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THE COMBINATION OF IMPORTANCE PERFORMANCE ANALYSIS AND STRUCTURAL EQUATION MODEL FOR MODELING PEDESTRIAN SATISFACTION IN MANADO

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ABSTRACT

This research aims to know the model of customer satisfaction pedestrian movement in pedestrian area path in Manado city. The Data used in this study was taken by pedestrian traffic survey with simple random sampling method, whereas the analysis techniques used is the amounts of Performance Analysis (IPA) and Structural Equation Modeling (SEM). The results with IPA approach shows that the high priority supported by Guarantee Indicator (I_KP1), Performance (I_KP3), Power Hold (I_KP7), Comfort (I_KP9), Aesthetics (I_ATTF2), priority which maintained supported by Reliability Indicator (I_KP6), Availability (I_KP10), Reliability (I_KL1), Assurance Guarantee (I_KL3), Manifests itself (I_KL5), Performance (I_AP1), Performance (I_ATTF1), Reliability (I_ATTF4), Comfort (I_ATTF7), low priority on the Power Emergency Indicators (I_KP2), Aesthetics (I_KP4), focus (I_KP5), Frequency (I_KP8), Oversight (I_KL2), Attention (I_KL4), Focus (I_AP3), focus (I_ATTF3), Frequency (I_ATTF6), Availability (I_ATTF8), and excessive is a Guarantee (I_AP2), Responsiveness (I_AP4), Power Hold (I_ATTF5). The relationship model of satisfaction pedestrian in each quadrant with SEM approach is the fit model. High priority satisfaction relationship model with Guarantee Indicator (I_KP1), Performance (I_KP3), Power Hold (I_KP7), Comfort (I_KP9) is influenced by the technical aspects of Transportation and Facilities (X2) with Warranty indicator (I_KP1). The relationship model of satisfaction maintained with Reliability indicator (I_KP6), Availability (I_KP10) is influenced by the service quality with the indicator reliability (I_KL1), Assurance Guarantee (I_KL3), manifests itself (I_KL5). The relationship model of low satisfaction priority with power indicator Emergency (I_KP2), Aesthetics (I_KP4), focus (I_KP5), Frequency (I_KP8) are influenced by management aspect with indicator ease (I_AP3), Technical Aspects of Transportation and Facilities (X2) with the ease indicator (I_ATTF3), Frequency (I_ATTF6), Availability (I_ATTF8), and the service quality with Oversight Indicator (I_KL2), Attention (I_KL4).

Keywords: *IPA, SEM, Sidewalks, Pedestrian Satisfaction, Service Quality, Management Aspects, Technical Aspects.*

1. INTRODUCTION

Walking is a basic human activity that is often neglected when planning for transportation and has been seen as a form of travel second class (Lumsden and Tolley, 1999). Walking is a secure mode of transportation which does not require expensive cost, besides that walking can prevent and reduce the risk of osteoporosis and make the body more energetic. In addition walk is one of the good cardio exercise to reduce body weight.(Lutfi & Adisasmita, 2009).

Transportation is a key element of the former city that is associated with many things, among others economic activities in the human health and

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the environment. Realized or not, the influence of the quality of the environment for the outdoor activities in general underlying the creation of pedestrian hazards area in urban areas. During the transportation planning is made, siding on the motor vehicle users, proven by the number of the recommendations of the widening of the highway, for toll roads, fly over, underpass and etc. While the provision of pedestrian facilities such as sidewalks, crossing bridge, includes the tree, illumination and other street furniture is still very less noted (Judges, 2005).

Walking is transportation media pollution free and affordable for all layers of the society. The existence of walkers on a certain level will result in a sharp conflict with the flow of the vehicle which in turn resulting traffic problem and a high level of an accident.

The lack of adequate pedestrian facilities, particularly focus on running and crossing, very impact on the safety of the pedestrian soul. It has been proven that 65 percent accident in the highway involving the death of pedestrian used (walkers), where 35 percent is children (Rahman A, 2003). So pedestrian movement and its characteristics and the flow of the vehicle need to learn to get a design of planning which can minimize the conflict between pedestrians and motor vehicle, add salvation, comfort, and smooth foot and minimise the traffic problems (Nurfanti, 2009).

