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RESEARCH ARTICLE

FACTORS AFFECTING PEOPLE'S SATISFACTION WITH BUS SERVICE IN HO CHI MINH CITY

***Truong Quang Dung**

PhD. in Economics, Ho Chi Minh City University of Technology (Hutech), Vietnam

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ABSTRACT

This study identifies the factors that affect people's satisfaction with the bus service in Ho Chi Minh City by empirical research.From the research model and surveying of 620 people, the results of the analysis show that the satisfaction of people about the bus service in Ho Chi Minh City depends on many factors such as communication, sale system, the service of bus service staff, the route network system, the bus and bus infrastructure. The research also finds that the overall satisfaction of the bus service in Ho Chi Minh City is lower than average and there is a wide variation in satisfaction between the type of passengers and their frequency of using the bus service.

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INTRODUCTION

Buses are now a form of public transport mainly in urban areas in Vietnam, especially in Ho Chi Minh City. The route network and bus infrastructure of the city has more than 150 routes and over 4,000 stops. Bus service supply in the City has 30 units, including 27 cooperatives, a state-owned unit, a joint venture and a limited liability company with a total of 3,208 vehicles. On average, there are more than 21,500 buses with about 1.2 million passengers using the bus service in Ho Chi Minh City. With such scale, bus services are playing an important role in the public transport system in Ho Chi Minh City. However, the quality of bus service in Ho Chi Minh City is still limited, including infrastructure, facilities and staff. Therefore, this article will study the factors that affect the satisfaction of people with the bus service in Ho Chi Minh City to develop solutions to improve service quality.

MATERIALS AND METHODS

Theoretical basis

Quality bus service

There is no universally accepted definition of the quality of goods or services (Brown and Swatz, 1989).

Corresponding author:* **Truong Quang Dung
PhD. in economics, Ho Chi Minh City University of Technology (Hutech), Vietnam.

However, due to the importance of quality and the need to study it, several definitions have been established: Zeithaml *et al*. (1988) defines quality as superiority or excellence. Fundamentally, quality of service is different between consumer's perceptions of the service received, compared with their expectations of service based on past service experiences (Parasuraman *et al*. 1985). However, parasuraman's idea on quality were extended by Zeithaml to include a relationship between service quality and customer should expect from the organization/firm that delivers high-quality services, while satisfaction compares perceptions to what consumers would normally expect. As far this study is concern, urban public transport a service whose quality is defined by consumer's perception as the one which meets hi/her expectations particular service, and which ultimately leads to his/her satisfaction. In this case, the customer is a passenger. Therefore, when a passengers becomes satisfied with transport service he/her perceives the service as being of good or high quality and service of good or high quality and vice versa. The quality of bus services in this research is demonstrated through the safety of passengers and the comfort and convenience of passengers while taking the bus. Based on the technology and operational processes, the quality of bus services is largely dependent on four groups of factors as following:

- Route network and bus infrastructure: Traffic system, bus station, bus network, stops, running frequency...
- Bus facilities: Vehicle size, vehicle quality, equipment and facilities, shape, maintenance ...

- Competence of staff and driver: sense of responsibility, service attitude, professional level, friendly...
- Communications and sales systems: Information and communications, point of sale, form of sale, fare...
- Passenger satisfaction

So far, there are quite a number of concepts of satisfaction in different contexts. Halstead *et al*. (1994) viewed satisfaction as an emotional response, focusing on comparing the results of the product with a number of criteria set before purchase and measurement during and after consumption. On the other hand, Mano and Oliver (1993) argued that satisfaction is a change in perceptual perceptions of the product and is judged after consumption. Zeithaml *et al*. (1988) found that customer satisfaction was their reaction to the perceived difference between known experience and expectation. This means that the customer's experience of using a service and the results after the service is provided. Whereas, according to Kotler and Keller (2006), satisfaction is the degree to which a person's sense of place is derived from comparing the perception of a product to his or her expectations.It means that there are three levels of satisfaction: 1) If the customer's perceptions are smaller than expected, the customer feels unsatisfied; 2) If the expectations are fulfilled, the customer feels satisfied; 3) If the perception is greater than expectations, the customer feels satisfied or interested.Passenger satisfaction about bus service quality in this study included satisfaction with factor: Route network and bus infrastructure; bus facilities, competence of staff and driver; communications and sales systems.

