The Influence of Critical Factors of Service Quality and Customer Satisfaction on Inter-City Bus Transport in Pakistan

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Abstract

The purpose of this research is to investigate the influence of critical success factors of Service Quality on Intercity Bus Transport Industry and to identify the current barriers to good service quality in the intercity bus transport industry. It focuses on the measurement of service quality and communication. In this research, the literature survey defined the service quality "gap" in this industry, identified the role of effective communication in the service delivery system, measured the variables affecting current service delivery and prioritized the importance of the factors influencing service delivery in this industry. The empirical data was collected using a self-administered questionnaire that was distributed among different bus terminals of different companies Daewoo, Niazi express, Bilal travels, Skyways and Faisal movers located in Islamabad, Rawalpindi and Sargodha district.500 questionnaires distributed, 396 questionnaires were received, 4 questionnaire were not properly filled, data analysis was done on 396 questionnaire and yielding a response rate of 79.2 percent. Data was analyzed by using SPSS relative importance Cronbach's alpha, and AMOS Structure Equation Modeling. The results of this research pointed to the importance of external communication in the industry. Specific recommendations are made to improve the productivity, reduce vacancy rate and maximize the benefits to this industry in future.

Key Words: Service Quality, Operating management support, handiness, tangible services

Introduction

Transport is considered as back bone economies of country. Customers are the powerful force of all firms' existence and expansion, as they strive to satisfy customer needs. Access toward good quality and overhauls claim more transit wellbeing, safety in addition to calm (quality dimensions of public transport). This research aims to shed light on different critical factors and their influence on service quality and customer satisfaction in intercity bus transport. Service quality is very important and serious issue in transport industry. Hence, this study is focused on the efficient deliverance of services and their success factors which can handle with problem and Practices which are suited in intercity bus transport industry in Pakistan. Furthermore it aims to find out more success factors of service quality according to perception and expectations of customers. There are 50 general as well as transnational awards for best quality, among them majority awards related to good quality of product rather good quality of service. Focus of this research study is to identify the factors which influence service quality and customer satisfaction. When a company provides best Quality in services it can help organizations to develop better strategies for rivalry against product expenses, customer satisfaction and to develop their loyalty towards organization as well as to upturn production (Lovelock & Wright, 2002:264).

In previous studies conducted on intercity bus service, mostly focused on tangible dimensions such as bus frequency, vehicle tools, travel time, loading factors. However, Passenger's perception of service quality is less taken into consideration. This study aims to discuss critical factors of service quality as well as view point of passenger's perceptions. Research will focus on dimensions of service quality for intercity bus service for example "Interaction with passengers", "Tangible service equipment", "Operating management support", "Handiness of services". As Inflation increased and due to lesser job securities, it resulted in less affordability of the luxuries. It became difficult for people to afford many things. Personal transport is also one of those luxuries. Moreover if there is insufficient mobility between rural and urban areas of country it will further penalize and marginalize the economic development of population. So people had to rely on intercity bus transport to travel between different cities in a country. The purpose of this study is to identify the critical factors of service quality and their influence on customer satisfaction in intercity bus transport. Based on the aim of the research, two main questions of this research are:

1) What are the critical factors of service quality in intercity bus transport industry?

2) What is the relationship between different dimensions of service quality and customer satisfaction in intercity bus transport industry?

Literature Review

The function of service quality is now generally acknowledged as a sign of customer contentment and organizational performance. Many optional definitions of service quality focal point are meeting customer needs as well as requirements. Service quality is associated with a series of characteristics describing the Transport service. Berry (1990) indicates that "customers are the sole judges of service quality" and numerous authors have also sustained this theory. Consequently, if service quality be measured from the consumer's perspective, transport quality depends on the traveler's perceptions about each trait characterizing the service (Oña, Eboli & Mazzulla (2013).

Ribeiro (1993) and Klaus (1985) defined quality the same as the collective experience of increase by contributors and stable prototype of behavior linked with a given type of check encounter. Klaus (1985) stated that service quality as an occurrence experienced via individuals and be evident in individual performance. It is also a self-motivated, multifaceted arrangement of substantial, conditional, as well as behavioral variables In order to understand quality there is a need of understanding the perception of substantial characteristics of a service, in addition to, customer's psychology and traditions.

