodate huge numbers of passengers at once and has been embraced in many cities, especially in the developed world. For example, 1.3 billion train passenger trips are run per annum in London (Ellis 2015:1), similarly, 3.3, 2.5 and 1.66 billion journeys in Tokyo, Seoul and New York (International Association of Public Transport 2014:1).

Some cities in Africa, especially Johannesburg also operate commuter trains. There are two commuter trains in Johannesburg; the Gautrain which targets the high-end commuters and Metrorail which is usually used by the low-end commuters. Gautrain completes over 15 million passenger trips per year (Gautrain Management Agency 2018:95), while Metrorail aims at

reaching 574 million train passenger trips by end of 2018 (Passenger Rail Agency of South Africa [PRASA] 2016:35). The Johannesburg figures are lower than those of cities in developed countries such as Japan, UK and USA (International Association of Public Transport 2014:1). The low figures might imply that the uptake of rail transport among commuters in Johannesburg is relatively low. Prior research has established that business success is determined by how well a service provider interacts with its customers and rail commuter transport is no different (Parasuraman, Zeithaml & Berry 1994:201; Ramseook-Munhurrun, Naidoo & Lukea-Bhiwajee 2009:541; Zahari, Ismail & Ali 2010:226). Customers expect the trains to be reliable, readily available and offering a good service at a low or reasonable cost (Wang & Qu 2017:144). Service quality is thus critical to the success of rail passenger transport in Johannesburg as well as other cities in developing countries, as argued by Ramseook-Munhurrun *et al.* (2009:541) and Zahari *et al.* (2010:227).

To make rail commuter transport attractive, its service quality should be high and continuously monitored to ensure that customer needs are met (Vilakazi & Govender 2014:259). However, in South Africa and in Johannesburg in particular, public transport operators have not provided appropriate service levels to commuters (Vilakazi & Govender 2014:266). The problems associated with frequent service breakdowns discourage commuters from using rail. These service breakdowns may be due to delayed trains, overcrowding, inaccessibility, poor or unreliable communication, safety and security threats, amongst others (Heyns & Luke 2018:472). The expectation is that these challenges should be solved by management through the service employees of the rail operators (Zahari *et al.* 2010:227). However, employees can only mitigate the challenges if ISQ is satisfactory regarding providing required resources in time, taking care of employee welfare, and having supportive service procedures (Brandon-Jones & Silvestro 2010:1306). Whereby, ISQ refers to satisfaction of workers with services provided by other workers in the same organisation (Prakash & Srivastava 2018:2). As such, prior research has established that employee attitudes are correlated with customer satisfaction (Schneider & Bowen 1985; Zahari *et al.* 2010). This implies that if employees are unhappy this might filter through into their service delivery and is likely to result in poor service (Bouranta, Chitiris & Paravantis 2009:276; Schneider & Bowen 1985:423).

Many studies have investigated the service quality phenomenon from customers' perspective given its impact on profits as well as overall firm performance (Bouranta *et al.* 2009:275). However, Zahari *et al.* (2010:230) argued that external customers' service quality can be measured by polling employees to rate their perception on the quality of services they offer to

customers. Employee perception of the service offered to customers provides an easier way for the organisation to understand how external customers are experiencing its services and can result in quick actions to make the company more competitive (Zahari *et al.* 2010:229). Despite the stated importance of employee perception of the services they offer to external customers, little is known about service quality from an internal or providers' perspective (Eboli & Mazzulla 2015:186; Kang, James & Alexandris 2002:278;; de Oña *et al.* 2012:11164; Zahari *et al.* 2010:227). There are a few studies that have investigated service quality from the employees' perspective, for example, Ehrhart, Witt, Schneider, and Perry (2011:7) found that ISQ influences the service quality provided to external customers, Johnston (2008:225) identified internal service limitations to achieving high external service quality as poor culture and limited resources. Similarly, Kang *et al.* (2002:287) claimed that reliability and responsiveness strongly influence ISQ and Sharma, Kong and Kingshott (2016:787) concluded that ISQ is a key driver of employee satisfaction as well as performance. It is also observed that studies on Gautrain and Metrorail in Johannesburg have left a gap regarding ISQ and employee perceptions of the service quality offered to external customers and this forms the purpose of the current study (Anastasiou 2016; Heyns & Luke 2018). The findings from the study have made a significant contribution to urban rail commuter transport literature by identifying the dimension and drivers of ISQ. Base on the findings, recommendations are made to improve ISQ at Gautrain and Metrorail to achieve high customer satisfaction. Specifically, the following research questions are answered:

1. What is the difference between Gautrain and Metrorail employees' perception of service quality offered to customers?

2. What is the relationship between internal service quality and employee perceptions of service quality offered to customers by Gautrain and Metrorail in Johannesburg?

2. LITERATURE REVIEW AND HYPOTHESES

This section presents a review of literature on internal service quality; employee perceptions of service quality offered to customers as well study hypotheses.

2.1 Internal service quality

A conducive internal organisational environment enhances service delivery to both internal and external customers (Vella, Gountas & Walker 2009:408; Zahari *et al.* 2010:227). Zahari *et al.* (2010) identified some factors that can create an internal working environment that supports employees to deliver outstanding customer experiences. The factors identified relating to ISQ include a conducive working environment, working procedures and regulations, commitment to

service quality and availability of resources. Top management are expected to recognise and communicate internal customer needs to internal suppliers (i.e. a department that services other functions in the same orgarnisation) to improve ISQ (Akroush, Abu-ElSamen, Samawi & Odetallah 2013:305).

Effective coordination between departments, an efficient service delivery system, training, top management support, skilled human resources, use of technology as well as good management of office spaces are great drivers of ISQ (Zahari *et al.* 2010:228). In addition, relevant job competencies for employees, use of standard procedures and developing policies and practices directed towards service excellence enhance ISQ (Vella *et al.* 2009:413). The presence of these enabling factors results in effective job performance and employee satisfaction as well as employee loyalty (Sharma *et al.* 2016:775). The importance of a favourable work environment as a promoter of ISQ was also emphasised by Akroush *et al.* (2013:324) who identified internal communication, staff retention and loyalty as its enablers. Therefore, ISQ can be measured through factors such as employee satisfaction, loyalty, working environment, organisational rules and regulations as well as an organisations' commitment to service quality (Sharma *et al.* 2016:785; Zahari *et al.* 2010:236).

