

# Service Quality and Punctuality of Indonesian Railfood Customer Online System

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**Abstract**—This study aims to analyze the effect of Indonesian Railway Company (PT KAI)'s service quality, especially the punctuality of travel on railroad customer satisfaction. This study also aims to examine the effect of timeliness variables on customer satisfaction. The data used in this study is a combination of primary data and secondary data where the author will use the survey method as primary data and data on the timeliness of train travel, especially train travel to and from Bandung Station as secondary data. The data analysis technique used in this research is quantitative by using a systematic literature review in terms of bibliometric analysis to review published research on the topics discussed. The explanation for this is the result of the punctuality of train travel on railroad customer satisfaction.

**Keywords**— Digital Business, Service Quality, Punctuality, Customer Satisfaction, Railway System

## I. INTRODUCTION

Along with the development of the times and increasingly widespread globalization, people tend to choose things that are practical, fast, and affordable. This also affects the world of transportation. Humans tend to choose fast and affordable modes of transportation, and one of the fast and most affordable modes of transportation is trains (Zaman et al., 2021). The train is one of the oldest modes of transportation in the world. As one of the oldest modes of transportation in the world, trains have certainly experienced many developments in various ways which of these developments have resulted in advantages in several fields such as comparative advantages, competitiveness (Idris & Pradana, 2023). The advantages in the field of legal and energy-saving savings, besides that trains also have an advantage in terms of the ability to transport large amounts of goods and has adaptability in adapting to rapidly changing times (Augustianto et al., 2019). In responding to the challenges of an increasingly rapid era, the train as a mode of transportation has undergone changes and developments to create a mode of transportation that is safe, comfortable, and affordable for people who use rail services (Andani et al., 2022).

In Indonesia, the mode of rail transportation is served by a government-owned transportation company called PT Kereta Api Indonesia (PT KAI). As the manager of rail transportation modes in Indonesia, PT KAI continues to experience changes and developments, and one of them is a change in the service sector (Abdulah & Wahyuni, 2022). In the field of service, several factors influence it, including reliability which includes timeliness, security, and travel comfort. Then there is Responsiveness which includes the availability of transportation services, the readiness of the crew supporting passengers (conductors, technicians, and train cleaners), and the readiness of crew services. Guarantees are also a factor that affects the quality of service where the guarantee includes the friendship and courtesy of the train crew as well as the knowledge of the train crew about the route or routes that the train passes (Nafsa & Wahyuni, 2022). In addition, the empathy factor is one of the important factors affecting PT KAI's service quality, because this empathy includes the concern of the ship's crew for passengers and how passengers treat other passengers well. Finally, the factors that influence the good or bad quality of PT KAI's services are physical evidence which includes the train fleet owned by PT KAI (age of facilities), seating facilities, facilities and infrastructure (especially for passenger trains), cleanliness of facilities, and neatness of facilities (Yunani et al., 2023).

Of all the factors above, the reliability factor, especially punctuality on train travel, is the factor that the authors highlight the most in this study. This punctuality is also related to the level of train travel punctuality. On-time performance is a condition where the departure time and arrival time are according to a predetermined schedule (Handi, 2019) In this case, the train schedule in question is the schedule specified in the Train Travel Chart or *Grafik Perjalanan Kereta Api* (GAPEKA). GAPEKA is a collection of guides for the implementation of train travel which is depicted in the form of a line chart showing the location of the station, time, speed allowed in a certain plot, train travel time, location of crossing and overtaking trains, to the speed and position of a train starting from the departure station to arrive at the final destination station (Pramesti & Wardhana, 2022). Punctuality is important

because it involves the interests of many people, especially fire customers.

Most people choose to use the train service because the level of punctuality is very high. In 2021 alone, the punctuality rate of passenger train passengers in Indonesia reached 99.71% on departure and 92.68% on arrival of trains, up 00.09% and 00.54% respectively from the previous year. Meanwhile, the level of on-time performance on freight train trips reached 89.45% for train departures and 86.56% for train arrivals, down 00.01% and 00.76% respectively from the previous year (Firmansyah & Pradana, 2023). The increase in the level of on-time performance in passenger vehicles and the decrease in freight vehicles was due to the fact that passenger trips (especially in Java) were prioritized over goods trips. This increase in punctuality was also supported by the small number of accidents and locomotive breakdowns, as well as the speed of fire racing cars from the previous year. In 2021, the total speed of trains will increase by 1.35% compared to 2020. The increase in speed is based on an increase in the travel speed of trains which have speeds of 100 to 120km/hour by 10% (Prabowo et al., 2023). From the explanation above, it can be concluded how important punctuality is in train travel in PT KAI's customer satisfaction and interest (Ismail, 2023). The higher the level of punctuality of train travel, the higher the level of PT KAI's customer satisfaction in the service sector, especially the punctuality.