Road transport and Intercity Bus Service in Pakistan

Intercity bus transport has increased noticeably in Pakistan as a result of the turn down of Pakistan railways and the high prices of Airlines for the common Pakistani. Many corporations have started working inside the country for example Daewoo Express and Niazi Express and have increased significant reputation because of their consistency, safety measures in addition to high-quality service. Slighter vans are used for transport in the hilly areas of North where congested moreover hazardous ways create it unfeasible for the movement of bigger buses. According to Pakistan Economic Survey (2014-2015), Well-organized transport system is not only requirement for economic growth but play an important role in economic assimilation of the country. This subdivision has straight and meandering links with every significant sectors of the financial system, which manipulate directly societal and financial wealth of the citizens. An efficient transportation contribute to financial growth by lowering manufacturing cost through timely deliverance of raw materials of agriculture region to the

marketplace and making possible timely deliverance to manufacturing sector therefore enhancing economy scale in the manufacturing process and developing economic opportunities through communication links between urban-rural inhabitants. It directly offers sufficient service opportunities to the lower class of the general public, whom if they cannot find proper occupations due lack of education.

While Pakistan has a huge network of roads, railway, airline service and advance seaports but the current government look like determined to further expand the accessible network by adding together sections of roads, motorways and also scheduling to add a considerable length of advance rail links toward the existing capacity (Pakistan Economic Survey, 2014-2015). Pakistan's Vision 2025, assigns high Weight age to modern transport infrastructure to ensure reduction in transportation cost, protection in travelling, effective communication among rural areas and urban market centers, incorporated network involving economic centers, along with high capacity transportation platforms connecting between major local trading associations (Pakistan Economic Survey, 2014-2015).

High road density of any country is a sign of the level of wealth and growth. Consequently, it has been estimated to raise road thickness to the level of 0.45 km/sq.km by 2018 beside the existing 0.33 km/sq. km density level which will raise the existing road links from approximately 263,942 km to 358,000 km (Pakistan Economic Survey, 2014-2015.

The Relationship between Service Quality and Customer Satisfaction

According to Govender and Pan (2011); Lovelock and Wright (2002) consumer approval is an appearance of expressive reaction that arises from self-practice. Metter (2006) signifies that satisfaction is the costumer's achievement response. Satisfaction is the consumer's assessment of a production or else service in requisites of either that product or else service has fulfil the customer's requirements and expectations (Bruhn & Georgi, 2006). According to Truong and Foster (2006) customer satisfaction acquires in two conditions, one is the outcome of manufactured goods as well as definite services assemble the consumer's anticipations. The other is wherever the result goes beyond the expectations. Disappointment will take place where the real service level is less than expected level. Consequently, satisfaction as well as dissatisfaction is the result of an individual evaluative procedure by the customer. The association between service quality along with customer satisfaction still remains a ambiguity, from the viewpoint of whether consumer satisfaction is a predecessor of service quality or vice versa. Some investigators suggest that consumer satisfaction leads to service quality (Lee, Lee & Yoo, 2000).

Consumer satisfaction is somewhat that includes noticeable assessment of entire services and products (Leem & yoon, 2004). Antouvakis and Iymperopoulou, (2008) conducted a study including 388 travelers who use Ferry they found that not just road transport people even want entire system of transportations very efficient with the intention that it will save their time also they want its manifestation should also be excellent. Though generally Ferry is used for employees with the purpose to save their time as there are no signals and traffic, still many of them were not satisfied. The motive was its manifestation and cleanliness therefore the results of this study recommended that customer satisfaction is effected as a result of the important elements of the service that involves on the whole satisfaction level. Bhandari, Chien and Daniel, (2003) stated that many organizations implement some approaches to satisfy customers but fail to keep them due to lack of attention and lack of knowledge. Singh and Singh (2009) conducted a study to find the influence of improvement created by technical adaptation with the purpose of how it supposed to be carried out to enhance customer satisfaction. They found that availability of practical reviews matter a great deal to check the accessibility of breakdown recovery that

in case any experiment does not achieve something they must have some plans to overcome the loss and achieve customer's satisfaction. Eboli and Mazulla (2009) conducted a research related to air travelers and they originated that customers desire not only comfort capability but also hygiene assurance and it influences their satisfaction level.

