

# **Innovation and Digital Transformation PT. Kereta Api Indonesia (Persero) Tbk Its Implications on Company Performance**

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## **Abstract**

The purpose of this study is to determine the readiness of PT. Kereta Api Indonesia (PERSERO) Tbk in embracing digital business innovation and transformation. How is the financial performance of PT. Kereta Api Indonesia (PERSERO) Tbk studied included ratio analysis techniques such as liquidity, solvency and profitability ratios. Quantitative descriptive is the statistical analysis method used. The results of this study indicate that the *current ratio* has liquid criteria, while the *quick ratio* does not match the current ratio liquidity criteria. In terms of *debt to asset ratio* solvency standards, the company PT. Kereta Api Indonesia (PERSERO) Tbk has a solvable standard, while *debt to equity ratio* has a non solvable standard. Then, in terms of profitability, *return on assets* has generally less effective criteria compared to *return on equity* which has effective criteria. The results of this study can be concluded that PT. Kereta Api Indonesia (PERSERO) Tbk is considered not ready to implement an economic and business growth program based on technological and digital innovation due to the condition of PT. Kereta Api Indonesia (PERSERO) Tbk which is not healthy. However, this can enable this company to be better, if PT. Kereta Api Indonesia (PERSERO) Tbk improved its company's performance, especially on *debt to asset equity* and *return on assets*.

**Keywords:** financial performance; digital transformation; transportation

## **1 Introduction**

The transportation industry is a sector that cannot be eliminated from people's lifestyles. Every transportation makes human activities easier to do effectively and efficiently. The most common form of public transportation used by the general public to travel long distances is the train. PT. Kereta Api Indonesia (PERSERO) Tbk is the name commonly used for the Railroad Transportation Company (PERSERO). PT. Kereta Api Indonesia (PERSERO) Tbk is the only provider of mass transportation services that has no competitors in the field of rail land transportation.

PT. Kereta Api Indonesia (PERSERO) Tbk needs to maximize its potential and maintain its status as the main focus of the nation and the world, as well as advocates and building contractors who work to improve people's welfare. Therefore, PT. Kereta Api Indonesia (PERSERO) Tbk is the only non-business entity that must provide reliable and comprehensive support to those using the system. This is based on the belief that every citizen has the right to receive assistance from a trusted government agency. Therefore, the right to this service is universal and applies to anyone who has an interest in this Ramadhi right in Luth'v et al., (2021).[1]

According to Mutiara in Sinaga T et al., (2016) [2], transportation is an important factor in determining how well the economy is performing. It can also make it easier for people to move from one area to another. Along with the development of increasingly sophisticated transportation, more and more types of transportation are available to the public, with rail transportation being the main choice of Indonesian people.

According to Pricilla in Sinaga T Et al., (2019) [2], many transportation companies offer affordable transportation options for the general public without compromising quality. One example is rail transportation services, which are currently the answer to public transportation because they can play a role in boosting the economy.

PT. Kereta Api Indonesia (PERSERO) Tbk to improve the quality of customer service, especially in the ticket industry by implementing an online ticket reservation system. This system allows customers to buy tickets without physically going to a store and pay in full for them there. However,

during its implementation, the online reservation ticket program is undoubtedly at its best. This can be seen from the large number of purchases of train tickets at the train stations that have piled up.

According to Westerman in Tulungen E et al., (2014)[3], digital transformation is the result of a number of digital innovations and technologies that affect organizational structure, operational practice, legal requirements, and key new developments that either negate or fully embrace existing organizational, ecological, and industrial norms.

According to Tangi in Tulungen E et al., (2021)[3], digital transformation is very important for all businesses operating in the industrial and public sectors because of how big the impact it is on IT systems, business strategy, and human resources. . Digital transformation is about lowering the standard of business processes and communicating this to customers, data users and analysts to spur new and innovative thinking. The digital transformation process will produce companies that are evaluated and use artificial intelligence (AI) technology that is considered biased. Digital transformation is increasingly seen as a catalyst for change in all industries, especially business, and as a way to improve every aspect of human life based on the effective use of technology and digitization. Digital technologies have transformed the public sector by influencing applications, procedures, daily life, organizational structures and tasks of national defense.

According to Kotarba in Tulungen E et al., (2018)[3], digital transformation can be defined as a modified (or adjusted) business model that results from a long history of technological innovation and advancement that has influenced social and consumer change.

There are various methods or techniques used by various businesses to understand how a thriving business works. What is most notable is that with a comparison of financial instruments that aims to evaluate current financial conditions and predict future financial conditions, it is clear that the company's ability to meet short-term needs (Liquidity Ratio), some of the main operational business initiatives obtained from loan capital (Solvency Ratio) and several managerially effective procedures to evaluate the business (Profitability Ratio).

