



# Digital Transformation Effectiveness and Service Quality at Pegadaian CP Palangga, Gowa Regency

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**Abstract.** The purpose of this study is to examine the effectiveness of digital transformation and service quality at Pegadaian CP Palangga, Gowa Regency. This study uses a qualitative research method to measure the effectiveness of digital transformation and a quantitative method to measure service quality towards customers. The sampling procedure in this study is based on probability sampling. This study uses primary data, and data collection methods include distributing questionnaires to customers and employees and conducting interviews with employees. The results of the study indicate that the effectiveness of digital transformation at Pegadaian CP Palangga, Gowa Regency, shows a very good level of effectiveness. This is based on the aspects studied, namely Customer Experience Metrics, Operational Efficiency, Digital Adaptation Rate, and Employee Productivity, which all yielded positive results. Meanwhile, the quality of service at Pegadaian CP Palangga, Gowa Regency, showed that all dimensions had positive values, indicating that all dimensions of service quality were sufficiently good in terms of customer service quality.

**Keywords:** Service Quality, Digital Transformation Effectiveness, Servqual, Operational Efficiency, Digital Adaptation.

## 1 Introduction

Digital transformation is one of the latest issues in management science today, various organisations and companies around the world have now seriously looked at digital transformation as an answer to increasing the effectiveness and efficiency of production and service services to customers. Digital transformation is defined as the use of digital technology that can radically improve and achieve expected company performance and goals [1]. Digital transformation is a process that aims to improve an entity by triggering significant changes to its properties through a combination of information technology, computing, communication, and connectivity [2].

Digital transformation of various business sectors is supported by technological developments that are inherent and applied to the daily dynamics of society. The Indonesian government in its strategic goals regarding digital development and progress in Indonesia is one of the focuses which is manifested in the Digital Indonesia Vision 2045 "Digital Indonesia Milestone" [3]. In 2022, Indonesia had a TDN Index score of 49.2, an increase from 43.67 in 2018. The increase in the TDN Index score each year

reflects the positive trend and progress of digital transformation in Indonesia [3]. This positive trend requires every element of society to be able to adapt to using digital technology in life and strategic issues that must be designed by every business actor to process and get opportunities from the increasingly progressive national digital transformation.

IMDI Year 2024 is at 43.34. Based on the forming pillars, the digital skills pillar is the pillar with the highest value, which is 58.25. Meanwhile, the pillar with the lowest value was obtained by the empowerment pillar, with a value of 25.66. This shows that currently Indonesian digital society is quite skilled in the use of digital devices in general, but it is not optimal in utilising them in an economically productive direction [3]. One of the financial sector companies that is widely used and contributes to the development and financing needs for MSMEs and society in general is PT Pegadaian, a company whose business activities are centred on financial institutions with a pawn system mechanism. The manifestation of digital transformation of services from Pegadaian can be seen in the Pegadaian Digital Service application,

The transition from customer service activities from face-to-face, to being able to enjoy various Pegadaian services through the hand certainly increases the speed of service and the convenience of customers in transactions, Before the presence of the Pegadaian Digital application, all Pegadaian services were carried out manually and conventionally at Pegadaian branch offices / outlets. The process of service to customers requires stages and physical presence, the role of technology and the application of digital transformation at PT Pegadaian has brought changes to all lines of Pegadaian activities, but whether the digital transformation at PT Pegadaian has been effective and optimal in the application of superior digital transformation. So that the need for indepth observation and testing of how the effectiveness of Digital Transformation at PT Pegadaian.

As a company that offers financial services, customer satisfaction is an achievement that must be achieved in service quality, improving service quality will increase the chances of customers remaining loyal, making repeat purchases, and recommending company services to others, so that customer loyalty is higher, companies need to improve aspects of reliability, responsiveness, assurance, and overall increase customer satisfaction [4].

The collaborative role between digital transformation and service quality leads to better service improvements in retaining customers and making pawnshops the first preference in the choice of financial services. The implementation of digital transformation, such as digitalisation of administration and online systems, can speed up the service process, reduce queues, and speed up decision-making. This digitalisation also reduces the potential for administrative errors, improves data recording, and makes it easier to track service status in real time, thus increasing public trust. In addition, digitalisation encourages service innovation that is more personalised and responsive, and focuses on customer convenience. This is in line with various studies that show a mutually supportive relationship, such as research by Nurfaidah [5], At the West Sulawesi Provincial Hospital, the implementation of service digitalisation such as electronic queuing systems, digital medical records, and online consultations allows services to

be more efficient, safe and reliable. The responsiveness aspect also increases because service times are faster with the use of technology.

## 2 Literature Review

Digital transformation is defined as the use of digital technology that can radically improve and achieve expected company performance and goals [1]. Digital transformation can also be interpreted as a process that aims to improve the of an entity by triggering significant changes in its properties through the adoption of information technology, computing, communication, and connectivity [6].

The following indicators can be used to measure the effectiveness of a digital transformation in a business or government organisation:

### a) Customer Experience Metrics

Customer Experience (CX) metrics are a set of quantitative indicators used to measure and evaluate customer experiences while interacting with products, services, or brands. These measurements are important to understand perceptions, satisfaction, loyalty, and areas of improvement in the overall customer journey [7]. CSE includes Customer Effort Score and Customer Satisfaction Score.

### b) Operational Efficiency

Operational efficiency in the public sector is the ability of government organisations or public institutions to maximise output (public services) with the minimum use of resources (budget, manpower, time, assets), without compromising service quality ([www.publicsectorexerts.com](http://www.publicsectorexerts.com)). operational efficiency includes Process Automation Rate and Cycle Time Reduction [8].

### c) Digital Adaption Rate

Digital Adoption Rate is the percentage of processes, services, or activities in an organisation that have been integrated and used effectively through digital technology, either by employees, the organisation, or the community. In the context of digital transformation, this indicator measures the extent to which digital technology is actually adopted and utilised, not just technically implemented [9]. Digital Adaption Rate includes Digital Channel Usage and Employee Digital Skill Index .

