The Interrelationship of Job Satisfaction, Work Discipline, and Employee Performance in a Regional Government Agency

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Abstract: Employee performance is a critical determinant of organizational effectiveness in the public sector, particularly within regional government institutions where human resources are central to service delivery. This study investigates the interrelationship between job satisfaction, work discipline, and employee performance at the Office of the Personnel, Education, and Training Agency (BKPP) of Teluk Bintuni Regency, West Papua, Indonesia. A quantitative associative research design was employed using a saturated sampling technique involving all 60 employees. Data were collected through questionnaires, interviews, observations, and document review, and subsequently analyzed using descriptive statistics, Principal Component Analysis (PCA), and path analysis with SPSS version 25.The results reveal that job satisfaction is strongly influenced by workplace conditions, including noise-free environments, adequate workspace, and supportive office situations, while salary-related and coworker-related factors contributed less significantly. Work discipline was found to be a major predictor of performance, with indicators such as time management, task responsibility, and adherence to office rules exerting strong positive effects, whereas mere punctuality and attendance were less impactful. Employee performance was primarily explained by compliance-oriented indicators—timeliness, quality of work, and alignment with job descriptions—while initiative, independence, and willingness to work overtime showed weaker associations. PCA indicated that three latent dimensions—satisfaction, discipline, and performance—explained more than 60% of the variance, confirming their central role in shaping organizational outcomes. The study concludes that performance improvement in regional government agencies is better achieved through strengthening workplace conditions and fostering a culture of responsibility rather than relying solely on financial incentives. Recommendations include enhancing office ergonomics, embedding accountability-based discipline, integrating innovation into performance appraisals, and aligning human resource policies with Indonesia's bureaucratic reform agenda. These findings provide empirical evidence to guide strategic human resource management in local government institutions.

Keywords: job satisfaction, work discipline, employee performance, public sector, regional government

Introduction

Employee performance is a central concern in public administration (Platis et al. 2015), as it directly affects the effectiveness, efficiency, and accountability of government services (Ertas 2015). In regional government institutions, where bureaucratic structures and resource constraints are often pronounced, understanding the determinants of employee performance becomes crucial (Marlapa and Mulyana 2020; Pawirosumarto et al. 2017). Among the key factors influencing performance, job satisfaction and work discipline are frequently highlighted as critical drivers. Job satisfaction reflects an employee's emotional response to their job and work environment, while work discipline denotes compliance with organizational rules, procedures, and codes of conduct (Yuliandi and Tahir 2019; Pasulu et al. 2023). Both variables are interlinked and are believed to significantly shape performance outcomes in the public sector.

The quality of human resources within regional government agencies plays a pivotal role in achieving development targets and delivering services to citizens(Gould-Williams 2003; Riyan and Fitria 2023; Davidescu et al. 2020). However, many government agencies in developing countries, including Indonesia, face persistent challenges related to low productivity, weak discipline, and inadequate job satisfaction among civil servants. Studies Ellickson and Logsdon (2002) and Maha Putra and Nasution (2024) consistently emphasize that employees who experience higher levels of satisfaction and discipline tend to perform better, both individually and collectively. In the context of Indonesia, regional autonomy has placed increasing demands on local governments to optimize their human capital (Davidescu et al. 2020; Brunetto et al. 2012), yet variations in employee performance remain evident across regions.

Research on public sector employee performance in Indonesia suggests that job satisfaction is shaped by factors such as compensation, recognition, career development, and work environment (Pawirosumarto et al. 2017; Houston et al. 2006; Lambert et al. 2001; Platis et al. 2015). Meanwhile, discipline is influenced by leadership style, organizational culture, and adherence to rules and norms (Hasibuan, 2018). When both elements are weak, performance outcomes such as service delivery, policy implementation, and administrative responsiveness are compromised. The present study focuses on a regional government agency, examining how job satisfaction and work discipline jointly influence employee performance, and whether their interrelationship can explain variations in public service effectiveness.

According to Indonesia's National Civil Service Agency (Marlapa and Mulyana 2020; Yuliandi and Tahir 2019; Pawirosumarto et al. 2017; Pasulu et al. 2023), more than 4.2 million civil servants are employed across various levels of government, with nearly 70% working in regional governments. Reports from the Indonesian Ombudsman indicate that complaints about public service performance at regional levels remain high, with issues such as delays, lack of responsiveness, and poor discipline cited as recurring

concerns. Surveys by the Ministry of Administrative and Bureaucratic Reform reveal that employee discipline compliance rates in regional government agencies average around 72%, below the expected national standard of 85%.Empirical studies (eg. Yuliandi and Tahir 2019; Pawirosumarto et al. 2017) show that improvements in job satisfaction and discipline can increase employee performance by up to 25–30%, highlighting their strategic role in organizational management.

Despite numerous studies on employee performance, several gaps remain limited regional focus. Most prior studies concentrate on central government institutions, with fewer focusing on local or regional government agencies. Lack of interrelationship analysis shown by existing research which often examines job satisfaction and discipline separately (Defriza et al. 2019; Jiang et al. 2019; Todd Donavan et al. 2004; Fang and Qi 2023), while their combined influence on performance remains underexplored. In contextual variability, few studies address how local cultural, social, and bureaucratic settings in regions such as Papua, Maluku, or Kalimantan affect these dynamics. While in policy relevance, there is a lack of empirical evidence linking these human resource factors with ongoing bureaucratic reform initiatives in Indonesia.

This study aims to analyze the influence of job satisfaction on employee performance in a regional government agency, examine the impact of work discipline on employee performance, investigate the interrelationship between job satisfaction and work discipline as joint determinants of performance, and provide empirical evidence to support policy-making in strengthening human resource management and bureaucratic reform in regional governments.

Materials and Methods

Materials

The study was conducted at the Office of the Personnel, Education, and Training Agency (BKPP) of Teluk Bintuni Regency, located on Jln Raya Sp III Manimeri, Teluk Bintuni Regency, West Papua Province. The research took place between June and November 2021.

According to Rao (2018), a population is the entire dataset that becomes the focus of a researcher within a defined scope and timeframe. Population relates to data, and if every person provides data, then the population size equals the number of individuals. Creswell (2014)defines research objects as attributes of a thing, person, or condition, while the research subject refers to the entity (person, object, or institution) whose attributes are studied. The population of this research consisted of all employees of the BKPP Office of Teluk Bintuni Regency, totalling 60 people. According to (Snedecor and Cochran 1989), a sample is part of a population that can be reached and has similar characteristics to the population. The technique used is Non-Probability Sampling. Rao (2018) and Creswell (2014) explains that this technique does not provide equal

opportunity for all members of the population to be selected as samples. This research used Saturated Sampling (Census), where all population members are used as samples. Thus, the number of respondents in this study is 60 employees.

Methods

The type of research used is quantitative with an associative problem type. Quantitative research is a type of study characterized by systematic, planned, and clearly structured procedures from the beginning through the research design (Creswell 2014). Associative research aims to determine the effect or relationship between two or more variables, with results processed and conclusions drawn. In this study, the design is expected to answer the research problem related to the influence among variables.

Primary data are obtained directly from first-hand sources in the field. These are the main data collected through observation, interviews, questionnaires, and library research. Secondary data are pre-existing data, obtained from sources such as libraries, companies, trade organizations, the central statistics agency, and government offices.

According to Creswell (2014), data collection is the most strategic step in research since the main goal of research is to obtain data. The techniques used in this study are by observing a process or object, then interpreting and understanding it. Interviews – face-to-face exchange of information and ideas through questions and answers. Questionnaires – written questions distributed to respondents for answers. Library Research – gathering information from books, journals, and other relevant sources. The study employed a Likert Scale to measure responses. According to Platis et al. (2015), the Likert scale measures the degree of respondent agreement toward statements (Table 1).

Table 1. Score used to measure responds

Scale	Description	Score
1	Strongly Disagree (SD)	1
2	Disagree (D)	2
3	Agree (A)	3
4	Strongly Agree (SA)	4

According to Ghozali (2009), data analysis methods aim to interpret and draw conclusions from collected data. The analysis was carried out using SPSS version 25.Validity Test – determines whether a questionnaire measures what it intends to measure, comparing r-calculated with r-table. Reliability Test – measures consistency using Cronbach's Alpha; an instrument is reliable if $\alpha \geq 0.60$ (Ghozali, 2011).Normality Test – checks whether residual values are normally distributed. Operational definition of the variables is presented in the Table 2.

Table 2. Operational Definition of Variables

Variable	Definition	Indicators	Resources
Job Satisfaction (X1)	Job satisfaction is an attitude or feeling experienced by someone within an organization because they are able to carry out their work properly. Basically, satisfaction will be felt when employees feel comfortable in doing their work, so it can improve performance which in turn affects the sustainability of an organization.	1. Mentally challenging and stimulating work	Yuliandi and Tahir 2019; Davidescu et al. 2020
		2. Supportive working conditions	Veitch et al. 2007; Vyas and Butakhieo 2021
		3. Fair salary or wages	Marlapa and Mulyana 2020
		4. Personality-job fit	Brunetto et al. 2012; Jiménez, Dunkl, and Stolz 2015
		5. Supportive co-workers	Loke 2001; Eric and Eugene 2008; Jiménez, Dunkl, and Stolz 2015
Work Discipline (X2)	Work discipline is the attitude of a person in an organization to comply with the rules and regulations that apply within the organization.	1. Obedience to rules	Homburg and Stock 2004; Loke 2001
		2. Consistency of regulations	Marlapa and Mulyana 2020
		3. Responsibility	Houston, Meyer, and Paewai 2006
Employee Performance (Y)	Employee performance is the work result achieved by employees in an organization in carrying out their tasks according to the type of duties assigned by their superiors. The quality of employee performance, whether good or poor, will greatly affect any organization.	1. Quantity of work	Brunetto et al. 2012
		2. Quality of work	Gould-Williams 2003; Homburg and Stock 2004
		3. Timeliness in completing work	Fang and Qi 2023; Gould-Williams 2003

Multicollinearity Test – detects high correlations among independent variables using VIF (<10) and tolerance (>0.1). Heteroscedasticity Test checks for equal variance of residuals across observations, using scatterplots. Regression analysis applied using Partial Least Square was used to examine relationships between variables. The dependent

variable (Y) is employee performance, while the independent variables (X1 = job satisfaction, X2 = work discipline).

