

**SISTEM PENANGANAN KELUHAN PADA MODA TRANSPORTASI KERETA API
STUDI KASUS: PT. KERETA API INDONESIA DAN STATENS JÄRNVÄGAR AB, SWEDEN
COMPLAINT HANDLING SYSTEM IN RAILWAY TRANSPORTATION MODE
CASE STUDY: PT. KERETA API INDONESIA AND STATENS JÄRNVÄGAR AB, SWEDEN**

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ABSTRACT

Railways, as mass public transport modes, have unique characteristics. It has large capacity, high safety level, and free from traffic jam. Those characteristics make railway a primary public transportation. In fact, even railway transportation has a lot of benefits for society life but they still faced by the problem. At present railways operation is still colored with the delay, limited condition vehicle, and unclear train travel information that often disadvantage passengers, and many other services offered fail to attract passengers. These conditions result in decreasing the quality of services and insufficient railways operation. The objective of this research is to analyze the relationship between customer satisfaction towards provided service with the desire to do a complaint and to find the factor from service quality that has significant influences to customer satisfaction towards PT KAI services. From that data, and also comparison study between PT Kereta Api Indonesia and Statens Järnvägar AB, Sweden, we can recommend the complaint handling system that need to be adjusted with the interest of consumer. This research shows several findings. First, there are six factors of service quality attributes that have significant influences to customer satisfaction towards PT KAI services for commuter class (Information, Appearances, Service coverage, Tangible, Safety & security, and Cost), seven factors for business class (Travel time, Information, Scheduling, Comfort, Tangible, Safety & security, and Service coverage), and also seven factors for executive class (Appearances, Safety & security, Information, Comfort, Tangible, Travel time, and Cost). Second, while the commuter class passengers complain on the safety & security attribute, for business class it is the information that influence the desire to complain. Meanwhile for executive class, passengers are mostly satisfied with the service given by PT KAI. Third, to decrease the number of complaints, some effective mechanisms to handle those complaints and learning from SJ.AB are necessary to take.

Keyword: Customer complaint handling, PT Kereta Api Indonesia, Statens Järnvägar AB

ABSTRAK

Kereta api sebagai moda angkutan massal memiliki karakteristik yang unik. Angkutan ini memiliki kapasitas besar, tingkat keamanan yang tinggi, dan bebas dari kemacetan lalu lintas. Karakteristik tersebut membuat kereta api sebagai angkutan umum utama. Meskipun transportasi kereta api memiliki banyak manfaat bagi kehidupan masyarakat tetapi mereka masih dihadapi oleh masalah. Saat ini operasional kereta api masih diwarnai dengan keterlambatan, kondisi kereta yang tidak baik, dan informasi perjalanan kereta api tidak jelas yang sering merugikan penumpang, dan banyak layanan yang ditawarkan gagal untuk menarik penumpang. Kondisi ini mengakibatkan penurunan kualitas pelayanan dan pengoperasian kereta api tidak memadai. Tujuan dari penelitian ini adalah untuk menganalisis hubungan antara kepuasan konsumen terhadap layanan yang disediakan dengan keinginan untuk melakukan keluhan dan untuk mencari faktor dari kualitas layanan yang memiliki pengaruh yang signifikan antara kepuasan pelanggan terhadap pelayanan PT KAI. Dari data, dan juga studi perbandingan antara PT Kereta Api Indonesia dan Statens Järnvägar AB, Swedia, dapat direkomendasikan desain sistem penanganan pengaduan

yang perlu disesuaikan dengan kepentingan konsumen. Penelitian ini menghasilkan beberapa temuan. Pertama, ada enam faktor atribut kualitas layanan yang memiliki pengaruh yang signifikan terhadap kepuasan pelanggan terhadap pelayanan PT KAI untuk kelas komuter (*Information, Appearances, Service coverage, Tangible, Safety & security, and Cost*). Untuk kelas bisnis memiliki tujuh faktor, (*Travel time, Information, Scheduling, Comfort, Tangible, Safety & security, and Service coverage*). Dan untuk kelas eksekutif, juga memiliki tujuh faktor yang mempunyai pengaruh signifikan terhadap kepuasan pelanggan, (*Appearances, Safety & security, Information, Comfort, Tangible, Travel time, and Cost*). Untuk hasil penelitian kedua menunjukkan bahwa untuk kelas komuter atribut *Safety & security* dan untuk kelas bisnis atribut *Information* adalah atribut yang memiliki pengaruh signifikan pada keinginan untuk melakukan keluhan. Sementara untuk kelas eksekutif, sebagian besar penumpang puas dengan pelayanan yang diberikan oleh PT. KAI. Untuk pertanyaan penelitian ketiga, untuk mengurangi jumlah keluhan, maka harus mengambil beberapa mekanisme yang efektif untuk menangani pengaduan tersebut belajar dari sistem yang diterapkan oleh SJ. AB.