Research model and hypotheses

Research model

Research model of the factors that affect people's satisfaction with bus service in Ho Chi Minh City in this research included the dependent variable "People's satisfaction with the service bus"and independent variables (influence) included: Route network and bus infrastructure; bus facilities, competence of staff and driver; communications and sales systems (Figure 1).

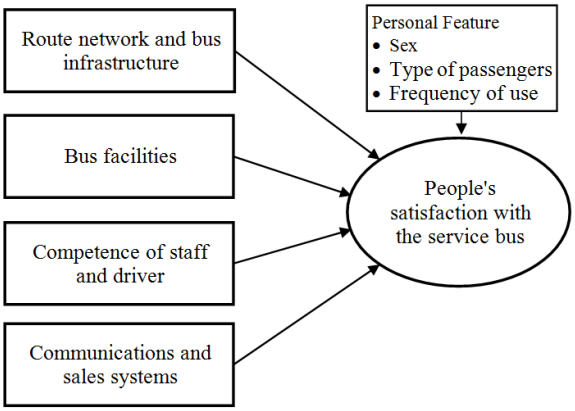


Figure 1. The proposed research model

Hypotheses

H_1: Route network and bus infrastructure are positively correlated with the satisfaction of bus service residents.

H_2: Bus facilities are positively correlated with the satisfaction of bus service residents.

H_3: Competence of staff and driver are positively correlated with the satisfaction of bus service residents.

H_4: Communications and sales systems are positively correlated with the satisfaction of bus service residents.

The importance of factors that affect people's satisfaction with bus service in Ho Chi Minh City is estimated by the parameters in the linear regression model in (1).

$$\mathbf{Y = b + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4} \quad (1)$$

Where:

Y: People's satisfaction with the service bus
X_1: Route network and bus infrastructure
X_2: Bus facilities
X_3: Competence of staff and driver
X_4: Communications and sales systems

RESEARCH METHODS

Variable and scale

From the research model and based on the SERVPERF scale (Cronin and Taylor, 1992), affter discussion with experts as well as passengers using bus services, the four groups of influences were developed into 18 variable observation (question), including: 5 variables of factor “Route network and bus infrastructure”; 5 variables of factor “Bus facilities”; 4 variables of factor “Competence of staff and driver” and 4 variables of factor “Communications and sales systems”. Satisfaction (dependent variable) is measured by four observation variables (Table 1). The scale of the observed variables is measured by Likert scale with 5 points: 1 is very disagree and 5 is very agree.

Data collection

To ensure statistical significance, sample size must be greater than or equal to 5 times the number of questions or observed variables (Hoang Trong Nguyen Mong Ngoc Chu, 2005) as well as 50 + 8P with P is the number of independent factors in the model Green W.H, 1991;Tabachnick B. G. and Fidell L. S, 2007). Variables observed in this study is 22 for 5 groups of factors. Therefore, the minimum sample size: n = 22 x 5 = 115 questionnaires or n = 50 + 8 x 5 = 90. Number of samples collected in this study is620 questionnaires then have been checked and cleaned by SPSS. They include 183 males, accounting for 29.52% and 437 females, accounting for 70.48% (Table 2).

Reliability analysis of scale

Scale reliability is assessed by Cronbach’s Alpha coefficients and Corrected item - total correlation to eliminate the variables "junk". Variable has Corrected item - total correlation less than 0.3 will be disqualified and the scale will be chosen when Cronbach's alpha coefficients greater than 0.6. Result of Cronbach's alpha analysis show that if $X_{2.1}$, $X_{3.3}$or$X_{4.3}$ are deleted, Cronbach's alpha coefficients are higher. However all Crobach’s Alpha coefficients of scales are > 0.6 and all Corrected item - total correlation of observed variables are greater than 0.3 so all variables observation are acceptable to analyze in the next steps (Table 3)

RESULTS AND DISCUSSION

Result of model testing

Test results show that there is a correlation between "People's satisfaction with the service bus" with influencing variables such asroute network and bus infrastructure, bus facilities, competence of staff and driver, communications and sales systems. All Sig. value are less than 0.01 so they have correlation with high reliability (Table 4).