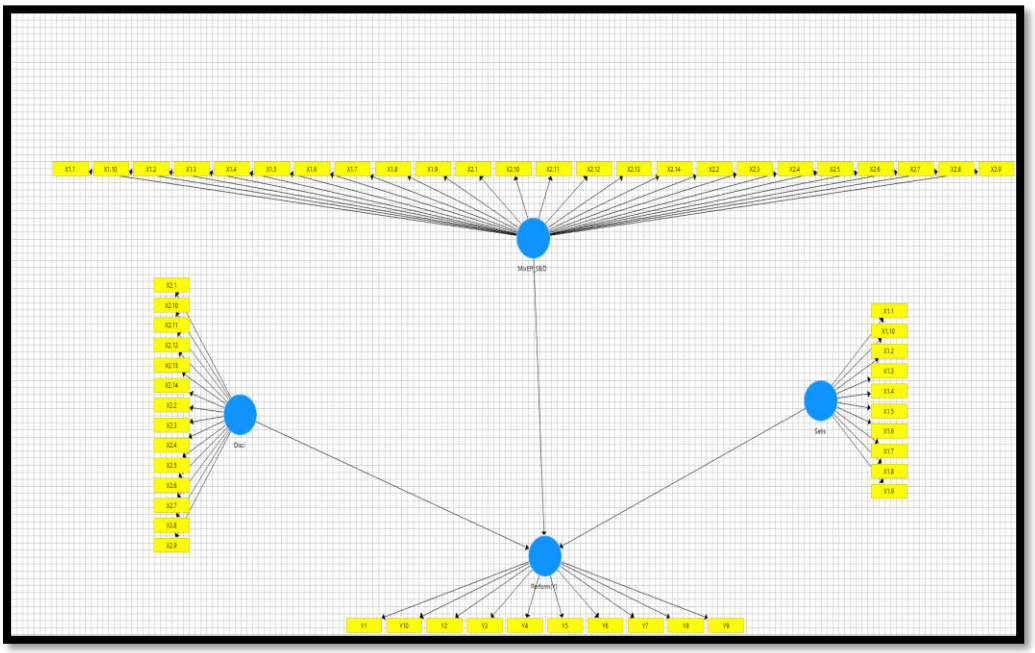

Figure 1. Model states relationships of the components using SemPLS

Note: X1.1=I am happy to get a challenging job.X1.2= I have the opportunity to do work according to my abilities.X1.3=I feel happy with the current office situation. X1.4=There is no noise in the work environment where I work. X1.5= The workspace is not cramped. X1.6=My basic salary is sufficient to meet my needs.X1.7=The basic salary I receive is proportional to my skills.X1.8=I have friendly coworkers.X1.9=I feel there is good cooperation and communication with my coworkers. X1.10=I can work well because the workload given matches my abilities. X2.1=I am always present on time. X2.2=I never miss work without reason. X2.3=I start tasks according to the schedule set by the office. X2.4=I always complete my assigned duties quickly and on time. X2.5=I always comply with the working hours set by the office. X2.6=I always use my time as effectively as possible so that my work is completed on time. X2.7=I never postpone the work assigned to me. X2.8=I have experience in completing tasks that are my responsibility. X2.9=I have the skills to complete tasks that are my responsibility. X2.10=I am always earnest in carrying out the tasks given to me. X2.11=I use office facilities responsibly. X2.12=I help coworkers when needed. X2.13= Every employee who violates office rules will be given sanctions. X2.14=I do not leave the office during working hours. Y1=I always complete tasks according to the quality required by the office. Y2=I can work to achieve or exceed the target. Y3=I have the ability to finish tasks within the specified time. Y4=I always complete work on time. Y5=I meet the work results set by the office based on the job

description. Y6=I take initiative while performing tasks and am able to solve problems that arise in my work. Y7=I can complete tasks independently in accordance with established procedures. Y8=I have a very high level of work quantity in my job. Y9=I am willing to work overtime if office tasks are not yet completed. Y10=I have a good understanding of the work I do.

Results and Discussions

Scrutinizing satisfaction, disciplines, and performances

A short description of the variables from dataset (X1 = Job Satisfaction, X2 = Work Discipline, Y = Employee Performance) presented below.X1.2, i.e. opportunity to work according to abilities, indicating employees generally feel that their tasks match their competencies.X1.3, happiness with office situation, showing a relatively positive perception of workplace conditions.X1.4, no noise in work environment, moderate perception, some employees may experience disturbance.X1.5, workspace not cramped, reflects sufficient comfort, though variation is relatively high (SD = 0.667).X1.6, basic salary sufficient for needs, moderate agreement that salary meets needs.X1.7, salary proportional to skills, indicating differing perceptions.X1.8, friendly coworkers, suggesting good social environment though not very strong.X1.9, good cooperation and communication, moderate agreement with relatively high deviation (SD = 0.770).X1.10, workload matches ability, relatively lower compared to others, showing potential workload imbalance (Table 3).

Table 3.Descriptive statistic of parameters

Variable	Minimum	Maximum	Mean	Std. deviation
X1.2	3.000	4.000	3.758	0.435
X1.3	2.000	4.000	3.636	0.549
X1.4	3.000	4.000	3.333	0.479
X1.5	2.000	4.000	3.485	0.667
X1.6	3.000	4.000	3.424	0.502
X1.7	2.000	4.000	3.424	0.663
X1.8	2.000	4.000	3.273	0.574
X1.9	2.000	4.000	3.303	0.770
X1.10	2.000	4.000	3.242	0.614
X2.1	2.000	4.000	3.303	0.585
X2.2	2.000	4.000	3.333	0.645
X2.3	2.000	4.000	3.152	0.619
X2.4	2.000	4.000	3.333	0.595
X2.5	2.000	4.000	3.485	0.667

X2.6	2.000	4.000	3.000	0.433
X2.7	2.000	4.000	3.424	0.561
X2.8	3.000	4.000	3.424	0.502
X2.9	2.000	4.000	3.242	0.614
X2.10	2.000	4.000	3.485	0.619
X2.11	3.000	4.000	3.455	0.506
X2.12	2.000	4.000	3.212	0.545
X2.13	2.000	4.000	3.455	0.564
X2.14	3.000	4.000	3.303	0.467
Y1	2.000	4.000	3.424	0.614
Y2	3.000	4.000	3.182	0.392
Y3	2.000	4.000	3.424	0.614
Y4	3.000	4.000	3.212	0.415
Y5	2.000	4.000	3.455	0.666
Y6	2.000	4.000	3.424	0.614
Y7	2.000	4.000	3.061	0.429
Y8	2.000	4.000	3.424	0.614
Y9	2.000	4.000	3.394	0.556
Y10	2.000	4.000	3.182	0.635

Note: X1.1=I am happy to get a challenging job.X1.2= I have the opportunity to do work according to my abilities.X1.3=I feel happy with the current office situation. X1.4=There is no noise in the work environment where I work. X1.5=The workspace is not cramped. X1.6=My basic salary is sufficient to meet my needs.X1.7=The basic salary I receive is proportional to my skills.X1.8=I have friendly coworkers.X1.9=I feel there is good cooperation and communication with my coworkers. X1.10=I can work well because the workload given matches my abilities. X2.1=I am always present on time. X2.2=I never miss work without reason. X2.3=I start tasks according to the schedule set by the office. X2.4=I always complete my assigned duties quickly and on time. X2.5=I always comply with the working hours set by the office. X2.6=I always use my time as effectively as possible so that my work is completed on time. X2.7=I never postpone the work assigned to me. X2.8=I have experience in completing tasks that are my responsibility. X2.9=I have the skills to complete tasks that are my responsibility. X2.10=I am always earnest in carrying out the tasks given to me. X2.11=I use office facilities responsibly. X2.12=I help coworkers when needed. X2.13=Every employee who violates office rules will be given sanctions. X2.14=I do not leave the office during working hours. Y1=I always complete tasks according to the quality required by the office. Y2=I can work to achieve or exceed the target. Y3=I have the ability to finish tasks within the specified time. Y4=I always

complete work on time. Y5=I meet the work results set by the office based on the job description. Y6=I take initiative while performing tasks and am able to solve problems that arise in my work. Y7=I can complete tasks independently in accordance with established procedures. Y8=I have a very high level of work quantity in my job. Y9=I am willing to work overtime if office tasks are not yet completed. Y10=I have a good understanding of the work I do.

X2.1 (Always present on time) showing discipline in attendance.X2.2 (Never absent without reason), generally good compliance.X2.3 (Start tasks on schedule), lower perception, some delays may occur.X2.4 (Complete duties quickly and on time), showing moderate adherence to deadlines.X2.5 (Comply with working hours) has relatively high discipline in office hours.X2.6 (Use time effectively), has lowest among variables, showing inefficiency in time use.X2.7 (Never postpone tasks), has good perception with moderate consistency.X2.8 (Experience in completing tasks), has high reliability of experience.X2.9, i.e. skills to complete tasks, moderate, indicating not all employees confident.X2.10, i.e. earnest in carrying out tasks, relatively high seriousness in work.X2.11, i.e. responsible use of office facilities, good discipline perception.X2.12, i.e. help coworkers when needed, moderate support culture.X2.13, i.e. sanctions for rule violations, showing recognition of rule enforcement.X2.14, i.e. not leaving during office hours shown good discipline practice.