PT. Kereta Api Indonesia (PERSERO) Tbk, the only company in the transportation industry, has a money management division whose main objective is to communicate financial policies so that interested parties, both internal and external to the company, can understand the capabilities and activities. The company can guarantee the smooth process of business productivity. Based on the explanation given in the previous section, the purpose of this research is to determine the readiness level of PT. Kereta Api Indonesia (PERSERO) Tbk in supporting business transformation through innovation and technology. Because this can be used as a tool to compare the competitiveness of one company with other companies and can be used as a benchmark for other companies to see the success or failure of their digital and innovative business.

## 2. Literature Review

### 2.1 Financial Performance and Financial Ratios

Financial Performance is a particular strategy used by businesses to improve performance while employing effective and efficient models in order to meet their objectives Sudarno in Setyadi E et.al., (2011)[4]. Methods used to analyze the financial operations of a particular business include vertical, horizontal, and radial analysis.

Financial reports according to (Harahap in Siti Aminah et.al., 2013: 105)[5], describe details regarding the financial situation and results of a particular company at a certain point in time. Balance sheets, profit or loss or results of operations, changes in equity, changes in cash flows, and changes in financial position are some examples of different types of financial reporting.

#### 1. Liquidity Ratio

Liquidity ratio is related to the ability of a business to settle urgently needed financial obligations. This means that the higher the company's ability to cover its current debt obligations, because the greater the ratio of current assets to current liabilities, it's not necessarily true that a company has to meet all the requirements before it can convince investors to invest in its goods.

#### 2. Solvency Ratio

Solvency limits some of the significant uses of debt in business transactions, because debt is a company's single most important financial data, so that it can increase the risk of burden and in the future. The greater the debt, the greater the interest expense that must be accommodated, according to Hery in Harfani A et.al., (2015) [6]. The current situation is likely to jeopardize the profitability or survival of the company. Make the relationship

between solvency and profitability tend to be opposite or negative.

3. Profitability Ratio

According to Kasmir in Harfani A et.al., (2017) [6], a company's profitability ratio is a measure of its capacity to generate profit. Profitability connects the dots between spending and investing so that it is possible to understand how a company's level of profitability may place it in advantageous situations.

## 2.2 Digital Transformation

To maximize the impact of technological change and the pace at which it is occurring in society, digital transformation involves transforming business operations, organizational structures, processes, competencies, and business models in a strategic and high-priority manner. With any digital transformation, infrastructure and technology are required. Digital transformation can be described as a process that makes use of already-existing digital technologies, such as virtualization, computers, or devices that are integrated with other media. In addition, digital transformation is a process that aims to improve a given entity's quality through the integration of information, computing, communication, and interaction technologies.

The primary goal of an organization's digital transformation is to align with its own digital strategy. As a result, businesses want to ensure that they are ready to expand when necessary and to quickly enter the digital world. Some things that can be seen as the foundation of a company's digital strategy include producing better products, exploring and developing new business models that are disruptive, and maintaining profitability. Another goal of implementing digital transformation is to make existing distribution channels more digital, connect with customers through existing digital channels so they can better understand their needs. It is not crucial to digitally deliver services or products to encourage consumers to continue using the goods or services they have already purchased.[7]

## 2.3 Company PT. Kereta Api Indonesia (PERSERO) Tbk

The Indonesian government agency that provides rail services is called PT. Kereta Api Indonesia (PERSERO) Tbk. PT KAI's services include passengers and goods. At the end of March 2007, the DPR announced the revision of law no. 13 of 1992, known as Law no. 23 of 2007, which states that investors from various walks of life, as well as government officials, have the opportunity to manage rail services in Indonesia. PT. Kereta Api Indonesia (PERSERO) Tbk is a large state-owned company that has used information technology to facilitate business operations. PT. Kereta Api Indonesia (PERSERO) Tbk already has several information technologies to expedite business operations, but not all of them are utilized optimally.

## 3 Methods

This analysis is a quantitative descriptive analysis that has been established by PT. Kereta Api Indonesia (PERSERO) Tbk company to explain the object under study. The descriptive analysis method is a method used to present data through analysis and data collection in a way without generalizing results. The type of data used is secondary data obtained from the official website of PT KAI Indonesia (Persero). Descriptive quantitative is a method used to illustrate, explain, or in other ways manipulate various conditions, situations, phenomena, or study variables according to the subject matter that has been recorded so that it can be studied, analyzed, and accessed using arithmetic operations.