Based on description above, we need to study the movement of pedestrians in Manado City, as one of the efforts to increase the attention of pedestrians used and pedestrian infrastructure styling that can made Manado City be Ecotourism Model with IPA approach and Structural Equation Modeling (SEM).

2. THEORY

2.1 *Importance - Performance Analysis* (IPA)

Importance-Performance Analysis is a method which combining the dimensions measurement expectations and interests into two grid. The value of the interests plotted as vertical axis while the value expectations plotted as diagonal axis using the average value which found on interest dimensions and expectations as the center of the line cutting. Importance-Performance Analysis (IPA) consists of four quadrants which shows the level of interest in the ministry attributes.

a. *Quadrant A,* area which contains the attributes that are considered important by the walkers / pedestrian but in fact these attributes not in accordance with the expected (the level of consumer satisfaction is still very low). In this area management party make continuously repairing in order to increase *performance* in this quadrants.
b. *Quadrant B,* area which contains the attributes that are considered important by the walkers / pedestrian and attributes that are considered by the walkers / pedestrian is in accordance so the level of satisfaction relatively higher.
c. *Quadrant C,* area which contains the attributes that are considered less important by the walkers / pedestrian and in actuality its performance is less special.
d. *Quadrant D,* area which contains the attributes that are considered less important for walkers / pedestrian and felt be excessive force.

In Ideal, attribute of the importance level is required to determine the priority in a decision use. This is because IPA in general attempting to understand the role of the selected attributes in decision use. While the performance measured by using the same attributes, so the interest level and the performance can be directly compared in the same attributes through this quadrants. The average score value of importance level and performance are used to determine the points in this quadrants. The next interpretation is a combination of the score of leaderboard importance level and the service quality from each attributes.

2.2 *Structural Equation Modeling* (SEM)

SEM is a collection of statistics methods that allows to test the series of relatively complex relationship as simultaneously. The complex relationships can be built from one or several dependent variables with one or several independent variables. Each of the independent and dependent variables can be in the form of the factor (construct is built from several indicators). These variables in the form of a single variable is observed or measured directly in a research. The input data used in SEM modeling is covarians matrix from data sample (empirical data), which is then used to produce an estimation of the population covariance matrix.

The modeling of SEM basically consists of measurement model and structural model. The measurement model is intended to confirm the dimensions which developed on a factor, while the structural model of the structure which formed or

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explained the causation between the factors. The SEM model are organized based on the conceptual framework about management aspect (X1), Technical Aspects of Transportation and Facilities (X2), the Quality of Service (Y1) and Pedestrian Satisfaction (Y2) which was taken from various literature.

The convergence validity of measurement model with reflesive indicator is valued based on correlation between store item or component score and construct store which calculated by PLS method. The reflexive individual size can be said as high if it has correlates more than 0.70 with the construct that you want to be measured. However for the early stages research from the measurement scale development, the loading value of 0.5 to 0.60 can be considered as enough (Chin, 1998).

Fornnel and Lacker (1981) stated that this measurement can be used for the measurement of the reliability of the *component score* latent variable and the result is more conservative compared to the *composite reliability* (ρ_c). Recommended value of the AVE should be greater 0.50. *Composite reliability* block indicator that measure a construct can be evaluated by two kinds of size i.e. the *internal consitency* which developed by Werts, Linn and Joreskoreg (1974) and *Cronbanch's Alpha* as follows:

$$\rho_c = \frac{(\Sigma\lambda_i)^2}{(\Sigma\lambda_i)^2 + \Sigma_i Var(\varepsilon_i)}$$

where λ_i is a loading component to indicators and $Var(\varepsilon_i) = 1 - \lambda_i^2$.