Poor ISQ is prevalent in organisations with unsupportive top management, inefficient working procedures, weak service delivery systems, bureaucratic processes, lack of interdepartmental coordination, resistance to change as well as lack of a performance measurement system (Zahari *et al.* 2010:235). According to SeyedJavadin, Rayej, Yazdani, Estiri and Aghamiri (2012:513), ISQ develops when there is close partnering between organisational units and it is likely to differ from one organisation to another. As such, organisations that have an enabling environment are likely to offer higher ISQ and vice versa (SeyedJavadin *et al.* 2012:524). Thus, it is hypothesised that:

H1: there is no difference between the Gautrain and Metrorail ISQ

2.2   Employee perceptions of service quality

Service quality is a judgement regarding the value of services provided by an organisation (Bouranta *et al.* 2009:277; Zahari *et al.* 2010:226). Service quality research has traditionally focused on how to meet or exceed external customer requirements (Bouranta *et al.* 2009:275). Researchers usually seek opinions of customers to establish the effectiveness of the service delivered by the organisation to customers in terms of matching their needs (Kang *et al.* 2002:280). However, service quality can also be investigated from a providers' perspective by seeking employees' opinion on the service they offer to customers. For the purpose of this study,

employee perceptions of service quality refer to the perceived level of excellence of services provided by employees as well as their colleagues to the organisations' customers (Sharma *et al.* 2016:775). As such, employees can evaluate the service they offer with likelihood that if they satisfy internal customers, external customers are likely to be satisfied (Pantouvakis & Mpogiatzidis 2013:35). ISQ, which is concerned with the work environment is likely to have an influence on how employees perceive the service they offer to external customers.

Singh (2016:29) argued that ISQ creates a service orientated enterprise internally as well as an effective service delivery system to external customers.

Employee perceptions of the service quality offered to customers has been investigated in prior research using the SERVQUAL dimensions identified by Parasuraman *et al.* (1985:44; 1994:202), by Edvardsson, Larsson and Setterlind (1997:257), Kang *et al.* (2002:282) and Bouranta *et al.* (2009:284) among others. The SERVQUAL dimensions were identified as reliability, empathy, tangibility, assurance and responsiveness (Parasuraman *et al.* 1994:207). Descriptions of each of the service quality dimensions from a service providers' perspective is presented in Table 1. The Parasuraman *et al.* (1985:47; 1994:207) dimensions have been modified in other studies by adding more dimensions, rewording the items or removing some dimensions to meet the requirements of specific studies (Bouranta *et al.* 2009:284; SeyedJavadin *et al.* 2012:521; Ghotbabadi, Feiz & Baharun 2015:279). The service quality dimensions can be applied in various industries including banking, call centres, hospitality, education and logistics to investigate employee perceptions (Parasuraman *et al.* 1985:43). For example, Ramseook-Munhurrun *et al.* (2009:541) investigated service quality from the employees' perspective using a modified model of Parasuraman *et al.* (1985) model in a call centre. Other studies that have investigated service quality from employees' perspective include Bourantas *et al.* (2009:284) in the hospitality industry, Zahari *et al.* (2010:233) in local governments and SeyedJavadin *et al.* (2012:513) in the energy sector.

Table 1:   Service quality dimensions

Dimension	Description
Reliability	Providing service as promised internally, being dependable, effective communication and can be relied on by customers.
Tangibles	Equipment, physical appearance and availability of working materials at the working environment

Empathy	Sincerity, consideration of customers' problems, working hours convenience, readiness to help others and culture of assisting customers. Also urgency of addressing work related needs of co-workers as well as customers.
Assurance	Trust, feeling of safety, politeness and knowledge of co-workers.
Responsiveness	Willingness to help, efficiency in processing normal as well as special requests and ability to communicate effectively.

Source: Kang *et al.* (2002:285); Parasuraman *et al.* (1985:47); Ramseook-Munhurrun *et al.* (2009:548)

Prior research supports nurturing ISQ as it contains essential elements of an overall service quality strategy of an organisation, which may result in cost savings and higher customer satisfaction and performance (Pantouvakis & Mpogiatzidis 2013:34) as well as improve external service quality of an organisation (Bouranta *et al.* 2009:275). Similarly, Ramseook-Munhurrun *et al.* (2009:551) argued that an effective internal customer-supplier relationship helps reduce the service quality gap, which is the difference between service quality expectations and the actual service provided. Therefore, the study on ISQ and employees' perceptions of service quality offered to rail commuters is important to establish relationships and identify areas of improvement of the working environment to offer superior public transport service. Thus, it is hypothesised that:

H2: There is no difference between Gautrain and Metrorail employees' perception of service quality offered to customers.

H3: There is no relationship between ISQ and employee perception of service quality.

3. METHODOLOGY

This section presents the research setting, research design, sampling, questionnaire and procedures and data analysis.

3.1 Research setting

The data used in this research was collected from rail commuters transport operators, Gautrain and Metrorail, in Johannesburg. Johannesburg is South Africas' largest commercial hub and is among the largest cities by gross domestic product (GDP) in Sub Saharan Africa (Smith 2018). Gautrain is an 80-kilometre high speed train providing a premium rail service between Johannesburg, Pretoria and OR Tambo International Airport (Gautrain Management Agency 2016:36). On the other hand, Metrorail is a low cost, narrow gauge train that operates within Johannesburg city to many locations around the city. The Gautrain operates only within the

Gauteng Province, while Metrorail operates in many other regions such as Cape Town, Durban and Pretoria; however, its largest presence is in Johannesburg. Gautrain is managed by the Gautrain Management Agency and Metrorail is operated by the Passenger Rail Agency of South Africa (PRASA). Therefore, a sample drawn from both the Gautrain and Metrorail employees in Johannesburg was likely to be representative of rail commuter service providers in South Africa. Commuters using the Metrorail train have always complained of its service as being unsafe, prone to high insecurity, delayed frequently and congested (Nicolson & Simelane 2015; Weiner 2018). On the other hand, Gautrain has generally been known for a differentiated transport service in Johannesburg, although occasional technical issues and industrial unrest causes service disruptions which management tries to solve as fast as possible (Koza 2018; Phakgadi 2018). As per Sharma *et al.* (2016:789), when employees receive excellent service internally, they are likely to offer superior service to external customers. This study investigated the relationship between ISQ and employee perception of service quality offered to customers.

