

HUMAN RESOURCE PLANNING AND TECHNOLOGY INTEGRATION AS PREDICTORS OF PUBLIC SERVICE PERFORMANCE

Nurbaiti^{a)}, Muhammad Irwansyah Hasibuan^{b)}, Mhd. Amin^{c)}

Management Study Program, Universitas Labuhanbatu, Rantauprapat, Indonesia

**)Corresponding Author: mhd_amin@ulb.ac.id*

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Abstract. This study aims to analyze the relationships between human resource planning, technology integration, and public service performance among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency, Indonesia. A quantitative approach using a survey method was employed. The study population consisted of 92 employees, with a minimum sample size of 75 respondents determined using Slovin's formula at a 5% margin of error. Simple random sampling was selected, and data were collected using a structured questionnaire with a five-point Likert scale. Data analysis included validity and reliability tests, multiple linear regression, partial t-tests, and an F-test. The preliminary findings indicate that human resource planning has a positive but statistically insignificant relationship with public service performance, whereas technology integration demonstrates a positive and statistically significant relationship. The overall regression model was also reported to be statistically significant, although the original statistical output still requires verification. These findings highlight the importance of integrating digital technologies into administrative processes while strengthening competency-based human resource planning. This study contributes to the public-sector management literature by examining human resource planning and technology integration within the institutional context of regional financial and asset management. The practical implications emphasize the development of integrated information systems, enhancement of employees' digital competencies, and more effective human resource management to support responsive and accountable public administration.

Keywords: Human Resource Planning; Technology Integration; Public Service Performance; Digital Transformation; Public Administration.

I. INTRODUCTION

Public service performance is increasingly shaped by the capacity of government organizations to align people, processes, information, and technology. Citizens and institutional stakeholders expect public agencies to provide services that are timely, accurate, transparent, accountable, and responsive, while internal administrative units are simultaneously required to comply with increasingly complex regulatory and reporting demands. Digital transformation has therefore become more than the conversion of paper-based activities into electronic transactions. It involves changes in work routines, information flows, organizational responsibilities, and the relationships through which public value is created. Mergel, Edelman, and Haug (2019) describe public-sector digital transformation as an organizationally embedded process in which technology changes service delivery and internal modes of working, while Tangi et al. (2021) show that managerial and organizational conditions remain central to whether digital technologies generate meaningful transformation. This perspective is particularly relevant for local government agencies whose service performance depends on both administrative capability and reliable digital systems.

The public-value literature provides a useful basis for understanding why internal performance matters. Twizeyimana and Andersson (2019) identify improved public services, improved administration, and broader social value as major dimensions through which e-government can create value. These dimensions imply that technology should not be assessed only by whether an application exists, but by whether it improves administrative efficiency, data quality, professionalism, accessibility, and service outcomes. Recent reviews reach a similar conclusion. Fischer, Heuberger, and Heine (2021) show that studies of public-sector digitalization frequently report effects on efficiency and

performance, but they also emphasize that impacts depend on organizational context. Haug, Dan, and Mergel (2024) further demonstrate that digitally induced change tends to accumulate through incremental adjustments in structures, routines, roles, and capabilities. Accordingly, the performance of a public agency is likely to reflect not one isolated input but the interaction of workforce readiness and digital work integration.

Human resource planning is one of the organizational mechanisms through which workforce readiness should be created. In strategic terms, workforce planning links future work requirements with the number, placement, competence, and development of employees. It is intended to reduce mismatches between organizational needs and available human capital, anticipate skill gaps, and provide a basis for recruitment, deployment, training, and succession decisions. In public organizations, this task is especially important because staffing decisions are constrained by formal structures, public accountability, and changing service obligations. Knies, Boselie, Gould-Williams, and Vandenabeele (2024) argue that the relationship between strategic human resource management and public-sector performance is highly context dependent; practices generate value when they are aligned with the institutional and organizational setting in which employees work. Workforce planning is therefore expected to contribute to performance, but its effect may be indirect, delayed, or contingent on implementation quality.

