JAFM: Journal of Accounting and Finance Management
E-ISSN: 2721-3013
P-ISSN: 2721-3005
https://dinastires.org/JAFM dinasti.info@gmail.com +62 811 7404 455
DOI: https://doi.org/10.38035/jafm.v6i4

The Influence of the Quality of Work Systems and Facilities on Work Effectiveness which Impacts the Quality of Public Services at the Regional Revenue Agency of West Tanjung Jabung Regency

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Abstract: This study aims to obtain an overview of the quality of the system, work facilities, work effectiveness and the quality of public services at the Regional Revenue Agency of West Tanjung Jabung Regency. As well as to determine and analyze the influence of the quality of the system and work facilities through work effectiveness on the quality of public services at the Regional Revenue Agency of West Tanjung Jabung Regency. This study was conducted at the Regional Revenue Agency of West Tanjung Jabung Regency. With a population of 118,264 taxpayers who receive services, while the sample size in this study uses the Slovin theory with a margin of error of 10% so that a sample of 100 is obtained. This study uses a quantitative approach with a survey method and uses Partial Least Square (PLS) data analysis. The results of the study indicate that the quality of the system and work facilities have an influence on the quality of service, both directly and indirectly through employee work effectiveness. This shows that the better the quality of the system and work facilities used in carrying out tasks, the more effective the performance that can be achieved by employees in providing excellent service to the community.

Keywords: System Quality, Work Facilities, Work Effectiveness, Service Quality

INTRODUCTION

In the modern era, public service has become a key indicator of the success of local governments in carrying out their bureaucratic functions. The public is increasingly critical of their right to receive fast, transparent, and accountable services. Improved education and the development of information technology have encouraged the public to demand professional, efficient, and digital-based public services (Dwiyanto, 2006; Osborne & Gaebler, 1992). This situation presents a challenge for the Regional Revenue Agency, including in West Tanjung Jabung Regency, which plays a strategic role in managing regional revenues.

Quality public services have direct implications for taxpayer compliance. Good service not only increases public satisfaction but also strengthens the legitimacy of local governments. Conversely, slow and complicated services have the potential to lead to complaints, reduced participation, and even illegal levies. Law Number 25 of 2009 concerning Public Services

stipulates that every public service provider is obliged to provide fast, easy, affordable, and measurable services. Therefore, the Regional Revenue Agency (BAP) must not merely carry out administrative duties but also create an adaptive, technology-based service system that is oriented toward public satisfaction (Kurniawan, 2020).

In practice, the effectiveness of public services at Regional Revenue Agency is heavily influenced by two key factors: system quality and work facilities. According to DeLone and McLean (2003), information system quality is a crucial element in increasing user satisfaction and work effectiveness. An unstable information system, such as server disruptions, application bugs, or weak cybersecurity, will hamper service delivery and undermine public trust. Data from the Regional Revenue Agency shows that system disruptions, both due to technical factors and digital security, continued to frequently occur during the 2020–2024 period, resulting in service effectiveness not yet being fully achieved.

In addition to systems, work facilities also determine employee effectiveness. Adequate facilities, such as computer equipment, internet access, a suitable workspace, and other supporting facilities, will increase employee motivation and productivity. Conversely, limited facilities can be a serious obstacle to providing optimal service (Sedarmayanti, 2017; Robbins & Judge, 2015). Data from the Regional Revenue Agency of West Tanjung Jabung Regency shows that of the total facility requirements, only around 73.71% is available, with much equipment damaged or not meeting requirements. This situation demonstrates a gap between public service demands and the availability of work facilities.

The quality of work systems and facilities ultimately leads to employee effectiveness, which is directly related to public service performance. Gibson, Ivancevich, and Donnelly (2009) emphasized that work effectiveness reflects the ability of individuals or groups to achieve work targets with optimal resource utilization. In the context of the Regional Revenue Agency, work effectiveness is not only about administrative achievements but also encompasses how employees are able to provide fast, accurate, and satisfactory services to the public. Previous research also shows that employee work effectiveness contributes significantly to supporting the digital transformation of public services (Gil-Garcia et al., 2018).