In this study, the authors conducted a comprehensive and detailed study of the relationship between the influence of PT KAI's service quality in the field of travel time punctuality and the convenience of train customers. This study will be conducted using a quantitative method that employs a systematic review of reviews in terms of bibliometric analysis. The review of analytical studies in bibliometric analysis aims to ensure that there is conformity with published research on the topics discussed (Amier & Pradana, 2023). In this study, the research methodology will be reviewed first, followed by an examination of publishing developments and a discussion of the achievements of the various authors. After that, the author will determine the main choice for the methodology so that this will produce comprehensive and detailed research.

The main theme of this research will be based on the basics of theoretical studies from the study of the effect of the punctuality of train travel on railroad customer satisfaction. In the concluding section, the author will provide conclusions by providing a summary of the findings found in the results and discussion sections based on the research methods that have been agreed upon previously. With this study, it is hoped that we can find out how much influence the punctuality of train travel has on customer satisfaction

## II. METHODS

### A. Research Plan

From the research model shown as figure 1, it can be concluded that this research starts with PT KAI as the manager of rail services in Indonesia and ends with customer satisfaction. In this downstream stage, there are two branches, namely PT KAI's service quality and PT KAI's service quality, especially on timeliness on train trips. These two branches have interrelatedness and continuity between the upstream and downstream of this research, as shown in figure 1.

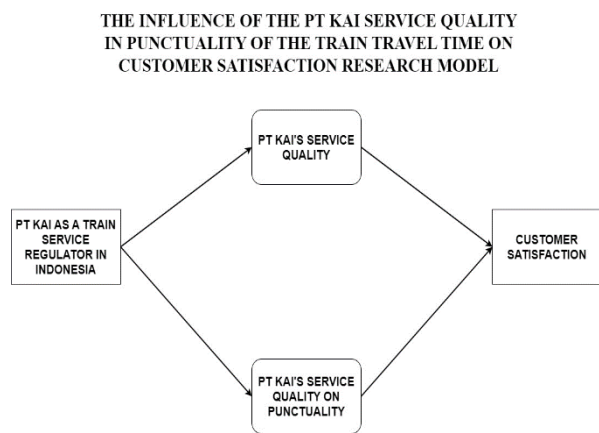


Figure. 1. Research Framework Plan

From figure 1, we see the linkage and continuity are that PT KAI as the regulator of rail services in Indonesia must always pay attention to the quality of their services so that customer satisfaction with PT KAI's services can be maintained and increased, while in the PT KAI Service Quality section, especially on Timeliness, PT KAI as a service provider Rail transport services in Indonesia must also always pay attention to the timeliness of their trips as part of PT KAI's service quality so that customer satisfaction with PT KAI is maintained and can be increased.

PT Kereta Api Indonesia (Persero), hereinafter referred to as PT KAI is a company owned by the Government of the Republic of Indonesia under the auspices of the Ministry of State-Owned Enterprises (BUMN) engaged in land transportation, especially rail transportation. In other words, PT KAI is a regulator of rail services in Indonesia and is entitled to all rail activities in Indonesia. PT KAI itself is a company founded on September 28, 1945, under the name Djawatan Kereta Api Indonesia (DKARI). In its development, PT KAI has undergone various changes and developments. Currently, PT KAI has 9 Operational Areas (DAOP), 4 Regional Divisions (DIVRE), 1 Regional Sub-Division (Sub DIVRE), and 8 Balai Yasa spread throughout Indonesia. As a transportation company, PT KAI carries out business activities that are in line with and related to the world of land transportation, especially railways. The activities are mentioned below.

1. Carry out the implementation of railway infrastructure which includes development, operation, maintenance, and management of railway infrastructure.
2. Carry out the management of railway facilities which includes the procurement, operation, maintenance, and management of railway facilities.
3. Wholesale of land transportation equipment other than cars, motorbikes, and the like, spare parts, and equipment.
4. Wholesale trade of used goods and unused remains (scrap).
5. Transportation consulting activities.
6. Other management consulting activities.
7. Cargo handling (loading and unloading of goods).
8. Multimodal transport.
9. Other travel agency activities

In addition to the main business activities referred to above, PT KAI can also carry out business activities to optimize the utilization of its resources for:

Warehousing and storage and cold storage activity.

Bounded warehousing activities or bonded zone areas includes these activities below.

1. Warehousing and other storage.
2. Marine port service activities.
3. River and lake port service activities.
4. Transport via pipelines.
5. Residential Building Construction.
6. Office Building Construction.
7. Shopping Building Construction.
8. Lodging Building Construction.
9. Mechanical Installation.
10. Other construction installations not elsewhere classified.
11. Advertising.
12. Private clinic activity.
13. Health service activity.