Contemporary workforce planning is also becoming more data intensive. Human resource analytics and people analytics are designed to improve decisions about workforce supply, capability, deployment, and future needs. Marler and Boudreau (2017) show that HR analytics has potential strategic value but that its adoption and performance evidence remain uneven. Minbaeva (2018) similarly emphasizes that credible human-capital analytics requires data quality, analytical capability, and the organizational ability to act on evidence. Tursunbayeva, Di Lauro, and Pagliari (2018)

demonstrate that people analytics increasingly connects human-resource decisions with digital tools and organizational strategy. These studies suggest that human resource planning may be most effective when it is supported by integrated information and translated into operational decisions rather than treated as a periodic administrative exercise.

Technology integration represents the technical and process side of this alignment. Technology integration is not simply the presence of computers or digital applications; it refers to the extent to which digital tools are embedded in routine work, connected to information needs, accessible to employees, and capable of improving the speed and reliability of task completion. Vial (2019) conceptualizes digital transformation as a process in which digital technologies trigger strategic responses and organizational changes that alter value creation. Verhoef et al. (2021) likewise distinguish digitization from broader digital transformation and stress that organizations require capabilities, structures, and performance metrics that match digital ways of working. At the operational level, Ganbold, Matsui, and Rotaru (2021) show that technology-enabled integration can improve operational performance by strengthening coordination and information flows. In the public sector, these mechanisms can translate into faster data access, fewer administrative errors, more consistent procedures, and better support for service decisions.

Evidence from Indonesian public organizations strengthens the relevance of this relationship. Jabid et al. (2023), studying the Government of Ternate City, show that technology acceptance and enabling conditions are related to employee performance and job satisfaction. Rahayu, Fadila, and Purnomo (2024) report that e-government system policy influences employee performance and, through employee performance, the effectiveness of public services in the Regional Government of Pesawaran Regency. More recent work on local-government personnel digitalization also emphasizes the role of digital systems in procedural transparency and administrative accountability (Tambaip, Ningrum, & Muttaqin, 2026). These studies indicate that the benefits of digital systems depend not only on technical deployment but also on employees' ability to use the systems and on their integration into real work processes.

The Regional Financial and Asset Management Agency of Labuhanbatu Regency (BPKAD Kabupaten Labuhanbatu) provides an important empirical setting for examining these issues. The agency carries responsibilities related to regional financial and asset administration, activities that require accurate information, timely processing, coordination, and compliance. Within such a setting, human resource planning should help ensure that employees are appropriately allocated and supported, while technology integration should facilitate information access and more efficient execution of administrative tasks. The source manuscript nevertheless indicates a practical tension: workforce planning is formally recognized as important, yet its immediate relationship with service performance may be weaker than the contribution of technology integration. This creates an empirical question that is meaningful for both public management and digital-government research.

The study addresses three gaps. First, much of the digital-transformation literature focuses on transformation programs, citizen-facing platforms, or macro-level outcomes, while fewer studies examine how routine technology integration is associated with employee-reported service performance inside a local financial-management agency. Second, strategic HRM and workforce-planning research often evaluates human-resource practices separately from the digital work environment, even though contemporary public work increasingly depends on integrated information systems. Third, there is limited evidence on whether human resource planning and technology integration display similar or different partial relationships with service

performance in Indonesian local government. Distinguishing these relationships is important because a statistically significant overall model does not imply that every management practice contributes equally.

Accordingly, this study analyzes human resource planning and technology integration as predictors of public service performance among employees of BPKAD Kabupaten Labuhanbatu. The contribution is twofold. Empirically, it reports the relative partial effects of the two predictors using the statistical output available from the study. Conceptually, it interprets the findings through an alignment perspective: workforce planning provides the intended human-capital architecture, while technology integration provides an immediate operational infrastructure for executing public work. The study therefore asks whether formal workforce planning is already translated into observable service performance and whether digital integration has a more direct association with employees' ability to deliver timely and effective services.