Kata kunci: Pelayanan keluhan penumpang, PT Kereta Api Indonesia, Statens Järnvägar AB Read phonetically

INTRODUCTION

Transportation as a public service has an important role in the people's society; But in the fact most of public transport company in Indonesia only care about the service as an output, it means the purpose of their activity only as making something (transporting somebody or providing transportation capacities). The customer only like the recipient of the service, they do not care about the customer needs (customer oriented). Railway is one of public transport mode in land transportation. Railways as mass public transport mode has unique characteristic. It has large capacity, high safety level, and free from traffic jam. Those characteristic makes railway as primary public transportation. In the fact even railway transportation has a lot of beneficiary for society life but they still faced by the problem. Service quality level of Railways transportation is still low compared with other transportation mode. At present railways operational is still colored with the delay, limited well-condition vehicle, and unclear train travel information that often disadvantage passengers, and many of services offered were failed to attract passengers.

From that explanation, we know that Indonesian railways have a lot of problem. There are many complains from the customer about railway service. It shows that people have big expectation on railway but the service still not fulfill their need. The operator of Indonesian railway (PT Kereta Api Indonesia) cannot understand what the overall expectation for

the user of railways service. These conditions result in decreasing quality of services and insufficient railways operation. This will be a barrier to Indonesian railways accomplishment in making it to be a reliable and sustainable transport mode.

A. Objectives of Study

The research presented in this research explores the following questions:

1. What is service quality attributes that has significant influences to customer satisfaction towards PT KAI services for Commuter, Business, and Executive class?
2. Whether there is influence between customer satisfactions towards provided service with the desire to do a complaint?
3. What is the effective mechanism to handle passenger complaint for PT KAI in order to improve their service?

B. Limitation

This research is study comparison between PT Kereta Api Indonesia and Statens Järnvägar (SJ) AB, Sweden as the mater that became this research question that is concerning customer complaint base on customer data survey. This research also limits the coverage area only in passenger railway service. The case study in Indonesia will be assumed in Jakarta City for commuter class, Pekalongan and Yogyakarta

city for business and executive class. For case study in Sweden is taken from annual report, previously study, literature review, interview with related authority and field observation. Due to there are some differences in complaint handling system of Statens Järnvägar AB, Sweden with the type of the service of PT KAI, so the researchers carried out the adjustments service with the real condition for the operation of PT KAI.

LITERATURE REVIEW

A. Public Transportation

Public Transportation is mass transportation from the government or private company that can carry many people to their destination on time with cheap expense, comfort and safe vehicles. An increasingly important task in transportation is the improvement of public transportation services as customer appeal to make them more useful so they can solve transportation problem. However, in order to keep and attract more passengers, public transport must to have high service quality to satisfy and fulfill more wide range of different customer's needs (Anable, 2005). It is important to summarize knowledge about what drives customer satisfaction and dissatisfaction in public transport area to design an attractive and marketable public transport.

B. Railways Operational

According to Indonesia Railways Law No.23 2005, Railway is united system which consist infrastructure, vehicle, and human resources, also norm, criteria, requirement, and procedure in order to operate railway as transportation mode. Railway operational consists of infrastructure and vehicle. Railway infrastructure covers all the fixed installations on routes and stations which are required for the running of trains. The activities inside infrastructure area are infrastructure operational, construction, maintenance, and management. Railway operational consists of vehicles steered

by a track on a dedicated area, which are governed by a signaling system. The activities inside vehicle operational are vehicle availabilities, vehicle operation, vehicle maintenance, and vehicle cultivation.

C. Service Quality

The discussion about the service quality is complex because of the quality assessment services with a different assessment of the quality of the product, especially because is not real (intangible) and the pattern of production and its consumption is running simultaneously. Besides differences in these characteristics, in assessing the service quality, the customers are directly involved and participate in the service process, so is the service quality is how consumers respond to the services consumed or enjoyed. The effort of consumer needs fulfillment, consumer desire and compensate for the accuracy of delivering customer expectation. The perceived quality is how well the service level delivered matches customer expectations. When perceived performance ratings are lower than expectations, this is a sign of poor quality, and the reverse is suggest good quality (Lim & Tang 2000).

D. Service Quality in Railway Transportation

The importance concern in transit service quality is passengers' point of view. TRB (2003a) groups those categories become two main groups, those are: availability consists of service coverage, scheduling, capacity and information, while for convenience & comfort. Consist of passenger load, reliability, travel time, safety and security, cost, appearance and comfort.

E. Customer Complaint Behavior

Customer complaint behavior is defined as a process that emerges when a service experience lies outside a customer's 'acceptance zone' during the service interactions and/or in the evaluation of the value-in-use. This unfavorable experience can be expressed in the form of verbal and/or nonverbal communication to another entity and can lead to a behavioral change (Tronvoll, 2007).

Knowledge about complaint behavior gives the service provider valuable insight into many areas such as identifying common service problems, improving service design and delivery, understanding the customer's perceived service quality and helping strategic planning (Tronvoll, 2008).

F. Customer Satisfaction

According to Oliver (1997), customer satisfaction is defined as the customer's fulfillment. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment. Need fulfillment is a comparative processes giving rise to the satisfaction responses. Any gaps lead to disconfirmation; i.e., Positive disconfirmations increases or maintain satisfaction and negative disconfirmation create dissatisfaction.