Further studies performed by Gronroos (1988); Zheng and Jiaqing (2007); Zineldin (2005) concluded that consumers desire the most excellent service whether it would be specified by private organizations or public organizations and by improving quality and approaches, customers possibly will be satisfied which would eventually be helpful in favor of the status and profit of the companies. All the above researches conducted by different researchers conclude that in transportation sector service quality plays an important role with some other moderating variables which might be constancy, capability, safety and not simply all these aspects, response from customers supposed to be there as it assists to improve the availability according to customer's need as well as to improve the service quality.

Bus Service Quality Dimensions

Assigning resources among challenging transport agencies, service quality dimensions are essential for reviewing management act of the transport service relative to population expectations, reviewing management issues regarding overheads of the service, along with as an examining tool for civilizing the service (Transportation Research Board, 1994). In adding together, determine of performance allows the behaviour of organizations designate compared eventually as well as transversely (Borger, 2002). A transport performance appraisal is characterized as a quantitative or qualitative aspect used to estimate an important feature of a transport service (Transportation Research Board, 2003). Every quality measures have individual sequence of pointers. Definitely, technical investigation is always extra leaning towards the founding of suitable transport performance events in addition to indicators. (A methodology for evaluating transit service quality based on subjective and objective measures from the passenger's point of view).

Table: 1 Dimensions of Service Quality

Dimension	**Definition**
Interaction with passenger	Consumers feel valued moreover concerned while interacting with staff. BUS companies provide gracious along with practical feedback to consumers' queries.
Tangible service equipment	The tools with overhaul presented by bus companies be able to make travellers feel comfortable
Operating management support	The preparation of timetable, the transmit of buses in addition to staff as well as maintenance from administrators can assure consumers' requirements
Handiness of service	The access to knowledge along with tools be capable of assist travellers attain bus service.

Source: Hu & Jen, (2006:3).

Interaction with passenger

According to Curry and Sinclair (2002), the interaction with passenger refers towards kind; individualized attention that companies provides its consumers. To this conclusion, right to use, communication and understanding of customer's needs are key elements. The central idea behind this dimension is to offer suitable and sufficient facilities for current as well as potential customers.

Tangible service equipment

Tangibles are associated with the appearance along with confirmation of tangible facilities, tools, and personal and communication substances (Robledo, 2001). Since the tangible and visual components will be critical towards effectiveness and overall intuitions of the company and the brand, service companies are likely to use tangibles to improve their image as well as communicate quality service to consumers (Zeithaml, 2006).

Operating management support

Bebco (2000) define operating management support as 'the capability to perform the agreed service dependably as well as accurately'. Reliability is an important factor in serving customers to evaluate the quality they experienced compared to the quality promised through the delivery process for example service terms, problem solutions and pricing.

Handiness of service

Robelo (2001:25) regards Handiness of service as the skills possessed by employees, their politeness and the capability to inspire faith and confidence. This dimension consists of four major components, competency, courtesy, credibility and safety.

Hypothesis

H1: Interaction with passenger has positive influence on service quality in inner-city bus service

H2: Tangible services has positive influence on service quality in inner-city bus service

H3: Operating management support has positive influence on service quality in inter-city bus service

H4: Handiness of service has positive influence on service quality in inter-city bus service

Methodology

The target population in this research involves all the customers who use intercity bus service to travel between different regions and cities in Pakistan. Data was collected from different intercity bus transport terminals of Daewoo express bus terminal Islamabad, Niazi express station Islamabad, Skyways bus services Islamabad, Bilal travels Rawalpindi, Daewoo express bus terminal Sargodha, Daewoo express bus terminal Bhalwal.

Sample Size

According to Sekaran (2003), an ideal sample size is greater than 30 and less than 500 is applicable for much research studies. This research selected 400 passengers as respondents at different intercity bus stations in Islamabad and Sargodha district. For the purpose of data collection, respondents were approached by employing convenience sampling. For this research random samples are selected from

selected bus terminals in Islamabad Rawalpindi and Sargodha regions by executing convenient sampling, and then self-administered questionnaires were used to collect responses of selected sample.