II. LITERATURE REVIEW

Human Resource Planning and Public Service Performance

Human resource planning is a systematic process for anticipating workforce requirements and aligning them with organizational goals. Its core functions include forecasting personnel needs, assessing current workforce availability, identifying competency gaps, planning deployment, and designing responses such as recruitment, development, reassignment, and succession. In public organizations, these functions are complicated by formal staffing structures, civil-service rules, budget constraints, and the obligation to provide continuity of service. Strategic workforce planning therefore has value when it connects future workload and service priorities with concrete human-capital decisions rather than merely documenting headcount. Jaillet, Loke, and Sim (2022), using a workforce-planning model with data from the Singapore Civil Service, illustrate how planning problems involve uncertainty, target constraints, organizational renewal, and time-based progression. Their work reinforces the idea that workforce planning is fundamentally a decision problem under changing conditions.

From a strategic HRM perspective, the performance effect of planning depends on implementation and context. Knies et al. (2024) emphasize that public-sector HRM cannot be separated from institutional conditions, managerial discretion, and the characteristics of public service work. Similarly, Ubah and Ibrahim (2021) find a positive relationship between human resource planning and public-sector organizational performance in Nigeria, but their findings also point to the importance of recruitment and institutional conditions. These studies support a general expectation that workforce planning should improve role fit, staffing adequacy, and competence deployment. However, they do not imply that a planning document automatically changes frontline or administrative performance. A plan influences outcomes only when it is translated into staffing, training, role clarification, workload balancing, and managerial follow-through.

Digitalization further changes the meaning of adequate workforce planning. Organizations increasingly require employees who can work with digital systems, interpret information, coordinate across applications, and adapt to changing procedures. Marler and Boudreau (2017) note that HR analytics can support more evidence-based workforce decisions, while Minbaeva (2018) argues that analytical value emerges only when organizations combine reliable data, analytical capabilities, and the ability to act. Tursunbayeva et al. (2018) similarly show that people analytics is moving HRM toward data-driven strategic contributions. For local government, this implies that workforce planning should not only estimate the number of staff but also identify digital competencies and the capacity required to operate integrated systems.

The measurement of human resource planning in this study reflects three practical dimensions: planning employee needs, placing employees in accordance with capability and field of work, and developing clear work programs that help employees perform tasks effectively. These indicators represent the translation of planning into organizational arrangements visible to employees. A strong score should therefore signal that staffing needs are considered systematically, personnel are allocated with attention to competence, and planned work supports task execution. If such planning is meaningful in daily operations, a positive relationship with service performance would be expected. Conversely, a weak or nonsignificant relationship may indicate that formal planning is not yet sufficiently enacted, that other variables dominate short-term performance, or that planning operates through mediating mechanisms not included in the model.

On this basis, the first hypothesis is formulated as follows: H1: Human resource planning has a positive and significant relationship with public service performance.

Technology Integration and Public Service Performance

Technology integration refers to the embedded, coordinated use of digital tools and information systems in organizational processes. The distinction between technology availability and technology integration is important. An organization can possess hardware and software without achieving integration if systems remain fragmented, employees cannot access needed information efficiently, or digital tools are not connected to real work processes. Mergel et al. (2019) emphasize that public-sector digital transformation requires changes in service processes and organizational practices rather than simple conversion from analog to digital. Tangi et al. (2021) similarly find that digital government transformation depends on managerial activities and organizational conditions, and that technology alone does not automatically reshape culture or structure.

At the employee level, integrated technology can improve performance through several mechanisms. First, it can reduce search and processing time by making information more accessible. Second, it can improve accuracy by standardizing data entry, calculations, and workflow controls. Third, it can strengthen coordination by allowing information to be shared across tasks or organizational units. Fourth, it can increase traceability and transparency, which are particularly important in public administration. Ganbold et al. (2021) provide evidence that information-technology capabilities support integration and operational performance, while Gupta, Lakhera, and Sharma (2024) show that emerging digital technologies can reshape employee performance through productivity, engagement, skill development, and new human-machine relationships. These benefits are not automatic, because poorly designed systems can also create complexity and technostress, but integration that fits the work process can produce immediate operational gains.

