

THE INFLUENCE OF HUMAN RESOURCE QUALITY, WORK DISCIPLINE, SKILLS, AND WORK EFFECTIVENESS ON EMPLOYEE PRODUCTIVITY

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Abstract

Work productivity refers to an employee's ability to produce work effectively and efficiently in accordance with organizational goals. This study aims to examine the influence of human resource quality, work discipline, work skills, and work effectiveness on the work productivity of civil servants (ASN) and non-civil servants (Non-ASN) at the Population and Civil Registration Office of Magetan Regency. A quantitative approach was employed, with questionnaires distributed to 64 respondents (62 ASN and 2 Non-ASN) using a saturated sampling (census) technique. Data were analyzed using validity and reliability tests, classical assumption tests, multiple linear regression, t-tests, and the coefficient of determination (R^2) with the aid of SPSS. The results show that human resource quality ($t = 2.014$; $\text{sig} = 0.049$), work discipline ($t = 2.536$; $\text{sig} = 0.014$), work skills ($t = 2.731$; $\text{sig} = 0.008$), and work effectiveness ($t = 2.029$; $\text{sig} = 0.047$) each have a positive and significant effect on work productivity. The Adjusted R Square value of 0.783 indicates that 78.3% of the variance in work productivity is explained by these four variables, while the remaining 21.7% is explained by factors outside the model. It is recommended that the institution continue to enhance human resource quality, discipline, skills, and work effectiveness through education, training, and ongoing performance evaluation.

Keywords: Human Resource Quality, Work Discipline, Work Skills, Work Effectiveness, Work Productivity.

A. INTRODUCTION

Human resources (HR) are the primary factor influencing employee productivity because they reflect an employee's emotional engagement, commitment, and willingness to contribute

beyond formal obligations to a regional government organization. The Population and Civil Registration Office (Disdukcapil) of Magetan Regency, as a local public service agency, depends heavily on the quality of its human resources to manage administrative and civil registration services for the community. Based on internal data, as of 31 December 2025 the majority of Disdukcapil employees held a Bachelor's degree (S1), followed by Diploma and Master's degree (S2) holders, indicating a reasonably strong educational foundation to support public service delivery.

Despite this, several challenges remain. The Disdukcapil Magetan 2026 Work Plan (Renja) notes that the digital competence of civil servants (ASN) still needs improvement to manage information systems more effectively. Attendance records for 2025 further show recurring tardiness at the morning assembly, reaching its highest rate of 10.87% in May, indicating that work discipline still requires attention because it can affect the effectiveness and productivity of employee performance. Meanwhile, Disdukcapil Magetan has also demonstrated strong work skills through eleven public service innovations (e.g., mobile recording services for people with disabilities and the elderly, WhatsApp-based administrative services, and Saturday completion services), reflecting the agency's continuous effort to improve service quality despite the aforementioned discipline-related constraints.

Human resource quality reflects an employee's competence, encompassing knowledge, skills, intellectual capability, responsibility, and work attitude in carrying out tasks effectively to achieve organizational goals (Solong, 2020; Ayomi, 2023). Work discipline is defined as an employee's readiness and commitment to comply with organizational rules, procedures, and social norms, rather than an act performed merely out of coercion or fear of punishment (Alfitriani et al., 2025; Wahyu et al., 2022). Work skills represent an employee's task-related competence, such as the ability to operate technology or communicate clearly to achieve organizational objectives, and to use available work facilities to complete tasks efficiently (Mainake et al., 2024). Work effectiveness concerns the extent to which employees achieve targets using optimal time, effort,

and resources, and is conceptually distinct from productivity even though the two are closely related (Darni & Febriansyah, 2024; Wau, 2022). Work productivity itself is defined as an individual's overall work output within a given period, measured against organizational standards, coupled with a mental attitude oriented toward continuous improvement (Gaurifa, 2024).

Previous studies show inconsistent findings regarding these relationships. While human resource quality and work skills are generally found to positively affect productivity (Benjamin et al., 2022; Rosdiana, 2022; Tobamba et al., 2023; Setyanti et al., 2022; Handayani et al., 2022), findings on work discipline are mixed: some studies report a positive but non-significant effect (Saleh & Utomo, 2018), while others report a significant positive effect (Gaurifa, 2024; Asnora, 2020; Sari et al., 2022). Similarly, while several studies find that work effectiveness positively affects productivity (Sari, 2025; Wau, 2022), other findings report a negative and non-significant effect. These inconsistencies constitute a research gap that this study seeks to address by testing the four variables simultaneously within the specific context of ASN and Non-ASN employees at Disdukcapil Magetan Regency.