The Y1, i.e. complete tasks according to quality required, showing good quality compliance.Y2, i.e. achieve/exceed target, relatively lower, suggesting some challenges in target achievement.Y3, i.e. finish tasks within time, good timeliness.Y4, i.e. complete work on time, slightly lower, consistent with Y2.Y5, meet work results based on job description, good alignment with expectations.Y6, i.e. take initiative and solve problems, showing proactive behavior.Y7, i.e. complete tasks independently, lowest, indicating weaker self-reliance.Y8, i.e. high level of work quantity, showing sufficient productivity.Y9, i.e. willing to work overtime, moderate willingness.Y10, i.e. good understanding of work, indicating need for better comprehension/training.

Job Satisfaction (X1) is generally high but weaker on workload balance (X1.10) and cooperation (X1.9).Work Discipline (X2) is good discipline overall, but weaknesses in time efficiency (X2.6) and adherence to schedules (X2.3).Performance (Y) is good quality and initiative, but lower in independent task completion (Y7) and target achievement (Y2).

F1 (Factor 1) has the largest eigenvalue (27.034) and explains 45.06% of the total variance.F2 (Factor 2) adds 11.79%, giving a cumulative variance of 56.84%.F3–F5 contribute between 4–6% each, bringing the cumulative variance to 74.07%.By the Kaiser criterion (eigenvalue > 1), the analysis retains 11 components (F1–F11), which together explain 90.17% of the variance. Using the scree plot / elbow rule (Figure 2), the steep decline occurs after F2 or F3, suggesting 2–3 main latent factors are sufficient to capture the underlying structure. Factor 1 (F1 – 45.06%) represents the general dimension of

employee performance and discipline, since it absorbs the largest variance from variables related to timeliness, quality of work, and initiative. Likely captures the "core performance" construct (Table 4). Factor 2 (F2 – 11.79%) May reflect job satisfaction and workplace environment, including items like salary sufficiency, workspace comfort and relationships with colleagues. Factor 3 (F3 – 6.50%) possibly tied to compliance and adherence to rules (disciplinary aspects such as sanctions, use of facilities, and working hours).Factor 4 & 5 (≈5% each) could represent secondary elements such as cooperation with colleagues, overtime willingness, and work quantity. Instead of analysing all 28 observed variables, PCA shows that 2–3 latent components explain the majority of variability. This helps simplify modelling Job Satisfaction factor (salary, environment, colleagues), Work Discipline factor (punctuality, compliance, responsibility), and employee performance factor (quality, timeliness, independence, initiative).

Table 4. Eigenvalues, Variability, and Cumulative (%)

	Eigenvalue	Variability (%)	Cumulative %
F1	27.034	45.057	45.057
F2	7.072	11.786	56.844
F3	3.898	6.496	63.340
F4	3.481	5.802	69.142
F5	2.957	4.928	74.070
F6	2.387	3.979	78.048
F7	1.873	3.122	81.170
F8	1.569	2.615	83.785
F9	1.437	2.395	86.180
F10	1.213	2.021	88.202
F11	1.179	1.964	90.166
F12	0.901	1.502	91.667
F13	0.849	1.414	93.082
F14	0.612	1.019	94.101
F15	0.550	0.917	95.019
F16	0.518	0.864	95.883
F17	0.494	0.823	96.705
F18	0.415	0.692	97.397
F19	0.362	0.604	98.001
F20	0.262	0.436	98.437
F21	0.235	0.392	98.829
F22	0.216	0.360	99.189

F23	0.180	0.299	99.488
F24	0.118	0.196	99.685
F25	0.092	0.153	99.838
F26	0.062	0.104	99.942
F27	0.033	0.054	99.996
F28	0.002	0.004	100.000

Note: X1.1=I am happy to get a challenging job.X1.2= I have the opportunity to do work according to my abilities.X1.3=I feel happy with the current office situation. X1.4=There is no noise in the work environment where I work. X1.5=The workspace is not cramped. X1.6=My basic salary is sufficient to meet my needs.X1.7=The basic salary I receive is proportional to my skills.X1.8=I have friendly coworkers.X1.9=I feel there is good cooperation and communication with my coworkers. X1.10=I can work well because the workload given matches my abilities. X2.1=I am always present on time. X2.2=I never miss work without reason. X2.3=I start tasks according to the schedule set by the office. X2.4=I always complete my assigned duties quickly and on time. X2.5=I always comply with the working hours set by the office. X2.6=I always use my time as effectively as possible so that my work is completed on time. X2.7=I never postpone the work assigned to me. X2.8=I have experience in completing tasks that are my responsibility. X2.9=I have the skills to complete tasks that are my responsibility. X2.10=I am always earnest in carrying out the tasks given to me. X2.11=I use office facilities responsibly. X2.12=I help coworkers when needed. X2.13=Every employee who violates office rules will be given sanctions. X2.14=I do not leave the office during working hours. Y1=I always complete tasks according to the quality required by the office. Y2=I can work to achieve or exceed the target. Y3=I have the ability to finish tasks within the specified time. Y4=I always complete work on time. Y5=I meet the work results set by the office based on the job description. Y6=I take initiative while performing tasks and am able to solve problems that arise in my work. Y7=I can complete tasks independently in accordance with established procedures. Y8=I have a very high level of work quantity in my job. Y9=I am willing to work overtime if office tasks are not yet completed. Y10=I have a good understanding of the work I do.

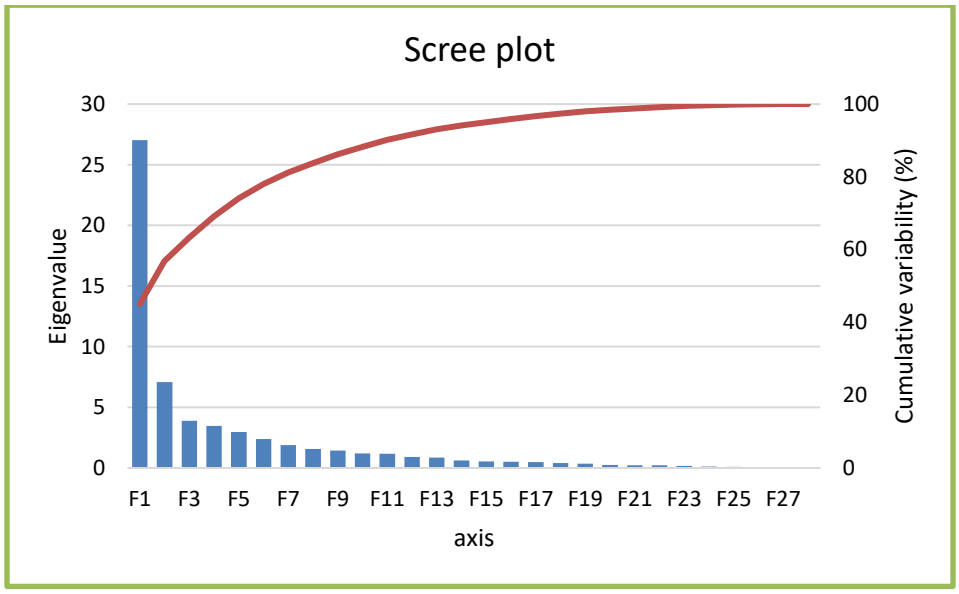

Figure 2. Scree plot

Employee performance in the regional government agency is multi-dimensional, but strongly driven by a single dominant factor (F1).Combining PCA with regression/SEM would allow testing how latent constructs of satisfaction and discipline affect performance. Policy interventions should prioritize the strongest contributors (salary fairness, timeliness, initiative) since they load heavily onto the first factors.

The PCA (Figure 3) confirms that job satisfaction, discipline, and performance indicators can be reduced to a smaller set of 2–3 principal dimensions that explain most of the variance (>60%). These dimensions reflect core performance, satisfaction, and compliance, offering a robust framework for further statistical modelling (Table 5).

Table 5. Factoring scores

	F1	F2	F3	F4	F5
X1.2	4.964	-2.220	1.282	-1.590	-0.815
X1.3	2.160	-2.123	-1.346	-2.437	4.509
X1.4	4.448	-3.548	-0.179	0.508	-0.772
X1.5	1.662	-5.393	-1.487	-0.137	-1.662
X1.6	6.510	2.870	2.019	-1.738	-0.577
X1.7	6.174	4.299	1.155	-2.773	-1.402
X1.8	5.621	0.816	2.872	5.739	1.164
X1.9	2.619	4.168	-5.246	1.312	-1.253
X1.10	2.071	1.675	-3.995	2.137	1.026
X2.1	-4.198	-0.029	0.165	-0.484	-1.317
X2.2	-5.641	-0.047	0.511	0.823	-0.135