### d) Employee Production

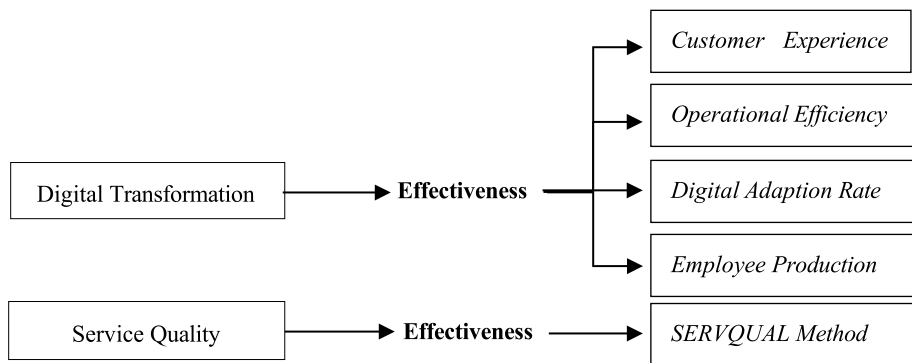
Employee productivity is the ability of employees to produce outputs in accordance with the targets set by the organisation, measured by quantity, quality, timeliness, and attendance.

Service quality is a form of consumer assessment of the level of service received with the expected level of service. If the service received or felt is as expected, then the service quality is perceived as good and satisfying [10]. According to Zaid [11] service quality is the customer's perception of the service component of a product. One of the most frequently used techniques for assessing service quality is Servqual. The quality measurement process for tangible goods is the same as the quality measurement process for services[12].

According to Kotler & Keller [10], there are several dimensions in service quality in order presented based on their level of importance, including:

- a) Reliability
- b) Responsiveness
- c) Assurance
- d) Empathy
- e) Tangible (physical evidence)

A synergistic and collaborative relationship between digital transformation and service quality in increasing customer satisfaction and increasing business value. This is in line with various studies that show a mutually supportive relationship, such as research [5], at the West Sulawesi Provincial Hospital, the implementation of service digitalisation such as electronic queuing systems, digital medical records, and online consultations allows services to be more efficient, safe, and reliable. The responsiveness aspect also increases because service times are faster with the use of technology.



**Fig. 1.** Research conceptual framework

Recent studies indicate that digital transformation has a positive and significant impact on improving service quality and user satisfaction across various sectors. Nurkulmati [13] and Reynilda [14] emphasize that digital transformation not only enhances service quality but also acts as a moderating variable in the relationship between service effectiveness and public satisfaction, particularly in immigration and public service contexts. In the education sector, Karya and Haryono [15] and Aisyah [16] found that service process innovation and digitalisation supported by resources, information systems, structures, and organisational culture significantly improve the quality of higher education services. Meanwhile [17] demonstrated a strong relationship between digital transformation, adaptive governance, and service quality improvement in the logistics business. At the village level, [18] proved that the implementation of digital applications such as SIJAWARA improves transparency, participation, accessibility, and the quality of public services. Additionally, [19] highlighted the positive impact of digital transformation on the quality of accounting information systems in a business environment. Overall, digital transformation plays a crucial role in driving service quality and user satisfaction through various organisational and sectoral aspects.

The limitation of previous research is that previous studies tend to only test and measure how digital transformation has been implemented, without measuring whether

digital transformation has been effectively implemented or not. The research gap in this study is addressed by exploring further how the effectiveness of digital transformation is implemented at the CP Palangga pawnshop in Gowa District. Additionally, the study collaborates with a comprehensive service quality method that measures the gap between expectations and performance, both in terms of dimensions and attributes of the questions.

### 3 Research Methodology

#### 3.1 Research Design

The research design used in this study is to use a Qualitative approach to the analysis of the effectiveness of digital transformation and use a Quantitative approach to the analysis of customer service quality. the reason for choosing a qualitative approach to the analysis of the effectiveness of digital transformation is to further examine how the process and application of digital-based services at Pegadaian KC Palangga Gowa Regency, by going into the field to see real phenomena, how the implications felt by each stakeholder on the use of digital-based systems. while the quantitative approach is applied to the analysis of the service quality of Makassar City Pawnshop Customers, by distributing questionnaires to every customer who gets direct service at Pegadaian KC Palangga Gowa Regency.

#### 3.2 Data Collection and Analysis

**Data Collection.** The data collection process is an important and priority stage because it requires very high focus and thoroughness. To collect data, researchers used 2 methods, namely:

Field Research, research whose data and information are obtained from activities in the field of work. In this study, the authors used several data collection techniques in the field, including a.) documentation, information related to the object of research under study such as digital-based service systems and service quality at Pegadaian CP Palangga Kab. Gowa. b.) observation, observation is needed in this study to collect indepth information related to how digital-based service systems and service quality at Pegadaian CP Palangga Kab. Gowa. c.) questionnaires, this study used questionnaires as research instruments in primary data collection which is the main data to be processed as a basis for measuring the quality of customer service at Pegadaian CP Palangga Kab. Gowa.

Literature Study (library research), this reference collection aims as a theoretical study which is the basis and reference for the discussion and background of this research, the scientific literature in question is in the form of books, journals, articles, and credible writings both physical and e-books or files that can be accessed via the internet.

## Data Analysis

*Effectiveness Of Digital Transformation.* There are several ways to increase data credibility (trust) in qualitative data, including a.) extension of observation, it is difficult to trust the results of qualitative research if the researcher only goes to the field once, with this extension of time the researcher can increase the degree of trust in the data collected and b.) triangulation is a method used in qualitative research to check and establish validity by analysing from various perspectives. The purpose of using the triangulation method, is to get better results when compared to using only one method in a study.