3.2   Research design

The study is based on the positivism philosophical orientation, which states that an objective reality can be obtained by applying scientific methodology to empirically confirm statements of believe (Straub, Boudreau & Gefen 2004:383). Positivism was appropriate for this study because it sought to confirm the level of ISQ in two commuter rail operators in Johannesburg by using a set of statements that respondents were to examine. As such, a quantitative research approach was followed. A descriptive survey research design was followed to investigate employee perceptions of service quality offered by the rail commuter transport operators in Johannesburg. A descriptive survey was appropriate as it allowed for the establishment of associations between ISQ and employee perceptions of service quality (Nenty 2009:26).

3.3   Sampling

The unit of analysis was rail commuter transport operators in Johannesburg which is, Gautrain and Metrorail. Responses were sought from employees of the selected operators in Johannesburg. The total number of employees in Gautrain was 87 (Gautrain Management Agency 2018:80). All the 87 employees were sampled to respond to the questionnaire. On the other hand, total sample of 200 employees was targeted from Gautrain and Metrorail. The sample of 200 was deemed sufficient given the time constraints of the study as well as resource constraints. Studies in ISQ have used relatively similar sample sizes for instance Chermack and Nimon (2013:820) had a sample of 129, while Ramseook-Munhurrun *et al.* (2009:541) used a sample of 130. It was expected to provide sufficient responses to fully investigate ISQ as well as

identify the factors that influence ISQ at Gautrain and Metrorail. A total of 60 usable questionnaires (30 from each of the operators) were returned giving a response rate of 11 and 8.5 percent from Gautrain and Metrorail respectively.

The respondents represented various departments in Gautrain and Metrorail, the percentages per department were operations and maintenance (23.3; 16.7 percent respectively), logistics (26.7; 3.3 percent), procurement (3.3; 6.7), sales and marketing (40; 26.6), security (3.3; 10) and other (3.3; 36.7) as illustrated in Table 2. The other (36.7) category in Metrorail included respondents from technical, information technology, finance, human resources, asset management and legal departments. A list of the demographic characteristics of the sample, including age, educational level, working experience, employment status and job position, are presented in Table 2.

Table 2:   Respondents' demographics

Demographics	Gautrain (%)	Metrorail (%)
Age		
<35 years	60	30
>35 years	40	70
Educational level		
High School certificate	3.3	16.7
Certificate	6.7	26.7
Diploma	33.3	43.3
Degree	43.3	13.3
Post graduate degree	13.3	23.3
Work experience		
Less than 1 year	6.7	6.7
1 year < 3 years	33.3	13.3
3 years < 5 years	40	13.3
> 5 years	20	66.7

Monthly income (ZAR)		
Less than 5000	6.9	7.1
5000 to 9999	20.7	14.3
10000 to 14999	27.6	7.1
15000 to 19999	24.1	17.9
20000 to 24999	10.3	14.3
More than 25000	10.3	39.3
Employment status		
Full-time	83.3	86.7
Part-time	10	5
Contract	6.7	8.3
Job position		
Call Agent	20	3.8
Trainer	10	0
Manager	26.7	30.8
Supervisor	33.3	15.4
Ticket sales operator	6.7	19.2
Others	3.3	30.8
Department		
Operations and Maintenance	23.3	16.7
Logistics	26.7	3.3
Procurement	3.3	6.7
Sales and Marketing	33.3	3.3
Tickets sales	6.7	23.3
Security	3.3	10

| Other | 3.3 | 36.7 |

Source: Research data

3.4 Questionnaire and procedure

A structured questionnaire was developed to collect data from Gautrain and Metrorail employees. The questionnaire contained questions relating to ISQ and employee perception of service quality. The items related to internal service quality included working environment (11 items), internal service rules and regulations (four items) and organisational commitment to service quality (six items) all adapted from Zahari *et al.* (2010:228). The questionnaire also included items related to job satisfaction (seven items) and loyalty (four items) adapted from Sharma *et al.* (2016:777,783). The measures of employee perception of service quality were reliability (five items), responsiveness (four items), assurance (three items), empathy (three items) and tangibles (three items) all adapted from (Frost & Kumar 2000:367; Parasuraman *et al.* 1985:47) and modified for this study. All the questionnaire items were measured on a five-point Likert-type scale (anchored from 1 = strongly disagree to 5 = strongly agree) in line with related previous studies such as (Sharma *et al.* 2016:782). The respondents were contacted at their work place during breaks and requested to fill the questionnaires.

3.5 Data analysis

The study aimed at answering two research questions which are (1) what is the difference between Gautrain and Metrorail employees' perception of service quality offered to customers? and (2) what is the effect of ISQ on employee perception of service quality offered to customers? To answer question one, descriptive statistics were calculated and compared. In addition, the difference between Gautrain and Metrorail ISQ was analysed using the independent samples T-test. The second question was answered by analysing the data through canonical correlation analysis to establish the relationship as well as relationship dimensions between the multiple measures of ISQ and multiple variables of employee perceptions of service quality as illustrated in Figure 1. CCA was preferred owing to its ability to test a relationship in which there are multiple dependent variables unlike multiple regressions (Chermack & Nimon 2013:822; Ogbu & Asuquo 2018:360).

Figure 1: Conceptualised data analysis model
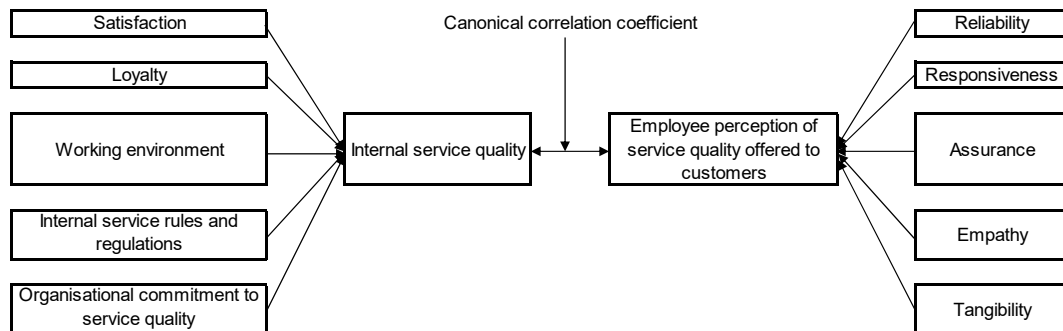
Source: Research data

The validity of the data was tested by examining the significance of the Wilks' lambda statistic to explain the predictability of the model. The standardised canonical coefficients, canonical loadings as well as canonical cross-loadings were also examined. Reliability was measured by examining the Cronbachs' alpha. A Cronbachs' alpha value of 0.6 and above reveals high internal consistency of the data (Hair, Hult, Ringle & Sarstedt 2014:102).