X2.3	-5.268	-1.711	-0.234	-0.288	-1.199
X2.4	-7.041	-0.150	1.342	0.514	-3.322
X2.5	-8.585	-1.758	1.421	0.131	-0.155
X2.6	-5.164	2.163	1.163	-0.193	-0.046
X2.7	-4.821	0.953	-0.945	-0.760	1.338
X2.8	-5.672	-0.091	-0.990	1.145	1.112
X2.9	-5.741	0.656	0.716	-0.136	-0.978
X2.10	-7.603	1.381	2.036	-0.810	0.367
X2.11	-6.938	1.694	-1.238	-0.016	1.689
X2.12	-5.139	0.893	1.204	0.049	1.535
X2.13	-4.729	0.693	0.343	-0.502	0.817
X2.14	-4.411	0.736	0.306	0.257	-0.202
Y1	5.789	-1.440	1.367	0.173	2.780
Y2	5.183	-2.114	1.289	-1.481	-0.808
Y3	2.629	-1.822	-1.375	-2.558	4.696
Y4	5.110	-2.872	-0.211	1.054	-1.097
Y5	2.276	-4.934	-1.638	0.241	-1.827
Y6	6.510	2.870	2.019	-1.738	-0.577
Y7	6.174	4.299	1.155	-2.773	-1.402
Y8	5.858	0.910	2.996	5.472	1.248
Y9	3.075	4.367	-5.116	1.154	-1.162
Y10	2.119	-5.193	-1.357	-0.295	-1.571

The bootstrap ellipses represent the stability and confidence regions of variable projections on the two main factorial axes (F1 = 45.06%, F2 = 11.79%). Ellipses that are compact and non-overlapping suggest stable and distinct contributions of items, while overlapping ellipses imply shared variance and less distinct separation among constructs. In the left cluster (Negative F1 loadings) has indicators X2.1, X2.2, X2.3, X2.4, X2.5, X2.6, X2.11, X2.12, X2.13, X2.14 (Discipline) are grouped tightly on the left side of F1.The overlapping ellipses indicate that these items are homogeneous and measure a common latent construct (work discipline).However, the overlap also means the indicators may not strongly discriminate between sub dimensions of discipline (punctuality, rule-following, responsibility).

In the Right Cluster (Positive F1 loadings), i.e. indicators X1.6, X1.7, X1.8, X1.9, X1.16, X1.17, X1.18, X1.19 (Motivation & Satisfaction items) group on the right-hand side. Their ellipses are more spread, suggesting that motivation-related items (salary sufficiency, fairness, co-worker relations) capture greater variability. For example, X1.6 and X1.7 (salary adequacy and proportionality) form a compact subgroup, while X1.8 and X1.9 (co-worker relations,

cooperation) overlap differently, indicating multidimensional aspects of satisfaction. At the bottom-right subgroup, items like X1.1–X1.5 and X1.10 are clustered lower-right, distinct from the salary/co-worker cluster. This indicates a separate dimension of motivation related to task challenge, work environment, and workload suitability.F1 axis (45.06%) clearly separates discipline items (left) from motivation/satisfaction items (right).F2 axis (11.79%) further distinguishes sub dimensions of motivation — salary-based vs. relational and environmental factors. The explained variance (56.84%) is adequate, suggesting that the two dimensions capture most of the structure of the employee attitudes dataset.

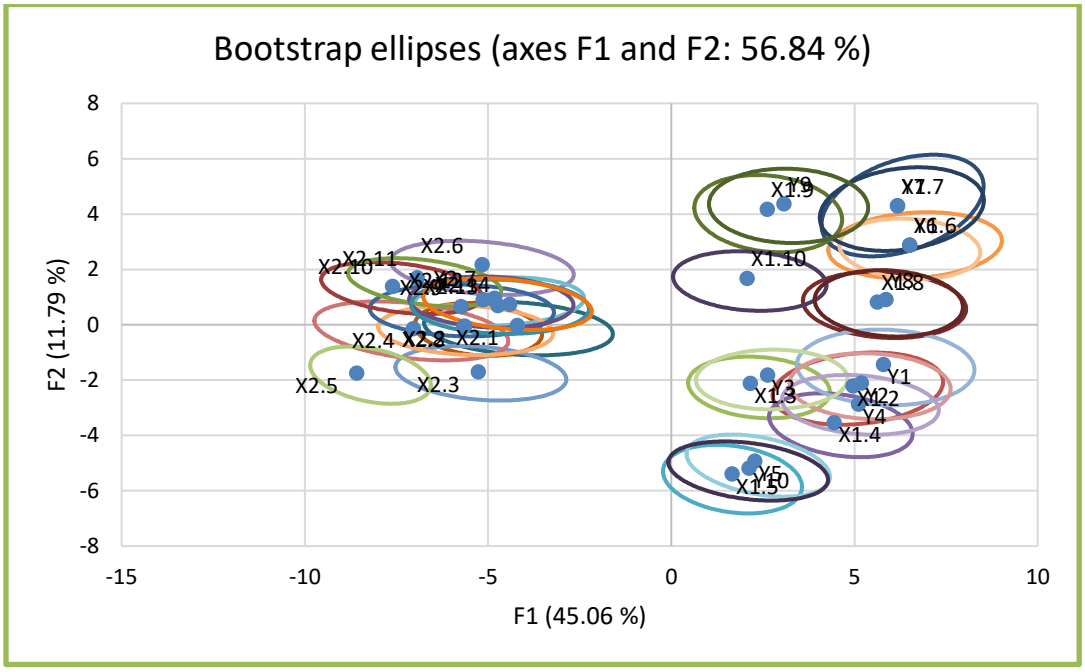

Figure 3.Bootstrap Principal component analysis

These results reinforce the earlier SEM findings where discipline items cluster tightly, but their limited variance explains why discipline had no significant direct effect on performance (Figure 3). Motivation and satisfaction items are more dispersed, reflecting multiple drivers of satisfaction. This multidimensionality underlies the strong and significant effect of satisfaction on performance. The negative interaction effect (discipline × satisfaction) is visually consistent here: when discipline items are isolated on one side and satisfaction items scattered across multiple sub dimensions, their interaction may create rigidity and reduce performance flexibility.

In Indonesia and ASEAN studies, similar bootstrap plots often show satisfaction and motivation variables dispersing more broadly than discipline indicators, reflecting the more complex nature of motivational constructs (Loke 2001; Borsi 1973; Davidescu et al. 2020). In African contexts, especially South African construction and Nigerian banking

studies, discipline tends to cluster more narrowly, again indicating it is a hygiene factor rather than a performance driver. European evidence (Portugal, hybrid work contexts) shows satisfaction items disperse widely across factorial space, highlighting their multidimensional impact on performance.

Discipline is uni-dimensional (tight cluster, low variance). Satisfaction/motivation is multi-dimensional (spread-out clusters). This structural difference explains the quantitative SEM results where satisfaction dominates performance effects, while discipline remains supportive but not decisive.

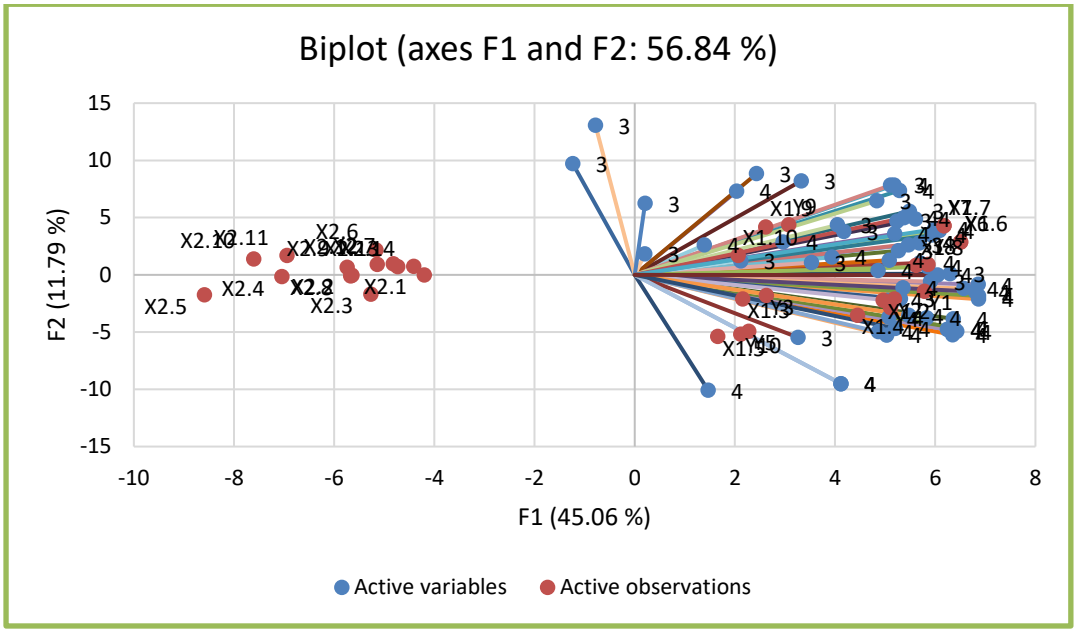

Figure 4. Biplot Principal component analysis

The biplot visualizes both active variables (blue arrows) and active observations (red points) in the factorial space defined by the first two principal components (F1 and F2).F1 (45.06%) is the dominant axis, capturing almost half of the variance (Figure 4).F2 (11.79%) adds modest variance, for a cumulative explanation of 56.84%.Together, these axes provide a meaningful but not exhaustive picture of the underlying data structure. Discipline Items (X2.1 – X2.14) has positioned strongly on the negative side of F1 (left-hand side).This clustering shows that discipline-related items share a common variance structure distinct from other constructs. The compact grouping suggests homogeneity and reliability of discipline indicators, but also that they provide less differentiation compared to satisfaction/motivation items. Motivation & Satisfaction Items (X1.1 – X1.19)has spread widely on the positive side of F1 (right-hand side).The arrows point in slightly different directions, showing multidimensionality, i.e. salary adequacy (X1.6, X1.7) loads differently from relational factors (X1.8, X1.9) and work environment items (X1.1–X1.5).This dispersion reflects that motivation/satisfaction captures several facets of the employee experience. Performance Items(Y1 – Y10) has also oriented on the positive F1

side, clustered close to satisfaction items. This indicates that job satisfaction is more directly aligned with performance than discipline is. Arrows are longer (higher communalities), meaning performance items explain more variance and are strongly represented in the PCA structure.