PT KAI as a mass transportation service company is the transportation of passengers and goods by train. In passenger transportation, PT KAI has operated many passenger trains on the islands of Java and Sumatra, both commercial and non-commercial trains consisting of executive, business, mixed class trains (executive-business, executive-business-economy, executive-economy, or business-economy), economy class, local trains, commuter trains (commuter line trains), airport trains, and tourist trains. Meanwhile, local trains, commuter trains, and airport trains are operated by a subsidiary of PT KAI is KAI Commuter.

Meanwhile, tourist trains are also operated by KAI Wisata. In a passenger train journey, it is usually equipped with a restoration train. The restoration train is a carriage used to serve food and beverage services during train travel. Restoration services are run by a subsidiary of PT KAI also namely PT Reska Multi Usaha or what is called KAI Services. Apart from passenger transportation, PT KAI also serves freight transportation. This freight transport service is run by PT Kereta Api Logistik (PT KAI Logistik/KALOG) with a door-to-door services business

system where their business orientation is as a total logistics distribution service provider (Total Logistics Solution) through "End-to-End Services". To support freight transport services, KALOG supports this by managing Container Terminals (TPK), loading and unloading, warehousing, packing, labeling, transportation, tracking, logistics escort, and logistics management by applying the principles of limited liability companies.

#### B. Service Quality of PT KAI

PT KAI as the manager of rail services in Indonesia always improves service quality to maintain excellent service. The quality of these services includes the activities below.

1. Reliability
2. Responsiveness
3. Guarantee
4. Empathy
5. Toughness

This reliability is a capability possessed by PT KAI as a train operator provides services that are following what is promised, is reliable and accurate, consistent and appropriate services. This reliability includes things such as timeliness, comfort, and safety of train travel. Responsiveness is the will of PT KAI in helping customers (in this case passengers and freight forwarders) to provide fast service and hear and resolve consumer complaints. This responsiveness includes things such as the availability of transportation services (availability of railway facilities, namely carriages or trains), crew readiness to assist passengers and the speed of crew service in serving passengers (Ryandithia & Syahputra, 2022).

Guarantee is the ability of PT KAI as a train operator in Indonesia is to provide confidence and trust in the promises that have been made to users of rail services. The guarantee has several factors, namely the friendliness of the crew in serving passengers, the politeness of the crew in serving passengers (train crew ethics), as well as the knowledge of the crew about the routes that the train passes (Patria, 2019). Empathy is the willingness of PT KAI is more concerned about giving personal attention to customers. This form of empathy includes the crew's concern for passengers, especially for those who need special treatment such as the elderly, disabled, children, and pregnant women. And lastly is toughness. Toughness is a form of PT KAI in terms of the appearance of the facilities, physical, equipment, and various communication materials that aim to provide excellent service to customers of PT KAI to increase customer trust and satisfaction with the service quality of PT KAI. These tangible forms include the novelty of the fleet (especially the primacy of the fleet), seating facilities, facilities in the train cabin, appearance of the crew, and cleanliness and tidiness of the train cabin. Of the five factors that affect the service quality of PT KAI above, one of the factors that influence it is reliability, especially the timeliness of train travel and this is the part that the author will discuss in this study.

### C. Punctuality

Service quality is a set of company capabilities in providing the best possible service to its customers (Handi, 2009), whereas according to Willayat et al. (2021), service quality or service quality is something related to the ability of an organization or company to meet or exceed customer expectations regarding the service provided. they feel. As previously discussed, five factors affect the service quality of PT KAI and one of them is reliability. Reliability is the ability to provide something (in this case a service) that is following what was promised, is reliable and accurate, consistent, and in accordance with what was promised.

One of the items contained in this reliability is timeliness. Timeliness is a condition where something happens not too late or according to a predetermined time Zagladi & Syahputra (2022). This timeliness is an important item that must be carried out by PT KAI is to provide customer satisfaction because every customer who uses train services expects to arrive at their destination safely and on time. The paucity of a train trip is determined by several factors, such as the length of time it takes for passengers to get on and off, the weather factor, the readiness factor for the towing equipment (locomotives), the signaling factor, and the level crossing factor. The punctuality of train travel also influences the performance of punctuality, namely conformity of departure and arrival times with the schedule that has been issued. The higher the performance level of a train's punctuality, will usually affect passenger occupancy. This happens because basically, customers prefer trains that have a high level of on-time for reasons of time efficiency. This service quality needs to be considered and considered by PT KAI because the quality of this service is very influential on customer satisfaction.