4.   ETHICAL CONSIDERATIONS

All relevant ethical considerations were taken into account during study formulation, data collection, data analysis and reporting to ensure that the respondents' confidentiality was not breached. The respondents were requested to participate voluntarily and were informed that they could withdraw from the survey at any stage if they wished to. The respondents were also assured of the confidentiality of the data collected and assured that it would only be used for academic purposes. They were also informed that their information would be collated and that they would not be able to be identified in any way in the research process. Ethical clearance was granted by the University of Johannesburg Department of Transport and Supply Chain Management Ethics Committee.

5.   RESULTS

5.1   Demographics

The mean rating (mean by Gautrain respondents is higher than that of Metrorail respondents in most items. The high mean might imply that Gautrain respondents were more comfortable with their internal working environment as well as the service they provided to their customers more than Metrorail. There is an exception with the item "I am ready for any changes within the department" in which Metrorail employees were slightly readier for change (mean = 4.21; SD =

0.940) than Gautrain (mean = 4.13; SD = 1.008). In addition, many of the Metrorail respondents agreed to "I wish to work for this organisation for the next 10 years" (mean = 3.70; SD = 1.236) than Gautrain (mean = 3.53; SD = 1.279) as well as "people with different cultures work well together" (mean = 3.9; SD = 1.145) than Gautrain (mean = 3.83; SD = 1.037). This might imply the respondents consider Metrorail to be inclusive and an employer of choice. Examining scale reliability revealed that the overall Cronbachs' alpha as well as when item is deleted was above the recommended 0.6 for all the scales (for example, reliability = 0.933 and satisfaction = 0.914) indicating high internal consistency (Table 3). The scale inter-item correlations were also examined and found to be positive implying that all scales' items were measuring same underlying characteristics (Pallant 2010:100).

Table 3:   Descriptive and reliability statistics

Scale items	Descriptive statistics				Reliability statistics			
	Gautrain		Metrorail		Overall Cronbachs' Alpha	Inter-Item Correlation		Cronbachs' Alpha if item deleted
	Mean	Std. Deviation	Mean	Std. Deviation		Min.	Max.	Min.
Reliability					0.933	0.6	0.813	
REL5 We provide our commuters with correct and relevant information	4.50	0.820	3.17	1.311				0.927
REL2 We capable of helping our commuters in any way	4.37	0.765	3.28	1.279				0.916
REL4 We provide services at the time required/ promised	4.24	0.830	2.69	1.391				0.910
REL3 We perform services right the first time	4.21	0.940	2.83	1.391				0.918
REL1 We deliver what we promise at all times	4.10	0.845	2.67	1.373				0.915

Responsiveness					0.896	0.654	0.744	
RES4 We make sure that we respond quickly to our customer's requirements	4.20	1.126	2.93	1.1				0.865
RES3 We always resolve our commuters concerns and complains	4.00	0.947	3.17	1.02				0.858
RES2 We are prepared to go the extra mile	3.93	1.048	3.31	1.168				0.863
RES1 We provide speedy services to our commuters	3.90	1.213	2.61	1.197				0.878
Assurance					0.819	0.48	0.716	
ASS3 We are capable of answering our commuters' questions	4.37	0.809	3.40	1.102				0.633
ASS2 We are consistently aware of our commuters needs	4.30	0.877	3.76	1.154				0.787
ASS1 We can be trusted by our commuters	4.20	0.997	2.76	1.327				0.834
Empathy					0.796	0.516	0.667	
EMP2 We have our commuters' best interest at heart	4.43	0.679	3.64	0.951				0.683
EMP1 We give individual attention to our commuters	3.97	1.033	3.10	1.113				0.681

EMP3 We understand the specific needs of our commuters	3.90	0.900	3.80	1.064				0.788
Satisfaction					0.914	0.221	0.848	
SAT7 I enjoy working for the organisation	4.30	0.988	3.69	1.312				0.903
SAT5 I feel like our concerns are taken seriously	4.17	1.085	3.00	1.414				0.890
SAT2 I am ready for any changes within the department	4.13	1.008	4.21	0.940				0.932
SAT3 Overall I'm satisfied with the way the organisation treats its employees	4.10	1.062	3.28	1.334				0.887
SAT4 I feel like my input is valued	4.10	0.885	3.31	1.391				0.893
SAT1 I am happy with how I am supervised	4.03	1.098	3.30	1.368				0.895
SAT6 There is potential for promotion	3.97	1.098	3.41	1.240				0.897
Loyalty					0.796	0.342	0.662	
LOY4 I would recommend this organisation to a scholar conducting research	4.33	1.061	4.00	1.035				0.750
LOY3 I would recommend this organisation to someone who is looking for a job	4.20	1.031	3.79	1.236				0.680
LOY2 I would recommend this	4.13	1.042	3.62	1.237				0.722

organisation to potential clients							
LOY1 I wish to work for this organisation for the next 10 years	3.53	1.279	3.70	1.236				0.818
Working environment					0.869	0.004	0.751	
WE8 I work overtime provided with payment	4.52	0.738	3.07	1.720				0.866
WE4 I have a good working relationship with my colleagues	4.28	0.702	3.97	1.085				0.869
WE7 Human Resource Management responds to our complaints in time and take us seriously	4.21	0.978	3.14	1.356				0.854
WE6 I am aware that when I have a complain there is something I can do	4.14	0.875	3.86	1.060				0.853
WE5 I have what I need to do my work	4.10	0.939	3.57	1.200				0.853
WE1 I feel supported by my boss	4.07	0.868	3.52	1.153				0.853
WE3 People with different cultures work well together	3.83	1.037	3.90	1.145				0.866
WE2 I am happy with my salary/wages	3.30	1.264	2.66	1.045				0.870
WE9 Our uniform is comfortable and appealing	4.27	1.015	3.39	1.227				0.848
WE10 The work environment is comfortable	4.10	1.094	3.20	1.375				0.853