Based on this background, this study aims to: (1) examine the effect of human resource quality on work productivity; (2) examine the effect of work discipline on work productivity; (3) examine the effect of work skills on work productivity; and (4) examine the effect of work effectiveness on work productivity of ASN and Non-ASN employees at Disdukcapil Magetan Regency. Accordingly, the following hypotheses are proposed:

H1: Human resource quality has a significant effect on work productivity.

H2: Work discipline has a significant effect on work productivity.

H3: Work skills have a significant effect on work productivity.

H4: Work effectiveness has a significant effect on work productivity.

B. METHOD

This study employed a quantitative approach with a survey method, using SPSS for Windows to analyze the collected data. The research was conducted at the Population and Civil Registration Office (Disdukcapil) of Magetan Regency, chosen because its ASN and Non-ASN employees are directly involved in daily administrative and civil registration services that demand competence, discipline, skill, and effectiveness.

1. Population and Sample

The population comprised all 64 employees of Disdukcapil Magetan Regency, consisting of 62 ASN and 2 Non-ASN staff. Because the population was relatively small, a saturated sampling (census) technique was applied, in which the entire population served as the research sample ($n = 64$).

2. Variables and Data Collection

The independent variables were human resource quality (X_1), work discipline (X_2), work skills (X_3), and work effectiveness (X_4), while the dependent variable was work productivity (Y). Data were collected through a structured questionnaire measured with a four-point Likert scale (Strongly Agree = 4, Agree = 3, Disagree = 2, Strongly Disagree = 1), supplemented by documentation and literature review.

3. Data Analysis Technique

Prior to hypothesis testing, the research instrument was tested for validity using Pearson Product Moment correlation (item declared valid if $r\text{-count} > r\text{-table}$ of 0.207, $\alpha = 5\%$, $df = n - 2 = 62$) and for reliability using Cronbach's Alpha (declared reliable if the coefficient exceeds 0.60). Classical assumption tests were then conducted, comprising multicollinearity (Tolerance > 0.10 and VIF < 10), heteroscedasticity (Glejser test, significance > 0.05), normality (One-Sample Kolmogorov-Smirnov test, significance > 0.05), and autocorrelation (Durbin-Watson test). The main analysis used multiple linear regression:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$$

where Y is work productivity, a is the constant, b_1 – b_4 are the regression coefficients of X1–X4, and e is the error term. The partial effect of each independent variable was tested using the t-test (significant if sig. < 0.05 or t-count > t-table of 2.001), and the overall explanatory power of the model was evaluated using the coefficient of determination (Adjusted R²).

C. RESULTS AND DISCUSSIONS

1. Respondent Characteristics

Of the 64 respondents, 53.12% were male and 46.88% were female, indicating a fairly balanced gender composition. Most respondents (60.94%) were aged 26–35 years, reflecting a workforce in its productive age range. Regarding education, 57.81% held a Bachelor's degree (S1), suggesting an adequate knowledge base to support administrative service tasks. In terms of tenure, respondents were relatively evenly distributed across the under-5-year (35.94%), 5–10-year (32.81%), and over-10-year (31.25%) categories, combining newer and experienced staff. As expected given the object of study, 96.88% of respondents were ASN and 3.12% were Non-ASN.

Table 1. Respondent Characteristics

Characteristic	Category	n	%
Gender	Male	34	53.12
	Female	30	46.88
Age	< 25 years	1	1.56
	26–35 years	39	60.94
	36–45 years	12	18.75
	> 45 years	12	18.75
Education	S2	3	4.69
	S1	37	57.81
	D.IV	2	3.12
	D.III	11	17.19
	SLTA/SMA/SMK	11	17.19

Characteristic	Category	n	%
Tenure	< 5 years	23	35.94
	5–10 years	21	32.81
	> 10 years	20	31.25
Employment status	ASN	62	96.88
	Non-ASN	2	3.12

Source: Primary data processed (2026)

2. Descriptive Statistics

Descriptive statistics for each variable are presented in Table 2. All variables show a mean value higher than their standard deviation, indicating relatively homogeneous responses across the sample. Human Resource Quality obtained the highest mean relative to its scale range (33.23 of a possible 25–40), while Work Effectiveness, measured on a narrower six-item scale, produced a mean of 20.45 (of 16–24). Overall, respondents rated all four independent variables and work productivity favorably.