Public-sector research increasingly links digitalization with service outcomes. Twizeyimana and Andersson (2019) identify improved services and improved administration as central forms of public value created by e-government. Tangi, Benedetti, Gastaldi, Noci, and Russo (2021) show that digital public-service strategies must consider both channel design and the characteristics of users and intermediaries. Fischer et al. (2021) find that efficiency and performance are among the most frequently examined impacts of digitalization in the public sector, and Escobar, Almeida, and Varajao (2023) identify organizational, technological, and process factors as recurring conditions of successful public-sector digital transformation. Taken together, these studies suggest that digital systems generate value when they are institutionalized within work routines and supported by appropriate organizational capabilities.

The Indonesian evidence is consistent with this logic. Jabid et al. (2023) show that system quality and facilitating conditions are

important in technology acceptance within local government and that employee performance is linked with job satisfaction. Rahayu et al. (2024) report that e-government policy has an important relationship with employee performance and service effectiveness. Tambaip et al. (2026) demonstrate that digitalization of personnel management can contribute to new public-service delivery, particularly through procedural transparency and administrative accountability. The present study operationalizes technology integration through employees' use of information technology, the ease with which technology supports task completion, rapid access to information, ability to use available applications, efficiency gains, and support for service quality.

Accordingly, the second hypothesis is formulated as follows: H2: Technology integration has a positive and significant relationship with public service performance.

Public Service Performance

Public service performance in this study refers to employees' ability to deliver work and services in accordance with organizational expectations, procedures, timeliness, information quality, and service needs. The construct is measured through service accuracy and timeliness, compliance with procedures, courteous service behavior, clarity of information, fulfillment of community needs, and perceived satisfaction with the service provided. This operationalization combines task performance and service-quality elements. It is therefore narrower than broad public value, but it is directly relevant to the employee-level processes through which public organizations convert resources into services.

Digital-government research cautions that performance should not be reduced to technology adoption. Dobrolyubova (2021) notes that measuring the outcomes of digital transformation in public administration remains challenging because outputs, outcomes, and stakeholder benefits are often conflated. Haug et al. (2024) similarly show that digital change involves multiple incremental outcomes across organizational levels. For the present study, the dependent variable is explicitly employee-reported service performance rather than citizen-level welfare, institutional trust, or objective financial outcomes. This distinction is important for interpreting the regression results: the model explains variation in perceived service-performance practices among employees, not the full performance of the local government or the satisfaction of all citizens.

Integrated Framework and Hypotheses

The study combines a human-capital predictor and a technology-process predictor in one model. Human resource planning is expected to improve performance by aligning employee availability, placement, and work programs with organizational needs. Technology integration is expected to improve performance by enabling faster access to information, more efficient task execution, and better support for service processes. The model does not test an interaction effect between the two predictors; rather, it estimates their separate partial coefficients while controlling for the other predictor and evaluates whether the predictor set is significant overall. This distinction is important because a significant F test shows that the regression model explains a statistically significant share of variance, but it does not by itself demonstrate synergy or complementarity.

The conceptual logic is summarized in Figure 1. The two direct paths are estimated simultaneously, allowing the relative standardized coefficients and significance levels to be compared.

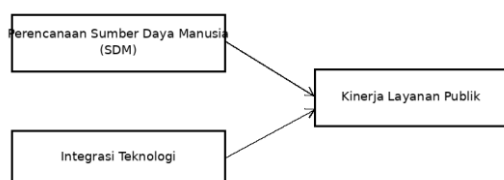


Figure 1. Conceptual framework

H3: Human resource planning and technology integration, considered jointly as a predictor set, significantly explain public service performance.