The value of Variance Inflation Factor (VIF) of all variables in the range from 1 to 10. This means that there is no autocorrelation between independent variables in this model (Table 5). From the result of the regression analysis, the model after estimates has the following form:

$Y = 0{,}135\ X_1 + 0.112\ X_2 + 0.275X_3 + 0.317X_4$

Measure the value of factors

The measurement results show that the overall satisfaction of the bus service in Ho Chi Minh City is below average.

Table 1. Expression and coding for variable of factors

Scale of influencing factors			Integrate with SERVPERF				
Factors / Observational variables		Encode	Reliability	Responsiveness	Assurance	Empathy	Tangibles
Route network and bus infrastructure							
1	Separate bus system for buses	$X_{1.1}$					x
2	Passenger terminal for bus	$X_{1.2}$					x
3	Bus route network	$X_{1.3}$		x			
4	Appropriate stops	$X_{1.4}$		x			
5	Bus frequencies	$X_{1.5}$		x			
Bus facilities							
6	Appropriate bus size	$X_{2.1}$					x
7	Quality bus	$X_{2.2}$	x				
8	Equipment and facilities	$X_{2.3}$				x	
9	Maintenance work	$X_{2.4}$				x	
10	Bus looks modern	$X_{2.5}$					x
Competence of staff and driver							
11	Responsibility for work	$X_{3.1}$	x				
12	Attentive service, kindness	$X_{3.2}$	x				
13	Professional qualifications meet requirements	$X_{3.3}$				x	
14	Friendly, enthusiastic guide, help	$X_{3.4}$			x		
Communications and sales systems							
15	Information system and bus communication	$X_{4.1}$			x		
16	Point of sale tickets	$X_{4.2}$		x			
17	The ticket mode	$X_{4.3}$		x			
18	Bus fare	$X_{4.4}$	x				
Satisfaction							
19	Satisfied with route network and bus infrastructure	Y_1					
20	Satisfied with bus facilities	Y_2					
21	Satisfied with the staff	Y_3					
22	Satisfied with communications and sales systems	Y_4					

Table 2. Summary of survey samples

Unit: Person

		Male		Female		Total	
		Count	Column N %	Count	Column N %	Count	Column N %
Type of passengers	Pupil	35	19.1%	96	22.0%	131	21.1%
	Student	55	30.1%	55	12.6%	110	17.7%
	Worker	68	37.2%	256	58.6%	324	52.3%
	Visitor	25	13.7%	30	6.9%	55	8.9%
	Total	183	100.0%	437	100.0%	620	100.0%
Frequency of use the bus	<once/week	41	22.5%	132	30.4%	173	28.1%
	2 -5 times/week	94	51.6%	142	32.7%	236	38.3%
	>5 times/week	47	25.8%	160	36.9%	207	33.6%
	Total	182	100.0%	434	100.0%	616	100.0%

Source: Descriptive statistics

Importance of factors

Result of linear regression analysis in research model shows that the variables have a positive relationship with the dependent variable and ensure significant statistics (Sig. <0.05). The value of Sig. in ANOVA analysis is less than 0.05 so regression models are appropriate.

The factors that affect satisfaction are also below average, the highest being "Communication and sales systems", followed by "Route network and bus infrastructure" and "Bus facilities", the lowest being "Competence of staff and driver" (Table 6).