WE11 All resources are always complete and up to date	4.07	1.112	2.75	1.378				0.849
Tangibles					0.88	0.436	0.881	
ISC2 Our trains provide a safe service for passengers	4.27	0.944	2.55	1.270				0.817
ISC5 We do provide extra services apart from rail (buses and other means of transportation)	4.17	1.177	3.17	1.365				0.883
ISC4 Parking space for passengers is available at every train station	4.13	0.973	2.62	1.265				0.864
ISC3 Our trains have enough space to accommodate everyone	4.10	1.125	2.93	1.307				0.866
ISC1 Our trains are always operate on time	3.93	1.081	2.33	1.269				0.835
Internal rules and regulations					0.894	0.62	0.83	
ISSR4 Rules and regulations apply to every employee	4.50	0.938	3.40	1.329				0.878
ISSR3 Organisational culture help with internal performance	4.30	0.952	3.24	1.185				0.880
ISSR2 Rules and regulations are always explained by management	4.17	1.085	3.24	1.244				0.836
ISSR1 The rules and regulations are	3.83	1.147	3.38	1.208				0.857

understood by everyone in the organisation								
Organisational commitment to service quality					0.885	0.362	0.753	
OCSQ3 I am aware of the required service quality standards	4.33	0.922	3.83	1.037				0.886
OCSQ6 Resources provided are enough to achieve high quality	4.27	0.907	2.86	1.382				0.847
OCSQ5 The organisation promotes high service quality	4.27	0.828	3.10	1.263				0.859
OCSQ4 The required standard of service quality is achievable	4.23	0.898	3.41	1.268				0.858
OCSQ1 Service quality is the responsibility of all the departments	4.03	0.928	3.63	1.129				0.872
OCSQ2 Every employee is held accountable if the service is compromised	3.97	0.964	3.34	1.203				0.864

Source: Research data

5.2 Differences between Gautrain and Metrorail

Employees' perceptions of service quality of the rail commuter transport operators were investigated. The mean rating of each of the dimensions for Gautrain and Metrorail was calculated and is illustrated in Table 4. The meaning rating was used to identify the service quality dimensions employees of the two operators consider to be most important. As such, in Gautrain, assurance (mean = 4.29) and reliability (mean = 4.28) dimensions were perceived as most important. While in Metrorail, empathy (mean = 3.51) was the highly ranked while assurance (mean = 3.31) was also was important. The largest difference between Gautrain and Metrorail employees' perceptions was revealed in the reliability (1.35) dimension, while the lowest was in empathy (0.59). This might imply that the respondents of Gautrain perceived their service to be

highly reliable compared to the perceptions of the Metrorail employees. The low mean ratings on perception of Metrorail's reliability confirm the customer complaints regarding delayed trains reported in literature.

Data related to ISQ of Gautrain was also examined revealing that internal service rules and regulations (mean = 4.20) were supportive to employees' endeavour to offer excellent service to customers. At Metrorail, it is revealed that loyalty (mean = 3.78) was a critical factor to their working environment, closely followed by satisfaction (mean = 3.46). Generally, the high mean ratings from Gautrain might be an indication that Gautrain respondents agreed more Metrorails' that their internal environment was supportive of a high service quality. In addition, given the high variability of Metrorail data, it could be possible that the service perceptions are even lower than reported in Table 3. Therefore, as per the sample data, Gautrain might be offering a higher ISQ as well as high perceived service quality to customers than Metrorail in all the dimensions used in this study as illustrated in the difference column (Table 4).

Table 4: Service quality perceptions

Dimensions	Gautrain (A)	Std Dev.	Metrorail (B)	Std. Dev.	Difference (A - B)
Reliability	4.28	0.849	2.93	1.349	1.35
Assurance	4.29	0.894	3.31	1.194	0.98
Responsiveness	4.01	1.084	3.01	1.121	1.00
Empathy	4.10	0.871	3.51	1.043	0.59
Satisfaction	4.11	1.032	3.46	1.286	0.65
Loyalty	4.05	1.103	3.78	1.186	0.27
Working environment	4.08	0.966	3.37	1.249	0.71
Tangibility	4.12	1.060	2.72	1.295	1.40
Internal service rules and regulations	4.20	1.031	3.31	1.242	0.89
Organisational commitment to service quality	4.18	0.908	3.36	1.214	0.82

Source: Research data

Prior to examining the difference between Gautrain and Metrorail employees' perception of the service quality offered to customers, their ISQ differences in terms of satisfaction, loyalty, working environment, internal service rules and regulations and organizational commitment to service quality. To examine the ISQ difference between Gautrain and Metrorail, the independent samples t-test was calculated. The independent samples t-test was conducted, with satisfaction, loyalty, working environment, internal service rules and regulations and organisational commitment to service quality as test variables and Gautrain and Metrorail as grouping variables. The results are as illustrated in Table 5 revealing that four variables were significantly different between Gautrain and Metrorail, these were satisfaction; p=0.009, working environment; p=0.000, internal service rules and regulations; p=0.001 and organisational commitment to service quality; p=0.000 except LOY; p=0.235. The finding implies that the internal working environment at Gautrain is significantly different from Metrorail'although employees' loyalty was the same. Therefore, the hypothesis: H1: there is no difference between Gautrain and Metrorail internal service quality is rejected.

Table 5: Difference between Gautrain and Metrorail ISQ

| | Levenes' Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Satisfaction	.543	.464	2.725	57	.009	.66601	.24441	.17659	1.15543
Loyalty	1.023	.316	1.200	57	.235	.28276	.23563	-.18908	.75460
Internal Service Rules and Regulations	.236	.629	3.541	57	.001	.89828	.25370	.39025	1.40630
Internal work environment	1.411	.240	3.795	57	.000	.69331	.18271	.32745	1.05917
Organisational Commitment to Service Quality	1.541	.220	3.740	57	.000	.80402	.21498	.37352	1.23452

Source: Research data

There was a statistically significant difference (p<0.05) between Gautrain and Metrorail on employee perceptions on all ISQ dimensions at 95 percent confidence interval as illustrated in Table 6. The result implies that the level of service quality offered to customers at Gautrain is statistically different from Metrorail's as perceived by their own employees. This confirms the mean rating examined earlier and implying that Gautrain employees consider themselves to be offering a better service than Metrorail employees. The hypothesis: H2: There is no difference between Gautrain and Metrorail employee's perception of the service quality offered to customers is rejected.