III. RESEARCH METHOD

This study employs a quantitative approach using a survey method, as quantitative research enables researchers to examine relationships among variables through objective and measurable statistical analysis. Sugiyono (2019) explains that quantitative research is used to test hypotheses by measuring variables operationalized through research instruments. The survey method was selected because it allows researchers to collect primary data directly from respondents regarding their perceptions of human resource planning, technology integration, and public service performance. According to Creswell (2014), survey research is appropriate for examining relationships among variables and analyzing population trends within a specific period. Accordingly, this approach provides a comprehensive understanding of the research phenomena at the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency.

The research was conducted at BPKAD Labuhanbatu Regency, an institution with strategic responsibilities in regional financial and asset management. This institution was selected because its organizational characteristics are relevant to the examination of employee performance, human resource planning, and technology integration. The research was planned to be conducted over three months, covering preparation, data collection, instrument testing, and data analysis. The research location was selected purposively because its institutional characteristics align with the research objectives. According to Nazir (2014), purposive selection of a research location is appropriate when a study focuses on a specific institution considered relevant to addressing its research questions.

The population of this study consists of all 92 employees of BPKAD Labuhanbatu Regency. These employees were considered relevant to the research because their responsibilities are directly related to human resource planning, technology integration, and public service performance. The sampling technique employed is simple random sampling, which provides every member of the population with an equal probability of being selected as a respondent. According to Sugiyono (2019), simple random sampling is appropriate when the population is relatively homogeneous in terms of its basic characteristics. Considering the relatively small population, the minimum sample size was calculated using Slovin's formula with a 5% margin of error, as follows:

$$n = \frac{N}{1 + N(e)^2}$$

$$n = \frac{92}{1 + 92(0.05)^2} = \frac{92}{1.23} = 74.80 \approx 75$$

Accordingly, the minimum sample size required for this study is 75 respondents. Given the relatively small population, the study also considers the possibility of employing total sampling (a census), involving all employees of BPKAD Labuhanbatu Regency to achieve more comprehensive population coverage. The final sample size will

be determined based on respondent availability and the completeness of the data collected during the research.

Data were collected using a structured questionnaire as the primary research instrument. The questionnaire employs a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), to measure respondents' perceptions of each research variable. According to Arikunto (2016), questionnaires are an effective data collection technique in quantitative research involving large populations and requiring standardized responses. In addition to questionnaires, documentation was used to obtain supporting information, including the organizational structure, number of employees, and human resource planning policies at BPKAD. Before distribution, the research instrument was designed to undergo validity testing, including construct and item validity, as well as reliability testing using Cronbach's alpha. Validity testing aims to determine whether the instrument accurately measures the intended variables, while reliability testing assesses the internal consistency of the measurement items (Ghozali, 2018).

Data analysis was conducted in several stages. First, descriptive statistical analysis was used to describe respondent characteristics and the mean scores of the research variables. Second, instrument quality was assessed through validity and reliability testing using SPSS or other statistical software. Third, classical assumption tests, including normality, multicollinearity, and heteroscedasticity tests, were conducted to evaluate the appropriateness of the regression model. Subsequently, multiple linear regression analysis was employed to examine the relationships between human resource planning, technology integration, and public service performance. According to Gujarati and Porter (2009), multiple regression analysis can be used to estimate the individual contributions of independent variables while controlling for other variables included in the model. The regression model is expressed as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Hypothesis testing was performed using t-tests to evaluate the individual relationships between the independent variables and public service performance, while an F-test was used to assess their joint statistical significance. Furthermore, the coefficient of determination (R^2) was calculated to determine the proportion of variance in public service performance explained by human resource planning and technology integration. The significance level was set at $p < 0.05$. Through these analytical procedures, the study is expected to provide valid empirical evidence regarding the relationships between human resource planning, technology integration, and public service performance among employees of BPKAD Labuhanbatu Regency.

