WORK PERSONALITY ASSESSMENT OF CIVIL SERVANTS (PNS) USING THE ANALYTICAL NETWORK PROCESS (ANP) METHOD AND RANTING SCALE TO DETERMINE THE ACHIEVEMENT OF EMPLOYEES AT DISKOPERINDAG ACEH JAYA

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ABSTRACT

The Office of Cooperatives, Small and Medium Enterprises, Industry and Trade of Aceh Jaya is an agency engaged in the industrial sector. Assessment of work behavior is one of the most important things in a service or agency that aims to guarantee the objectivity of fostering civil servants (PNS) in terms of assessment to reduce the subjectivity factor. The purpose of this study was to obtain criteria and sub-criteria for assessing the results of the work behavior of civil servants in the industrial sector at the Office of Cooperatives, Small and Medium Enterprises, Industry, Trade in Aceh Jaya, an agency engaged in the industrial sector. The methods used to assess employee performance are the Analytical Network Process (ANP) and Rating Scale methods. The Analytical Network Process (ANP) method is used to weight each criterion and sub-criteria while the rating scale method is used to assess employee work behavior. The results showed that through ANP, the weight of each criterion was obtained, namely service orientation (0.048), integrity (0.05), commitment (0.048), discipline (0.073), cooperation (0.082), leadership (0.071) and community service (0.125). Employees civil servants who are assessed for work behavior using the rating scale method have different values, from the 5 employees the highest score is Employee 4, (4.259907), and the lowest score is employee 1,2,3 and 5 respectively (3 ,7289214). (3.8545035), (3.294166) and (3.916054)

Keywords: Work behavior assessment, ANP, *Rating Scale,*

Introduction

Government organizations must be able to adapt to the environment and changes that occur in order to continue to provide services to the community in the era of globalization. In general, organizational personnel are expected to be able to carry out their work effectively, efficiently, productively and professionally so that the business can fulfill its objectives. In order for an organization to be able to provide high-quality public services that are undoubtedly in accordance with societal standards, it is intended to have great human resources while also being highly competitive.

In an institution the performance of employees must be evaluated, a representative must pay attention to the needs of the workforce. Because performance appraisal must be based on competencies that pay attention to the characteristics of work ability in terms of aspects of knowledge, skills and attitudes that are appropriate to the tasks in each government, it will have an impact on the progress and decline of performance in a government, such as in the Office of Cooperatives, Small and Medium Enterprises, Industry, Trade Aceh Jaya [1]–[5].

The Office of Cooperatives, Small and Medium Enterprises, Industry and Trade in Aceh Jaya is a work unit or official government institution located in Mon Mata village, Krueng Sabee sub-district, Aceh Jaya district which has the main task and function of managing and overseeing all forms of cooperative, umkm, industrial and trading that occurs in an area or area, it is necessary to provide good performance from employees who must have employee performance achievements. An agency or service that has good employee performance values, the effectiveness of activities within the agency or service will run as it should and can achieve the goals of the agency[6]–[10] .

Based on direct observations made by researchers at the Office of Cooperatives, Small and Medium Enterprises, Industry and Trade in Aceh Jaya, there are problems related to Service Orientation, Integrity, Commitment, Discipline, Cooperation, Leadership and Community Service, such as many employees who do not come to the office on time , the room is not clean and the employees are still not consistent in carrying out their duties so that they get unsatisfactory results.

In this study, researchers used the Analytical Network Process (ANP) method with Super decision 3.2.0 Software. Analytical Network Process (ANP) is a technique that takes into account the relationship between the current criteria and sub-criteria to show the number of interests of different parties [11].

The research related to the author's research is Panji Negara's research "Assessing the Work Behavior of Civil Servants (PNS) Using the Analytical Network Process (ANP) Method and Rating Scale to Determine Outstanding Employees. Previous research is the same as the research that the author will examine, but the difference is the value of the sub-category [12]

Researchers used the Analytical Network Process (ANP) technique using Super Decision 3.2.0 Software to determine the priority value or weight of each criterion. Knowing the value of each criterion, assessment of work behavior uses the Rating Scale approach to be compared with the Job Implementation Rating List. It is hoped that the results of this study can be used appropriately, in order to ensure the performance of active and accomplished employees in the industrial sector at the Office of Cooperatives, Small and Medium Enterprises, Industry, Trade in Aceh Jaya Regency[13]

The purpose of this study was to determine the weight of the importance of the criteria and sub-criteria for assessing the work personality of civil servants in the Aceh Jaya Cooperative, Small and Medium Enterprises, Industry, Trade Office. In this study, researchers used seven criteria, namely Service Orientation, Integrity, Commitment, Discipline, Teamwork, Leadership and Community Service. Of the 7 criteria, there were 16 sub-criteria [14].