In SEM analysis, there are some test tool to measure or to test the hypothesis about the model. The evaluation or the suitability test above used to measure the truth of the proposed model. This can be done by measuring the proximity between S dan $\hat{\Sigma}$ with the hypothesis :

$$H_0 : \Sigma = \Sigma(\theta) \text{ and } H_1 : \Sigma \neq \Sigma(\theta)$$

The test statistics for the hypothesis based on Bollen (1989) using Chi-square Statistics. In this case, Chi-square test using the likelihood function which is evaluated on $\hat{\Sigma}$ and S , and stated with log L_0 (refers to the $H_{0)}$ when evaluated on $\hat{\Sigma}$ and log L_1 (refers to the H_1) when the value reaches the maximum when evaluated on S. This can be written as the following :

$$Log\ L_0 = -\frac{N-1}{2}\left\{\log|\hat{\Sigma}| + tr\left(\hat{\Sigma}^{-1}S\right)\right\}$$

and

$$Log\ L_1 = -\frac{N-1}{2}\left\{\log|S| + tr\left(S^{-1}S\right)\right\}$$

$$= -\frac{N-1}{2}\left\{\log|S| + p\right\}$$

Distric natural from the ratio of the likelihood, $\log(L_0 / L_1)$ When multiplied by -2 berdistribusi khi square when H0 . And in this case,

$$-2\log\left(\frac{L_0}{L_1}\right) = -2\log L_0 + 2\log L_1$$

$$= (N-1)\left[\log|\hat{\Sigma}| + tr\left(S\hat{\Sigma}^{-1}\right)\right] - (N-1)(\log|S| + p)$$

$$= (N-1)\left(\log|\hat{\Sigma}| + tr\left(S\hat{\Sigma}^{-1}\right) - \log|S| - p\right)$$

$$= (N-1)F_{ML}$$

The zero hypothesis will be rejected when the value of $-2\log\left(\frac{L_0}{L_1}\right)$ greater than X_α^2 value.

3. RESULT AND DISCUSSION

The results of the suitability of the level of processing of IPA analysis on management aspect (AP), Technical Aspects of Transportation and facilities (ATTF), quality of service (KL) and pedestrian satisfaction (KP) in Manado city. The attribute is used with the indicator amounted to four variables. Each has indicators and level of satisfaction of different interests, where the value of customer satisfaction will be the coordinates of the point X and the value of the importance level will be the coordinates of the point Y on the quadrant IPA, besides the level of compliance (Workers) each indicators is different. When the value exceeds 100 percent passenger considered very satisfied, while if under 100 percent indicate that there are one or several aspects that are considered necessary to improve the quality and customer satisfaction walkers met.

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Table 1. The Suitability Of The Level Of Satisfaction Walkers

AP notation	Average Value (mean)		The Level Compliance (percent)
	Customer Satisfaction	The Importance Level	
Guarantee (I_KP1)	3.99	4.02	99.25
Emergency power (I_KP2)	3.96	3.97	99.75
Performance (I_KP3)	4.01	4.02	99.75
Aesthetics (I_KP4)	3.98	3.97	100.25
Ease (I_KP5)	3.97	3.91	101.53
Reliability (I_KP6)	4.02	4.01	100.25
Hold the power (I_KP7)	4.01	4.02	99.75
The frequency (I_KP8)	3.99	3.95	101.01
Comfort (I_KP9)	3.98	4.00	99.50
The availability of (I_KP10)	4.01	4.00	100.25
Reliability (I_KL1)	4.01	4.09	98.04
Oversight (I_KL2)	3.95	3.98	99.25
Guarantee legal certainty (I_KL3)	4.09	4.02	101.74
Attention (I_KL4)	3.99	3.87	103.10
The substantial (I_KL5)	4.01	4.06	98.77
Performance (I_AP1)	4.03	4.04	99.75
Guarantee (I_AP2)	4.02	3.98	101.01
Ease (I_AP3)	3.99	3.95	101.01
Emergency power (I_AP4)	4.06	3.96	102.53
Performance (I_ATTF1)	4.03	4.01	100.50
Aesthetics (I_ATTF2)	3.98	4.05	98.27
Ease (I_ATTF3)	4.00	3.99	100.25
Reliability (I_ATTF4)	4.05	4.00	101.25
Hold the power (I_ATTF5)	4.04	3.96	102.02
The frequency (I_ATTF6)	4.00	3.98	100.50
Comfort (I_ATTF7)	4.14	4.15	99.76
The availability of (I_ATTF8)	3.96	3.81	103.94