Table 2. Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Dev.
Human Resource Quality (X1)	64	25	40	33.23	4.400
Work Discipline (X2)	64	22	32	27.36	3.209
Work Skills (X3)	64	22	32	26.94	3.157
Work Effectiveness (X4)	64	16	24	20.45	2.370
Work Productivity (Y)	64	22	32	27.14	3.116

Source: Primary data processed with SPSS (2026)

3. Validity and Reliability

Validity testing using Pearson Product Moment correlation showed that all questionnaire items across the five variables produced r-count values exceeding the r-table value of 0.207 (r-count ranged from 0.415 to 0.782 depending on the item and variable), confirming that every item validly measured its intended construct. Reliability testing using Cronbach's Alpha (Table 3)

confirmed that all variables exceeded the 0.60 threshold, indicating that the research instrument was internally consistent and suitable for further analysis.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Criterion	Description
Human Resource Quality (X1)	0.750	> 0.60	Reliable
Work Discipline (X2)	0.743	> 0.60	Reliable
Work Skills (X3)	0.736	> 0.60	Reliable
Work Effectiveness (X4)	0.740	> 0.60	Reliable
Work Productivity (Y)	0.731	> 0.60	Reliable

Source: Primary data processed with SPSS (2026)

4. Classical Assumption Tests

As summarized in Table 4, the regression model satisfied all classical assumptions. The tolerance values for all independent variables exceeded 0.10 and the VIF values were below 10, indicating no multicollinearity. The Glejser test produced significance values above 0.05 for every independent variable, indicating homoscedastic (constant) residual variance. The One-Sample Kolmogorov-Smirnov test produced an Asymp. Sig. (2-tailed) of 0.200, exceeding 0.05 and confirming that the residuals were normally distributed. Finally, the Durbin-Watson statistic of 1.913 fell between dU (1.7303) and 4-dU (2.2697), indicating the absence of autocorrelation. The model was therefore deemed appropriate for multiple linear regression analysis.

Table 4. Summary of Classical Assumption Tests

Test	Result	Criterion	Conclusion
Multicollinearity (X1)	Tol. 0.243 / VIF 4.112	Tol.>0.10, VIF<10	No multicollinearity
Multicollinearity (X2)	Tol. 0.298 / VIF 3.351	Tol.>0.10, VIF<10	No multicollinearity

Test	Result	Criterion	Conclusion
Multicollinearity (X3)	Tol. 0.349 / VIF 2.869	Tol.>0.10, VIF<10	No multicollinearity
Multicollinearity (X4)	Tol. 0.343 / VIF 2.918	Tol.>0.10, VIF<10	No multicollinearity
Heteroscedasticity (Glejser)	Sig. 0.442–0.987 (all X)	Sig. > 0.05	No heteroscedasticity
Normality (Kolmogorov-Smirnov)	Asymp. Sig. = 0.200	Sig. > 0.05	Residuals normally distributed
Autocorrelation (Durbin-Watson)	DW = 1.913 (dU=1.7303; 4-dU=2.2697)	dU < DW < 4-dU	No autocorrelation

Source: Primary data processed with SPSS (2026)

5. Multiple Linear Regression and Hypothesis Testing

The multiple linear regression analysis produced the following equation:

$$Y = 1.550 + 0.170X_1 + 0.265X_2 + 0.268X_3 + 0.268X_4 + e$$

Table 5. Multiple Linear Regression and t-Test Results

Variable	B	t-count	Sig.	Description
(Constant)	1.550	0.881	0.382	-
Human Resource Quality (X1)	0.170	2.014	0.049	H1 accepted
Work Discipline (X2)	0.265	2.536	0.014	H2 accepted
Work Skills (X3)	0.268	2.731	0.008	H3 accepted
Work Effectiveness (X4)	0.268	2.029	0.047	H4 accepted

Source: Primary data processed with SPSS (2026); t-table = 2.001 ($\alpha = 0.05$)

Human Resource Quality (X1) had a t-count of 2.014 (sig. = 0.049 < 0.05), indicating a positive and significant effect on work productivity; H1 is accepted. This finding is consistent with Benjamin et al. (2022), Rosdiana (2022), and Tobamba et al. (2023), who similarly found that better-qualified employees, in terms of knowledge, skills, and adaptability, tend to be more productive in public sector settings.