The researchers used the following data analysis techniques: data reduction, data reduction involves summarising, selecting key points, and focusing on important aspects. The purpose of data reduction is to provide a clearer picture and facilitate further data collection by researchers [20]. In this data reduction stage, the results of the interviews are selected by connecting which answers are explanations of which questions, and then organised into information that can be used for analysis and drawing conclusions.

Data presentation after data reduction, the next step is to present the data. in qualitative research, data presentation can be done in the form of brief descriptions, charts, relationships between categories, flowcharts, and the like [20]. In this data presentation, the researcher will describe the data related to the effectiveness of data transformation, including customer experience metrics, operational efficiency, digital adaptation rate, and employee production.

Drawing conclusions, the researcher then draws conclusions. The conclusions in this study were drawn after conducting research at Pegadaian CP Palangga, Gowa District, which involved an in-depth analysis to address the research problem, particularly to measure the effectiveness of digital transformation at Pegadaian CP Palangga, Gowa District..

*Service Quality.* Service quality is a method of measuring service quality using the attributes of each dimension to obtain a gap value that represents the discrepancy or difference between consumer perceptions of the service received and the expected service [21].

According to Sukmawati the Service quality method has the following steps to complete the calculation [22]: Finding the perception value (performance value) of each variable ( $X_i$ ) and the expected value score of each variable ( $Y_i$ ) Calculate the average ( $\bar{X}$ ) and ( $\bar{Y}$ ) by summing the expected value ( $Y$ ) and perception ( $X$ ) of each variable of all respondents.

$$X_1 = \frac{\sum X_1}{n} \quad Y_1 = \frac{\sum Y_1}{n} \quad (1)$$

Where:

$\bar{X}_i$  = Average value of i-th perception

$\bar{Y}_i$  = Average value of i-th expectation

Calculating the gap between perceptions and expectations

$$Ns_i = X_1 - Y_1 \quad (2)$$

Where:

$NS_i$  = Servqual value (Gap) of the  $i$ -th variable

If the value obtained is a negative number ( $<0$ ), it indicates a mismatch between customer expectations and perceptions, while a positive number ( $>0$ ) indicates that the quality of the service level offered is higher than the level of customer satisfaction. Conversely, if the satisfaction score is zero or equal to zero ( $=0$ ), it means that the service level meets customer expectations. This conclusion is obtained by summing up the results of the calculation of satisfaction scores for each dimension.

## 4 Results

The researcher will describe the results of the research in accordance with the formulation of the problem at the beginning, where this research wants to answer questions and research objectives related to how the effectiveness of digital transformation and service quality at Pegadaian CP Palangga Kab. Gowa. So the researcher collects data by conducting interviews and documentation on informants, related to several parties who are stakeholders of Pegadaian CP Palangga Kab. Gowa, namely Pawnshop customers and employees of Pegadaian CP Palangga Kab. Gowa.

### 4.1 Digital Transformation

**Customer Experience Metrics.** Customer Effort Score, To find out the customer's perspective regarding the ease of use of the digital Pegadaian application, the researcher certainly interviewed several customers who have used the application, the research results are described in the following table:

**Table 1.** Customer Effort Score

No	Question	Results
1	How easy is it to use the Pegadaian Digital application so far?	75.7% stated that it was easy-very easy, 21.6% stated that it was balanced, while only 2.7% stated that it was difficult.
2	Overall, does Pegadaian Digital help pawnshop services faster?	75.7% stated that it was easy-very easy, 21.6% stated that it was balanced, while only 2.7% stated that it was difficult.
3	How easy is it to find the service you want to use in the digital pawnshop application?	75.7% stated that it was easy-very easy, 21.6% stated that it was balanced, while only 2.7% stated that it was difficult.
4	How easy is it for you to find out the selling and buying prices of gold	83.8% stated that it was easy-very easy, while only 16.2% stated that they had never used the service.
5	How easy it is for you to make instalment payments on the digital pawnshop application	83.8% stated that it was easy-very easy, 13.5% stated that they had never used the service, while only 2.7% stated that it was difficult.

6	How easy it is for you to make pawn payments in the digital pawnshop application	83.8% stated that it was easy-very easy, 13.5% stated that they had never used the service, while only 2.7% stated that it was difficult.
7	How easy is it for you to make gold instalments and gold deposits through the digital pawnshop application?	81.1% stated that it was easy-very easy, 16.2% stated that they had never used the service, while only 2.7% stated that it was difficult.
8	Is the information in the digital pawnshop application complete?	73% stated that it was easy-very easy, 27% stated that they had never used the service.

The questionnaire results show a very large percentage with an average of 79% of all question attributes stating that the application of the Digital Pawnshop Application is easy and makes it easy for customers, to complete transactions and get various pawnshop services through a hand. services that are often used by customers in transactions in digital pawnshop applications are Pawn Payments, installment payments, gold savings, pay interest, buy and sell gold.

Digital transformation of customer service allows you to simplify processes, eliminate errors, minimise manual effort, reduce response times, and cut operational costs [23]. Pegadaian Digital is an application presented by Pegadaian to make it easier for customers to complete various transactions. Various transaction features can be utilised by the public [24]

Based on the results of the questionnaire from pawnshop customers, as well as a literature review related to how the customer effort score metric is given an assessment by the customer, it shows that the digital pawnshop application makes it easier for customers to transact and customers have no difficulty in running the application in meeting the needs of pawnshop services through the hand.

Customer Effort Score, To find out the customer perspective regarding customer satisfaction with the use of the digital Pegadaian application, the researcher certainly interviewed several customers who have used the application, the research results are described in the following table:

**Table 2.** Customer Effort Score

No	Question	Results
1	Are you satisfied with the quality and speed of our service?	89.2% said satisfied-very satisfied while only 10.8% said balanced.
2	Can you easily apply digital pawnshop?	86.5% said satisfied-very satisfied while only 13.5% said balanced.
3	Did you encounter any obstacles during the service process through the Pegadaian Digital Application?	75.7% stated that they did not encounter any obstacles while only 24.3% stated that they were balanced.
4	Does the digital pawnshop application meet your expectations?	91.9% stated satisfied-very satisfied while only 8.1% stated balanced.
5	would you recommend the Digital pawnshop application to others?	86.5% stated that they would recommend others while only 13.5% stated that it was balanced.