Results and Discussion

In this research data analyses was performed by using AMOS 18 and SPSS 20.. Individually both softwares were used for different types of analysis. SPSS was used for descriptive analysis and reliability, whereas AMOS was used for CFA.

Table 2: Descriptive Statistics

Male	156	
Female	240	60.6
Total	**396**	**100.0**
Age		
16-20	68	17
21-25	128	32
26-30	56	14
31-35	36	9
36-40	44	11
41-45	30	8
46-50	18	5
51 & above	16	4
Total	**396**	**100.0**
Post graduation	114	28.8
Graduation	120	30
Under graduation	126	31.8
Matriculation	26	3.6
Other	10	2.5
Total	**396**	**100.0**
Status		
Married	154	39
Unmarried	228	57
Total	396	100
Income Level		
10,000-20,000rs	100	25

21,000-30,000rs	66	16
31,000-40,000rs	74	19
41,000-50,000rs	52	13
50,000rs & above		
	104	26
Total	**396**	**100**

Preferred Bus Service	**Frequency**	**Percentage**
Daewoo	232	58
Niazi	30	7
Skyways	56	14.1
Bilal Travel	20	5
Other	58	14.6
Total	**396**	**100**

Table 3: Reliability Statistics

Variables	**No. of Items**	**Alpha Reliability Coefficient**
Interaction with Passenger	5	0.731
Tangible Service Equipment	3	0.729
Support	4	0.754
Handiness of Service	5	0.784
Service Quality	4	0.705

Confirmatory Factor Analysis

In any research study for any theoretical model there are various fit indices which are functionally used but there is no standardized measurement and agreement to decide which one is the best to present (Meyers, 2006). According to theories and literature three categories for model fit are given below in table (Jalees & Derun; 2013) where as they recommended that one should be presented from each section for model fit. The table given below demonstrates all the values which are observed after confirmatory factor analysis of exogenous and endogenous variables in this research study. The fit indices mentioned in table presents over all model fitness

Table 4: Confirmatory Factor Analysis

Absolute		**Relative**		**Parsimonious**	
Test	**Prescribed value**	**Test**	**Prescribed value**	**Test**	**Prescribed value**
CMIN/df	<3.00	CFI	> 0.95	PNCFI	>0.50
p value	< 0.5	TLI	> 0.90	PCFI	>0.50
RMSEA	< 0.10				

SEM Model

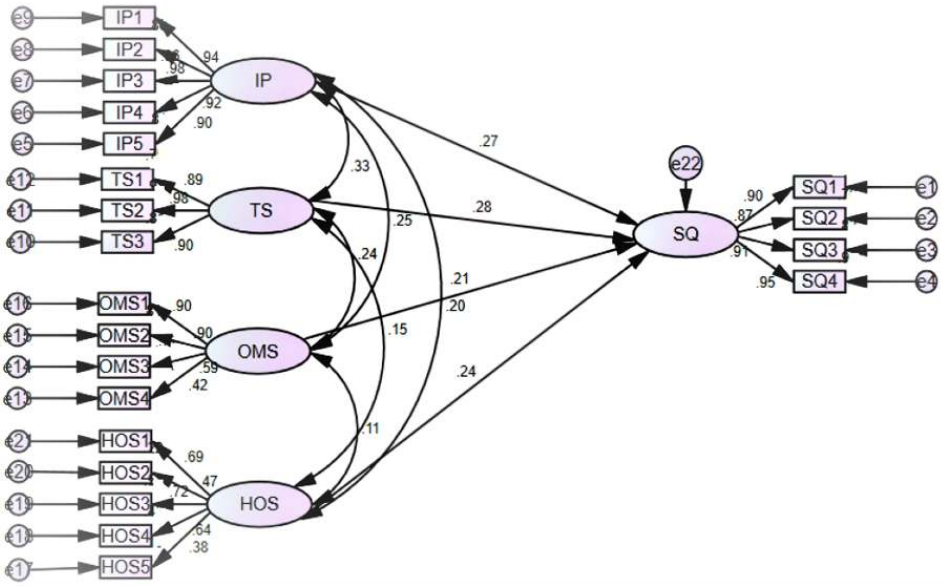
In this research study AMOS model has one dependent variable "Service Quality", whereas four independent variable that are Interaction with Passenger, Tangible Service Equipment, Operating Management Support, Handiness of Service, Offering Correct Information. While developing the SEM model the observed and unobserved covariance and variance measurements can be compared and we can make changing's in the model for good model fit after comparison. The AMOS model in this research study represents that dependent variable Service Quality in a straight line exaggerated by four independent variables i.e. Interaction with Passenger, Tangible Service Equipment, Operating Management Support, Handiness of Service, they are shown by single arrow from independent variables towards endogenous or dependent variable. While single headed arrow describe the linear dependencies among dependent and independent variable.