G. Quantitative Research Approach

The functional of the positivist paradigm that guides the quantitative mode of inquiry is based on the assumption that social reality has an objective ontological structure and that individuals are responding agents to this objective environment (Morgan & Smircich, 1980). Quantitative research involves counting and measuring of events and performing the statistical analysis of a body of numerical data (Smith, 1988). The assumption behind the positivist paradigm is that there is an objective truth existing in the world that can be measured and explained scientifically. The main concerns of the quantitative paradigm are that measurement is reliable, valid, and generalizable in its clear prediction of cause and effect (Cassell & Symon, 1994).

H. Case Study Research

A case study is an empirical inquiry that investigates a contemporary phenomenon within its real life context, especially when the boundaries between phenomenon and context are not clearly evident. The case study inquiry copes with technically

distinctive situation in which there will be many more variables of interest than data points, and as one result relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result benefits from the prior development of theoretical proposition to guide data collection and analysis (Yin, 2003).

I. Analysis Factor

Analysis factor is used to uncover the latent structure (dimensions) of a set of variables. It reduces attribute space from a larger number of variables to a smaller number of factors and as such is a "non-dependent" procedure (that is, it does not assume a dependent variable is specified).

J. Regression Analysis

Regression analysis examines the strength of a relation between a dependent variable and a number of independent variables, also called explanatory variables. The mathematical model of the relation between the dependent variable and the explanatory variables is known as the regression model. The regression model contains one or more unknown parameters that are estimated using the given data on the explanatory variables. The simplest and most commonly used is the univariate linear regression is, $y = a + bx$. In the multivariate case the corresponding technique is called MLR (multivariate linear regression), which fits a linear combinations of several variables, $x_1, x_2, \dots, x_n$, to describe the response, y (Esbensen et al., 1998).

K. Empirical Studies

1. PT Kereta Api Indonesia

The first railway line in Indonesia began operations in August 10, 1867 in Central Java. By May 21, 1873, the line had connected three main cities in the region, i.e. Semarang, Solo and Yogyakarta. The railway restructuring has gone through various stages, started with Djawatan Kereta Api (DKA), short after the Independence Day in 1945. Later years, it changed into several

names of public corporations, such as Perusahaan Negara Kereta Api (PNKA) and Perusahaan Jawatan (PJKA), which were considered as public services. In 1991, the organization changed into a state-owned enterprise, Perusahaan Umum Kereta Api (PERUMKA) which aimed for commercial purposes, while maintaining the obligation to provide public services. The second stage of the railway restructuring was the transformation of PERUMKA into PT. Kereta Api (Persero), a state owned enterprise, through Government Regulation No. 19/1998. PT. Kereta Api Indonesia, Tbk (PT. KAI) is the main operator for railway in Indonesia. PT.KAI is a State-owned Company which in their operational related to Ministry of Transportation for technical operational and as railway contractor, and to Ministry of State-owned Company for company management because PT. KAI is a state-

Table 1 Distribution of satisfaction responses

Attributes of service (Satisfaction)	VB		B		N		C		VC	
	n	%	n	%	n	%	n	%	n	%
General satisfaction	2	0,5	31	8,3	296	78,9	37	9,9	9	2,4
Accessibility of station	4	1,1	25	6,7	193	51,3	128	34,1	25	6,7
Availability of parking facilities	8	2,1	89	23,7	195	52	69	18,4	14	3,7
Ticket price	7	1,9	98	26,1	191	50,9	71	18,9	8	2,1
Fare payment	4	1,1	26	6,9	156	41,6	139	37,1	50	13,3
Queuing the ticket	7	1,9	69	18,4	223	59,5	70	18,7	6	1,6
Satisfaction	8	2,1	71	18,9	199	53,1	84	22,4	13	3,5
Cleanliness	16	4,3	126	33,6	179	47,7	51	13,6	3	0,8
Safety & security equipment	17	4,5	140	37,3	171	45,6	42	11,2	5	1,3
Safety information	32	10,9	175	46,7	116	30,9	26	6,9	6	1,6
Facilities for disabled	45	12	213	56,8	87	23,2	25	6,7	5	1,3
Comfortness	28	7,5	103	27,5	144	38,4	89	23,7	11	2,9
Security on train	85	22,7	175	46,7	82	21,9	31	8,3	2	0,5
Train condition	38	10,1	102	27,2	174	46,4	58	14,7	6	1,6
Appearance of service personnel	1	0,3	5	1,3	139	37,1	201	53,6	29	7,7
Staff behavior	2	0,5	16	4,3	271	72,3	75	20	11	2,9
Readiness to help passenger	2	0,5	50	13,3	262	69,9	58	14,7	6	1,6
Availability of train fleet	5	1,3	58	15,5	204	54,4	95	25,3	13	3,5
Punctuality	5	1,3	34	9,1	206	54,9	118	31,3	12	3,2
Travel time	8	2,1	70	18,7	205	54,7	81	21,6	11	2,9
Complaint handling system	14	3,7	134	35,7	186	49,6	28	7,5	13	3,5