The urgency of this research is further strengthened when linked to the evaluation results of the Public Service Performance Index of the Regional Revenue Agency of West Tanjung Jabung Regency for 2020–2024. Despite being in the “Good” category, the Public Service Performance Index score tends to stagnate, particularly in aspects of officer attitudes, complaint handling, and public satisfaction. This indicates the need for more serious improvements to improve the quality of public services towards the “Very Good” category. Therefore, this research is relevant to examine in depth the influence of the quality of work systems and facilities on employee work effectiveness, which ultimately impacts the quality of public services at the Regional Revenue Agency of West Tanjung Jabung Regency.

METHOD

This study employed a quantitative approach with a survey method, as the primary focus was to examine the interplay between predetermined variables: system quality, work facilities, work effectiveness, and public service quality. The quantitative approach was chosen to provide objective and generalizable results by measuring numerical data obtained from respondents using a research instrument (Sugiyono, 2021).

The object of this research is the Regional Revenue Agency of West Tanjung Jabung Regency, with the research population consisting of taxpayers who receive services from the Regional Revenue Agency. The population in 2024 was recorded at 118,264 taxpayers. Due to the large population, the sample size was determined using the Slovin formula with a 10% error rate, resulting in 100 respondents being used as the research sample. The sampling technique used was accidental sampling, namely any taxpayer who was receiving services at the Regional Revenue Agency at the time of the research (Arikunto, 2016; Umar, 2016).

The types of data used include primary and secondary data. Primary data were obtained through questionnaires distributed to respondents, while secondary data came from documents and reports from related agencies, as well as relevant literature. The questionnaire used a Likert scale of 1–5 to measure respondents' level of agreement with the statements posed, ranging from "strongly disagree" to "strongly agree" (Idriantono & Supomo, 2017). The research instrument was then tested for validity and reliability to ensure data reliability. Validity testing was carried out by correlating item scores with the total score, while reliability testing used Cronbach's Alpha, where a variable is declared reliable if it has an alpha value greater than 0.60 (Ghozali, 2019).

Data analysis was conducted in two stages: descriptive analysis and verification analysis. Descriptive analysis was used to describe the characteristics of respondents and the distribution of answers to the research indicators, thus obtaining a general overview of the variables studied. Meanwhile, verification analysis used the Structural Equation Modeling (SEM) method with the Partial Least Squares (PLS) approach. This technique was chosen because it is able to test complex relationships between latent variables simultaneously, even with a relatively small sample size (Hair et al., 2017). Model evaluation in SEM-PLS includes testing the outer model (validity and reliability of indicators) and the inner model (relationships between latent variables). Hypothesis testing was conducted by examining the t-statistic and p-value, where the relationship between variables is declared significant if the t-statistic is > 1.96 at a significance level of 5% (Wong, 2013).

RESULTS AND DISCUSSION

Respondent Profile

The respondent profiles in this study covered gender, age, education level, and occupation. This information was obtained through the distribution of questionnaires to the public (taxpayers) served by the Tanjung Jabung Barat (Tanjabbar) Regency Revenue Agency. Identifying the respondent profiles was intended to provide a general overview of the participants' backgrounds and serve as a basis for further analysis of the research findings. A description of the respondent characteristics is presented below.

Table 1. Respondent Profile

No	Respondent Profile	Amount	Percentage (%)
1	**Gender**		
	Man	70	70
	Woman	30	30
2	**Age Group (Years)**		
	< 25	4	4
	25 – 35	52	52
	36 – 45	33	33
	46 – 55	8	8
	> 55	3	3
3	**Education**		
	Senior High School	24	24
	Diploma	5	5
	Bachelor	66	66
	Master	21	21,1
4	**Respondent's Occupation**		
	Civil Servants	31	31
	TNI/Polri	14	14
	Private Sector Employees	14	14
	Self-Employed	25	25
	Farmers/Fishermen	16	16

Source: Questionnaire data processing results (2025).