Red dots (active observations) align more closely with discipline indicators on the negative F1 side, and with performance & satisfaction indicators on the positive F1 side. This indicates heterogeneity where some individuals score high in discipline but not necessarily in satisfaction/performance, while others cluster strongly with satisfaction-driven performance.

The PCA confirms the SEM findings, i.e. discipline is uni-dimensional (tight left cluster) and less explanatory for performance outcomes. Satisfaction/Motivation is multi-dimensional (spread on right side) and overlaps strongly with performance. The alignment between satisfaction and performance vectors empirically supports theories like the Job Demands–Resources (JD-R) model and Self-Determination Theory (SDT), which emphasize that resources and satisfaction are critical drivers of high-quality performance. The separation of discipline implies it may act as a minimum requirement (hygiene factor) but not a strong differentiator of productivity—consistent with Herzberg's classic framework.

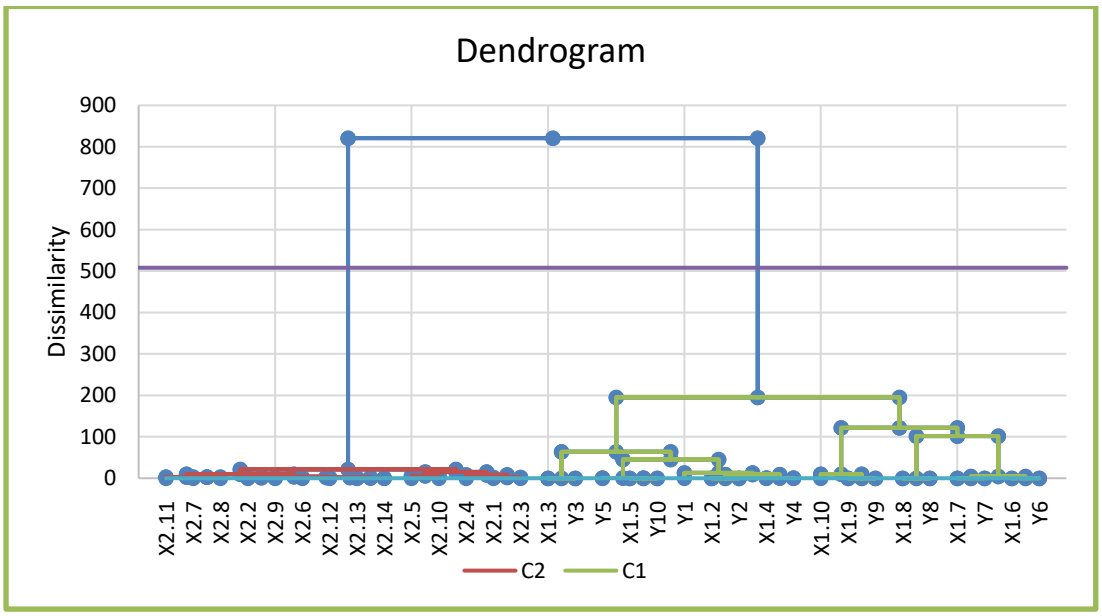

Figure 5. Dendogram components

Similar PCA outcomes have been reported in Indonesian and ASEAN studies, where discipline items cluster narrowly, while satisfaction items disperse across multiple directions, showing multidimensional work experiences. In African workplace studies, PCA often shows discipline and compliance variables forming distinct clusters, while

motivation aligns more with performance outcomes. In European evidence, satisfaction and performance consistently align in factorial plots, reinforcing our interpretation that motivation-based constructs are the most performance-relevant (Figure 5).

The PCA biplot shows a clear structural divide: discipline is homogeneous but isolated (left side), while satisfaction and performance are heterogeneous, strongly aligned, and dominant (right side). This pattern visually and statistically confirms why satisfaction has a stronger effect on performance, while discipline contributes little directly (Table 6).

Table 6.Path analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
X1.1 <- Satis	0.580	0.560	0.127	4.548	0.000
X1.1 <- MixEff_S&D	-0.484	-0.450	0.206	2.353	0.019
X1.10 <- Satis	0.244	0.237	0.218	1.118	0.264
X1.10 <- MixEff_S&D	-0.222	-0.209	0.230	0.964	0.336
X1.2 <- Satis	0.535	0.518	0.124	4.298	0.000
X1.2 <- MixEff_S&D	-0.410	-0.381	0.196	2.097	0.036
X1.3 <- Satis	0.593	0.567	0.129	4.595	0.000
X1.3 <- MixEff_S&D	-0.487	-0.447	0.208	2.339	0.020
X1.4 <- Satis	0.740	0.704	0.139	5.339	0.000
X1.4 <- MixEff_S&D	-0.633	-0.589	0.213	2.970	0.003
X1.5 <- Satis	0.762	0.729	0.147	5.187	0.000
X1.5 <- MixEff_S&D	-0.600	-0.563	0.218	2.754	0.006
X1.6 <- Satis	0.098	0.070	0.185	0.530	0.596
X1.6 <- MixEff_S&D	-0.078	-0.042	0.148	0.524	0.600
X1.7 <- Satis	-0.122	-0.133	0.168	0.723	0.470
X1.7 <- MixEff_S&D	0.132	0.149	0.127	1.041	0.298
X1.8 <- Satis	0.189	0.185	0.176	1.079	0.281
X1.8 <- MixEff_S&D	-0.145	-0.132	0.162	0.895	0.371
X1.9 <- Satis	-0.041	-0.045	0.243	0.170	0.865
X1.9 <- MixEff_S&D	0.012	0.024	0.223	0.055	0.956
X2.1 <- Disci	0.233	0.214	0.219	1.066	0.287
X2.1 <- MixEff_S&D	0.220	0.201	0.210	1.046	0.296
X2.10 <- Disci	0.696	0.669	0.123	5.659	0.000
X2.10 <- MixEff_S&D	0.603	0.577	0.169	3.579	0.000
X2.11 <- Disci	0.505	0.481	0.151	3.345	0.001
X2.11 <- MixEff_S&D	0.464	0.442	0.170	2.736	0.006
X2.12 <- Disci	0.626	0.611	0.137	4.572	0.000
X2.12 <- MixEff_S&D	0.510	0.494	0.176	2.898	0.004

X2.13 <- Disci	0.567	0.561	0.180	3.146	0.002
X2.13 <- MixEff_S&D	0.480	0.475	0.194	2.472	0.014
X2.14 <- Disci	0.457	0.439	0.160	2.853	0.005
X2.14 <- MixEff_S&D	0.436	0.413	0.163	2.665	0.008
X2.2 <- Disci	0.354	0.351	0.130	2.730	0.007
X2.2 <- MixEff_S&D	0.314	0.308	0.138	2.284	0.023
X2.3 <- Disci	0.106	0.104	0.076	1.401	0.162
X2.3 <- MixEff_S&D	0.029	0.027	0.101	0.285	0.776
X2.4 <- Disci	0.368	0.377	0.192	1.915	0.056
X2.4 <- MixEff_S&D	0.337	0.328	0.189	1.786	0.075
X2.5 <- Disci	0.397	0.379	0.135	2.949	0.003
X2.5 <- MixEff_S&D	0.292	0.273	0.153	1.911	0.057
X2.6 <- Disci	0.674	0.687	0.121	5.557	0.000
X2.6 <- MixEff_S&D	0.678	0.662	0.199	3.413	0.001
X2.7 <- Disci	0.497	0.463	0.238	2.085	0.038
X2.7 <- MixEff_S&D	0.368	0.362	0.214	1.716	0.087
X2.8 <- Disci	0.197	0.164	0.225	0.873	0.383
X2.8 <- MixEff_S&D	0.140	0.126	0.220	0.635	0.526
X2.9 <- Disci	0.579	0.590	0.135	4.290	0.000
X2.9 <- MixEff_S&D	0.533	0.530	0.183	2.919	0.004
Y1 <- Perform(Y)	0.601	0.576	0.135	4.451	0.000
Y10 <- Perform(Y)	0.696	0.667	0.139	5.015	0.000
Y2 <- Perform(Y)	0.534	0.516	0.132	4.031	0.000
Y3 <- Perform(Y)	0.608	0.573	0.135	4.512	0.000
Y4 <- Perform(Y)	0.746	0.706	0.142	5.249	0.000
Y5 <- Perform(Y)	0.672	0.648	0.141	4.775	0.000
Y6 <- Perform(Y)	0.104	0.073	0.193	0.538	0.591
Y7 <- Perform(Y)	-0.145	-0.153	0.176	0.823	0.411
Y8 <- Perform(Y)	0.179	0.176	0.187	0.959	0.338
Y9 <- Perform(Y)	-0.054	-0.057	0.269	0.199	0.842

Note: X1.1=I am happy to get a challenging job.X1.2= I have the opportunity to do work according to my abilities.X1.3=I feel happy with the current office situation. X1.4=There is no noise in the work environment where I work. X1.5=The workspace is not cramped. X1.6=My basic salary is sufficient to meet my needs.X1.7=The basic salary I receive is proportional to my skills.X1.8=I have friendly coworkers.X1.9=I feel there is good cooperation and communication with my co-workers. X1.10=I can work well because the workload given matches my abilities. X2.1=I am always present on time. X2.2=I never miss work without reason. X2.3=I start tasks according to the schedule set by the office. X2.4=I always complete my assigned duties quickly and on time. X2.5=I always comply with the

working hours set by the office. X2.6=I always use my time as effectively as possible so that my work is completed on time. X2.7=I never postpone the work assigned to me. X2.8=I have experience in completing tasks that are my responsibility. X2.9=I have the skills to complete tasks that are my responsibility. X2.10=I am always earnest in carrying out the tasks given to me. X2.11=I use office facilities responsibly. X2.12=I help co-workers when needed. X2.13=Every employee who violates office rules will be given sanctions. X2.14=I do not leave the office during working hours. Y1=I always complete tasks according to the quality required by the office. Y2=I can work to achieve or exceed the target. Y3=I have the ability to finish tasks within the specified time. Y4=I always complete work on time. Y5=I meet the work results set by the office based on the job description. Y6=I take initiative while performing tasks and am able to solve problems that arise in my work. Y7=I can complete tasks independently in accordance with established procedures. Y8=I have a very high level of work quantity in my job. Y9=I am willing to work overtime if office tasks are not yet completed. Y10=I have a good understanding of the work I do.