Source: Data processing with SPSS, (Saputra, A.D., 2010)

conducted in aim to know the real demand of the passenger and to measure

owned company. PT KAI is divided into five directors and headed by a chief executive as a president director. The five directors, one for director of finance, another for director of railway technique and engineering, director of operation, director of personal and general affair, and director of business development. In doing the core business, PT KAI set a total of 9 Operational Region (DAOP I Jakarta, DAOP II Bandung, DAOP III Cirebon, DAOP IV Semarang, DAOP V Purwokerto, DAOP VI Yogyakarta, DAOP VII Madiun, DAOP VIII Surabaya, and DAOP IX Jember) and 3 Regional Division (DIVRE I Sumatra Utara, DIVRE II Sumatra Barat, and DIVRE III Sumatra Selatan), which responsible in maintaining the infrastructure and the operational of railways.

2. Customer satisfaction index

The customer satisfaction survey is

service quality of railway transportation in Indonesia. This part describes about

existing condition of PT KAI service performance. The explanation can be seen in table 1.

From descriptive statistic analysis table in above we can see from general satisfaction that 78,9 % customer of PT KAI (train passenger) is almost satisfied "neither bad or good" with the service and only 2,4 % of customer felt that service that given by PT KAI is very good. From the central tendency finding it can be concluded that respondent is not satisfied with the quality of service. This indicates that the quality of railway service is under passenger's expectation. This means the level of service that given by PT KAI as a train operator Indonesia is still low.

2. Complaint handling system

PT KAI as a train operator in Indonesia has provide call center, customer service and the media of website (especially for PT KCJ) for customer that want to make a complaint if they feel dissatisfaction towards PT KAI services. PT KAI also has fans community website and community of customer website which also gives spaces for complaining. However, the fast response and feedback on complaints that was sent by the passengers of train only could be felt at the beginning time of launching this system and until now, the quality of the response to customer complaint increasingly decrease.

L. Statens Järnvägar (SJ) AB, Sweden

The first railway in Sweden started operating in 1856, between Örebro and Nora. This was also the year in which the Swedish State Railways, SJ, was founded (SJ, 2004). In 1862, the two largest cities in the country had a railway connection, and SJ started its traffic. In the following years, many railways were built, and most of them were private (in 1990, there were twice as many private tracks as publicly owned). The demand for steel increased strongly at the turn of the 20th century, and the large resources

in the north of Sweden, become worth exploiting due to the building of the railway (which solved the transport problem) and new processing technique. By 1910, Sweden had 12.000 kilometers of railway – in 2003, about the same track length, 11.697 kilometers, is in use (Banverket, 2004). SJ is divided into seven divisions and six strategic corporate functions. The seven divisions, one for Southern Sweden Division, another for Northern Sweden Division, Long Distance Traffic Division, Subsidiaries Division, Sales Division, Rolling Stock Division and Production Division, work mainly with production and have operational responsibility.

1. Customer satisfaction index

SJ AB puts great emphasis on listening to its customer. SJ AB wants to know what their customers think of SJ and what SJ can do to improve customer travel experience. SJ AB invests heavily in measuring customer attitudes annually

Table 2 Customer Satisfaction Index in SJ AB, Sweden

Customer Satisfaction Index	2006	2007	2008
Comfort	71	73	72
Information	73	75	76
Punctuality	60	61	59
Customer care	73	74	73
CSI Total	71	73	73

Source: SJ Sustainability Report 2008 (www.sj.se)

via Customer Satisfaction Index (CSI). The index is based on questions put to customer while traveling onboard SJ train, an approach that their believe best captures the full range of feeling and attitudes towards SJ services. The survey measures satisfaction with SJ as a company and their products and services, as well as their success in meeting customer expectations.

From Table 2 above, it can be seen that in 2008 the overall CSI was 73, which respondents to a rating of "Good". Onboard comfort has a big impact on customer satisfaction. Comfort includes basic questions like whether a train is

clean, comfortable and in good working order, and whether there are working toilettes and adequate luggage space. The current customer rating for onboard comfort is 72. The data has held steady at a satisfactory level for the three years. Onboard customer care is another key component to of customer satisfaction. SJ customer care rating of 73 in the CSI has held steady in the recent years.

2. Complaint handling system

The information about this item is limited. In this case researchers only using related documents in SJ AB including, General terms and condition for carriage by rail documents (GCC-CIV/PRR), Swedish Rail Carriage Act, and Regulation (EC) No 137 /2007 of the European Parliament and of the Council of 23 October 2007 on rail passengers rights and obligations. When customers were facing the problem in the service of SJ AB as a train operator in Sweden, they could convey their complaint to SJ AB through email, website and customer service. SJ AB recorded and kept the complaint data in the database.

Complaints where the customer has requested a response will be responded to within 5 working days of receiving the complaint. In the event a passenger wishes to report a circumstance which entitles him to compensation or assistance pursuant to these General Terms and Conditions (about complaints and settlements of disputes), they should firstly contact the train staff or the staff at staffed points of sale.