6	Can you find the information you are looking for quickly on the digital pawnshop application?	86.5% stated that it was easy to find while only 13.5% stated that it was balanced.
7	How likely is it that you will continue to use our digital pawnshop app in the future?	75.6% stated that they would reuse while only 24.4% stated that it was balanced.
8	On a scale of 1 to 10, how satisfied are you with the digital pawnshop service?	Out of 37 respondents, the average score of customer satisfaction is 8.86.

The questionnaire results show a very large percentage with an average of 84% of all question attributes stating that customers are satisfied with the quality of service of the digital pawnshop application, the services that are considered the most satisfying in the digital pawnshop application are the payment/top up feature, pawn payment, gold savings.

Digital transformation plays an important role in improving customer satisfaction in green banking. Easily accessible digital services significantly increase customer satisfaction. [25]. Pegadaian in an effort to update the system to improve service quality and convenience for customers in transacting Pegadaian products in the Pegadaian Digital application [26]

Based on the results of the questionnaire from pawnshop customers, as well as a literature review related to how the level of satisfaction after the presence of the digital pawnshop application given by the customer, it shows that the customer is very satisfied with the services offered in the digital pawnshop application because it makes it very easy for customers to complete transactions and obligations, as well as the ease of information that can be obtained through a hand.

**Operational Efficiency.** Process Automation Rate, The following table compares pawnshop customer services that can be done digitally or manually (offline):

**Table 3.** Process Automation Rate

No	Service Type	Digitisation	Manual
1.	Butab account opening	✓	✓
2.	Gold savings transaction	✓	✓
3.	Cash and non-cash disbursement gold pawning	×	✓
4.	Vehicle pawn	×	✓
5.	Flexi pawn	×	✓
6.	Krasida (Payment)	✓	✓
7.	Kreadi (Payment)	✓	✓
8.	Kupedes (Payment)	✓	✓
9.	Gold deposit pawn	✓	✓
10.	Kur (Payment)	✓	✓
11.	Interest payment	✓	✓
12.	Pawn-redeem	✓	✓
13.	Request for addition (new Up)	✓	✓
14.	Electronic pawn	×	✓
15.	Precious metal instalment	✓	✓

16.	E-wallet top-up	✓	✓
17.	Utility payments (electricity, water, credit)	✓	✓
18.	Cash withdrawal	×	✓
19.	Gojek and Grab voucher creation	×	✓
20.	Buyback (sale of gold savings)	✓	✓
Total Activity		14	20

The observation results show that, of the 20 pawnshop services studied, 14 service activities can be accessed through the digital pawnshop application, this shows that pawnshop services have implemented aspects of digital transformation with most of the services (70%) can be accessed without having to come directly to the pawnshop office, This will make it easier for customers such as reducing queues for services that must be carried out offline at Pegadaian, because it cannot be denied that some services still require customers to transact and make offline applications such as gold pawning, vehicle pawning, electronic pawning, flex pawning and cash withdrawals.

Through service digitisation, people in remote areas and groups with disabilities find it easy to access services without having to be physically present at the office, thereby increasing service inclusiveness and efficiency [27]. Pegadaian not only makes it easy to register for all products and services. Pegadaian Digital also provides convenience in all transactions made by customers [28].

Based on observations from pawnshop employees, as well as a literature review related to how business operational processes can be carried out through digitalisation technology, it shows that the Pegadaian Digital application has covered 70% of services that can be carried out through the application of the 20 types of services that have been studied

Cycle Time Reduction, To find out how the comparison and description of the speed of customer service after the presence of digital applications, interviews were conducted with employees of Pegadaian CP Palangga Kab. Gowa, who gave a statement that:

"Krasida, Administration, Check collateral, Determination of loan money and loan period, Customer confirmation, Loan authorisation, Print contract, Transfer borrowed money / cash, It takes 10 minutes, Cicil LM, Administration, Determination of the amount of grams, DP and loan period and monthly installments, Pay DP loan, Approve estimator and pinca, Print installments, It takes 10 minutes All installment payments, pay interest and repayment process 3 minutes at most".

The various activities above describe the time required to complete one activity cycle which ranges from an average of 10 minutes, except for installment payments, interest payments and repayments, this shows that customers take a relatively long time when transacting and using offline services at the Pegadaian Office, after the presence of the Pegadaian Digital application, some customer activities can now be carried out via smartphones such as installment payments, interest payments which can be much faster activity cycles, which are only 1 minute, the Digital Pegadaian application makes solving service needs at Pegadaian efficient.

The use of information technology can cut bureaucratic red tape, speed up decision making, and increase the accountability and transparency of public institutions [29].

The Pegadaian Digital application facilitates various financial needs, ranging from pawning, instalment payments, gold investment, to topup something can be done. The benefits I feel include saving time, costs, and ease in managing finances [30].

Based on observations from pawnshop employees, as well as a literature review related to how to reduce service time through the adoption of digitalisation technology, it shows that the Pegadaian Digital application has cut service time compared to coming directly to the Pegadaian office.

**Digital Adaption.** Digital channel usage shows how many digital channels customers use.

**Table 4.** Digital Channel Usage

No	Question	Results
1	Have you ever used the digital pawnshop application	Of the 37 respondents, 83% stated that they had used the Pegadaian Digital application.
2	How often do you use the digital pawnshop application	53% stated that they often used the application, 31% stated that they rarely used it, while who never used the application was 16%.
3	Apart from the digital pawnshop application, through which channels do you get customer service?	Pawnshop offices, agents and social media
4	Do you prefer to transact and be served through the digital pawnshop application compared to coming directly to the pawnshop office?	40% prefer to transact in the application, while 60% prefer to transact offline.