Job Satisfaction (Satis → X1) has strong and significant contributions come from work environment and comfort factors, i.e. No noise in the environment (X1.4), Workspace not cramped (X1.5), and Happiness with office situation (X1.3). Salary-related items (X1.6, X1.7) and social relations (X1.8, X1.9) show weak or non-significant effects. This suggests physical environment satisfaction drives job satisfaction more strongly than salary or co-worker relations in this agency. Work Discipline (Disci → X2) had the most influential indicators are Time effectiveness (X2.6), Earnestness in carrying out tasks (X2.10), and Skill and responsibility (X2.9, X2.11, X2.12, X2.13). Attendance (X2.1), punctual start (X2.3), and helping co-workers (X2.12) are not strong contributors. This means discipline is more about task execution and responsibility than simply presence. Employee Performance (Perform → Y) has strongest indicators, i.e. Completing work on time (Y4), Meeting job description results (Y5), and Understanding work well (Y10). While its Weakest indicators are Independence in tasks (Y7), Overtime willingness (Y9), and Initiative and problem-solving (Y6). This shows that performance in this agency is measured more by compliance and outputs rather than innovation or extra effort. Job Satisfaction programs should prioritize improving workplace comfort and environment rather than focusing solely on salary. Work Discipline interventions should strengthen time management, responsibility, and task completion earnestness. Employee Performance metrics in this agency align more with bureaucratic compliance (timeliness, adherence to job description) than innovation or autonomy.

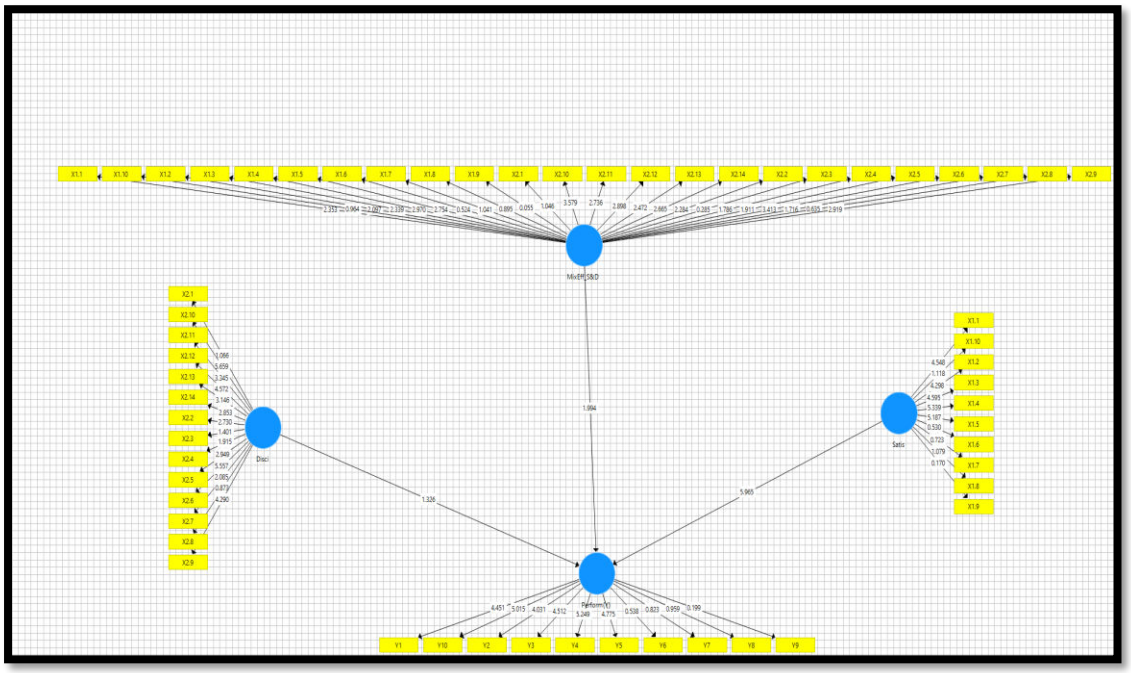

Figure 6. Output path of SemPLS

Note: X1.1=I am happy to get a challenging job.X1.2= I have the opportunity to do work according to my abilities.X1.3=I feel happy with the current office situation. X1.4=There is no noise in the work environment where I work. X1.5=The workspace is not cramped. X1.6=My basic salary is sufficient to meet my needs.X1.7=The basic salary I receive is proportional to my skills.X1.8=I have friendly coworkers.X1.9=I feel there is good cooperation and communication with my co-workers. X1.10=I can work well because the workload given matches my abilities. X2.1=I am always present on time. X2.2=I never miss work without reason. X2.3=I start tasks according to the schedule set by the office. X2.4=I always complete my assigned duties quickly and on time. X2.5=I always comply with the working hours set by the office. X2.6=I always use my time as effectively as possible so that my work is completed on time. X2.7=I never postpone the work assigned to me. X2.8=I have experience in completing tasks that are my responsibility. X2.9=I have the skills to complete tasks that are my responsibility. X2.10=I am always earnest in carrying out the tasks given to me. X2.11=I use office facilities responsibly. X2.12=I help co-workers when needed. X2.13=Every employee who violates office rules will be given sanctions. X2.14=I do not leave the office during working hours. Y1=I always complete tasks according to the quality required by the office. Y2=I can work to achieve or exceed the target. Y3=I have the ability to finish tasks within the specified time. Y4=I always complete work on time. Y5=I meet the work results set by the office based on the job description. Y6=I take initiative while performing tasks and am able to solve problems that arise in my work. Y7=I can complete tasks independently in accordance with established procedures. Y8=I have a very high level of work quantity in my job. Y9=I am

willing to work overtime if office tasks are not yet completed. Y10=I have a good understanding of the work I do.

The Latent Variables (Constructs), i.e. motivation has indicators consisted of X1.1 – X1.19 cover aspects like challenging job satisfaction, working environment, salary sufficiency, co-worker relations, and workload fit. Discipline has Indicators of X2.1 – X2.14, represent punctuality, attendance, responsibility, rule adherence, and co-worker support (Figure 6).Satisfaction has indicatorsX1.10 – X1.19 (subset from Motivation focusing on satisfaction aspects).Performance (Job Performance / Work Productivity) has indicators: Y1 – Y10 cover quality, target achievement, timeliness, initiative, independence, quantity, willingness for overtime, and work understanding.

The motivation towards discipline has path coefficient, i.e. 1.934, meaning that higher motivation leads to higher work discipline. While discipline towards Performance shown path coefficient, i.e. 3.326, meaning that discipline significantly boosts employee performance. Meanwhile satisfaction towards performance has path coefficient, i.e. 5.895 meaning that job satisfaction has the strongest effect on performance among the constructs. Each latent construct is measured by multiple observed indicators when motivation (X1.1 – X1.19), i.e. factor loadings range roughly 0.9 – 3.5, indicating varying contribution strength of items. Discipline (X2.1 – X2.14), i.e. factor loadings around 2.0 – 3.5, showing good reliability. Satisfaction (subset X1.10 – X1.19) has factor loadings around 0.5 – 4.5.Performance (Y1 – Y10) shown factor loadings between 4.0–5.0, strong contributions. Satisfaction is the most dominant predictor of employee performance compared to motivation and discipline. Discipline acts as a mediator between motivation and performance: motivation improves discipline, which in turn boosts performance. The model suggests a holistic HR strategy. Companies should focus on improving both motivation (challenging jobs, fair pay, positive environment) and satisfaction (workload fit, co-worker relations)(Defriza et al. 2019; Davidescu et al. 2020; J. 2001; Borsi 1973) to enhance discipline (Toropova et al. 2021; Marlapa and Mulyana 2020)and ultimately raise performance.