Based on the background above, the authors conducted a study entitled "Assessment of the Personality of Civil Servants (PNS) Using the Analytical Network Process (ANP) Method and Twig Scale to Determine Outstanding Employees at the Aceh Jaya District Office of PRINDAG. This study aims to determine the importance of the criteria and sub-criteria for assessing the work behavior of civil servants, evaluations that have been conducted as a basic reference needed by the attitude of employees at the Diskoperindag Service. This is very important to note and can then be used as an improvement towards a better in the future date[15]–[22].

Research Methods

This research was conducted at the Office of Cooperatives in Aceh Jaya District. For this method the authors use the Quantitative method. The quantitative method is the systematic scientific study of parts and phenomena and causality. This method was chosen because it can be explained how a problem can be solved by observing what happens in the field, namely by seeing how the personality of employees who excel in the Cooperatives Service.

1. Criteria and Sub criterion

Service orientation, integrity, commitment, discipline, cooperation, leadership, and community service are only a small part of the components of work behavior included in this study. There are seventeen sub-criteria for the seven criteria. There are many sub-criteria for each of these requirements which can be seen in Table 1.[23]

Table 1 criteria and sub criteria of marketing strategy

Criterion	Code	sub-criteria
Service Orientation (OP)	1a	Complete tasks as well as possible for internal and external services Organization
	1b	Implement remediation efforts. continuous service
Integrity (INT)	2a	Always Be honest and sincere. Work on tasks
	2b	Never misuse. Authority
Commitment (KMT)	3a	Always Put interests first officialdom rather than self-interest
	3b	Not forgetting the responsibility as a state apparatus
Discipline (DS)	4a	Comply with official regulations. that happened
	4b	Comply with working hours
	4c	Able to keep things. state-owned
Collaboration (KJ)	5a	Collaborate well with colleagues. Work
	5b	Work with leaders or superiors
	5c	In collaboration with other instansi
Leadership (KP)	6a	Act decisively and not Favor
	6b	Set a good example
	6c	Able to move the work team well to achieve. high performance
Community Service (PKM)	7a	Utilization of science and technology
	7b	Counseling or socialization to the community

2. **Questionnaire design**

   In this study, researchers used two questionnaires, namely:
   1) Questionnaire about the relationship criteria. As a starting point for developing the ANP model, this questionnaire seeks to ascertain the relationship between the sub-criteria, the pairwise comparison questionnaire between criteria and the pairwise comparison questionnaire between sub-criteria
   2) Questionnaires to evaluate the performance of outstanding public employees using the Rating Scale approach.

   From the two questionnaires above, it must be done sequentially. Questionnaires for this study were distributed in two groups. First, the respondents who were heads of the Department of Industry and Trade in Aceh Jaya, namely the Head of Industry, the Head of Trade, and the Head of Cooperatives were informed about the relationship between criteria and sub-criteria. The Section Head then receives the Rating Scale questionnaire because he must have a close relationship with employees and often has contact with the subordinates or employees being evaluated.

3. **Weight determination using the ANP method.**

   After distributing the questionnaires to the respondents, the next step is to perform calculations using the Analytical Network Process method

   The following are the stages of performing the calculation, namely:
   a). Calculating the geometric mean value, the purpose of calculating the geometric mean is to collect answers from several respondents combined in a formula to arrive at an assessment in other words, the geometric mean value is a joint answer, from several respondents in getting one answer
   b). Enter all calculation results from the geometric mean into the super decision software.
   c). Conduct a consistency test on the results of a pairwise comparison questionnaire, based on the CR (consistency ratio) value, which must be less than 0.1. If the inconsistency index falls below 0.1, the comparison is said to be consistent. This is important because adjustments that impact preference levels cannot be applied without inconsistencies.
   d) Identify the importance weight of the sub-criteria. This importance weight is obtained from normalizing the limiting value on each element.
   e) Next is the Assessment of Employee Work personality with the Rating Scale method

   After getting all the importance weights of each criterion and sub-criteria, the next step is to assess priorities to find out which criteria are more important to apply to the work personality of civil servants.[24] [9]