The questionnaire results show that of the 37 respondents studied 83% have used the digital pawnshop application and more than half often use the application, but most respondents prefer to transact at the pawnshop office, this is due to several services that can only be accessed, as well as employee services that are considered good in meeting customer needs and questions.

Digital transformation encourages organisations to adopt more flexible and open structures. Rigid hierarchical models are being replaced by more horizontal and collaborative structures [31]. In addition to customer service, the company also offers products that can meet every customer's needs, from funding to investment services with both offline and online access [32]

Based on the results of a questionnaire from pawnshop customers, as well as a literature review related to how to use the digital pawnshop application, although customers feel that the pawnshop application facilitates their transactions, customers tend to prefer to come to the pawnshop office, because of the services that must be done directly and maximum service from pawnshop employees.

Employee Digital Skill, employee digital skills to determine employees' ability to use digital applications.

**Table 5.** Employee Digital Skill

No	Question	Results
1	Do you know the types of services available in the digital Pegadaian application? please state	the majority of respondents are aware of the various types of services available in the Pegadaian Digital application. The most mentioned services include gold savings, gold instalments, gold deposits, and pawning, which are considered the main features of the application.
2	do you know how to apply the services available in the digital application?	All respondents stated that they know how to apply the services available on the Pegadaian Digital application. The majority of respondents considered that using the application was relatively easy to understand and practical.
3	do you know how to create a digital application account and can help customers create a digital pawnshop account	all respondents stated that they knew how to apply the services available on the Pegadaian Digital application. The majority of respondents considered that using the application was relatively easy to understand and practical and could help customers create accounts.
4	are you able to demonstrate to customers about the types of services on the digital pawnshop application?	All respondents were able to demonstrate to customers the types of services on the Digital Pawnshop application. Most respondents stated that they could not only explain, but also actively teach how to use the application,
5	Are there any service features in the digital pawnshop application that you have difficulty using?	The majority stated that they had no difficulty in using the service features on the Pegadaian Digital application, some even mentioned that this application was similar to mobile banking so it was easy to understand.

The results of the interview above indicate that of the 9 respondents who gave answers to the digital skills index, the employees of Pegadaian CP Palangga Kab. Gowa have been very good at applying and educating customers regarding the use of the Digital Pegadaian Application. In an ever-evolving digital era, digital skills and artificial intelligence have become critical elements in determining employee performance. Employees who understand technology thoroughly tend to make a greater contribution to organisational success." [33].

Employee productivity measures the productivity level of employees

**Table 6.** Employee Production

No	Question	Results
1	After the presence of digital pawnshop, I can serve more customers	All respondents feel that the presence of Pegadaian Digital (PDS) makes it easier for them to serve more customers because it provides efficiency, flexibility, and ease of transactions,
2	my work is done faster when customers use digital pawnshop applications	all respondents recognised the presence of Pegadaian Digital makes their work faster. This application is considered capable of speeding up the transaction process, reducing customer queues at outlets.

3	what is the real impact felt after the presence of the digital pawnshop application?	Pegadaian Digital has a real impact in the form of convenience, efficiency, and flexibility in services. Customers feel the benefits of being able to make transactions flexibly.
4	the level of accuracy of my work has increased and minimal errors have occurred after the presence of the digital pawnshop application	Pegadaian Digital increases the level of accuracy of work and minimises errors in the transaction and recording process.
5	After the presence of digital pawnshop, I can serve more customers.	all respondents felt that it was easier to find the information needed by customers after the presence of the Pegadaian Digital application.

The results of the interview above show that of the 9 respondents who gave answers to employee productivity of Pegadaian CP Palangga Kab. Gowa employees after the presence of PDS, the presence of PDS is also proven to speed up work completion, reduce queues at outlets, increase accuracy, and minimise transaction and recording errors. In addition, this application makes it easier for employees and customers to access important information quickly and accurately, so that services become more effective and optimal

#### 4.2 Service Quality

##### 1. Calculation of customer expectations regarding service

$$\sum y_i = (\sum STT \times 1) + (\sum TT \times 2) + (\sum CT \times 3) + (\sum T \times 4) + (\sum ST \times 5) \tag{2}$$

Description:

$\sum y_i$  = the sum of the weights of the answers to the i-th variable expectation statements

$\sum STS$  = the number of people who choose the answer is very unfulfilled

$\sum TS$  = number of people who chose the answer is not fulfilled

$\sum R$  = number of people who chose the answer quite fulfilled

$\sum S$  = number of people who chose the answer fulfilled

$\sum SS$  = the number of people who chose the answer is very fulfilled

1,2,3,4,5 = score for Likert scale

For the average respondent's answer to the hope statement, it can be calculated by the equation

$$(Y_i) = \sum y_i / n \tag{3}$$

Description:

$(Y_i)$  = average respondent's answer to the i-th attribute expectation statement

$\sum y_i$  = the sum of the weights of the answers to the i-th variable expectation statements

n = number of respondents

2. Calculation of customer reality regarding service

$$\sum y_i = (\sum STT \times 1) + (\sum TT \times 2) + (\sum R \times 3) + (\sum S \times 4) + (\sum SS \times 5) \tag{4}$$

Description:

$\sum x_i$  = the sum of the weights of the answers to statement of reality of the variable

$\sum STS$  = the number of people who choose the answer is very unfulfilled

$\sum TS$  = the number of people who choose the answer is not fulfilled

$\sum R$  = the number of people who choose the answer is quite fulfilled

$\sum S$  = the number of people who chose the answer fulfilled

$\sum SS$  = the number of people who chose the answer is very fulfilled

1,2,3,4,5 = score for Likert scale

For the average respondent's answer to the reality statement, it can be calculated by the equation

$$(X_i) = \sum x_i / n \tag{5}$$

Description:

$(X_i)^{-}$  = average respondent's answer to the statement of the reality of the i-th attribute

$\sum x_i$  = the sum of the weights of the answers to the statement of reality of the i-th variable

n = number of respondents

The gap value is the value of the gap that occurs between the expectations and reality of service users obtained from the service quality statement regarding consumer expectations (extension workers) of the services they want to feel and the average value of the reality of the services felt by consumers (extension workers) in actual conditions. To find out the gap value, the following equation is used:

$$SQ]_{-1} = (X_i)^{-} - (Y_i)^{-} \tag{6}$$

Description:

$SQ]_{-1}$  = The gap value of the i-th attribute

$(X_i)^{-}$  = Average value of the reality of the i-th attribute

$(Y_i)^{-}$  = Average value of the reality of the i-th attribute

**Table 7.** SWOT Analysis Expectations-Reality-Gap

Service Attributes	Service Expectations		Service Reality		Gap value 5
	Weighting Value	Average Expectation	Weighted Value	Average Reality	
1	135	3,55	171	4,5	0,95
2	134	3,53	170	4,47	0,95
3	138	3,63	171	4,5	0,87
4	172	4,53	166	4,37	-0,16
5	141	3,71	167	4,39	0,68
6	147	3,87	168	4,42	0,55
7	144	3,79	170	4,47	0,68
8	143	3,76	170	4,47	0,71
9	175	4,61	167	4,39	-0,21

10	146	3,84	167	4,39	0,55
11	147	3,87	169	4,45	0,58
12	145	3,82	170	4,47	0,66
13	148	3,89	167	4,39	0,50
14	143	3,76	169	4,45	0,68
15	143	3,76	167	4,39	0,63
Total		57,92		66,65	8,63

The bigger the gap resulting from a Servqual Gap 5 calculation, the less good the service quality is. Therefore, the priority of improving service quality is carried out from the largest gap or gap. Conversely, the smaller a gap (the gap is close to zero or positive) the better the quality of service.

**Table 8.** Result Gap Swot Analysis

Attribute	Statement	Gap
9	Employees consistently serve customers with courtesy and politeness	-0.21
4	Pawnshop employees provide fast service to customers	-0.16
13	Pawnshops have adequate and comfortable facilities	0.50
10	Employees can respond well to customer complaints	0.55
6	Pawnshop employees are always available and never too busy to respond to customers	0.55
11	Employees can create good communication with customers	0.58
15	Interior and room appearance that makes customers feel at home.	0.63
12	Employees can understand the needs and interests of customers.	0.66
5	Pawnshop employees are always willing to help customers.	0.68
7	Employees are skilled in handling and solving customer needs.	0.68
14	Employee appearance is neatly dressed and attractive.	0.68
8	Employees make customers feel confident during transactions.	0.71
3	Employees have knowledge related to various pawnshop services answer customer questions.	0,87
1	Pawnshop employees provide maximum service to customers.	0.95
2	Employees can resolve complaints and needs faced by customers.	0.95

Service quality at the CP Pegadaian Palangga Kab. Gowa office is measured by the Gap 5 model which is the gap between customer expectations regarding service and the reality of service felt by customers. From the calculation of Gap 5, it turns out that the attribute that has the largest gap value is the attribute of the 9th and 4th statements, namely regarding the statement -Employees consistently serve customers with courtesy and politeness-, with a gap value of -0.21, and regarding the statement -Pawnshop employees provide fast service to customers-, with a gap value of -0.16.

Calculation of the average answer per dimension of gap value 5 (five) for expectations

$$\bar{X}_i = \frac{\sum \bar{X}_i}{n} \quad (7)$$

Calculation of the average answer per dimension of gap value 5 (five) for expectations  
Description:

$\bar{X}_i$  = average dimension of the Ith attribute for expectations

$\bar{Y}_i$  = the sum of the average value of the statement attributes per Ith dimension of expectation

n = number of statements per dimension

Calculation of the average answer per dimension of gap value 5 (five) for performance

$$\bar{D}_i = \frac{\bar{X}_i - \bar{Y}_i}{n} \tag{8}$$

Description:

$\bar{X}_i$  = average of the Ith attribute dimension for performance

$\bar{Y}_i$  = sum of average values of attribute statements per Ith dimension of performance

n = number of statements per dimension

**Table 9.** Result Gap Dimension Servqual

Dimension Statement	Attribute Statement	Average Number of Expectations	Average Number of Performance	Service Expectation Value	Service Performance Value	Gap Value
1,2,3	Reliability	10,71	13,47	3,57	4,49	0,92
4,5,6	Responsiveness	12,11	13,18	4,04	4,39	0,36
7,8,9	Guarantee	12,16	13,34	4,05	4,45	0,39
10,11,12	Empathy	11,53	13,32	3,84	4,44	0,60
13,14,15	Physical Evidence	11,42	13,24	3,81	4,41	0,61

Based on the table shows the distribution of the average value of the gap between the value of service expectations and the value of service performance shows that all dimensions have a positive value which indicates that all dimensions of service quality have been quite good at the quality of customer service of CP Palangga Pawnshop Kab. Gowa

## 5 Discussion

The empirical findings indicate that the digital transformation implemented at Pegadaian CP Palangga has achieved a high level of effectiveness, particularly in terms of customer experience, operational efficiency, digital adoption, and employee productivity. Customers perceive the Pegadaian Digital application as easy to use and helpful in accelerating transactions, while employees report faster work completion, higher accuracy, and the ability to serve more customers. These results support the conceptualisation of digital transformation as the strategic use of digital technologies to substantially improve organisational performance and value creation, rather than merely automating existing processes [1, 2]. They are also consistent with the national agenda on digital transformation, which highlights increasing digital capability and utilisation as key

drivers of public and private sector performance [3]. However, the finding that a considerable proportion of customers still prefer offline interactions suggests that effective digital transformation in financial services must accommodate hybrid service preferences and that the success of digital initiatives depends not only on technological readiness but also on behavioural adaptation among users and front-line staff [9, 13]