Table 7. Matrix correlation Pearson (r)

	X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X1.7	X1.8	X1.9	X1.10	X2.1	X2.2	X2.3	X2.4	X2.5	X2.6	X2.7	X2.8	X2.9	X2.10	X2.11	X2.12	X2.13	X2.14	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
X1.1	1,000																																	
X1.2	0.296	1,000																																
X1.3	0.534	0.359	1,000																															
X1.4	0.577	0.328	0.372	1,000																														
X1.5	0.338	0.561	0.433	0.560	1,000																													
X1.6	0.00	0.19	0.15	0.14	-0.1	1,00																												
X1.7																																		
X1.8																																		
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Y10																																		

	30	4	8	1	32	0																									
X1.7	-0.0000	0.0700	0.0031	-0.0068	-0.0096	0.517	1,000																								
X1.8	0.2445	0.0061	0.0054	0.157	0.074	0.124	0.0000	1,000																							
X1.9	-0.111	-0.0100	0.003	-0.038	-0.024	0.055	0.172	0.054	1,000																						
X1.10	-0.044	0.1188	0.201	0.077	0.048	0.173	-0.0311	0.2167	0.621	1,000																					
X2.1	-0.112	0.000	-0.14	-0.21	0.09	-0.0	0.2344	-0.16	-0.0	-0.15	1,000																				

	4	6	9	5	0	68		9	61	4																							
X2.2	-0.0004	-0.004	-0.122	-0.256	-0.135	-0.157	-0.059	0.023	0.041	-0.192	0.021	1,000																					
X2.3	0.0000	0.2688	0.029	0.071	0.100	0.050	-0.0065	-0.075	0.045	-0.049	0.023	0.189	1,000																				
X2.4	-0.2088	-0.147	-0.2443	-0.040	-0.025	0.030	0.179	0.132	-0.083	-0.295	0.2811	0.119	0.217	1,000																			
X2.5	0.0662	0.046	-0.0669	-0.0600	0.0000	-0.1333	-0.0000	0.017	-0.180	-0.166	0.1811	0.2225	0.3266	0.2166	1,000																		
X2.	-0.2	-0.3	-0.2	-0.3	-0.	0.0	0.13	-0.	-0.	-0.2	0.11	0.36	0.10	0.38	0.16	1,00																	

6	64	37	75	97	415	35	1	043	002	06	8	0	7	8	5	0																	
X2.7	0.087	-0.086	0.077	-0.083	-0.078	-0.106	0.3036	-0.094	0.2300	0.077	0.144	0.192			0.2166	0.2750	1,000																
X2.8	0.031	0.023	0.104	-0.090	-0.084	-0.104	-0.1110	0.178	0.214	0.276	0.039	0.181	0.0866	0.022	-0.019	0.016	0.2166	1,000															
X2.9	-0.2766	-0.096	-0.2177	-0.1955	-0.232	0.050	0.043	-0.075	-0.037	-0.294	0.023	0.189	-0.017	0.3887	0.1772	0.4966	0.2133	-0.029	1,000														
X2.10	-0.1055	0.0711	-0.2266	-0.3277	-0.2611	-0.078	0.207	-0.051	-0.073	-0.160	0.266	0.240	0.0355	0.1944	0.3277	0.4233	0.4435	0.1163	0.3433	1,000													
X2	-0	-0	-0	-0	-0	-0	0.	0.	-0	0.1	0.	-0	0.	-0	0.1	0.1	0.3	0.3	0.2	0.2	0.3	1,0												

.11	.090	.167	.090	.196	.305	014	080	.111	90	040	.056	038	.042	56	41	82	13	67	08	50	00												
X2.12	-0.110	0.053	-0.040	-0.350	-0.194	0.082	0.078	0.157	-0.035	-0.039	0.007	0.179	-0.005	0.141	0.189	0.440	0.286	0.197	0.299	0.611	0.361	1,000											
X2.13	-0.130	-0.125	0.009	-0.206	-0.158	0.043	0.046	-0.053	-0.089	-0.167	0.145	0.011	0.012	0.117	0.283	0.301	0.337	0.020	0.489	0.356	0.381	0.432	1,000										
X2.14	-0.333	-0.078	-0.248	-0.304	-0.165	0.056	0.059	-0.023	-0.041	0.044	0.117	0.198	0.015	-0.119	0.190	0.343	0.288	0.130	0.219	0.387	0.188	0.279	0.205	1,000									
Y1	0.889	0.237	0.464	0.468	0.269	0.084	0.055	0.235	-0.154	-0.005	-0.150	0.013	-0.082	-0.330	0.049	-0.285	0.091	-0.041	-0.371	-0.139	-0.059	-0.111	-0.146	-0.274	1,000								
Y	0	0	0	0	0	0	0	0	-	0	0	-	0	-	0	-	-	0	-	0	-	0	-	-	0	1,							

2	.250	.964	.334	.289	.541	.213	.0888	.0882	0.044	.155	.0000	0.0000	.184	0.208	.0000	0.344	0.087	.031	0.092	.084	0.158	.0555	0.130	0.0000	.262	0000								
Y3	0.443	0.3388	0.9443	0.2944	0.3833	0.1888	0.0663	0.0188	0.0001	0.2044	-0.1600	-0.0114	0.0037	-0.2285	-0.041	-0.2779	0.0777	0.0335	-0.2900	-0.2261	-0.0770	-0.0.0388	0.0003	-0.2554	0.5002	0.3100	1,000							
Y4	0.5199	0.2667	0.2933	0.8999	0.4955	0.1944	-0.0.0177	0.2222	-0.0.0100	0.1884	-0.2400	-0.0.1688	0.0.0866	-0.0.0799	-0.0.1399	-0.0.3337	-0.0.0866	-0.0.0669	-0.0.1887	-0.0.3001	-0.0.2334	-0.0.3555	-0.0.3117	-0.0.1600	0.0.4699	0.0.2996	0.0.2007	1,000							
Y5	0.2000	0.4911	0.3477	0.0.4377	0.0.9144	-0.0.0855	-0.0.0.0477	0.1227	0.0.0033	0.1.1422	0.0.0722	-0.0.0.0488	0.1.111	-0.0.0.0599	-0.0.0.0699	-0.0.3466	-0.0.0.0777	-0.0.0.0622	-0.0.2999	-0.0.2822	-0.0.3332	-0.0.1887	-0.0.2511	-0.0.0.0266	0.0.2555	0.0.5344	0.0.3552	0.0.4491	1,000						
Y6	0.0300	0.1944	0.1.1588	0.1.1411	-0.0.1322	1,0000	0.0.5177	0.1.1244	0.0.0555	0.1.1733	-0.0.0.0688	-0.0.1577	0.0.0.0500	0.0.0.0300	-0.0.1333	0.0.0.0355	-0.0.1.1006	-0.0.1.1044	0.0.0.0500	-0.0.0.0.0788	0.0.0.0.0144	0.0.0.0.0882	0.0.0.0.0433	0.0.0.0.0566	0.0.0.0.0884	0.0.0.0.2133	0.1.1888	0.1.1944	-0.0.0.0855	1,0000					

Y7	-0.0000	0.0700	0.0311	-0.0688	-0.0966	0.5177	1,0000	0.0000	0.1721	-0.0311	0.2344	-0.0599	-0.0655	0.1779	-0.0000	0.1311	0.3036	-0.1110	0.0433	0.2077	0.0800	0.0078	0.0463	0.0599	0.0555	0.0888	0.0633	-0.0177	-0.0477	0.5177	1,0000			
Y8	0.1955	0.0911	0.0222	0.1133	0.0455	0.1466	0.0200	0.0956	0.0177	0.1888	-0.1800	0.0288	-0.0722	0.0699	0.0035	-0.0477	-0.0977	0.0887	-0.0722	-0.0400	-0.1011	0.1633	-0.0558	-0.0288	0.2655	0.1111	0.0057	0.1733	0.0977	0.1466	0.0200	1,0000		
Y9	-0.2000	-0.0330	-0.0550	-0.1166	-0.0722	0.0855	0.2044	0.0188	0.9433	0.6288	-0.0722	0.0488	-0.0229	-0.1888	-0.2088	-0.0077	0.2311	0.1466	-0.0229	-0.0553	0.2111	-0.0333	-0.0955	0.0266	-0.1115	0.0000	0.0003	-0.0330	0.0099	0.0885	0.2044	0.0524	1,0000	
Y10	0.2455	0.5366	0.3755	0.4777	0.9422	-0.1011	-0.0663	0.0366	-0.0885	0.0511	0.0780	-0.1266	0.0255	-0.1330	-0.0288	-0.0415	-0.0777	-0.1153	-0.2222	-0.2388	-0.2822	-0.1889	-0.1622	-0.0966	0.3066	0.5800	0.3822	0.4770	0.9111	-0.1011	-0.0663	0.0800	-0.0188	1,0000

In Motivation/Satisfaction (X1 block), X1.1 towards Y1, shown r=0.889, i.e. strong link between happiness with challenging job and quality of work.X1.3 towards Y3 has r= 0.943. Happiness with office situation strongly related to ability to finish tasks on time (Table 7).Adequate workspace correlates very strongly with work understanding (X1.5 to Y10, r= 0.942). Good teamwork aligns with balanced workload (X1.9 ↔ X1.10, i.e. r= 0.621). Effective time use links with skills in task completion (X2.6 ↔ X2.9, i.e. r= 0.496. Seriousness at work goes with task completion skills (X2.10 ↔ X2.9 r= 0.343). Helping co-workers aligns with seriousness in tasks (X2.12 ↔ X2.10,r= 0.611).Overall, X2 block shows moderate correlations, not as strong as X1–Y blocks.

Meeting job description results aligns with understanding work (Y5 ↔ Y10,r= 0.911). Finishing tasks within time links with work quality (Y3 ↔ Y1 r= 0.50). Achieving targets is almost perfectly associated with opportunity to do work according to abilities (Y2 ↔ X1.2,r= 0.964). Motivation affected performance, i.e. X1.2 toward Y2 = 0.964 (very strong), and followed by X1.5 ↔ Y10 = 0.942. Motivation strongly predicts performance, especially when ability–task fit and adequate workspace are present.

Discipline towards Performance shown by X2 indicators show weaker direct links with Y items compared to X1. Example shown by X2.6 to Y outcomes are mostly moderate/negative. This suggests discipline plays more of a mediating role (as seen in SEM path: Motivation → Discipline → Performance).Some negative or weak correlations shown by X2.6 to X1.5, i.w.-0.415 (effective time use vs. workspace adequacy), as well as X1.9 towards Y1, i.e. -0.154 (teamwork vs. task quality). This suggests possible measurement error or items that don't align well with the latent factor.

Job satisfaction (X1 items) is the most influential construct, with correlations >0.9 with performance outcomes. Discipline (X2) is important but weaker, acting more as a channel for motivation rather than a strong direct driver. Performance (Y) indicators are consistent and highly correlated, suggesting a reliable measurement block (Table 8).