IV. RESULTS AND DISCUSSION

4.1. Validity Test

The validity test was conducted using Pearson's Product Moment correlation to assess the ability of each questionnaire item to measure human resource planning, technology integration, and public service performance. The test was performed at a 5% significance level by comparing the calculated correlation coefficient (r-value) with the critical value (r-table). An item was considered valid if its calculated r-value exceeded the critical value. For 75 respondents, the critical correlation coefficient for a two-tailed test is approximately 0.227. The results of the instrument validity test are presented in Table 1. correlation coefficient is approximately 0.227. The reported item correlations are presented in Table 1.

Table 1. Results of the Validity Test

Variable	Item	r-value	Result
Human Resource Planning (X1)	PSDM1	0.703	Valid
	PSDM2	0.723	Valid

	PSDM3	0.680	Valid
	PSDM4	0.764	Valid
	PSDM5	0.745	Valid
	PSDM6	0.730	Valid
Technology Integration (X2)	IT1	0.895	Valid
	IT2	0.754	Valid
	IT3	0.926	Valid
	IT4	0.834	Valid
	IT5	0.786	Valid
	IT6	0.820	Valid
Public Service Performance (Y)	KL1	0.867	Valid
	KL2	0.845	Valid
	KL3	0.861	Valid
	KL4	0.839	Valid
	KL5	0.763	Valid
	KL6	0.843	Valid

Source: Primary data processed by the authors (2026)

As presented in Table 1, all 18 questionnaire items met the established validity criteria. Human resource planning produced correlation coefficients ranging from 0.680 to 0.764, while technology integration yielded coefficients ranging from 0.754 to 0.926. Meanwhile, public service performance recorded correlation coefficients ranging from 0.763 to 0.867. All coefficients exceeded the critical value used in the test. Therefore, all questionnaire items satisfied the item-validity criteria and were considered suitable for subsequent statistical analysis.

4.2. Reliability Test

The reliability test was conducted using Cronbach's alpha to evaluate the internal consistency of the research instruments. An instrument was considered reliable if its Cronbach's alpha coefficient was at least 0.70. This test aimed to ensure that the questionnaire items for each variable demonstrated adequate consistency in measuring their respective constructs. The reliability test results are presented in Table 2.

Table 2. Results of the Reliability Test

Variable	Cronbach's Alpha	Number of Items	Result
Human Resource Planning (X1)	0.959	6	Reliable
Technology Integration (X2)	0.942	6	Reliable
Public Service Performance (Y)	0.934	6	Reliable

Source: Primary data processed by the authors (2026)

As shown in Table 2, human resource planning obtained a Cronbach's alpha coefficient of 0.959, followed by technology integration at 0.942 and public service performance at 0.934. All coefficients exceeded the minimum threshold of 0.70, indicating that the three instruments demonstrated very high internal consistency. Therefore, all research instruments met the reliability criteria and were considered suitable for subsequent statistical analysis.

4.3. Multiple Linear Regression Analysis

Multiple linear regression analysis was employed to examine the relationships between human resource planning (X1), technology integration (X2), and public service performance (Y) among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency. The analysis aimed to determine the direction and magnitude of the relationship between each independent variable and public service performance. The reported regression coefficients are presented in Table 3.

Table 3. Multiple Linear Regression Results

Variable	B	Std. Error	t	Sig.
Constant	5.217	2.024	2.578	0.012
Human Resource Planning (X1)	0.080	0.065	1.231	0.222

Technology Integration (X2)	0.567	0.109	5.202	<0.001
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Source: Primary data processed by the authors (2026)

Based on the reported unstandardized coefficients, the estimated regression equation is expressed as follows:

$$Y = 5,217 + 0,080X_1 + 0,567X_2 + \varepsilon$$

The results indicate that human resource planning has a regression coefficient of 0.080, suggesting a positive relationship with public service performance. Meanwhile, technology integration has a regression coefficient of 0.567, also indicating a positive relationship. Based on the reported significance values, human resource planning does not demonstrate a statistically significant relationship with public service performance, whereas technology integration exhibits a positive and statistically significant relationship with public service performance.