The analysis of service quality using the Servqual framework shows that, overall, the perceived performance of Pegadaian CP Palangga exceeds customer expectations across all dimensions, with positive gaps for reliability, responsiveness, assurance, empathy, and tangibles. This aligns with the view that service quality reflects the degree of congruence between expected and perceived service, and that when perceptions meet or exceed expectations, customers tend to evaluate service as good and satisfactory [10]. The particularly strong performance on reliability and assurance confirms the importance of consistent, accurate and trustworthy financial services for driving customer loyalty in line with previous findings on the relationship between service quality and customer loyalty in financial institutions [4,11]. At the same time, the presence of small negative gaps related to speed of service and the consistency of courteous and polite behaviour illustrates that service encounters remain vulnerable at the human interaction level, even when the overall system performs well. This nuance echoes prior research that emphasises the centrality of front-line employee competence, responsiveness and interpersonal conduct in shaping customer confidence in digitally supported service environments [7,16].

Taken together, the results demonstrate a synergistic relationship between digital transformation and service quality in the specific context of pawnshop financial services, and thereby extend earlier studies that documented positive links between digitalisation, service quality and user satisfaction in health, education, logistics and public administration [5,13]. Unlike many previous works that primarily examined whether digital tools had been implemented or whether digital transformation was associated with satisfaction, this study operationalises the effectiveness of digital transformation through multiple indicators and integrates them with a comprehensive Servqual-based assessment at branch level. This dual perspective contributes context-specific evidence that digital transformation can enhance both process efficiency and perceived service quality when supported by digitally skilled employees and accessible applications [9,15]. For Pegadaian and similar financial service providers, the findings imply that further gains are likely to come from deepening the use of digital channels, addressing residual pain points in speed and interpersonal aspects of service, and designing strategies that gradually shift customers from predominantly offline usage towards a more balanced, digitally enabled service portfolio, while continuing to monitor effectiveness and service quality over a broader population and time horizon.

## **6 Conclusion**

The findings of this study indicate that digital transformation at Pegadaian CP Palangga, Gowa Regency, has been implemented with a very high level of effectiveness across the core aspects examined, namely Customer Experience Metrics, operational

efficiency, the digital adaptation rate, and employee productivity. The evidence suggests that automation has strengthened operational efficiency by simplifying and accelerating service processes, whilst simultaneously enabling services that are faster, more convenient, and more personalised from the customer's perspective. In practical terms, this transformation has contributed to a more comfortable and flexible service journey, which in turn supports higher customer satisfaction and fosters stronger customer loyalty.

In addition, the service quality at Pegadaian CP Palangga, Gowa Regency, can be characterised as positive across all measured dimensions. The consistently favourable values observed for each service-quality dimension imply that customer-facing performance is already functioning at a good standard. Collectively, these results underline that digital transformation and service quality are mutually reinforcing in this context: digital systems improve efficiency and customer experience, whilst strong interpersonal service delivery sustains trust and satisfaction, thereby strengthening the overall quality of customer service outcomes.

## References

1. Royyana, A.: Strategi Transformasi Digital pada PT Kimia Farma (Persero) Tbk. *Journal of Information System for Public Health* 5(2), 15–32 (2018).
2. Vial, G.: Understanding Digital Transformation: A Review and a Research Agenda. *The Journal of Strategic Information Systems* 28(2), 118–144 (2019).
3. Komdigi, K.: Indeks Transformasi Digital Nasional. Komdigi (2025).
4. Felicia, Nagjudin, Yuliana, Hutabarat, F.A.M.: Pengaruh Kualitas Pelayanan Terhadap Loyalitas Pelanggan. *Journal of Trends Economics and Accounting Research* 4(3), (2024).
5. Nurfaidah, Hafizah, Y.C., Yeni, H.: Transformasi Efisiensi Layanan Kesehatan dengan Sistem Informasi Manajemen Rumah Sakit (SIMRS) di RSUD Provinsi Sulawesi Barat. *JEMSI: Jurnal Ekonomi Manajemen Sistem Informasi* 6(3), (2025).
6. Putri, N.I., Herdiana, Y., Suharya, Munawar, Z.: Kajian Empiris Pada Transformasi Bisnis Digital. *ATRABIS: Jurnal Administrasi Bisnis* 7(1), 1–15 (2021).
7. Lemon, K.N., Verhoef, P.C.: Understanding Customer Experience Throughout the Customer Journey. *Journal of Marketing* 80(6), 69–96 (2016).
8. Public Sector Experts: Public Sector News, Insights and Analysis: Government Project Efficiency. (2024). Available: <https://www.publicsectorexponents.com/blog/public-sector-news-insights-and-analysis-1/government-project-efficiency-840>.
9. Utama, D.R., Hamsal, M., Rahim, R.K., Furinto, A.: The Effect of Digital Adoption and Service Quality on Business Sustainability Through Strategic Alliances at Port Terminals in Indonesia. *The Asian Journal of Shipping and Logistics* 40(1), 11–21 (2024).
10. Kotler, P., Keller, K.L.: *Marketing Management*. Pearson Education (2021).