The indicator that is considered to have been meet pedestrian level of satisfaction in Manado is: Aesthetics (I_KP4), focus (I_KP5), Reliability (I_KP6), Frequency (I_KP8), Availability (I_KP10), Guarantee Assurance (I_KL3), attention (I_KL4), Warranty (I_AP2), focus (I_AP3), Responsiveness (I_AP4), Performance (I_ATTF1), focus (I_ATTF3), Reliability (I_ATTF4), Power Hold (I_ATTF5), Frequency (I_ATTF6) and Availability (I_ATTF8).

The results of the analysis of the four quadrants IPA walkers on management aspect in Manado based on the value of customer satisfaction (X) and the value of the importance level (Y), average value - average (mean) interest (Y) = 3.97 and average value - average customer satisfaction (X) = 4.02, as many as 4 or indicator of 21.1 percent in quadrant I, as many as 6 or indicator of 31.6 percent in quadrant II, as many as 3 or indicator of 15.7 percent in quadrant III, and as many as 6 or indicator of 31.6 percent in quadrant IV. Each quadrant with finances indicator can be seen on Table 2.

Table 2. Quadrant Ipa Pedestrian Satisfaction

The indicator		
I	High priority	Guarantee (I_KP1), Performance (I_KP3), Power Hold (I_KP7), Comfort (I_KP9), Aesthetics (I_ATTF2)
II	Keep the Achieve-ments	Reliability (I_KP6), Availability (I_KP10), Reliability (I_KL1), Guarantee Assurance (I_KL3), manifests itself (I_KL5), Performance (I_AP1), Performance (I_ATTF1), Reliability (I_ATTF4), Comfort (I_ATTF7)
III	Low Priority	Emergency power (I_KP2), Aesthetics (I_KP4), focus (I_KP5), Frequency (I_KP8), oversight (I_KL2), attention (I_KL4), focus (I_AP3), focus (I_ATTF3), Frequency (I_ATTF6), Availability (I_ATTF8)
IV	Excessive Force	Guarantee (I_AP2), Responsiveness (I_AP4), Power Hold (I_ATTF5)

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Validity test is done using confirmatory factor analysis on each of the latent variables namely management aspect (X1), Technical Aspects of Transportation and facilities (X2), the Quality of Service (Y1) and Pedestrian Satisfaction (Y2). Reliability tests used composite (contruct) reliability with *cut off value* is a minimum equal to 0.7. The full results are presented in table 3.

Table 3. Validity Test And The Reliability Of The Indicators On The Latent Variable

The latent variable	The Indicator	Loading (λ)	p-value	Error variance	p-value	Composite-Reliability (C-R)
Management Aspects (X1)	Performance (X1.1)	0.702	- 4,000	.172	- 4,000	0.753
	Collateral (X1.2)	0.734	- 4,000	.217	- 4,000	
	Ease (X1.3)	0.590	- 4,000	.249	- 4,000	
	Responsiveness (X1.4)	0.600	- 4,000	.357	- 4,000	
Technical Transportation Ropps Aspects (X2)	Performance (X2.1)	0.757	- 4,000	.278	- 4,000	0.901
	Aesthetics (X2.2)	0.798	- 4,000	.196	- 4,000	
	Ease (X2.3)	0.743	- 4,000	.222	- 4,000	
	Reliability (X2.4)	0.567	- 4,000	.486	- 4,000	
	Endurance (X2.5)	0.926	- 4,000	.076	- 4,000	
	Frequency (X2.6)	0.623	- 4,000	.370	- 4,000	
	Comfort (X2.7)	0.518	- 4,000	.363	- 4,000	
	Availability (X2.8)	0.859	- 4,000	.111	- 4,000	
Service Quality (Y1)	Reliability (Y1.1)	0.539	- 4,000	.353	- 4,000	0.822
	Responsiveness (Y1.2)	0.562	- 4,000	.180	- 4,000	
	Assurance certainty level (Y1.3)	0.716	- 4,000	.218	- 4,000	
	Attention (Y1.4)	0.822	- 4,000	.139	- 4,000	
	Tangible (Y1.5)	0.800	- 4,000	.148	- 4,000	
Pedestrians Satisfaction (Y2)	Assurance (Y2.1)	0.701	- 4,000	.300	- 4,000	0.896
	Responsiveness (Y2.2)	0.618	- 4,000	.292	- 4,000	
	Performance (Y2.3)	0.751	- 4,000	.203	- 4,000	
	Aesthetics (Y2.4)	0.712	- 4,000	.387	- 4,000	
	Ease (Y2.5)	0.672	- 4,000	.263	- 4,000	
	Reliability (Y2.6)	0.728	- 4,000	.179	- 4,000	
	-acy (Y2.7)	0.663	- 4,000	.189	- 4,000	
	Frequency (Y2.8)	0.606	- 4,000	.357	- 4,000	
	Comfort (Y2.9)	0.639	- 4,000	.148	- 4,000	
	Availability (Y2.10)	0.706	- 4,000	.162	- 4,000	