Results and Discussion

1. **Determination of Relationships Between Sub criteria**

   Based on the results of distributing the questionnaires, it can be identified whether there is a relationship or not between the criteria and sub-criteria. In determining the relationship between these sub-criteria, there were 3 respondents. The relationship can be seen from the number of respondents who choose, in this study what is stated to be related is if Vij > 1.5. From the results of the questionnaire, there are 2 (two) relationships between sub-criteria, namely inner dependence and outer dependence, where inner dependence is a relationship between sub-criteria within the same criterion while outer dependence is a relationship between sub-criteria with other sub-criteria on different criteria. Therefore the relationship between the sub-criteria can be seen in Table 2: Data from determining the relationship between these sub-criteria is used to create the ANP model of this study. Data from the recapitulation of the questionnaire to determine the relationship between sub-criteria can be seen in Table 2

Table 2 Questionnaire Recapitulation of Relationships between Criteria and Sub criteria

			Influenced																
	Criterion		ON		INT		KMT		DS			KJ			KP			PKM	
		sub-criteria	1a	1b	2a	2b	3a	3b	4a	4b	4c	5a	5b	5c	6a	6b	6c	7a	7b
Affect	ON	1a		0	1	1	1	0	1	0	1	1	2	2	0	1	0	1	2
		1b	0		2	2	2	1	2	1	2	2	3	3	1	2	1	2	3
	INT	2a	1	2		1	1	0	1	0	1	1	2	2	0	1	0	1	2
		2b	1	2	1		1	0	1	0	1	1	2	2	0	1	0	1	2
	KMT	3a	1	2	1	1		0	1	0	1	1	2	2	0	1	0	1	2
		3b	0	1	0	0	0		2	1	2	2	3	3	1	2	1	2	3
	DS	4a	1	2	1	1	1	2		0	1	1	2	2	0	1	0	1	2
		4b	0	1	0	0	0	1	0		2	2	3	3	1	2	1	2	3

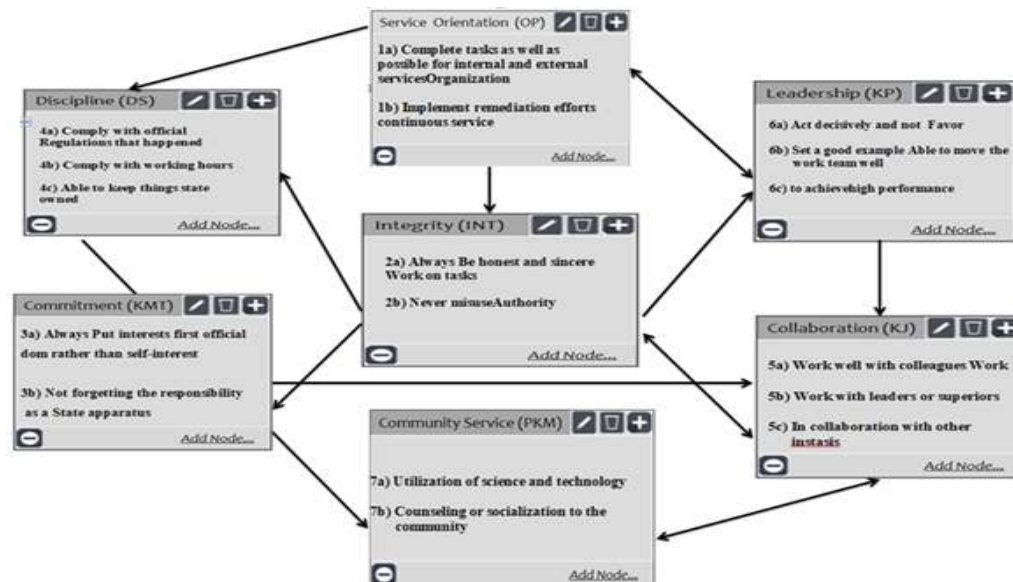|																		
	4c	1	2	1	1	1	2	1	2		1	2	2	0	1	0	1	2
	5a	1	2	1	1	1	2	1	2	1		2	2	0	1	0	1	2
KJ	5b	2	3	2	2	2	3	2	3	2	2		1	-1	0	-1	0	1
	5c	2	3	2	2	2	3	2	3	2	2	1		-1	0	-1	0	1
	6a	0	1	0	0	0	1	0	1	0	0	-1	-1		2	1	2	3
KP	6b	1	2	1	1	1	2	1	2	1	1	0	0	2		0	1	2
	6c	0	1	0	0	0	1	0	1	0	0	-1	-1	1	0		2	3
PKM	7a	1	2	1	1	1	2	1	2	1	1	0	0	2	1	2		2
	7b	2	3	2	2	2	3	2	3	2	2	1	1	3	2	3	2	