Where such staff cannot make a decision regarding compensation, the passenger should, not later than within three months, submit his claim to SJ AB's Customer Service or via SJ AB's website (www.sj.se) or otherwise in writing to SJ AB. Agreements regarding compensation entered into between a passenger and train staff or staff at staffed points of sale must be noted on the ticket or oth-

erwise in writing. In the absence of any notation, the party wishing to invoke an agreement must prove the existence and terms of such agreement.

RESEARCH METHODOLOGY

A. Research Design & Questionnaire

The questionnaire was divided into three parts: (1) Items measuring satisfaction towards PT KAI Services (2) Complaint questionnaire to measuring factors from service quality factor that influence the passenger to make a complaint (3) Demographics, the questioner item correspondent to age, sex, last educational, average wage and frequency to using train transportation.

B. Respondent

Respondent researched people who use train transportation. The respondents are people who use train transportation when survey is happen.

C. Sample Size

Total of respondents for this research are 375 respondents consist of 125 respondents for each class of passengers (commuter class, business class, and executive class).

D. Study Area

Location of this research was held in train station to collect the data from passenger which located in Jakarta including Bogor, Tangerang, Bekasi and Depok, Pekalongan and Yogyakarta province.

E. Procedure

The data was collected via field survey in the station that located in Jakarta, Yogyakarta and terminated when the surveyor had reached and collected data from 375 respondents.

Data Analysis Pekalongan. In this study, researchers using self-rating questionnaire as a data collection method. The respondents was asked to fill out the questionnaire at the train stations. Data collection was Statistical tools (SPSS) were use for data input and analysis. The data that were collected will be analyzed using statistical method. There are :

1. Statistic Deskriptve Analysis, in this statistic analysis, the data will be presented with some simple tables as well as frequency distribution tables, line and/or stick diagram, pie chart, gough description through modulus median, and variation through standard deviation.
2. Factor Analysis, this analysis is for finding the factor that has significant influences to customer satisfaction towards PT KAI Services. Analysis are divided into 3 class of customer, there are: commuter class, business class, and executive class.
3. Regression Analysis, this analysis is for finding where there is influence between customer satisfactions towards provided service with the desire to do a complaint

RESULTS & DISCUSSION

A. Demographic Data Analysis

In this section the result of analyzing demographic questions are given, 6 questions were asked in section (part) 3 of the research questionnaire about the passenger sex, age, education level, profession, frequency of travel in month and average income per month.

B. Sex and age

From the demographic data it can be seen that the sex of 80,3 % of the respondents were male and 19,7 % female. 100 % of the respondents declared that their age range as follows, 7,2 % less and equal to 20 years, 59,7 % between 21-30 years, 29,6 % between 31-40 years, 3,5 % 41 years above. As can be noticed the age between 21-30 years are consisting the most.

C. Educational level

Most of respondent have a less and equal high school degree consisting 48 % of the respondents declaring their educational level, following is Bachelor (S1) 30,7 %, Diploma (D1-D3) 19,7 % , and Post Graduate (S2-S3) 1,6 %.

D. Profession

From 100 % of respondents who answered

this question. 70,1 % have mentioned that they profession is Private employee/businessman, following is civil servant/TNI/Polri 22,1 %, Students 7,2 % and other profession 0,5 %.

E. Frequently using train

From 375 respondents (including commuter, business and executive passenger), 32,8 % using train 1 time/week, 2 time/week (29,3 %), 3 time/week (1,6 %), 4 time/week (2,7 %), 5 time/week (1,3 %), and for commuter passenger especially they commuted frequently, 6 time/week (2,4 %) and more than 8 time/week (29,9 %).

F. Average income

Most of respondents 46,9 % have an average income per month is 1.000.001-2.000.000, 22,9 % less and equal to 1.000.000, 24,5 % between 2.000.001-3.000.000, 5,6 % is 3.000.000 above.

G. Customer Satisfaction Analysis

In this section, the results of Factor Analysis are given, this analysis is for finding the factor from service quality attributes that has significant influences to customer satisfaction towards PT KAI Services. Analysis are divided into 3 class of customer, there are: commuter class, business class, and executive class.

H. Analysis Factor

1. Commuter Class

The analysis resulted for commuter class is in six factors solutions. The newly formed sixth factors can be seen from the variable that has *eigenvalue* greater than 1 (> 1), which explained 57,95 % of the variance. A factor analysis with six factors revealed the following. Attributes with bigger factor score weights are shown below:

Factor 1: - Safety information for passenger on board and of board, facilities for disabled, and security on the train.

Factor 2: - Cleanliness of the train & station, safety & security equipment, and complaint-handling system adopted on

train.

Factor 3: - Ticket price, queuing the ticket, physical condition of the train, and punctuality when using train.

Factor 4: - Availability of parking facilities at station, appearances of service personal, and the comfort in using train

Factor 5: - Security while waiting at/leaving the station, availability of train fleet, and travel time when using train.

Factor 6: - Fare payment, and staff behavior.