Table 3., show all indicators of each latent variable has a value of loading factors above 0.5 with p-value smaller than α=0.05, then the indicator is valid and significant. Furthermore also provides value p-value variance error smaller than 0.05 and the value of the C-R on the value of the cut-off his 0.7 so that it can be said reliabel. Management aspect that covers Performance Indicators (0.702), Warranty (0.734), focus (0.590), responsiveness (0.600), and technical aspects of transportation and facilities include Performance Indicators (0.757), Aesthetics (0.798), focus (0.743), Reliability

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(0.567), Power hold (0.926), Frequency (0.623), Comfort (0.518) and availability (0.859) , quality of service with the indicator reliability (0.539), oversight (0.562), the level of guarantee legal certainty (0.716), attention (0.822), manifests itself (0.800) and pedestrian satisfaction guarantee indicators (0.701), responsiveness (0.618), Performance (0.751), Aesthetics (0.712), focus (0.672), reliability (0.728), power hold (0.663), frequency (.606), Comfort (0.639) and availability (0.706)

After the validity test and reliability on each of the latent variable, some prerequisites that must be met in the structural modeling is the assumption of multivariate normal assumptions lack multicolinearity or had been and outlier. Normalitas from data is one of the conditions in the modeling of Structural Equation Modeling (SEM). CR multivariat value of illegal and this value is located between -1,96 until 1.96, so that it can be said that the normal multivariat berditribusi data. Had Been can be seen through determinan covarians matrix. The research results provide the value of the *Determinant of sample covariance matrix* of 0.381 so that it can be said that there had been problems on the data. Multicolinearity occurs if there is a latent variable exogenous supply more than one and there is a correlation between. The value of the correlation between the latent variable management aspect of (X1) with Technical Aspects of Transportation and facilities (X2.) of 0.067 with p = 0.582 is greater than the level of the significance α=0.05, it can be said not happen multicolinearity. Outlier is the observation that appears with extreme values in both multivariate uniariate, Mahalanobis value greater than the Chi-square table or the value of p1 < 0.001 said the observation that outlier. In this research there is no data with the value of p1 smaller than 0.001, it can be said is not an outlier.

After the validity test and reliability on all latent variables which valid results and reliabel, data multivariat normal, not happen multicolinearity and not an outlier, then the latent variables can be continued modeling SEM. The results of the complete model testing in AMOS programme can be seen more detail in the following table:

Table 4. The Results Of The Test The Suitability Of The Model Of The Movement Of Pedestrian Satisfaction