Abbreviations signify the underlying variables which are restrained by the perceived variables in the blocks. Every variable in the model is represented by various observed variables as well as pointers. At the completion of every pointer there was an error term indicator it presents various effects which are not measured in model. The endogenous variable Service Quality as well connected with an error indicator. In Amos model the curved shape arrows represent correlation effect or relationship among exogenous variables. They are represented by two headed arrows in the model. If there are any credentials issues in AMOS model it can be fixed by keeping the regression weight equal to 1. In the end all these steps or procedures practices a structure equation model or path diagram.

All three exogenous variables are correlated with one another. In the data analysis of this research study while using AMOS we want to know interconnection between model and data we collected through

respondents. In the figure given below SEM model has been developed by using SPSS AMOS. First of all Confirmatory Factor Analysis has been performed and results of loading factors of each items are given in tables below. in the figure we can observe items which have high loading factor are equally better when structure equation modeling performed. In the figure below beta weights are mentioned for each independent variable to dependent variable "Service Quality" by single headed arrow.

Figure 1: SEM Model Fit



Interaction with Passengers

Structure equation model creates a numerical value shown by single headed arrow in model. This incepted value should be above 0.5, incepted values for items of Interaction with Passenger are given below.IP1; IP2, 1P3, and IP4, IP5, and IP6 are abbreviated for convenience. As value for IP7 and IP8 were below 0.5, both were deleted from model.

Table 5: Factor Loadings of Interaction with Passengers

Interaction with passenger	Item stands for	Obtained values
IP1	Easy accessibility	0.93
IP2	Polite behavior	0.94
IP3	Adequate response	0.98
IP4	Passenger's opinions	0.92
IP5	Operating hours	0.90

Tangible Service Equipment

3 items of Tangible Service Equipment consist of values above 0.5.values of these items are given below.

Table 5: Factor Loadings of Tangible Service Equipments

Tangible Service Equipment	Items stands for	Obtained values
TSE1	Professional appearance	0.89
TSE2	Brand new buses	0.98
TSE3	Clean environment	0.90

Values of remaining items are less than 0.5 whereas detail of these items and their statement are given in appendix moreover these items were deleted from model.

Operating Management Support

Operating management support consists of 8 items. Inception values of five items are above 0.5 which are as follows

Table 6: Factor Loadings of Operating Manager Support

Operating Management Support	Items Stands for	Obtained values
OMS1	Departs Time	0.90
OMS2	Bus condition	0.90
OMS3	Tickets Purchasing	0.59
OMS4	Passenger's problems	0.42

Handiness of Services

Handiness of services consists of 6 items. The CFA performed on 6 items and Threshold values of items are given below. Whereas value of one item is less than 0.5 and it was deleted to improve the model fit.

Table 7: Factor Loadings of Handiness of Services

Handiness of Services	Items stands for	Obtained values
HOS1	Transactions	0.69
HOS2	Occupational Knowledge	0.47
HOS3	Passenger's confidence	0.73
HOS4	Passenger's needs	0.64
HOS5	Passenger's luggage	0.38

Dependent variable

Service Quality is the dependent variable in the model. Variable was divided into three factors namely SQ1, SQ2 & SQ3, SQ4 having a normal threshold values of 0.90, 0.87, 0.91 &0.95 respectively. The names of the factors are given in the table below.