Table 6:   Difference between Gautrain and Metrorail employee's perception of service quality

| | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | | |
| | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
								Lower	Upper
Reliability			5.453	45.771	0.000	1.35276	0.24808	0.85334	1.85218
Responsiveness	0.345	0.560	4.142	57	0.000	1.01408	0.24482	0.52383	1.50433
Assurance	1.158	0.286	4.305	57	0.000	0.99004	0.23000	0.52948	1.45060
Empathy	0.785	0.379	2.782	57	0.007	0.60594	0.21779	0.16982	1.04206
Tangibility	0.126	0.724	5.980	57	0.000	1.38897	0.23228	0.92383	1.85410

Source: Research data

Therefore, employees' perception of the service quality offered to customers at Gautrain and Metrorail are significantly different in terms of reliability, responsiveness, assurance, empathy and tangibility dimensions.

5.3   ISQ and Employee perception of service quality

The interrelationships between ISQ (that is, satisfaction, loyalty, working environment, internal service rules and regulations and organizational commitment to service quality) and employees' perception of service quality (regarding, reliability, responsiveness, assurance, empathy and tangibility) was investigated. As discussed in literature, conceptually the five factors satisfaction, loyalty, working environment, internal service rules and regulations and organisational commitment to service quality are the measures of ISQ. The objective was to establish a latent relationship (relationship between composites of variables) between ISQ (as independent variables) and employees' perception of service quality offered to customers (as dependent variables). To meet the set objective, CCA (CCA) was performed to establish the relationships or

significant canonical variates that can be used to explain the relationship. CCA was chosen over multiple regression analysis because it allows for investigation of dependence relationships involving multiple dependent and independent variables (Hair *et al.* 2014). The distribution of the data was examined to ensure that it does not violate the multivariate analysis assumptions as advised by Hair *et al.* (2014). The examination found the data to be normally distributed upon observing the normal P-P plots and scatter plots; effects of outliers was ruled out after finding that the Mahalanobis distances were within the acceptable range. Problems associated with multicollinearity as well as collinearity were also ruled out. Upon satisfaction that the multiple regression assumptions were met, CCA was conducted.

The significance of the full model was evaluated using four test statistics (Table 7). The Wilk's lambda (Λ) was selected to evaluate the model due to its general applicability (Sherry & Henson 2005). Wilk's Λ = 0.11660, F = 5.75067, p=0.000 revealed that the overall model was statistically significant. Ogbu and Asuquo (2018) claimed that the Wilk's Λ revealed the unexplained variance, meaning that 1 - Λ = r^2 = 0.8834 is the explained variance of the full model. This implies that the overall canonical model explained a substantive 88.34 percent of the variance of the full model.

Table 7:   Test statistics

Test Name	Value	Approx. F	Hypoth. DF	Error DF	Sig. of F
Pillais	1.33481	3.86036	25.00	265.00	.000
Hotellings	4.32219	8.19488	25.00	237.00	.000
Wilks	.11660	5.75067	25.00	183.53	.000
Roys	.78381				

Source: Research data

Five canonical functions were derived with canonical correlation coefficients of 0.8853, 0.5188, 0.4078, 0.3301 and 0.0809 for functions 1, 2, 3, 4 and 5 respectively. To determine which functions to interpret, Sherry and Henson (2005) advised that the effect size of each function as well as the statistical significance should be examined. As such, function 1 and 2 explained 78.4 percent and 26.9 percent of the variance within their functions respectively. While functions 3, 4 and 5 explained only 16.6, 10.9 and 0.7 percent of the variance respectively as illustrated in Table

8. Functions 1 and 2 are further noted to explain a substantive 83.88 and 8.52 percent of the variance respectively.

Table 8:   Canonical correlation functions

Function No.	Eigenvalue	Pct.	Cum. Pct.	Canon Cor.	Sq. Cor
1	3.62552	83.88140	83.88140	.88533	.78381
2	.36827	8.52053	92.40193	.51880	.26915
3	.19951	4.61601	97.01795	.40783	.16633
4	.12231	2.82970	99.84765	.33012	.10898
5	.00658	.15235	100.00000	.08088	.00654

Source: Research data

Examination of the dimension reduction helped to test statistical significance of the hierarchically arranged functions. It confirmed that root or function 1 to 5 $F_{(25, 183.53)} = 5.75$; $p < 0.05$ and function 2 to 5 $F_{(16, 153.39)} = 2.15$; $p < 0.05$ were statistically significant (Table 9) and hence can be considered for interpretation as advised in Sherry and Henson (2005).

Table 9:   Dimension reduction analysis

Roots	Wilks L.	F	Hypoth. DF	Error DF	Sig. of F
1 TO 5	.11660	5.75067	25.00	183.53	.000
2 TO 5	.53934	2.14713	16.00	153.39	.009
3 TO 5	.73796	1.83623	9.00	124.27	0.68
4 TO 5	.88519	1.63465	4.00	104.00	.171
5 TO 5	.99346	.34899	1.00	53.00	.557

Source: Research data

Therefore, there is a relationship between the measures of ISQ and employee perception of service quality as revealed by the canonical correlations and statistical significance of functions 1

and 2. In addition, function 1 and 2's canonical effect (that is, R^2_c) is 76.842 and 7.918 percent respectively. As such, only functions 1 and 2 will be interpreted.

To fully explain the nature of the relationship the standardised coefficients, cross loadings and structure coefficients corresponding to the first and second canonical functions presented in Table 10 were examined. This is because only the first and second functions satisfied the criteria for interpretation which included statistical significance and canonical effect size.

For function 1, satisfaction (0.374) and organisational commitment to service quality (0.554) were identified as the most relevant predictor variables based on the standardised coefficients, while working environment had marginal relevance. Examining the standardized coefficients of the criterion variables of function 1 reveals that responsiveness (0.560), empathy (0.222) and tangibility (0.247) are the most relevant variables while reliability (0.129) was marginal and assurance (-0.045) was not relevant given the low negative coefficient. Assurance was also inverse to all the other criterion variables.

Observing the standardised coefficients of function 2 reveals satisfaction (0.254), working environment (0.251) and organisational commitment to service quality (0.187) as the most relevant predictor variables, while only assurance was relevant among the criterion variables.