Criterion	Cut-Off Value	High priority		Maintained		Low Priority	
		Calculate	Information	Calculate	Information	Calculate	Information
Chi - Square	It is expected that small	2.713	χ2 with Indonesia recorded its 94 = 4 is 194.883 Good	19.731	χ2 with Indonesia recorded its 94 = 164 is 194.883 Good	40.223	χ2 with Indonesia recorded its 94 = 164 is 194.883 Good
The Yew Prob.	≥ 0.05	.607	Good	.600	Good	.080	Good
RMSEA	≤ 0.08	.000	Good	0.000	Good	.063	Good
GFI	≥ 0.90	.989	Good	.956	Good	.935	Good
AGFI	≥ 0.90	5.959	Good	.909	Good	.877	Good
CMIN/Indonesia Recorded Its 94	≤ 2.00	.678	Good	.897	Good	1.387	Good
TLI	≥ 0.95	1.025	Good	1.015	Good	.936	Good
CFI	≥ 0.95	1.000	Good	1.000	Good	5.959	Good

Based on the table above shows that 7 (seven) criteria used to assess worthy / or not a good model it states. It can be said that the model can be accepted, which means there is a similarity between the model with data. The movement of the model line coefficient testing Pedestrian satisfaction in detail is presented in table 5 as follows:

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Table 5. The results of the Customer Satisfaction Model Line Coefficient Testing Pedestrian Movement Pedestrian Path

Variables	High priority			Maintained			Low Priority		
	Coef.	Prob.	Infor.	Coef.	Prob.	Infor.	Coef.	Prob.	Infor.
Management aspects (X1) → service quality (Y1)				0.455	0.000	Sig.	.356	.009	Sig.
Technical transport ropps aspects (X2) → service quality (Y1)				0.314	0.024	Sig.	.426	.007	Sig.
Management aspects (X1)→ pedestrian Satisfaction (Y2.)				-0.020	0.857	Non-Sig.	.219	.058	Sig.
Technical transport ropps aspects (X2) → pedestrian satisfaction (Y2)	0.266	0.013	Sig.	0.033	0.766	Non-Sig.	.256	.063	Sig.
Service quality (Y1) → pedestrian satisfaction (Y2)				0.323	0.027	Sig.	.491	.011	Sig.

Based on the table 5, interpretation of each path coefficient is as follows:

High priority

- The Technical aspects of Transportation and facilities (X2) have positive and significant impact on the pedestrian Satisfaction (Y2). This can be seen from the path marked by the positive coefficient of 0,266 with the value of the probability of 0.013 smaller than equal significance) determined by 0.05. Thus the technical aspects of Transportation and facilities (X2) directly impact to Customer Satisfaction walkers (Y2) of 0,266, which means that every increase in the technical aspects of Transportation and facilities (X2.) Then will raise pedestrian Satisfaction (Y2) of 0,266.

Maintained

- Management aspect (X1) has positive and significant impact on service quality (Y1.). This can be seen from the path marked by the positive coefficient of 0,455 with the value of 0,000 probability smaller than equal significance determined by 0.05. Thus the Management aspect (X1.) influential significant impact on the quality of service (Y1.) of 0,455, which means that every increase in the Management aspect (X1.) Then will raise the quality of service (Y1.) of 0,455.
- The Technical aspects of Transportation and facilities (X2.) have positive and significant impact on the quality of service (Y1.). This can be seen from the path marked by the positive coefficient of 0,314 with the value of the significance probability (P) of 0,024 smaller than equal significance () determined by 0.05. Thus the technical aspects of Transportation and facilities (X2.) influential significant impact on the quality of service (Y1.) of 0,314, which means that every increase in the technical aspects of Transportation and facilities (X2.) Then will raise the quality of service (Y1.) of 0,314.
- Management aspect (X1) has negative effect but not significant for pedestrian Satisfaction (Y2.). This can be seen from the path marked by the negative coefficient of 0.02 with probability of 0,857 value that is greater than the rank of the significance is determined by 0.05. Thus the Management aspect (X1.) do not affect significantly to pedestrian Satisfaction (Y2.)
- The Technical aspects of Transportation and facilities (X2.) have positive but not significant for pedestrian Satisfaction (Y2.). This can be seen from the path marked by the positive coefficient of 0,033 with probability of 0,766 value that is greater than the rank of the significance is determined by 0.05. Thus the technical aspects of Transportation and facilities (X2.) do not affect significantly to pedestrian Satisfaction (Y2.).
- The quality of service (Y1.) have positive and significant impact on the pedestrian Satisfaction (Y2.). This can be seen from the path marked by the positive coefficient of 0,323 with the value of 0,027 probability smaller than equal significance determined by 0.05. Thus the Quality of Service (Y1.) affect significantly to pedestrian Satisfaction (Y2.) of 0,323, which means that every increase in the Quality of Service (Y1.) Then will raise pedestrian Satisfaction (Y2.) of 0,323.