Figure 1 ANP. Model of Civil Servant Work Personality Assessment in *Super Decision Software 3.2.0*

2. Determination of the Weight of Importance of Each Sub criterion

Tabel 3 scale of comparison of rice

Level Interests	Definition
1	Equally important
3	A little more important
5	Obviously more important
7	very obviously more important
9	Definitely/absolutely more important
2,4,6,8	when in doubt between two values that adjacent
1/(1-9)	The goodness of the value of the importance level of Scale 1-9

Based on the ANP model that has been made, it can be used to create a pairwise comparison questionnaire. The scale used is 1-9 according to Table 3 based on the priority scale of Safety 2003. Questionnaires were distributed to predetermined expert respondents. The ANP model framework can be seen in Figure 1. The next step is inputting the results of the questionnaire into the super decision The thing that needs to be considered in processing data using ANP is that the inconsistency value must be less than 0.1. Filling in the questionnaire conducted by expert respondents is one of the important things for the level of accuracy of the value given, so that the research data is said to be feasible and reliable. For the selection of expert respondents who are experts in their fields who have studied and understood for more than one year and occupy positions without job rotation. In this study, the inconsistency value of all sub-criteria was more than 0.1, so it was said that it was feasible to continue.

The next stage is to make the super matrix, in the ANP method the super matrix is made through three stages, namely Unweighted Super Matrix, Weighted Super Matrix and Limiting Matrix. The following are the stages of making a super matrix [10].
1) Unweighted, the original Super Matrix from the column eigenvectors obtained from the matrix of pairwise comparisons of elements.

2) Weighted Super Matrix where each block of the column eigenvector of a cluster is weighted with the priority of the cluster's influence, which makes the weighted super matrix a stochastic column.
3) The Limiting Matrix is obtained by raising the weighted super matrix to the highest rank.

After going through the above steps, the importance weight value of each sub-criteria is obtained which can be seen in the following table, which is the importance weight value that has been sorted from largest to smallest.

Table 4 recapitulation of weights of sub criteria importance

sub-criteria	Symbol	*Normalized*	*Limiting*	Rank
Counseling or socialization to the community	7b	0,10747	0,064399	1
Utilization of science and technology	7a	0,05824	0,060882	2
Work with leaders or superiors	5b	0,10747	0,028685	3
In collaboration with other instasis	5c	0,10747		
Prioritizing official interests over personal interests	3a	0,05824		
Comply with applicable official regulations	4a	0,05824		
Able to maintain state-owned goods	4c	0,05824		
Collaborate well with colleagues	5a	0,05824		
Set a good example	6b	0,05824	0,025168	4
Complete tasks as well as possible for internal and external services of the organization	1a	0,05824		
Be honest and sincere in doing tasks	2a	0,05824		
Not abusing authority	2b	0,05824		
Make continuous service improvement efforts	1b	0,03070		
Responsibilities as a state apparatus	3b	0,03070		
Comply with the provisions of working hours	4b	0,03070	0,023201	5
Act decisively and impartially	6a	0,03070		
Able to move the work team well to achieve high performance	6c	0,03070		

In Table 4 there is *Normalized by Cluster, Limiting* of each subcriterion. Limiting is obtained from the recapitulation of calculations.

Limiting Matrix. Normalized By Cluster value is obtained from normalizing subcriteria values

3. Assessment of Work Behavior of Civil Servants

After obtaining the weight of importance for each subcriterion, the next stage is to conduct a behavioral assessment work for employees in the Office of Cooperatives, Small and Medium Enterprises, Industry, Trade Aceh Jaya, especially in the field of industry with a Rating Scale. Rating scale is an assessment technique, where evaluators assess.

work for employees in the Office of Cooperatives, Small and Medium Enterprises, Industry, Trade Aceh Jaya, especially in the field of industry with a Rating Scale. Rating scale is an assessment technique, where evaluators assess employees using a scale in measuring factors of work behavior. The following is a scale of values in performance appraisal based on work behavior with a rating scale can be seen in Table 5:[25]

Table 5 scale of comparison values with *sclale twigs*

Value Scale	Categories	Value Interval
A	Very high performance	$4,20 < n \leq 5,00$
B	High performance	$3,40 < n \leq 4,20$
C	Performance to standard	$2,60 < n \leq 3,40$
D	Performance is down	$1,80 < n \leq 2,60$
And	Ineffective performance	$1 < n \leq 1,80$