2. Business Class

The analysis resulted for business class is in seven factors solutions. The newly formed seventh factors can be seen from the variable that has *eigenvalue* greater than 1 (> 1), which explained 61,90 % of the variance. A factor analysis with seven factors revealed the following. Attributes with bigger factor score weights are shown below:

Factor 1: - Fare payment, the comfort in using train, punctuality, and travel time.

Factor 2: - Cleanliness of the train & station, safety information for passenger on board and off board, complaint handling system.

Factor 3: - Ticket price, security while waiting and leaving the station, facilities for disable, and availability of train fleet.

Factor 4:- Appearances of service personal, staff behavior, and readiness to help passenger.

Factor 5: - Security on train, and physical condition of the train.

Factor 6: - Safety & security equipment in train or station.

Factor 7: - Queuing the ticket, and accessibility of station.

3. Executive Class

The analysis resulted for executive class is in seven factors solutions. The newly formed seventh factors can be seen from the variable that has *eigenvalue* greater

than 1 (> 1), which explained 60,317 % of the variance. A factor analysis with seven factors revealed the following. Attributes with bigger factor score weights are shown below:

Factor 1: - Queuing the ticket, cleanliness of the train & station, the comfort in using train, appearances of services personal, and punctuality.

Factor 2: - Fare payment, security while waiting at/leaving the station, safety & security equipment in train or station, facilities for disabled, availability of train fleet, and accessibility of station.

Factor 3: - Safety information for passenger on board and off passenger, security on the train, and complaint handling system.

Factor 4: - Staff behavior, and availability of parking facilities at station.

Factor 5: - Physical train condition.

Factor 6: - Travel time and readiness to help passenger.

Factor 7: - Ticket price.

I. Interpretation Results

By looking the highest correlation value between early variables with latent factors, it will get a new factor that is the aggregation of previous variable. In other words from 20 variables, after the initial stages of factoring and rotation it will be 6 factors (Commuter class) and 7 factors (Business and Executive class) that consist of several variables factor. Next steps, by looking at the variables that make up each of these latent factors, then it can be given a new name to simplify the interpretation process. Naming of factor is base on value () of the largest variable factor. If two or more variables have a same value (), then the process for giving the name is base on priority (1,2,3...), but if the variable is derived from the same attributes, the naming of factor is a equal with the name from attributes factor.

In this research, the naming process (interpretation process) is done by identifying the variables that have a high factor loading value. The

previous explanation results of the factors of service quality attributes that have significant influences on customer satisfaction towards PT KAI Services can be clearly identified. There are different results for commuter, business and executive class. The more comprehensive explanation of the results can be seen in table 3. From Table 4 above, it can be noted that a factor that has significant influences on customer satisfaction for commuter class is *Information*.

This factor consists of safety information for passenger on board and off board, and complaint-handling system adopted on train transportation. This makes sense because this mode (commuter class) has become the main option for transportation modes to support customer daily work activities especially in urban area. But in fact, the convenience offered by operator is far from expectation, so it may disappoint

Table 3 Service Attribute That Use in Factor Analysis

Variable	Question	Service attribute
A1	Availability of information, such as schedule, in many/multiple places	Service coverage
A2	Availability of parking facilities at station	Tangible
A3	Ticket price	Cost
A4	Carry luggage	Cost
A5	Queueing the ticket	Service coverage
A6	Safety while waiting at/leaving the station	Safety & security
A7	Cleanliness of the train & station	Appearance
A8	Safety & security management and service station for emergency, fire, human or financial	Safety & security
A9	Safety information for passengers on board and off board	Information
A10	Facilities for disabled train, such as ramp, wheelchair	Tangible
A11	The comfort in using train transportation because of clean, sound, and safe	Comfort
A12	Safety on the train because of secure system (technology)	Safety & security
A13	Physical condition of the train for fire, fire, and crime condition	Tangible
A14	Appearance of service personnel (staff, help, smile)	Appearance
A15	Staff behavior	Comfort
A16	Knowledge in helping passengers	Comfort
A17	Availability of train that fast, sound, and high frequency of train	Scheduling
A18	Facilities for ensuring health and safety	Reliability
A19	Travel time when using train	Travel time
A20	Complaint handling system adopted on train transportation for human or financial	Information

Source: Result analysis (Saputra, A.D., 2010)

Table 4 Comparison Results

Factor	Commuter Class	Business Class	Executive Class
Factor 1	Information	Travel Time	Appearance
Factor 2	Appearance	Information	Safety & security
Factor 3	Service coverage	Scheduling	Information
Factor 4	Tangible	Comfort	Comfort
Factor 5	Safety & security	Tangible	Tangible
Factor 6	Cost	Safety & security	Travel time
Factor 7	-	Service coverage	Cost

Source: Result analysis (Saputra, A.D., 2010)

the users of commuter train. Because of that reason, if customers feel dissatisfied with the provided services from the operator, the operator must provide the media for customers who have complaints to convey their complaint

easily. Meanwhile for business class, the first factor is *Travel time*. There are two conditions that can influence passenger travel time in this research; the waiting time and the vehicle speed. Based on the analysis factor results, this

factor becomes the most factor that has significant influences on customer satisfaction for business class passenger because their travel time is less than the travel time using other transportation mode that has similar service for long distance public transportation (Bus). This happens because train is free from traffic jam. For executive class, customers focus more on *Appearances*. From respondent data about level of income, which can be noticed for long distance train, the average income of passengers of executive class is 2.000.001-3.000.000 (59,2%), this result is higher compared to that of business class of long distance train. It is very logical, therefore, that this class is mainly intended for the better class in society. From that explanation, we understand that passengers for this class is concerned with the appearance factor including cleanliness on the trains & stations, also appearances of service personal. This may be because they already pay higher price for this class and expect better service for their comfort. This is called the appearance dimensions.