Cross loadings were examined and found that both the predictor (ranging from 0.625 to 0.843) and criterion (ranging from 0.715 to 0.857) variables loaded heavily on function 1. The cross-loading reveal that the variables loaded substantially (above 0.5) to only the first canonical function confirming the high significance of the model.

The canonical correlations or structure loadings (r_s) also reveal high loadings in function 1 thus signifying a strong direct relationship between the predictor and criterion variables. Satisfaction ($r_s = 0.906$), loyalty ($r_s = 0.706$), working environment ($r_s = 0.910$), internal service rules ($r_s = 0.887$), organisational commitment to service quality ($r_s = 0.952$) were identified as relevant contributors to the predictor synthetic variable for function 1. The contributors to the criterion synthetic variable were reliability ($r_s = 0.855$), responsiveness ($r_s = 0.968$), assurance ($r_s = 0.841$), empathy ($r_s = 0.838$) and tangibility ($r_s = 0.808$). The findings are confirmed satisfaction and work environment contributing most to the relationship among the predictor variables while responsiveness and reliability contributed the most among the criterion variables for function 1. The findings for function 1 reveal a strong positive direct relationship between ISQ and employee perception of the service offered to customers.

Examining function 2 canonical structure coefficients reveals that loyalty (r_s = 0.578) was the only relevant predictor variable and internal service rules and regulations (r_s = -0.227) was a weak predictor of employee perception of service quality offered to customers. Tangibility (r_s = -0.274) and reliability (r_s = -0.395) were the only contributors to the criterion synthetic variable. The finding implies that loyalty had an inverse relationship with tangibility and reliability as well as internal service rules and regulations in function 2. The structured coefficient for function 2 was quite low with only loyalty and reliability contributing 33.4% and 15.6% respectively. Hair et al. (2014) argued that in interpreting the canonical functions, the standardised coefficients have high volatility and may not be reliable. As such, based on the structure coefficients and cross loadings, function 2 displays a very weak relationship dimension with only loyalty and reliability having a structured coefficient above 0.3.

The communalities (h^2) revealed that all the variables in this study were very useful to the full model given the high values (above 70%) with great contributions coming from function 1. However, close examination show that organisational commitment to service quality is the most useful among the predictor variables while responsiveness and reliability are the most useful among the criterion variables.

Table 10: **Canonical solution for internal service factors and ISQ for function 1**

Variable	Function 1				Function 2				Commu-nality
	Coef	Cross loading	r_s	r^2_s	Coef	Cross loading	r_s	r^2_s	h^2 square (%)
Satisfaction	0.374	0.803	0.906	82.169	-0.254	-0.052	0.100	1.009	83.178
Loyalty	-0.037	0.625	0.706	49.827	1.291	-0.300	0.578	33.398	83.225
Work environment	0.124	0.806	0.910	82.854	0.251	-0.005	0.010	0.010	82.864
Internal service rules	0.053	0.786	0.887	78.757	-1.226	0.118	-0.227	5.164	83.921
Organisational commitment to service quality	0.554	0.843	0.952	90.604	0.187	0.005	-0.009	0.009	90.613
R^2_c				76.842				7.918	

Reliability	0.129	0.757	0.855	73.162	-1.584	0.205	-0.395	15.582	88.744
Responsiveness	0.560	0.857	0.968	93.631	1.495	-0.082	0.159	2.518	96.149
Assurance	-0.045	0.745	0.841	70.748	0.365	-0.041	0.079	0.630	71.378
Empathy	0.222	0.742	0.838	70.191	-0.061	-0.078	0.151	2.278	72.469
Tangibility	0.247	0.715	0.808	65.261	-0.430	0.142	-0.274	7.500	72.761

Coef, standardized canonical coefficient; r_s, structure coefficient; r^2_s, squared structure coefficient, R^2_c, average squared structure coefficient; h^2, communality coefficient

Source: Research data

The high loadings in function 1 reveal a high degree of inter-correlations between the ISQ variables and employee perception of the service quality offered to customers. The finding imply that the predictor variables are relevant predictors of the outcome (Hair *et al.* 2014), and the rail operators should focus their efforts on these variables. In addition, the observed canonical loadings in the first canonical variate (first function) closely correspond to the dimensions that would be extracted in factor analysis, thus, reinforcing its high practical significance (Sherry & Henson 2005; Hair *et al.* 2014) to rail operators in explaining the relationship between ISQ and employee perception of the service quality offered to customers.

Calculation of the model redundancy was also done to estimate the predictiveness of employee perception of the service quality offered to customers by ISQ variables. A redundancy of 0.6803 and 0.0410 for function 1 and 2 respectively was obtained. The redundancy values imply that the relationship dimension established by function 2, although statistically significant is very weak with very low predictiveness confirming the low cross loadings and structure coefficients. Nevertheless, CCA has helped to identify relationship dimensions between the dependent and independent variables and to maximise relationships between the variable sets. Thus, the results reveal that a single relationship dimension exists supported by the high practical significance of the first canonical function with all the variables being relevant. However, the second relationship dimension (function 2) show that only loyalty and internal service rules and regulations were associated with reliability and tangibility and were the only relevant variables. Therefore, it implies that the five dependent set of variables create a well-defined criterion synthetic variable representing employee perceptions of service quality offered to customers at Gautrain and Metrorail. Similarly, the five independent set of variables predict the criterion variables when

acting as a set. Therefore, the hypothesis (H3) "there is no relationship between ISQ and employee perception of service quality offered to customers" is rejected.

6.   DISCUSSION

The objective of this study was two-fold. First, to establish the difference between Gautrain and Metrorail employees' perception of the service quality offered to customers. Second, to determine the relationship between internal service quality and employee perception of the service quality offered to customers. Three hypotheses were formulated to investigate the difference as well as the relationship.