Description of Research Variables

The descriptive statistical analysis in this study aims to describe the observed variables through a Likert-scale questionnaire. The study covers four main variables: system quality, work facilities, work effectiveness, and service quality at the Tanjabbar Regency Regional Revenue Agency. Each indicator within these variables is designed to represent the actual conditions within the agency, with each question item having a specific classification that captures the real situation on the ground.

Table 2. Description of Research Variables

No	Hipotesis	Score	Range	Results
1.	X1_System Quality	3.735	3.400 – 4.199	Good
2.	X2_Work Facilities	4.811	4.429 – 5.459	Good
3.	Y_Work Effectiveness	3.324	3.060 – 3.779	Tall
4.	Z_Quality of Public Services	4.441	4.080 – 5.039	Good

Source: Questionnaire data processing results (2025).

Data Analysis Results

a. Measurement Model Analysis (Outer Model)

The outer model assessment in PLS-SEM analysis using SmartPLS 3.0 covers three main aspects: convergent validity, discriminant validity, and composite reliability. Convergent validity in the reflective indicator measurement model is evaluated through the correlation between item/component scores generated by SmartPLS 3.0. An indicator is considered to meet the criteria if it has a loading factor value of at least 0.70 against the measured construct. In this study, the loading factor threshold value was set at 0.70 as the evaluation standard. The test results show the following findings:

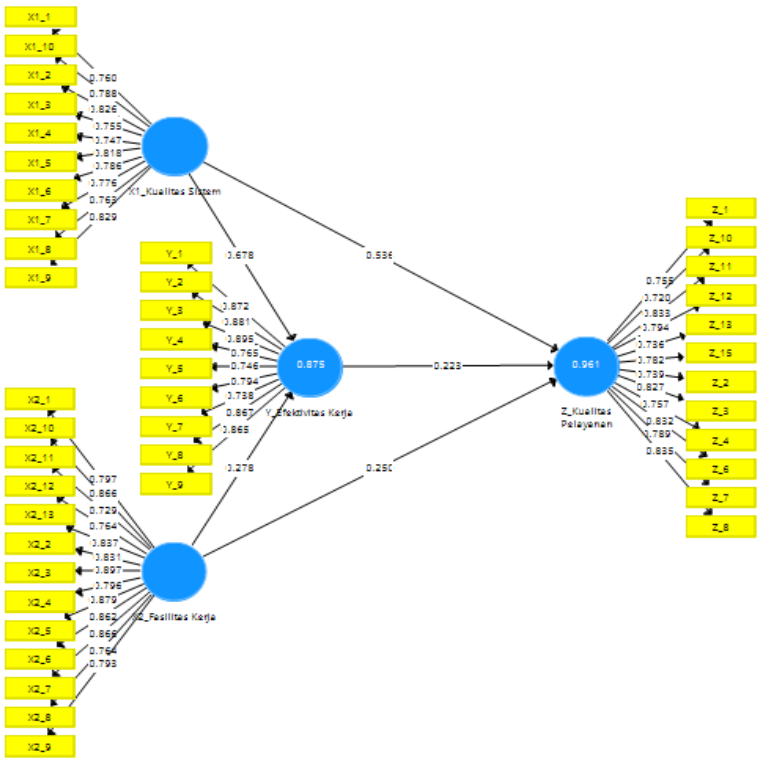

Figure 1. Outer Model

Based on the results of data processing using PLS presented in Figure 1, it is known that all indicators in this study have outer loading values that exceed the rule of thumb value of 0.70. Where the lowest outer loading value was recorded for indicator Z_10 at 0.720, while the

highest value was obtained for indicator X2_3 with a score of 0.897. Thus, the study can proceed to the next stage of analysis.