4.4. Simultaneous Hypothesis Testing

The F-test was employed to examine the joint statistical significance of human resource planning (X1) and technology integration (X2) in explaining variations in public service performance (Y) among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency. Hypothesis testing was conducted at a 5% significance level ($\alpha = 0.05$). The analysis of variance (ANOVA) results are presented in Table 4.

Table 4. Results of the Simultaneous F-Test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	681.327	2	340.664	45.349	<0.001
Residual	540.869	72	7.512	—	—
Total	1222.196	74	—	—	—

Source: Primary data processed by the authors (2026)

Based on the simultaneous hypothesis testing results presented in Table 4, the F-statistic was 45.349, with a significance level of $p < 0.001$, which is below the 0.05 threshold. These results indicate that human resource planning and technology integration are jointly and significantly associated with public service performance among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency. Accordingly, the third hypothesis (H3) is supported. Nevertheless, the overall significance of the regression model does not necessarily indicate that each independent variable has a statistically significant individual relationship with public service performance. The contribution of each variable is examined through the partial t-tests.

4.5. Coefficient of Determination

The coefficient of determination (R^2) was used to assess the ability of human resource planning and technology integration to explain variations in public service performance among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency. The model summary is presented in Table 5.

Table 5. Results of the Coefficient of Determination

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.747	0.557	0.545	2.741

Source: Primary data processed by the authors (2026)

As presented in Table 5, the R Square value of 0.557 indicates that human resource planning and technology integration collectively explain 55.7% of the variation in public service performance, while the remaining 44.3% represents variation not explained by the research model. Furthermore, the adjusted R Square of 0.545 indicates that, after accounting for the number of independent variables and the sample size, the model explains approximately 54.5% of the variation in public service performance.

4.6. Discussion

4.6.1. Human Resource Planning and Public Service Performance

The results indicate that human resource planning has a positive but statistically insignificant relationship with public service performance among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency. This finding suggests that human resource planning does not make a statistically significant partial contribution to explaining variations in public service performance after accounting for technology integration. This condition may be associated with a gap between human resource planning and its implementation within organizational activities. Workforce planning that is not adequately supported by competency-based employee placement, skills development, and continuous performance evaluation may have a limited contribution to improving administrative service performance. Nevertheless, this possibility requires further empirical investigation, as the implementation mechanisms of human resource planning were not specifically examined in this study.

This finding can be explained through the perspective of strategic human resource management, which emphasizes the alignment of HR policies, employee competencies, and organizational objectives. Vermeeren (2017) demonstrated that human resource management practices have different relationships with organizational effectiveness, efficiency, and fairness in the public sector. This suggests that the effectiveness of human resource planning depends not only on the accuracy of workforce planning but also on the implementation of policies that optimize employee capabilities. In the context of BPKAD Labuhanbatu Regency, this finding provides a basis for evaluating the alignment between competency requirements, employee placement, and the complexity of regional financial and asset management responsibilities.

4.6.2. Technology Integration and Public Service Performance

The findings reveal that technology integration has a positive and statistically significant relationship with public service performance among BPKAD Labuhanbatu Regency employees. This indicates that employees who perceive higher levels of technology integration also tend to report higher levels of administrative service performance. Technology integration has the potential to improve task effectiveness by enhancing information accessibility, facilitating more systematic financial data processing, and strengthening coordination across organizational units. In regional financial and asset management, interconnected information systems are particularly important because administrative activities require data accuracy, consistent reporting, and timely task completion in accordance with established operational standards.

This finding is consistent with Popa et al. (2024), who demonstrated that digitalization positively contributes to five managerial functions in public-sector organizations: planning, organizing, coordinating, motivating, and controlling. These findings reinforce the relevance of technology integration as an organizational factor associated with public-sector performance. In the context of BPKAD Labuhanbatu Regency, digital infrastructure development should be accompanied by information system interoperability, improved employee digital competencies, and the alignment of work processes with organizational requirements. Accordingly, technology utilization should extend beyond the digitization of administrative procedures to strengthening organizational capabilities in delivering efficient, accurate, and accountable services. However, the relationship identified in this study cannot be interpreted as evidence of causality because the research employed a cross-sectional survey design.