Describe the object that has been analyzed by providing a description of the problems that have been identified, worked on in depth, and consistently by the company. Company PT. Kereta Api Indonesia (PERSERO) Tbk emphasizes the importance of the quality of the company's financial performance and can be characterized as a company that is liquid and does not have a negative impact on stakeholders.

The focus of this research is as follows:

1. Liquidity Ratio

Wijaya in Putri S et al (2012)[8] said that the ratio of liquidity to pay off long-term and short-term obligations through the *current ratio* and *quick ratio* formulas, which are measures of financial condition that reveal how well PT. Kereta Api Indonesia (PERSERO) Tbk can support operational growth. There are two ways to define the Liquidity Ratio, namely:

$$CR = \frac{current\ asset}{current\ liabilities} \times 100\% \quad (1)$$

$$QR = \frac{current\ asset - stock}{current\ liabilities} \times 100\% \quad (2)$$

## 2. Solvency Ratio

Wijaya in Putri S et al, (2021)[8] says that the solvability ratio uses the *debt to assets ratio* and *debt to equity ratio*, which are financial statement measures that explain how PT. KERETA API's business can increase the number of users and customers it serves by receiving payments from lenders. The Solvability Ratio is considered in two ways, namely:

$$DAR = \frac{total\ debt}{total\ assets} \times 100\% \quad (3)$$

$$DER = \frac{total\ debt}{equity} \times 100\% \quad (4)$$

## 3. Profitability Ratio

Wijaya in Putri S et al., (2021)[8] says that using the concepts of return on assets and return on equity, the Profitability Ratio confirms that PT. KERETA API's ability to generate profits or profits as a result of using company assets effectively. Profitability ratios are determined in two ways, namely:

$$ROA = \frac{EBIT}{total\ assets} \times 100\% \quad (5)$$

$$ROE = \frac{net\ profit\ after\ tax}{equity} \times 100\% \quad (6)$$

## 4 Results Company PT. Kereta Api Indonesia (Persero) Tbk

### 4.1 Liquidity Ratio

Liquidity ratio uses the formula quick ratio and current ratio. Any results from the financial audit for Company PT. Kereta Api Indonesia (PERSERO) Tbk for the years 2020–2022 are summarized as follows:

**Table 1.** Results of the *current ratio*

Year	Current Asset	Current Liabilities	CR	Standar d	Criteria
2020	9.164.500 .411	9.281.616. 345	99%	>100%	illiquid
2021	9.706.681 .516	9.574.299. 758	101 %	>100%	Liquid
2022	10.588.42 3.715	10.555.55 6.330	100 %	>100%	Liquid

Source : Data processed 2023

According to the table below, PT. Kereta Api Indonesia (PERSERO) Tbk has a *current ratio* that for the years 2020–2022, is below with the relevant criteria, indicating that there is profit. This indicates that PT. Kereta Api Indonesia (PERSERO) Tbk generates laba that is particularly strong and that it has the potential to attract investors if they want to extend invest. 2020 had a *current ratio* of 99% with no qualifying criteria, 2021 had a *current ratio* of 101% with qualifying criteria, and 2022 had a *current ratio* of 100% with qualifying criteria.

**Table 2.** Results of the *quick ratio*

Year	Current Asset	Stock	Current Liabilities	Q R	Stand ard	Criteria
2020	9.164.500 .411	912.1 56.31 0	9.281.616. 345	8 9 %	>10 0%	illiquid

2021	9.706.681 .516	893.7 80.63 9	9.574.299. 758	9 2 %	>100 % %	illiquid
2022	10.588.42 3.715	889.1 29.33 5	10.555.556 .330	9 2 %	>10 0% %	illiquid

Source : Data processed 2023

Based on the table above, the company PT. Kereta Api Indonesia (PERSERO) Tbk has experienced *quick ratio* increase in 2020 to 2021 with illiquid criteria, then from 2021 to 2022 it has experienced a stable *quick ratio* value, this indicates no profit . In 2020 it has a *quick ratio* value of 89%, in 2021 it has a *quick ratio* value of 92% and in 2022 it has a *quick ratio* value of 92%.