In addition, the Composite Reliability (CR) results obtained also have high values. Where the CR value for the variable System Quality (X1) is 0.941, Work Facilities (X2) is 0.965, Work Effectiveness (Y) is 0.951, and Public Service Quality (Z) is 0.950. All of these values are above the recommended minimum figure, which is 0.70, as stated by Hair et al. (2019), which indicates that all constructs in this study are reliable.

b. Structural Model Analysis (Inner Model)

After all constructs in this study successfully met the requirements of convergent validity, discriminant validity, and composite reliability, the analysis stage continued by evaluating the structural model. This evaluation process includes two main aspects: (1) testing the coefficient of determination (R-Square) to measure the predictive power of the model, and (2) effect size analysis (F-Square) to assess the contribution of each predictor variable to the dependent variable.

1) Nilai R–*Square* (*Coefficient of determination*)

The results of the calculation of the coefficient of determination for this research model are presented in the following table:

Table 3. R Square Value

	R Square	Adjusted R Square
Y_Work Effectiveness	0,875	0,873
Z_Quality of Public Services	0,961	0,960

Source: SmartPLS 3.0 output (2025).

Based on Table 3, this research model shows excellent predictive power, as reflected by the high R-Square and Adjusted R-Square values for both endogenous variables. For the work effectiveness variable, the R-Square value is 0.875 and the Adjusted R-Square value is 0.873. This figure indicates that 87.3%–87.5% of the variance in work effectiveness can be explained by exogenous constructs (system quality and work facilities), this value is considered strong based on the criteria of Hair et al. (2017) ($R^2 > 0.75$).

Meanwhile, for the service quality variable, the R-Square value was 0.961 (96.1%), and the Adjusted R-Square value was 0.960. This means that 96%–96.1% of the service quality variance is predicted by the exogenous constructs (system quality and work facilities), including work effectiveness as a mediator. This value is considered very strong ($R^2 > 0.75$).

2) F–*Square* (*f^2 Effect Size*)

The results of the F-square calculation for this research model are presented in the following table:

Table 4. *F-Square Value*

	Y_Work Effectiveness	Z_Quality of Public Services
X1_System Quality	**0,696**	**0,825**
X2_Work Facilities	0,117	**0,273**
Y_Work Effectiveness		**0,160**

Source: SmartPLS 3.0 output (2025).

Based on the results of the SmartPLS analysis presented in Table 4, the influence of the research variables can be interpreted as follows:

a) The Effect of System Quality (X1): Has an f-square value of 0.696 on Work Effectiveness (Y) and 0.825 on Public Service Quality (Z). This value indicates a strong influence (f-square > 0.35), meaning that system quality contributes significantly to improving employee work effectiveness and public service quality. This indicates that

improvements in information technology systems or work procedures will have a significant impact on organizational performance.

b) The Effect of Work Facilities (X2): The f-square value of 0.117 on Work Effectiveness (Y) and 0.273 on Public Service Quality (Z) falls into the weak to moderate influence category (0.02 < f-square < 0.35). Despite the positive influence, work facilities are not a dominant factor. This means that the provision of physical facilities such as workspace or equipment needs to be supported by other factors for optimal results.

c) The Effect of Work Effectiveness (Y) on Public Service Quality (Z): The f-square value of 0.160 indicates a weak influence. This suggests that employee work effectiveness alone is not sufficient to ensure service quality. supporting variables such as training or reward systems are required.

c. Hasil Pengujian Hipotesis

The hypothesis in this study can be declared accepted if the results are in accordance with the Rule of Thumb, if the p-value <0.05, or t-statistic > 1.96, the significance value that can be used (one-tailed) t-value 1.96 (Significance level = 5%). The research construct relationship model using the bootstrapping method can be seen in the following figure.