4.6.3. Human Resource Planning, Technology Integration, and Public Service Performance

The simultaneous hypothesis testing results indicate a statistically significant joint relationship between human resource planning, technology integration, and public service performance. However, the partial hypothesis testing results demonstrate that technology integration has a statistically significant relationship with performance, whereas human resource planning does not exhibit a significant partial relationship. This distinction indicates that the overall significance of the regression model should not be interpreted as evidence that each independent variable makes an individually significant contribution. Therefore, the relationships between the two independent variables and public service performance should be interpreted by considering both the partial and simultaneous hypothesis testing results.

From a sociotechnical perspective, human resource management and technology utilization represent two organizational components that should be aligned to support institutional objectives. Ruiz et al. (2024) demonstrated the relevance of integrating human resource strategies and digital technologies to organizational performance in the private sector. Within the context of regional financial administration, this perspective provides a theoretical foundation for understanding the importance of aligning employee competencies, information systems, and administrative responsibilities. Therefore, BPKAD Labuhanbatu Regency should consider human resource development and technology integration as interconnected components of its organizational capacity-building strategy. Nevertheless, the regression model employed in this study did not directly examine the interaction or moderating effects between the two variables. Consequently, the existence of a synergistic effect requires further investigation.

4.6.4 Practical Implications and Research Limitations

The findings provide practical implications for strengthening human resource management and digital transformation at BPKAD Labuhanbatu Regency. The positive and statistically significant relationship between technology integration and public service performance highlights the importance of developing integrated information systems, improving digital infrastructure, and strengthening employees' technological competencies. Meanwhile, the statistically insignificant relationship between human resource planning and public service performance emphasizes the need to evaluate the implementation of workforce planning, particularly competency development, competency-based employee placement, and the effectiveness of human resource development programs. Aligning HR policies with technological requirements may serve as a strategic consideration for strengthening organizational capabilities in managing regional finances and assets effectively, efficiently, and accountably.

Several limitations should be considered when interpreting the findings. First, the cross-sectional survey design limits the study's ability to establish causal relationships among the research variables. Second, the reliance on employee perceptions as the primary data source may introduce subjective bias and may not fully represent service quality as experienced by service users. Third, the study's focus on a single regional government institution limits the generalizability of its findings to public organizations with different institutional characteristics. Future research is therefore encouraged to include a broader range of government institutions, combine perception-based measures with objective performance indicators, and incorporate additional variables such as digital competencies, leadership, and organizational culture. Longitudinal or mixed-method approaches may also provide a more

comprehensive understanding of the relationships between human resource planning, technology integration, and public service performance.

V. CONCLUSIONS

This study aimed to examine the relationships between human resource planning, technology integration, and public service performance among employees of the Regional Financial and Asset Management Agency (BPKAD) of Labuhanbatu Regency. The findings indicate that human resource planning has a positive but statistically insignificant relationship with public service performance. In contrast, technology integration demonstrates a positive and statistically significant relationship with public service performance. Simultaneously, both variables exhibit a statistically significant joint relationship with public service performance. These findings suggest that technology integration is a relevant factor in explaining variations in public service performance, while human resource planning requires further attention, particularly in implementing policies that align employee competencies with organizational needs.

From a practical perspective, this study emphasizes the importance of strengthening information system integration, enhancing employees' digital competencies, and optimizing competency-based human resource planning. BPKAD Labuhanbatu Regency should align human resource development with technology utilization to support more effective, efficient, and accountable administrative service delivery. Given that this study was limited to a single government institution and employed a cross-sectional survey design, future research is recommended to expand its institutional scope, incorporate objective performance indicators, and consider additional variables such as digital leadership, employee competencies, and organizational culture. Longitudinal or mixed-method approaches may also provide a more comprehensive understanding of the relationships between human resource planning, technology integration, and public service performance.

VI. REFERENCES

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