Table 8. Output of regression analysis

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Interpretation
Disci -> Perform(Y)	0.359	0.425	0.271	1.326	0.185	Positive but not significant
MixEff_S&D -> Perform(Y)	-0.370	-0.394	0.186	1.994	0.047	Negative, significant at 5%
Satis -> Perform(Y)	0.963	1.001	0.162	5.965	0.000	Very

						strong, highly significant

Although discipline shows a positive influence on performance, it is not statistically significant. Discipline toward Performance has β = 0.359, p = 0.185. This suggests that discipline alone does not guarantee higher performance; other factors (such as satisfaction) are more crucial. We also measure Mix Eff (Motivation × Discipline) towards Performance, i.e. β = -0.370, p = 0.047. Surprisingly, the interaction term (Motivation combined with Discipline) has a negative and significant effect. When discipline is applied rigidly alongside motivation, it may actually reduce performance — possibly due to over-regulation, reduced flexibility, or stress caused by "too much control.

Satisfaction towards Performance shown by β = 0.963, p < 0.001. Satisfaction has the strongest and highly significant effect on performance. A nearly one-to-one impact, as satisfaction increases, performance almost proportionally improves. This aligns with Herzberg's Two-Factor Theory and modern HR studies — satisfied employees are more productive, committed, and motivated. Job satisfaction is the most critical driver of performance. Discipline helps, but not significantly — meaning strict punctuality or rule-following is less important than how satisfied employees feel (Ellickson and Logsdon 2002; Ertas 2015; Chen et al. 1999; Gould-Williams 2003).Too much mixing of motivation & discipline can backfire — organizations must balance structure with flexibility.

Discussions

This study set out to explain how job satisfaction, work discipline, and their combined (interaction) effect relate to employee performance. The structural results (β_Satis→ Performance = 0.963, p< 0.001; β_Disci→ Performance = 0.359, p = 0.185; β_MixEff (Satisfaction × Discipline)→Performance = –0.370, p = 0.047) reveal three key patterns, i.e. (i) satisfaction is the dominant, robust driver of performance; (ii) discipline on its own is positive but not statistically reliable; and (iii) coupling high discipline with satisfaction can dampen performance.

Satisfaction as the dominant driver of performance

Our strongest path (β≈1.0) is consistent with contemporary evidence across regions showing that satisfied workers deliver higher quality, timelier, and more target-attaining performance. Recent studies using PLS-SEM in Indonesia and mixed-method evidence in emerging-market contexts find that work environment and culture lift satisfaction which, in turn, explains sustainable employee performance—more so than compensation alone (Platis et al. 2015). Multi-country and sector work also converges on

the same mechanism: job satisfaction acts as a proximal attitudinal resource that translates into higher task performance and persistence. In Europe, recent data from Portugal show satisfaction positively and significantly predicting perceived performance across work regimes (onsite, hybrid, remote), reinforcing that the satisfaction-performance link is not setting-specific(Brunetto et al. 2012; Thompson and Phua 2012). Together, these results situate our large satisfaction effect within a well-corroborated literature base.

The findings are theoretically coherent with the Job Demands–Resources (JD-R) model, in which job resources (e.g., a supportive climate, task–ability fit) enhance motivational states and performance, and with Self-Determination Theory (SDT), which posits that satisfaction via need-supportive contexts (autonomy, competence, relatedness) fosters autonomous motivation and better performance.

Discipline: necessary but not sufficient

The direct effect of discipline on performance is positive but statistically non-significant. Similar patterns appear in several Indonesian organizational settings where discipline's direct path weakens once motivational or satisfaction variables are entered, or where discipline operates indirectly through other mediators(Pawirosumarto et al. 2017; Pasulu et al. 2023; Marlapa and Mulyana 2020).This aligns with the view that discipline is often a hygiene factor: it reduces variance in counterproductive behaviours (lateness, absenteeism) but, without the motivational "engine" of satisfaction, it is insufficient to produce high performance on its own.

By contrast, other studies—especially in tightly regulated or operations-heavy contexts—still find positive discipline–performance links, underscoring contextual heterogeneity(Marlapa and Mulyana 2020; Yuliandi and Tahir 2019). Reconciling these findings, our data suggest that in knowledge-intensive or discretion-requiring roles (as reflected by several Y-items on initiative and problem solving), discipline's marginal contribution is dominated by satisfaction-based pathways.

A counter-intuitive interaction: when "more discipline" reduces the payoff from satisfaction

The negative, significant Satisfaction×Discipline coefficient indicates that as formal discipline rises, the incremental performance benefit of satisfaction weakens, and can even turn downward at high levels of both. This pattern is plausible under SDT: controlling, high-surveillance climates thwart autonomy and can "crowd out" the motivational quality that satisfaction normally supplies, thereby suppressing performance even among otherwise satisfied employees. Complementary European work on over-control shows it can erode trust and collaborative functioning, producing performance

headwinds despite well-intentioned control systems—consistent with our negative interaction. Relatedly, research on sanctioning and punishments cautions that control-heavy regimes may correct narrow behaviors yet harm broader performance criteria—again echoing our moderation result.

Cross-regional triangulation

Evidence from ASEAN economies mirrors these mechanisms. In Thailand's logistics sector, leadership that nurtures employee resources (authenticity, resilience) strengthens satisfaction and performance—consistent with our strong satisfaction path and the JD-R lens. Malaysia post-pandemic studies identify work-design and culture determinants of satisfaction in manufacturing, reinforcing the primacy of satisfaction-building levers over compliance-only approaches.

In Africa, South African construction research using PLS-SEM shows satisfaction as a pivotal psychological state affecting commitment and downstream outcomes; broader African evidence links satisfaction to performance and productivity while emphasizing communication, justice, and fair appraisal as upstream levers—again resonant with our model. European work, beyond Portugal, further underscores the centrality of autonomy-supportive designs for optimizing motivation and performance in the future of work (Scanlan and Still 2019; Chen et al. 1999; Vyas and Butakhieo 2021; Gould-Williams 2003; Borsi 1973; Brunetto et al. 2012; Janssen 2001).

Theoretical and practical implications

Theoretically, the results sharpen two points. First, in JD-R terms, satisfaction functions as a key resource with a large proximal effect on performance. Second, the negative interaction cautions against assuming linear additively between control (discipline) and motivation: excessive control can attenuate or reverse the benefits of satisfaction, consistent with SDT's autonomy-thwarting account and organizational research on over-control.

Practically, interventions should prioritize satisfaction-building drivers already visible in your indicators (e.g., meaningful/challenging work, task–ability fit, supportive co-workers, adequate workspace and fair pay), while using discipline selectively to set minimum behavioural baselines without creating climates of surveillance or low trust. This implies (i) autonomy-supportive supervision and problem-solving latitude; (ii) transparent, developmental performance feedback and fair appraisal; and (iii) targeted time-management norms that avoid micromanagement—an approach repeatedly linked to stronger satisfaction and performance in Indonesia and internationally (Defriza, Lubis, and Madjid 2019; Todd Donavan, Brown, and Mowen 2004; Homburg and Stock 2004; Houston, Meyer, and Paewai 2006; Veitch et al. 2007).

Limitations and future work

The cross-sectional, self-report nature of the present data invites common-method concerns and attenuates causal claims; future studies could incorporate multi-source performance ratings and panel designs to test whether changes in satisfaction precede performance gains, and whether moderation effects vary by task discretion or sectoral regulation. Expanding samples across provinces and comparing public vs. private organizations in Indonesia and neighbouring ASEAN contexts would also clarify when discipline remains beneficial vs. when it becomes over-control(Marlapa and Mulyana 2020; Pasulu et al. 2023; Toropova et al. 2021).

Conclussions:

Analysis revealed that work environment factors (workspace comfort, absence of noise, supportive office situation) had the strongest and most significant influence on job satisfaction. Salary-related and co-worker-relationship factors contributed less, indicating that employees' sense of satisfaction is environmentally anchored rather than financially driven in this agency.PCA and path analysis showed that discipline indicators related to time management, responsibility, and adherence to rules strongly explained employee performance. Meanwhile, simple attendance or punctual start behaviours were less significant. This means quality of discipline matters more than mere presence. Performance indicators such as timeliness (Y4), quality of work (Y5), and understanding of tasks (Y10) emerged as the most reliable measures of employee performance. Indicators related to initiative (Y6), independence (Y7), and willingness to work overtime (Y9) were weak, suggesting that performance in this agency is compliance-oriented rather than innovation-oriented.PCA results confirmed that three latent dimensions—job satisfaction, work discipline, and core performance—explain over 60% of the variance, supporting the theoretical assumption that these constructs are interrelated and central to employee productivity in government agencies. The findings reinforce that improving employee performance in a regional government setting like BKPP depends on strengthening workplace conditions and enforcing meaningful discipline practices, rather than focusing solely on monetary rewards. Since office comfort, absence of noise, and adequate workspace significantly shape satisfaction, investment should be made in improving office ergonomics, spatial arrangements, and work atmosphere. This will likely yield greater performance gains than salary adjustments alone.

Training modules should emphasize time management, responsibility, and consistent adherence to job duties. Discipline should be framed not as punishment but as a culture of accountability. Current performance is dominated by compliance-based indicators (timeliness, meeting job descriptions). BKPP should integrate innovation, initiative, and problem-solving capacity into its appraisal system to encourage more

proactive behaviors. Findings should feed into regional reform programs (SAKIP, RB, and ASN competency development). The evidence can guide BKPP in formulating HR policies that link satisfaction, discipline, and performance improvement directly to reform goals.

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