J. Customer Complaint Analysis

In this section the results of Regression analysis are given, regression analysis examines the strength of a relation between a dependent variable and a number of independent variables, also called explanatory variables. In this research, this analysis is for finding the whether there is influence between customer satisfactions towards provided service with the desire to do a complaint. Analysis also divided into 3 class of customer, there are; commuter, business, and executive class.

K. Regression Analysis

1. Commuter Class

The regression analysis for commuter class satisfaction conducted to 20 attributes that categorized into six groups; *Information, Appearances, Tangible, Service coverage, Safety & security, and Comfort*. The regression equity for commuter class is $[Y = 2.657 - 0.042 * (Information) + 0.015 * (Appearances) + 0.059 * (Service coverage) - 0.090 * (Tangible) + 0.223 * (Safety \& security) + 0.100 * (Cost)]$. The confirmation results of the proposed hypotheses are as follows:

X1 (*Information*): with sig. value 0.493 (> 0.05) and (T-statistics = - 0.687) is rejected and specifies that the *Information* attributes does not have a significant influence on desire to do a complaint.

X2 (*Appearances*): with sig. value 0.820 (> 0.05) and (T-statistics = 0.228) is rejected and specifies that the *Appearances* attributes does not have a significant influence on desire to do a complaint.

X3 (*Service coverage*): with sig. value 0.513 (> 0.05) and (T-statistics = 0.657) is rejected and specifies that the *Service coverage* attributes does not have a significant influence on desire to do a complaint.

X4 (*Tangible*): with sig. value 0.183 (> 0.05) and (T-statistics = - 1.339) is rejected and specifies that the *Tangible* attributes does not have a significant influence on desire to do a complaint.

X5 (*Safety & security*): with sig. value 0.006 (< 0.05) and (T-statistics = 2.787) is confirmed and specifies that the *Safety & security* attributes has a direct and a significant influence on desire to do a complaint.

X6 (*Cost*): with sig. value 0.143 (> 0.05) and (T-statistics = 1.473) is rejected and specifies that the *Cost* attributes does not have a significant influence on desire to do a complaint.

2. Business Class

The regression analysis for business class satisfaction conducted to 20 attributes that categorized into seven groups; *travel time, followed by Information, Scheduling, Comfort, Tangible, Safety & security and Service coverage factor*. The regression equity for business class is $[Y = 2.459 + 0.054 * (Travel time) + 0.128 * (Information) + 0.011 * (Scheduling) + 0.168 * (Comfort) + 0.034 * (Tangible) - 0.029 * (Safety \& security) - 0.16 * (Service coverage)]$. The confirmation results of

the proposed hypotheses are as follows:
X1 (*Travel time*): with sig. value 0.374 (> 0.05) and (T-statistics = 0.893) is rejected and specifies that the *Travel time* attributes does not have a significant influence on desire to do a complaint .

X2 (*Information*): with sig. value 0.030 (< 0.05) and (T-statistics = 2.200) is confirmed and specifies that the *Information* attributes has a direct and a significant influence on desire to do a complaint.

X3 (*Scheduling*): with sig. value 0.893 (> 0.05) and (T-statistics = 0.135) is rejected and specifies that the *Scheduling* attributes does not have a significant influence on desire to do a complaint.

X4 (*Comfort*): with sig. value 0.063 (> 0.05) and (T-statistics = 1.878) is rejected and specifies that the *Comfort* attributes does not have a significant influence on desire to do a complaint.

X5 (*Tangible*): with sig. value 0.494 (> 0.05) and (T-statistics = 0.063) is rejected and specifies that the *Tangible* attributes does not have a significant influence on desire to do a complaint.

X6 (*Safety & security*): with sig. value

For this class, according Table 5 as bellow, it can be seen that sig. value is 0.189 (> 0.05), it is means H_0 is accepted. Thereby simultaneously, there is not an influence between seven factors (*Appearances, Safety & security, Information, Comfort, Tangible, Travel time and Cost*) with the desire to do a complaint. It can be interpreted for executive class passenger mostly satisfied with the service that given by PT KAI.