Work Discipline (X2) had a t-count of 2.536 ($\text{sig.} = 0.014 < 0.05$), indicating a positive and significant effect on work productivity; H2 is accepted. This result aligns with Gaurifa (2024), Asnora (2020), and Sari et al. (2022), who found that employees who consistently comply with working hours, procedures, and standards produce higher-quality and more consistent output. It also resolves part of the research gap noted by Saleh and Utomo (2018), who found a positive but non-significant effect, suggesting that the strength of this relationship may vary by organizational context.

Work Skills (X3) had a t-count of 2.731 ($\text{sig.} = 0.008 < 0.05$), the strongest partial effect among the four predictors, indicating a positive and significant effect on work productivity; H3 is accepted. This is in line with Setyanti et al. (2022) and Handayani et al. (2022), who reported that technical competence and task mastery are central drivers of employee output quality and speed, a pattern also reflected in Disdukcapil Magetan's array of technology-enabled service innovations.

Work Effectiveness (X4) had a t-count of 2.029 ($\text{sig.} = 0.047 < 0.05$), indicating a positive and significant effect on work productivity; H4 is accepted. This supports Wau (2022) who found that the ability to achieve targets using optimal time and resources translates into higher productivity. This finding, obtained within a single local government office, does not corroborate reports of a negative or non-significant effect of work effectiveness on productivity found in some other organizational settings, suggesting that the relationship may be context-dependent.

6. Coefficient of Determination

Table 6. Coefficient of Determination (R^2)

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.892	0.796	0.783	1.453

Source: Primary data processed with SPSS (2026)

The Adjusted R Square value of 0.783 indicates that Human Resource Quality, Work Discipline, Work Skills, and Work Effectiveness jointly explain 78.3% of the variance in the work

productivity of ASN and Non-ASN employees at Disdukcapil Magetan Regency, while the remaining 21.7% is attributable to factors outside the model, such as motivation, work environment, job satisfaction, leadership, or compensation.

D. CONCLUSIONS

This study demonstrates that human resource quality, work discipline, work skills, and work effectiveness each have a positive and significant partial effect on the work productivity of ASN and Non-ASN employees at the Population and Civil Registration Office of Magetan Regency, and that these four variables collectively explain a substantial proportion of the variance in employee productivity, with the remainder attributable to factors beyond the scope of this study. Employees with stronger competencies, greater adherence to workplace rules and standards, more developed technical and interpersonal skills, and a greater capacity to achieve targets efficiently tend to produce more consistent and higher-quality work. Among the four predictors, work skills exerted the strongest partial influence, followed closely by work discipline and work effectiveness, while human resource quality, though significant, showed a comparatively smaller effect. These findings reinforce the view, established in prior research on human resource management in public organizations, that productivity in a service-oriented government office cannot be attributed to a single factor but instead emerges from the interplay of competence, conduct, capability, and efficient task execution. The study is nonetheless limited by its single-institution setting, its reliance on self-reported questionnaire data, and a relatively small and heavily ASN-dominated sample, which together constrain the extent to which the findings can be generalized to other government agencies.

E. SUGGESTIONS

Disdukcapil Magetan Regency is encouraged to sustain and expand employee competency development through structured education and training programs, particularly those addressing digital service systems, while reinforcing work discipline through consistent monitoring of

attendance and adherence to service standards. Continued investment in technology-based skills training is warranted given its strong observed link to productivity, alongside periodic evaluation of work effectiveness to ensure that time and resources are used optimally in daily service delivery. Employees, in turn, are encouraged to proactively develop their own competencies, discipline, and technical skills to support both individual and organizational performance. For future research, scholars are encouraged to extend this model by incorporating additional variables such as work motivation, work environment, job satisfaction, leadership style, or compensation, and to replicate the study across multiple government agencies or regions to produce more generalizable findings regarding the determinants of public-sector employee productivity.

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