## 4.2 Solvency Ratio

Solvency Ratio uses the formula *debt to asset ratio* and *debt to equity ratio* any results from the financial audit for PT. Kereta Api Indonesia (PERSERO) Tbk for the years 2020–2022 are summarized as follows:

**Table 3.** Results of the *debt to asset ratio*

Year	Total Debt	Total Assets	DAR	Standard	Criteria
2020	36.167.08 9.500	53.207.06 9.002	68%	<100%	Solvable
2021	39.357.08 6.447	62.768.82 6.772	63%	<100%	Solvable
2022	42.249.61 3.338	66.365.61 5.914	64%	<100%	Solvable

Source : Data processed 2023

According to the table below, PT. Kereta Api Indonesia (PERSERO) Tbk business has seen a impairment *debt to asset ratio* 68% in 2020 and 63% in 2021 then experience a slight increase in the value of the *debt to asset ratio* of 64% in 2022. Meanwhile, from year to year the value of the *debt to asset ratio* of the company PT. Kereta Api Indonesia (PERSERO) Tbk is still in the solvable criteria.

**Table 4.** Results of the *debt to equity ratio*

Year	Total Debt	Equity	DER	Standard	Criteria
2020	36.167.08 9.500	17.039.9 79.502	212%	<100%	Not Solvable
2021	39.357.08 6.447	23.411.7 40.325	168%	<100%	Not Solvable
2022	42.249.61 3.338	24.116.0 02.576	175%	<100%	Not Solvable

Source : Data processed 2023

According to the table below, PT. Kereta Api Indonesia (PERSERO) Tbk business has seen a impairment *debt to equity ratio* from year to year. In 2020 it has a *debt to equity ratio* of 212% in 2021 it has a *debt to equity ratio* of 168% and in 2022 it has a *debt to equity ratio* of 175% with non-solvable criteria.

## 4.3 Profitability Ratio

Profitability ratio uses the formula *return on assets* and *return on equity*. Any results from the financial audit for PT. Kereta Api Indonesia (PERSERO) Tbk for the years 2020–2022 are summarized as follows:

**Table 5.** Results of the *return on assets*

Year	EBIT	Total Assets	ROA	Standard	Criteria
2020	1.203.950.7 02	53.207.0 69.002	2%	>1,5%	Efficient
2021	470.875.12 9	62.768.8 26.772	1%	>1,5%	Less Efficient
2022	915.911.50	66.365.6	1%	>1,5%	Less

	8	15.914			Efficient
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Source : Data processed 2023

Based on the table below, PT. Kereta Api Indonesia (PERSERO) Tbk has experienced a decline in *return on assets* from 2% in 2020 to 1% in 2021 and then experienced a stable *return on assets* of 1% in 2022 with less efficient criteria. The decrease in the value of *return on assets* was caused by an increase in the amount of EBIT. *Return on assets* can increase if the company can increase the amount of assets and increase the amount of EBIT.

**Table 6.** Results of the *return on equity*

Year	Net Profit After Tax	Equity	ROE	Standard	Criteria
2020	1.357.879.803	17.039.97 9.502	8%	>1,5%	Efficient
2021	480.476.727	23.411.74 0.325	2%	>1,5%	Efficient
2022	739.961.324	24.116.00 2.576	3%	>1,5%	Efficient

Source : Data processed 2023

According to the table below, PT. Kereta Api Indonesia (PERSERO) Tbk business has seen a impairment *return on equity*. 2020 had a return on equity of 8%, 2021 had a *return on equity* of 2%, and 2022 had a return on equity of 3%.

## 5 Conclusion

In the discussion above it can be seen that the liquidity ratio is calculated using the *current ratio* and the *quick ratio*, the solvency ratio is calculated by the *debt to asset ratio* and *debt to equity ratio*, and the profitability ratio is calculated by the *return on assets ratio* and the *return on equity ratio*. This research was conducted to determine the readiness of PT. Kereta Api Indonesia (PERSERO) Tbk in facing digital transformation and innovation. The *current ratio* has liquid criteria in its fundamental analysis, while the *quick ratio* has fundamental criteria that are not liquid. In terms of the standard *debt to asset* solvency ratio, PT. Kereta Api Indonesia (PERSERO) Tbk has a solvable standard, but *debt to equity* has a non-solvable standard. In general, the calculation of profitability on the *return on assets* is less efficient than the *return on equity* which has efficient criteria. Therefore, it is suggested to PT. Kereta Api Indonesia (PERSERO) Tbk to improve company performance, especially in terms of *debt to equity* and *return on assets*. By increasing the value of the ratio of *debt to equity* and *return on assets*, it is hoped that it will be able to cover the losses that occurred in PT. Kereta Api Indonesia (PERSERO) Tbk to be better prepared in the years to come. The results of this study can be concluded that the company PT. KERETA API INDONESIA (PERSERO) Tbk is in an unhealthy condition and is considered not ready to support programs to develop the economy and business through digital and innovation. With unhealthy criteria, the company PT. Kereta Api Indonesia (PERSERO) Tbk has not had enough funds to support digital transformation based on selling train tickets through the KAI access application in digital technology.

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