L. Interpretation Results

From explanation above it shows that *Safety & security* has a significant influence on desire to do a complaint for Commuter class passenger. It can be interpreted as a low service performance for commuter class in the *Safety & security* dimension by the train operator (PT KAI). And for business class passenger shows that *Information* has a significant influence on desire to do a complaint. It can be interpreted as a low service performance for business class in the *Information* dimension by the train operator (PT KAI). Meanwhile for executive class passenger mostly satisfied with the service that given by PT KAI

M. Complaint Handling System

In these research, can be seen from the questionnaire answer there too many complaint about the service that given by PT KAI, it can be happen because the customer do not get the service with their expectation or still far from their expectation. To decreasing the number of complaint, it must be taken some effective mechanism to handle the complaint and learning from Statens Järnvägar (SJ) AB, Sweden doing their customer complaint handling. From previous explanation, we can seen the differences mechanism to handling customer complaint between PT KAI and Statens Järnvägar (SJ) AB, Sweden, overall explanation of system can be compared into table 6.

Base on the complaint handling policy in Statens Järnvägar (SJ) AB, Sweden, it could be as guidance for PT KAI to implement the

Table 5 ANOVA^b Table

	Model	Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.552	7	.222	1.457	.189 ^a
	Residual	17.777	117	.152		
	Total	19.328	124			

Source: Data processing with SPSS (Saputra, A.D., 2010)

0.476 (> 0.05) and (T-statistics = - 0.715) is rejected and specifies that the *safety & security* attributes does not have a significant influence on desire to do a complaint.

X7 (*Service coverage*): with sig. value 0.775 (> 0.05) and (T-statistics = - 0.287) is rejected and specifies that the *Service coverage* attributes does not have a significant influence on desire to do a complaint.

3. Executive Class

process to handling complaint from customer and at least it can decrease the number of complaints about services provided by PT KAI using the effective mechanism of customer complaint handling system. The complaints handling management system that will be applied is underpinned by these guiding principles.

1. Quality improvement – Complaints management is an integral part of the quality improvement approach that has been or will be adopt by PT KAI.
2. Open disclosure – PT KAI has a policy of open disclosure in relation to adverse events and complaints.
3. Commitment – The management of PT KAI should fully commit to an integrated complaints management system and will provide the necessary support for it to operate effectively.
4. Accessibility – PT KAI encourages consumers to give feedback about the service and makes it easy for them to do so.

5. Responsiveness – PT KAI should have a consumer-focused approach, being receptive to complaints and treating complaints seriously.
6. Transparency and accountability – The complaints process is clearly articulated, open and accountable to both staff and consumers.
7. Privacy and confidentiality – PT KAI should respects the privacy and confidentiality of consumers and the information received during the complaints process, while at the same time making its decisions open and accountable.

PT KAI as an operator must provide the media for customer who has complaints to convey their complaint easily. Customer could submit or send their complaints to the official website of PT KAI or they can use complaint/suggestion box that provided in station, besides the customer service call number that can be viewed inside the train, in station or other place and media. Every

Table 6 Customer complaint policy

Sistem	PT Kereta Api Indonesia	Statens Järnvägar (SJ) & Öresund
Consentment to register the complaint	Media information	Good and high motivation
Media information	Accessibility medium	Formality of train
Media of complaint	Hotline number, making hot official website, suggestion box	Hotline number, official website, 24/7
Consentment to registration	Media information	Good customer registration (train) time guaranteed information on the telephone (track registration). Encourage additional response for formal and a recommendation
Process to register and solve the complaint	Media information	will be registered to within 3 working day and in closing the complaint

Source: Case study result analysis (Saputra, A.D., 2010)

complaint through official website, customer service call, letter and email is logged and given a unique reference number, which makes it easy to keep track of. Customers making complaints must be prepared to give their name and contact details for the complaint to be investigated. They will

also be given the option of having someone respond to them directly or not. Where the customer has requested a response, they will be informed of the complaint reference number as well as how long they should expect to wait for a response. In accordance

with the Privacy Policy, any personal information collected to respond to a complaint will remain confidential and will only be used to help resolve that complaint. When a complaint is logged it is forwarded to and dealt with by the appropriate area within the PT KAI organization. Complaints where the customer has requested a response will be responded to within 5 working days of receiving the complaint. In the case of complaints concerning emergency situations, the relevant area in PT KAI organization structure will be notified immediately.

CONCLUSION

Based on the result of research, there are some conclusions that can be drawn to answer the purpose of this research, are as follows:

The main finding from the first research question is, from factor analysis show that there are six factors from service quality attributes that has significant influences to customer satisfaction towards PT KAI services for commuter class. Seven factors for business and executive class,

For second research question results from regression analysis shows that for commuter class passenger only *Safety & security* attribute and for business class is *information* attributes that has a significant influence on desire to do a complaint. Meanwhile for executive class, passenger mostly satisfied with the service that given by PT KAI.

For third research question, to decrease the number of complaint, it must be taken some effective mechanism to handle those complaint and learning from how Statens Järnvägar (SJ) AB, doing their complaint handling.

SUGGESTION

The suggestion that could be given for future research is related to the process and analysis of survey that will use so the result will be more accurate, and the research not only for train transportation mode but also for other mode like air, sea and other land transportation mode

(especially on buses). The research also needs to be conducted annually because customer satisfaction (especially on railway customer) is always change time to time.

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