6.1   Employee perception of service quality

Although many studies use the gap-measure, in this study the perceptions-only measure was used, and it is known to be an equally reliable and valid measure (Brandon-Jones & Silvestro 2010). Employee perception of service quality offered to customers at Gautrain and Metrorail was measured in terms of reliability, responsiveness, assurance, empathy and tangibility. It was established that employee perception of the service quality offered to customers at Gautrain was significantly different from that at Metrorail based on the five dimensions. The difference was confirmed by the significant difference obtained in ISQ of the two operators. It implied that Gautrain employees perceived to offer superior service quality to their customers than Metrorail given the high mean ratings obtained. The highest difference was in the reliability whereby Gautrain employees indicated that they provide all relevant information to their commuters as expected. This supported Anastasiou (2016) who claimed that whenever there were technical issues within the line; Gautrain provided information to commuters through all media platforms including social media and SMS service. It clearly reveals that they have effective communication with their commuters. On the flipside, Nicolson and Simelane (2015) claimed that Metrorail fails to provide relevant information regarding anticipated delays or during breakdowns negatively affecting reliability of the transport service. Therefore, Gautrain employees perceive the reliability of their service to customers to be better compared to how their counterparts in Metrorail perceive theirs. A notable difference was also established in the tangibility, responsiveness and assurance dimensions in that order.

6.2   ISQ

Gautrain employees highly perceived their working environment to be conducive compared to their Metrorail colleagues. Conversely, at Metrorail, the employees perceived that the resources required to perform their work are either missing or not up to date, thus, affecting their service

quality, for instance, under capacity, poor ticketing system, and security (Nicolson & Simelane 2015). Quick response to commuter challenges was rated highly by Gautrains' employees, for example, increasing access by providing commuter buses (Koza 2018) compared to Metrorail. Many of the perceptions on the service quality dimensions confirmed what the practise of the two institutions is already. Employees in both organisations perceived loyalty to their organisations equally. However, Metrorail employees seemed to be less willing to refer potential clients to their organisation compared to their Gautrain colleagues. In addition, Gautrain employees seemed not to be willing to work with their current employer for more than 10 years compared to Metrorail, although marginally. Metrorail management should consider improving their ISQ by enhancing effective communication between departments and also with commuters. They should also ensure that the employees have the required resources to perform their duties. Although the findings indicate that Gautrain offers superior ISQ, management should consider making the organisation more attractive for current employees given that it is perceived as not employer of choice in the next 10 years as per the loyalty dimension.

The finding that the internal environments in Gautrain and Metrorail are significantly different is confirmed, first, by Nicolson and Simelane (2015) who claimed that although Metrorail offers affordable transport service, internally it is characterized by labour disputes, poor communication and generally frustrated operational staff. The claim is supported by this study as many of Metrorail employees indicated that they were not happy with their current salary. Second, by Phakgadi (2018) who observed that Gautrain holds fruitful negotiations with unions representing its workers and always vouches for a win-win negotiated agreement, thus, creating a favourable internal working environment. The negotiation with unions is a likely indicator of Gautrain's effective communication within the organization and is likely to create a conducive working environment that promotes high levels of ISQ as established in this study. The present study also supports other which claim that high ISQ is likely to result in superior service to external customers including Parasuaraman *et al*. (1985), Vella *et al*. (2009), Bouranta *et al*. (2009) and Sharma *et al*. (2016).

6.3   ISQ and employee perception of service quality

The relationship between ISQ and employee perception of service quality offered to customers was examined through CCA. CCA was selected as it allowed examining the relationship in which both the dependent and independent constructs had multiple variables. ISQ (the predictor variable) was measured using five factors and employee perception of service quality offered to customers (the criterion variable), which was also measured by five factors. A direct strong

positive relationship was established between ISQ and employee perception of the service quality offered to customers confirming Bouranta *et al*. (2009) concludes that ISQ associates with external service quality. Organisational commitment to service quality contributed the most to the relationship followed by working environment, satisfaction, internal service rules and regulations and loyalty in that order. The finding implies that when the internal service quality is high, employees perceive to offer high service quality to external customers supporting the study (Frost & Kumar 2000; Bouranta *et al*. 2009; Sharma *et al*. 2016) who found that satisfied employees deliver high quality service resulting in excellent service to external customers. The findings also imply that an organisation committed to service quality is likely to promote effective communication internally, provide relevant resources to employees to enable them to perform their duties effectively as well as define responsibilities of each worker to create efficiencies and effectiveness in service delivery. Akroush *et al*. (2013) claim that perceived service quality is high when employees perceive the internal environment as being supportive or conducive is also supported by the current study. It is also expected that the internal service rules and regulations should help create efficiencies and effectiveness of internal operations to support delivery of a reliable and responsive service to external customers.

7.   CONCLUSION

In this study perceptions-only measure was used to compare ISQ and employee perception of service quality offered to customers between Gautrain and Metrorail. Employee perception of service quality offered to customers at Gautrain was significantly different that at Metrorail. The findings confirmed that the two rail operators offered different ISQ levels. Gautrain was perceived to have a better overall working environment as well as superior service quality to its customers. The finding implies that Metrorail has some grounds to cover to improve its ISQ to improve rail commuter service. In addition, ISQ influenced employee perception of service quality offered to customers. Management of the rail operators in Johannesburg should endeavour to develop strategies that enhance internal working environment, humanise internal rules and regulations, mitigate internal service challenges and promote commitment to service quality so as to achieve high ISQ which is likely to result in service excellence to commuters (Vella *et al*. 2009).

7.1   Managerial Implications

Management is informed by the findings that the ISQ is likely to impact employees' service delivery to external customers. The strong inter-correlations among the ISQ set of variables informs managers of rail commuter service to focus on the full set to improve service quality of

external customers. This is because poor rating of any of the independent variables is likely to have a negative influence on the total service quality offered to external customers.

The management of Gautrain and Metrorail is further informed to frequently assess ISQ to identify areas that negatively affect employee performance to achieve smooth operations. To deliver superior service to customers, managers are advised to create a conducive internal working environment by providing the right tools and equipment, enhancing proper communication between departments, developing enabling standard operating procedures as well as deliberate commitment to superior service quality. In addition, rail commuter service managers should be ready to address employee concerns timely to avoid industrial unrest which usually lead to complete service breakdown or even accidents.

7.2   Limitations and future research directions

The current research and findings are limited to Gautrain and Metrorail in Johannesburg. For this reason it may not be conclusive. A wider study is advised to incorporate other cities within the Southern Africa region. Only cross-sectional data was collected for this research. Longitudinal data may provide a better picture to illustrate the variations in ISQ at the two rail operators over time and how it relates to employee perceptions of the service quality offered to customers. A self-administered survey was the most appropriate approach for the current study; however future studies can consider interviews to get more insight on how external service quality is influenced by ISQ and how it can be improved.

ACKNOWLEDGEMENTS

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