Table 8: Factor Loadings of Service Quality

Service Quality	Items stands for	Obtained values
SQ1	Customer's satisfaction	0.90
SQ2	Correct Information	0.87
SQ3	communication	0.91
SQ4	Prompt services	0.95

Table 9: Measure of Goodness of Fit

	Obtained value	Test	Obtained value	Test	Obtained value
CMIN/df	2.310	CFI	0.969	PNFI	0.807
p value	0.000	TLI	0.963	PCFI	0.826
RMSEA			0.05		

Observed values which are given in above table are the measures of goodness of fit and are initiated according to measures given in previous studies and theory. CMIN/df is 2.310 which is less than 3; the observed value of RMSEA is 0.05 which is less than 1 show a good fit. CFI, TLI, PNFI &PCFI are 0.96, 0.963, 0.807 & 0.826 respectively which are all above the required value of good fit.

Relationship among IV and Service Quality as DV

When dependent variable 'Interaction' with Passenger is increased by standard deviation of 1 then dependent variable 'Service Quality' has been increased by 0.27 standard deviation. With a particular change in the value of standard deviation by 1 for Tangible Service Equipment there was an upturn for Service Quality and value of standard deviation is increased by 0.28. Once Operating Management Support variable drives up to one standard deviation, standard deviation for Service Quality goes up to 0.21. After Handiness of Services safety drives up to 1 standard deviation, value for Service Quality drives up to 0.24 standard deviations.

Hypotheses testing

In this study four hypotheses are derived to find out relationship among four exogenous variables with one endogenous variable. The hypotheses were established with the help of previous studies and theory. All hypotheses were tested against the significance level of 5% which is denoted by alpha. For this research study following are the results of hypothesis to check the proposed relationship

H1: Interaction with Passenger has positive influence on Service Quality in intercity bus transport industry.

The value of beta for Interaction with Passenger and Service Quality is 0.27 and it is greater than the inception value of 0.2. Therefore hypothesis has been accepted that there is a positive relationship between Service Quality and Interaction with Passenger. This indicates that Interaction with Passenger support has a significant effect on Service Quality.

H2: Tangible Service Equipment has positive influence on Service Quality in intercity bus Transport industry.

The hypothesis that Tangible Service Equipment has a positive influence on Service Quality is established at 0.28 which is greater than 0.2 beta value. This means that the alternative hypothesis which states that Tangible Service Equipment has a positive relationship on Service Quality of Intercity bus Transport is accepted.

H3: Operating Management Support has positive influence on Service Quality in intercity bus transport industry.

The observed value of beta is 0.21 which is above the threshold value of beta, henceforth the hypotheses that Operating Management Support has a positive significant effect on Service Quality is established. This proves that Operating Management Support has major effect on Service Quality of Intercity bus Transport Industry.

H4: There is a positive relationship between Service Quality of Intercity bus Transport Industry and Handiness of Service.

The observed value of beta is 0.24 which is greater than 0.2. Therefore the assumptions that Handiness of Services has a positive influence on Service Quality of bus Transport Industry are established. Therefore it is observed from given results that if management of bus companies focused on Handiness of Services then there is a positive effect on overall Quality of Services. This proves that Handiness of Service is completely related to Service Quality as well as meaningfully participates on the way towards best Quality Services of Intercity bus transport Industry.

Conclusion

This examination has accomplished, expressed targets, effectively and exactly inspected the impact of basic achievement variables, on successful change administration process, information gathered from travelers at various transport terminals from Rawalpindi, Islamabad and Sargodha district. The accompanying conclusions were drawn on the premise of above information investigation and exchange. The four critical success factors of change service quality (Interaction with passengers, Tangible service equipment, Operating Management support, Handiness of service,) are positively related with service quality. All these factors are highly significant with service quality. Most significant factors according to passengers are Interaction with Passenger which might companies to aid in providing best service quality.

Recommendations

The research study arise innovative dimension toward future study now in service quality.

However results and measurement highlighted that these critical factors have significant effect on service quality of intercity bus transportation. Consequently, upcoming studies should investigate either these measures and results are applicable to other transportation such as railway, airship or local transportation within the city. Beside that what are the perceptions of service quality of customer toward intercity transportation in developed countries compared to developing countries. Moreover research studies should inspect other cultural and professional needs regarding service quality.

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