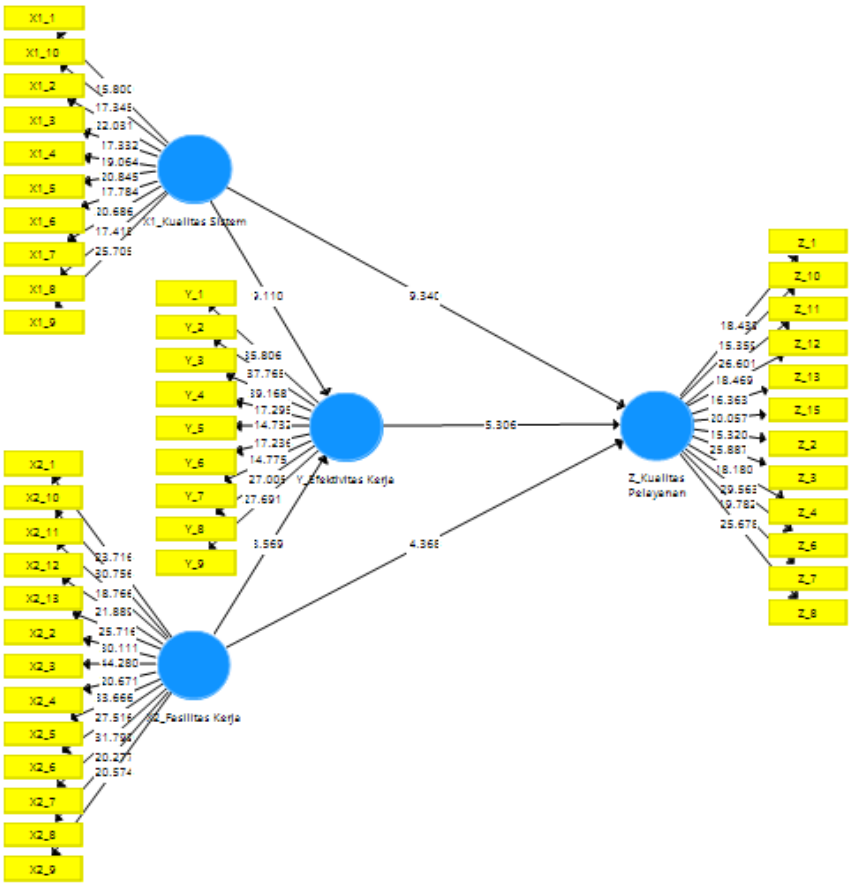

Figure 2. Research Construct Relationship Model Using Bootstrapping Method

Based on the results of the inter-construct relationship modeling obtained, the next step is to conduct a statistical evaluation using the bootstrapping technique in SmartPLS 3.0. This analysis will comprehensively describe both the direct and indirect influences between the research variables, with the following explanation:

Table 5. Hypothesis Test Result

	Original Sample (O)	T Statistics (|O/STDEV|)	P Values	Hypothesis

X1 System Quality -> Y Work Effectiveness	0,678	9,110	**0,000**	**Accepted**
X2_Work Facilities -> Y_Work Effectiveness	0,278	3,569	**0,000**	**Accepted**
X1_System Quality -> Z_Public Service Quality	0,536	9,340	**0,000**	**Accepted**
X2_Work Facilities -> Z_Quality of Public Services	0,250	4,368	**0,000**	**Accepted**
Y_ Work Effectiveness -> Z_ Quality of Public Services	0,223	5,306	**0,000**	**Accepted**
X1_System Quality -> Y_Work Effectiveness -> Z_Service Quality	0,151	4,194	**0,000**	**Accepted**
X2_Work Facilities -> Y_Work Effectiveness -> Z_Service Quality	0,062	3,250	**0,001**	**Accepted**

Source: SmartPLS 3.0 output (2025).

The results of direct and indirect hypothesis testing obtained a T-statistic value > rule of thumb (1.96) and P value < 0.05 (5%), with these results it can be concluded that all direct and indirect influence hypotheses are accepted.

Discussion

The results of the study indicate that system quality significantly influences employee performance at the Regional Revenue Agency of West Tanjung Jabung Regency. This is in line with the information systems success model developed by DeLone and McLean (2003), which states that system quality is a key factor in increasing user satisfaction and organizational effectiveness. A reliable tax information system enables employees to process data quickly and accurately, while minimizing input errors. Conversely, technical disruptions such as server downtime, application bugs, or internet network issues will hamper employee performance and slow down public services. This condition is also reflected in Regional Revenue Agency data for the 2020–2024 period, which indicates that recurring disruptions continue to occur in the regional tax service system.