11. Zaid: Ekuitas Merek dan Advokasi Pelanggan Melalui Strategi Gamifikasi dan Kualitas Pelayanan. Academia Publication, Lamongan (2021).
12. Pranada, Y., Lucitasari, D.R., Khannan, A., Shodiqin, M.: Penerapan Metode Service Quality (Servqual) untuk Peningkatan Kualitas Pelayanan Pelanggan. OPSI – Jurnal Optimasi Sistem Industri 12(1), 1–11 (2019).
13. Nurkumalawati, I., Wiraputra, A.R., Bawono, S.K., Sohirin, S., Aji, K.P., Purnomo, A.S., Wilnotomo, W.: The Role of Digital Transformation and Service Quality of Integrated Passport System Based on Biometrics on User Satisfaction (Case Study at the Immigration Department). EnPress 8(8), 1–16 (2024).
14. Reynilda, L.O.A., Kamaluddin, M.A., Ali, M., Khatimah, H.: The Moderation Effect of Digital Transformation on the Influence of Effectiveness and Quality of Service on Public Service User Satisfaction in South Sulawesi. Inovasi 20(4), 890–897 (2024).
15. Karya, M.A., Haryono, B.S., Sujarwoto: Digitalization and Innovation of the Service Process. Bina Praja 16(1), 69–81 (2024).
16. Aisyah, S., Nurqamarani, A.S., Wulandari, F.R., Broto, M.F.: The Influence of Digital Transformation on Service Quality in the Education Sector. E3S Web of Conferences 440, 04009, 1–9 (2023).
17. Li, C., Feng, W.X., Han, S., Gupta, S., Kamble, S.: Digital Adaptive Governance, Digital Transformation, and Service Quality in Logistics Enterprises. IGI Global 30(1), 1–26 (2022).
18. Rahman, N.: The Effectiveness of Digital Transformation in Public Services in Bulukumba Regency. Jurnal Administrare: Jurnal Pemikiran Ilmiah dan Pendidikan Administrasi Perkantoran 2(1), 27–34 (2024).
19. Hamdy, A., Diab, A., Eissa, A.M.: Digital Transformation and the Quality of Accounting Information Systems in the Public Sector: Evidence from Developing Countries. MDPI 13(30), 1–22 (2025).
20. Sugiyono: Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Alfabeta (2022).
21. Sembiring, J., Sinaga, B.: Penerapan Metode Servqual Dalam Menentukan Tingkat Kepuasan Masyarakat Terhadap Pelayanan Pengurusan Surat Izin Usaha Mikro dan Kecil Pada Kantor Camat Dolat Rayat Kabupaten Karo. Jurnal Nasional Komputasi dan Teknologi Informasi 4(2), 165–170 (2021).
22. Rahmawati, D., Aulawi, H., Kurniawati, R., Sari, T.F.: Pengukuran Kualitas Layanan Berdasarkan Dimensi Service Quality (Servqual) dengan Metode Zone of Tolerance (ZOT) dan Kano pada Pet World. J@ti Undip: Jurnal Teknik Industri 18(1), 21–32 (2023).

23. Conexiom: What is Customer Service Digital Transformation. (2024). Available: <https://conexiom.com/blog/what-is-customer-service-digital-transformation>.
24. Detikfinance: Transaksi Serba Mudah di Pegadaian Digital Bebas Biaya Admin. (2025). Available: <https://finance.detik.com/berita-ekonomi-bisnis/d-7920702/transaksi-serba-mudah-di-pegadaian-digital-bebas-biaya-admin>.
25. Mareta, S.N., Wardani, D.T.K., Hanim, A.L., Rahmawati, D.C., Puspitasari, N.P., Darsono, S.N.A.C.: Peran Transformasi Digital Terhadap Kepuasan Nasabah Green Banking. *Journal of Waqf and Islamic Economic Philanthropy* 1(3), 1–17 (2024).
26. Detikfinance: Genjot Kualitas Layanan Pegadaian Lakukan Pemeliharaan Aplikasi Digital. (2025). Available: <https://finance.detik.com/berita-ekonomi-bisnis/d-7859800/genjot-kualitas-layanan-pegadaian-lakukan-pemeliharaan-aplikasi-digital>.
27. Isma, Y.S., Kardiati, D., Muslem, F., Fadhillah, S.K., Akmal, J.K.F., Chairunnisak, S.: Transformasi Digital Sebagai Instrumen untuk Memperluas Aksesibilitas Layanan Publik. *Journal of Administrative and Social Science* 6(2), 66–77 (2025).
28. Kompasiana: Menggemaskan Indonesia Dalam Satu Genggaman Pegadaian Digital Memudahkan Semua. (2025). Available: [https://www.kompasiana.com/airanilitia/68902d93c925c4390b622913/mengemaskan-indonesia-dalam-satu-genggaman-pegadaian-digital-memudahkan-semua?page=2&page\\_images=1](https://www.kompasiana.com/airanilitia/68902d93c925c4390b622913/mengemaskan-indonesia-dalam-satu-genggaman-pegadaian-digital-memudahkan-semua?page=2&page_images=1).
29. Peran Teknologi Informasi dalam Reformasi Birokrasi di Sektor Publik. *Stratēgo: Jurnal Manajemen Modern* 7(1), 1–6 (2015).
30. Kompasiana: Gak Perlu Antre Review Jujur Aplikasi Pegadaian Digital dari Pengguna Aktif. (2025). Available: [https://www.kompasiana.com/shinti-apujiutami3862/6896da9bed641505655a1fe2/gak-perlu-antre-review-jujur-aplikasi-pegadaian-digital-dari-pengguna-aktif#google\\_vignette](https://www.kompasiana.com/shinti-apujiutami3862/6896da9bed641505655a1fe2/gak-perlu-antre-review-jujur-aplikasi-pegadaian-digital-dari-pengguna-aktif#google_vignette). [Accessed 15 Jan 2025].
31. Djani, W.: *Administrasi Publik (Teori dan Pergeseran Paradigma ke Era Digital)*. Sifatama Jawara (2022).
32. Swa: Pegadaian Tawarkan Layanan Gadai yang Relevan dan Adaptif. (2025). Available: <https://swa.co.id/read/460609/pegadaian-tawarkan-layanan-gadai-yang-relevan-dan-adaptif>.
33. Handayani, D.: *Dinamika Perubahan Kinerja Karyawan dalam Era Keterampilan Digital dan Kecerdasan Buatan*. Sirisma (2023).

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