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Low Priority

- Management aspect (X1.) has positive and significant impact on the quality of service (Y1.). This can be seen from the path marked by the positive coefficient of 0,356 with probability of 0,009 value that is greater than the rank of the significance is determined by 0.05. Thus the Management aspect (X1.) influential significant impact on the quality of service (Y1.) of 0,356, which means that every increase in the Management aspect (X1.) Then will raise the quality of service (Y1.) of 0,356.
- The Technical aspects of Transportation and facilities (X2.) have positive and significant impact on the quality of service (Y1.). This can be seen from the path marked by the positive coefficient of 0,426 with the value of 0,007 probability smaller than equal significance determined by 0.05. Thus the technical aspects of Transportation and facilities (X2.) influential significant impact on the quality of service (Y1.) of 0,426, which means that every increase in the technical aspects of Transportation and facilities (X2.) Then will raise the quality of service (Y1.) of 0,426.
- Management aspect (X1.) have positive and significant impact on the pedestrian Satisfaction (Y2.). This can be seen from the path marked by the positive coefficient of 0,219 with the value of 0,058 probability smaller than equal significance determined by 0.10. Thus the Management aspect (X1.) significant effect on pedestrian Satisfaction (Y2.) of 0,219, which means that every increase in the Management aspect (X1.) Then will raise pedestrian Satisfaction (Y2.) of 0,219.
- The Technical aspects of Transportation and facilities (X2.) have positive and significant impact on the pedestrian Satisfaction (Y2.). This can be seen from the path marked by the positive coefficient of 0,256 with the value of the significance of 0,063 probability smaller than equal significance determined by 0.10. Thus the technical aspects of Transportation and facilities (X2.) directly impact on pedestrian Satisfaction (Y2.) of 0,256, which means that every increase in the technical aspects of Transportation and facilities (X2.) Then will raise pedestrian Satisfaction (Y2.) of 0,256.
- The quality of service (Y1.) have positive and significant impact on the pedestrian Satisfaction (Y2.). This can be seen from the path marked by the positive coefficient of 0,491 with the value of 0,011 probability smaller than equal significance determined by 0.05. Thus the Quality of Service (Y1.) has a significant effect on pedestrian Satisfaction (Y2.) of 0,491, which means that every increase in the Quality of Service (Y1.) Then will raise pedestrian Satisfaction (Y2.) of 0,491.

4. CONCLUSION

The results of the study showed that the Model of Customer Satisfaction Pedestrian Movement Pedestrian path in Manado city is fit model. The relationship model of satisfaction that there are on the quadrant I with indicator Guarantee (I_KP1), Performance (I_KP3), Durability (I_KP7), Comfort (I_KP9) is influenced by the technical aspects of Transportation and facilities (X2) with Warranty indicator (I_KP1). The relationship model of satisfaction that there are on the quadrant II with indicator reliability (I_KP6), the availability of (I_KP10) influenced by management aspect of performance indicators (I_AP1), Technical Aspects of Transportation and facilities (X2) with Performance Indicators (I_ATTF1), Reliability (I_ATTF4), Comfort (I_ATTF7), and quality of service with the indicator reliability (I_KL1), guarantee legal certainty (I_KL3), manifests itself (I_KL5). The relationship model of satisfaction that there are on the quadrant III with power indicator Emergency (I_KP2), Aesthetics (I_KP4), Ease (I_KP5), Frequency (I_KP8) influenced by management aspect with indicator ease (I_AP3), Technical Aspects of Transportation and facilities (X2) with the indicator ease (I_ATTF3), Frequency (I_ATTF6), the availability of (I_ATTF8), and quality of service with the indicator oversight (I_KL2), Attention (I_KL4).

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