Table 3. Reliability analysis of scales

Cronbach's Alpha of scale	Variable	Corrected item-total correlation	Cronbach's alpha if item deleted
Route network and bus infrastructure			
0.713	$X_{1.1}$	0.426	0.684
	$X_{1.2}$	0.533	0.640
	$X_{1.3}$	0.556	0.632
	$X_{1.4}$	0.462	0.669
	$X_{1.5}$	0.387	0.699
Bus facilities			
0.697	$X_{2.1}$	0.327	0.700
	$X_{2.2}$	0.388	0.674
	$X_{2.3}$	0.572	0.594
	$X_{2.4}$	0.424	0.660
	$X_{2.5}$	0.565	0.600
Competence of staff and driver			
0.773	$X_{3.1}$	0.635	0.686
	$X_{3.2}$	0.688	0.657
	$X_{3.3}$	0.384	0.807
	$X_{3.4}$	0.608	0.701
Communications and sales systems			
0.733	$X_{4.1}$	0.538	0.668
	$X_{4.2}$	0.659	0.524
	$X_{4.3}$	0.480	0.736
	$X_{4.4}$	.474	.732
Satisfaction			
0.707	Y_1	0.444	0.672
	Y_2	0.540	0.613
	Y_3	0.469	0.659
	Y_4	0.519	0.628

Table 4. Matrix correlation

		X1	X2	X3	X4	Y	Result
X1	Pearson Correlation	1	.591**	.348**	.498**	.478**	Accepted hypothesis
	Sig. (2-tailed)		.000	.000	.000	.000	
X2	Pearson Correlation	.591**	1	.382**	.460**	.409**	Accepted hypothesis
	Sig. (2-tailed)	.000		.000	.000	.000	
X3	Pearson Correlation	.348**	.382**	1	.480**	.504**	Accepted hypothesis
	Sig. (2-tailed)	.000	.000		.000	.000	
X4	Pearson Correlation	.498**	.460**	.480**	1	.582**	Accepted hypothesis
	Sig. (2-tailed)	.000	.000	.000		.000	
Y	Pearson Correlation	.478**	.409**	.504**	.582**	1	
	Sig. (2-tailed)	.000	.000	.000	.000		

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

Source: Results of correlation analysis

Table 5. Parameters are estimated in model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.000	.031		0.000	1.00		
X_1	.135	.038	.135	3.566	.000	.675	1.480
X_2	.112	.038	.112	2.949	.003	.668	1.497
X_3	.275	.036	.275	7.646	.000	.746	1.341
X_4	.317	.037	.317	8.617	.000	.715	1.398
$R^2 = 0.406$							
Adjusted $R^2 = 0.402$							
Sig. trong ANOVA = 0,000 (F = 105.019)							

a. Predictors: (Constant), X_4, X_2, X_3, X_1

b. Dependent Variable: Y

Table 6. Measurement of the value of factors

Factor	N	Mean	Std. Deviation	Coefficient of variation
X_1	620	2.7303	.65023	23.82%
X_2	620	2.6071	.61972	23.77%
X_3	620	2.2851	.75160	32.89%
X_4	620	2.9306	.63059	21.52%
Y	620	2.5601	.69175	27.02%

Source: Descriptive statistics

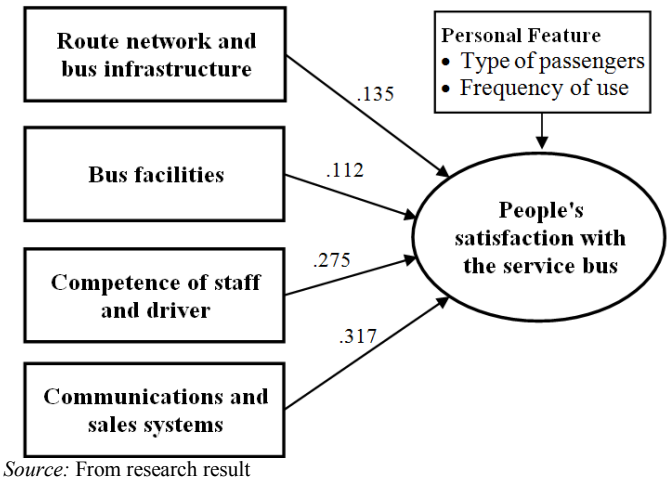
Satisfaction among passenger groups

Testing the different shows that there is a statistically significant difference (Sig. $\leq$ .05) in terms of customer satisfaction betwen type of passengers as well as their frequency of use. Besides, The difference in satisfaction between men and women is not sufficiently large and ensures statistical significance. To be more specific, as regards type of passengers, the highest rate is by visitor, followed by pupil and student, the lowest rate is the worker.