### D. Customer Satisfaction

Customer satisfaction by definition is a mixture of feelings between disappointment and pleasure for each individual in comparing the impression given by consumers about the level of performance of real or real products and services with performance according to expectations (Rahmah & Jamiat, 2022). The factors that indicate customer satisfaction are the feeling of pleasure from consumers related to the services provided so as to make customers feel comfortable, then from that satisfaction makes customers repeat orders regularly, then customers will recommend these services to other people, at least those closest to them. , and the last is the fulfillment of customer expectations, namely the suitability of services with customer expectations (Oktafani et al., 2022). Customer satisfaction is more or less influenced by service quality. As explained above, service quality is a set of things related to the ability of an organization or company to meet or exceed customer expectations regarding the service they experience.

can be quantified. In general, quantitative research is intended to describe phenomena or understand patterns in a measurable way. By using quantitative methods researchers can understand the quantity of a phenomenon which can be used later for comparison. By using inferential statistics, researchers can see patterns of relationships, interactions and causality for observed phenomena. In general, quantitative research is an embodiment of the Deductive thinking paradigm (general to specific) where researchers try to find new knowledge or test the validity of existing knowledge on the empirical phenomena that researchers observe.

Before starting quantitative research, it is important for researchers to fully understand how quantitative methods generally work and understand the strong reasons why quantitative methods should be used to answer the scientific questions that researchers ask. Deductive thinking, and blindness to other, very diverse research methods cause researchers to try to use quantitative research methods to try to answer all scientific questions (Lamb et al., 2001). Therefore, it is important for researchers to broaden their horizons of knowledge by learning various scientific research methods, so that researchers can recognize the right pair of scientific questions and methods.

After the dissemination of questionnaires to 100 respondents, we researchers grouped respondents into several of these criteria shown in table 1.

Table 1. Sociodemographic Data

Profile	Sum	Percentage
<b>Gender</b>		
Female	63	63%
Male	37	37%
Total	100	100%
<b>Age</b>		
<17 years	3	3%
18-25 years	94	94%
26> years	3	3%
Entire	100	100%
<b>Income</b>		
<1,000,000	36	36%
1.000.000-3.000.000	45	45%
3.000.000-5.000.000	15	15%
5.000.000	3	3%
>5.000.000	100	100%
Entire		
<b>Frequency of using KAI in the last 1 year</b>		
1-5 times	38	38%
Above 5 times	62	62%
Entire	100	100%

To classify respondent data into many categories, including strongly agree, disagree, simply agree, and very disagree, data is classified according to sociodemographic

## III. RESULT AND DISCUSSION

We use quantitative methodology. Quantitative research is suitable for research that will observe phenomena that

parameters. These categories are then analyzed for data validity and quality (Widodo et al., 2022). Based on factors such as gender, age, income, and frequency of expenditure in the preceding year, Table 1 divides the data into four groups. The relationship between each indicator in the questionnaire and the indicator of the outer loading value in this test is known as the standard loading factor. At this point in the research, the outer loading value of any indicator must be between 0.6 and 0.7 in order to be considered valid, as shown in table 2.

Table 2. Average extracted variance (AVE)

Variable	AVE
X1 WQ	0,522
X2 CT	0,509
AND CL	0,511

The purpose of the Average Variance Extracted (AVE) test is to evaluate ideas regarding the magnitude of construction-supported indicator fluctuations. Every indication with an AVE value threshold greater than 0.5 is considered to have strong convergent validity. The website quality variable's variance value, as seen in Table 3. The value of the consumer trust variable is 0.511, which is more than 0.5. The value of variable customer loyalty, which is larger than 0.5. Every variable has a value larger than 0.5, meaning that it satisfies the conditions of the validity test and the AVE test. It is meaning that the idea, on average, explains more than half of the fluctuations in its indicator, as shown in table 3.

Table 3. Reliability Test Results

	Composite Reliability	Alpha Cronbach
X1 (WQ)	0,808	0,800
X2 (CT)	0,812	0,711
AND (CL)	0,816	0,713

#### IV. CONCLUSION

The results of research and discussion of the quality of coffee beverage products on consumer satisfaction at PT KAI Bandung shows that the author can conclude that in general, the four dimensions contained in the quality of service and products have reached the good category, but need to be further improved because there are still several aspects that have not been able to achieve consumer satisfaction such as the suitability of coffee drink prices. In terms of service, the level of speed of employees in serving food and drinks is still considered unable to achieve guest satisfaction. This happens because the management is less able to prepare its products thoroughly so that it cannot meet consumer needs.

Also in general, the aspects contained in consumer satisfaction are considered important. It is proven that

consumer satisfaction has not been met in terms of coffee beverage products sold and the speed of employees at PT KAI. Consumers have a very important role in achieving their goals. Without consumers, services will not develop to run their business activities. Therefore, every consumer must always be considered and served as well as possible.

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