In addition to system quality, work facilities have also been shown to influence employee effectiveness. Adequate facilities, from computers and printers to internet access to a suitable workspace, support employees in working more productively. Robbins and Judge (2015) confirmed that a good physical environment significantly influences employee satisfaction and work behavior. This finding is consistent with research by Sedarmayanti (2017), which found that complete and well-maintained work facilities can increase employee motivation and performance. Conversely, limited facilities, such as cramped workspaces or slow internet access, can cause frustration and negatively impact public service delivery.

Employee work effectiveness is a crucial variable mediating the relationship between system quality and work facilities and public service quality. This study's findings support Gibson, Ivancevich, and Donnelly's (2009) assertion that work effectiveness is related to the ability of individuals and groups to achieve optimal work results through efficient resource utilization. Regional Revenue Agency employees who work with the support of digital systems and appropriate facilities are able to provide faster, more accurate, and more friendly services to the public. Conversely, if work effectiveness declines, the public will experience the impact in the form of slow, inconsistent, and less satisfactory service.

Furthermore, the results of this study also indicate that the quality of public services at the Regional Revenue Agency of West Tanjung Jabung Regency remains in the "Good" category, but tends to stagnate. The Public Service Performance Index (IKPP) for the 2020–2024 period shows a relatively stable average value without significant improvement, particularly in indicators of officer attitudes, complaint handling, and customer satisfaction. This aligns with the findings of Zeithaml, Parasuraman, and Berry (1990) that the quality of public services is measured not only by technical aspects but also by the public's experience during service delivery. Therefore, even though systems and facilities are supportive, service

quality still depends on the behavior and responsiveness of employees in interacting with the public.

This research emphasizes the relevance of bureaucratic reform in the public service sector, particularly in improving the quality of technology-based services and work facilities. Consistent with Gil-Garcia, Dawes, and Pardo (2018), digital transformation of government will be successful if supported by effective staff performance. Therefore, the Regional Revenue Agency of West Tanjung Jabung Regency needs to continue improving by enhancing system quality, maintaining work facilities, and strengthening employee capacity. These comprehensive improvements are expected to encourage increased public satisfaction while strengthening the legitimacy of the local government in providing public services.

CONCLUSION

This study demonstrates that the quality of work systems and facilities plays a crucial role in improving employee effectiveness at the Regional Revenue Agency (BPRD) of West Tanjung Jabung Regency. A stable, fast, and secure information system has been shown to support smooth administrative processes and increase user satisfaction. Similarly, the availability of adequate work facilities, from technological devices to physical infrastructure, contributes to employee comfort, motivation, and productivity. High work effectiveness ultimately has a direct impact on the quality of public services, both in terms of speed, accuracy, and public satisfaction. Although the public service index of the BPRD remains in the "Good" category, the results of this study emphasize the need for more serious improvement efforts to improve service quality towards the "Very Good" category and meet public expectations. Therefore, this study reinforces the importance of digital-based bureaucratic reform, strengthening work facilities, and increasing employee capacity as key strategies in building professional, transparent, and accountable public services.

Although this study makes important empirical contributions, several limitations should be noted. First, the study only used a sample of 100 taxpayer respondents using an accidental sampling technique, so the results cannot be fully generalized to the entire taxpayer population in West Tanjung Jabung Regency. Second, the research variables focused on system quality, work facilities, work effectiveness, and public service quality, while other factors such as leadership, organizational culture, or individual motivation were not analyzed in depth. Third, the use of questionnaire data with a Likert scale allows for subjective bias among respondents in providing answers. Furthermore, this study was only conducted at one agency, the Regional Revenue Agency of West Tanjung Jabung Regency, so the results are contextual and may differ if applied to other public agencies. Therefore, future research is expected to expand the sample size, include additional variables, and use mixed methods (quantitative and qualitative) to obtain more comprehensive results.

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