Table 7. Test the differences among passenger groups

Passenger groups		Mean	Std. Deviation	Statistical value	
				t or F	Sig. (2-tailed).
Sex	Male	2.5765	.72506	1.259	.702
	Female	2.5532	.67805		
Type of passengers	Pupil	2.7576	.53971	16.693	.000
	Student	2.6250	.74789		
	Worker	2.3943	.70396		
	Visitor	2.9364	.52753		
Frequency of use the bus	<once/ week	2.8555	.52971	46.816	.000
	2 -5 times/ week	2.6282	.67378		
	>5 times/ week	2.2271	.70135		

Source: Results of difference analysis



Source: From research result

Figure 2. Model from research results

As to the frequency of use the bus, as they use the higher frequency, the more they feel dissatisfied (Table 7). From the results of regression analysis and analysis of satisfaction among passenger groups, the model of factors affecting people's satisfaction with bus service in Ho Chi Minh City in this study is presented in Figure 2.

Conclusion and Policy Implications

The satisfaction of the people about bus service in Ho Chi Minh City depends on many factors. The results of this research show that "Communication and sales systems" have the greatest impact on people's satisfaction, followed by "Competence of staff and driver", "Route network and bus infrastructure" and "bus facilities" has the lowest impact. In particular. In case of other factors unchanged, if the these factors increase by 1%, "Satisfaction of bus service in Ho Chi Minh City" increased by 0.317%; 0.275%, 0.135% and 0.112% in that order. The research also finds that the overall satisfaction of the bus service in Ho Chi Minh City is lower than average and there aredefference of customer satisfaction between type of passengers as well as their frequency of use. In particular, the highest rate is by visitor, followed by pupil and student, the lowest rate is the worker. As to the frequency of use the bus, as they use the higher frequency, the more they feel dissatisfied.

From the result of this research, in order to improve the "satisfaction of bus service in Ho Chi Minh City", we need the efforts of both local government and bus service businesses in improving the quality of bus services in Ho Chi Minh City. Bus service providers should pay attention to improving the quality of bus services, promoting communication and enhancing the operation of the sales system, especially improving the competence of staff and driver. In addition, the People's Committee of Ho Chi Minh City needs to invest in infrastructure for bus routes and assist bus service businesses in implementing their solutions.

REFERENCES

Brown, S.W. and Swartz, T.A. 1989. A gap analysis of professional service quality. *Journal of Marketing*. Vol. 53, pp. 92 - 98.

Green, W. H. 1991. Child and adlescent clinical psy-chopharmacology. Baltimore, MD: Williams and Wilkins.

Halstead, D., Hartman, D. and Schmidt, S.L. 1994. Multisource effects on the satisfaction formation process. *Journal of the Academy of Marketing Science*. Vol. 22, pp. 114-129.

Hoang Trong and Chu Nguyen Mong Ngoc 2005..*Analyzing research data with SPSS*. Statistical Publishing House, Hanoi, Vietnam.

Joseph Cronin, Jr. J. and Steven A. Taylor 1992. *Journal of Marketing.* Vol. 56, No. 3, pp. 55-68.

Kotler, P. and Keller, K. 2006. Marketing Management. 12th Edition, Prentice Hall, Upper Saddle River.

Mano, Haim and Richard L. Oliver 1993. "Assessing the Dimensionality and Structure of Consumption Experience: Evaluation, Feeling, and Satisfaction," Journal of Consumer Research, 20 (December), forthcoming.

Parasuraman, A. 1985. A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing.* Vol. 49, No. 4, pp. 41-50.

Tabachnick, B. G., and Fidell, L. S. 2007. *Using multivariate statistics*. Boston: Pearson/Allyn and Bacon.

Zeithaml, V.A Parasuraman, A. and Berry, L.L. 1988. Servqual: a multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing. Vol. 64, No. 1, pp. 12 - 40.

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