The weight of the criteria obtained will be multiplied by the value of each criterion. The calculation to get a score from each competency criterion is as follows:

Score = Weight x Value

Furthermore, the value of employee performance achievements with the formula:

Performance Achievement Value = Z Score

Information:

Σ Score = Score of each sub criterion

After obtaining the employee performance presentation value, it will be known how high the performance of outstanding employees is and it can also be known which employees are worthy of promotion based on the *Rating Scale method.*

After knowing the scale of values in the *scale e rating*, the next stage is to assess performance based on the work behavior of civil servants. The collection of grades is carried out on staff under the structural head of the program development field who have 5 staff employees assessed by the section head, to find out which staff employees are fostered by the program who excel from the value of the weight of the criteria and sub criteria. The assessment of each criterion and sub criterion is inseparable from the value of work behavior, one of the assessments of civil servants can be seen in Table 6.

Table 6. Assessment of work behavior with *rating scale*

Criterion	Symbol	A	B	C	D	And	Weight	A	B	C	D	And
			Employee Name							Value. Weight		
ON	1a	9	6	6	8	7	0,025168	0,226512	0,151008	0,151008	0,201344	0,176176
	1b	7	4	6	6	8	0,023201	0,162407	0.092804	0,139206	0,139206	0,185608
INT	2a	9	4	7	7	9	0,025168	0,226512	0,100672	0,176176	0,176176	0,226512
	2b	8	6	6	9	6	0,025168	0,201344	0,201344	0,151008	0,226512	0,151008
KMT	3a	6	7	7	7	8	0,025168	0,151008	0,151008	0,176176	0,176176	0,201344
	3b	8	5	8	5	6	0,023201	0,185608	0,116005	0,185608	0,116005	0,139206
DS	4a	9	7	6	5	9	0,025168	0,226512	0,176176	0,151008	0.12584	0,226512
	4b	4	6	7	6	6	0,023201	0,09804	0,139206	0,162407	0,139206	0,139206
	4c	7	6	5	7	8	0,025168	0,176176	0,151008	0.12584	0,176176	0,201344
KJ	5a	8	7	6	8	8	0,025168	0,201344	0,176176	0,151008	0,201344	0,201344
	5b	9	5	8	8	9	0,028685	0,258165	0,143425	0,22948	0,22948	0,258165
	5c	9	7	7	8	9	0,028685	0,258165	0,200795	0,200795	0,22948	0,258165
KP	6a	6	5	6	4	7	0,023201	0,139206	0,116005	0,139206	0,09804	0,162407
	6b	7	5	8	6	7	0,025168	0,176176	0.12584	0,201344	0,151008	0,176176
	6c	8	6	7	6	5	0,023201	0,185608	0,139206	0,162407	0,139206	0,116005
PKM	7a	5	8	6	6	9	0,060882	0,30441	0,487056	0,365292	0,365292	0,547938
	7b	9	7	7	8	9	0,060882	0,547938	0,426174	0,426174	0,487056	0,547938
The Value of Civil Servants' Work Behavior								3,7289214	3,8545035	3,294166	4,259907	3,916054
The Value of Civil Servants' Work Performance								B	B	B	A	B

explanation

Name	Symbol
MOHD. Royani,S.Pd	A
Fakhurraz I, S.T.,M.T	B
Rina Darwis, S.TP	C
Dessi,S.T	D
Erna Wati,S.Pd	And

4. Selection of Outstanding Employees in the Industrial Field

After the assessment of work behavior, this stage is the selection of outstanding employees by looking at the highest scores from the results of the assessment of the work behavior of civil servant staff in the industrial sector at the Office of Cooperatives, Small and Medium Enterprises, Industry and Trade Aceh Jaya, based on the weight of criteria and sub criteria that make it easier for employees to measure

The level of performance achievement achieved Following Table 7 selection of outstanding employees in the field of industry.

Table 7 selection of outstanding employees in the field of industry

Name	Position	Value	Scale	Information
MOHD. Royani,S.Pd	Business and industrial kasi	3,7289214	B	High Performance
Fakhurraz I, S.T.,M.T	Kasi manufacturing	3,8545035	B	High Performance
Rina Darwis, S.TP	Quality control kasi	3,294166	B	High Performance
Dessi,S.T	Kasi cooperative	4,259907	A	Very High Performance
Erna Wati,S.Pd	Kasi trade	3,916054	B	High Performance

Selection of outstanding employees in the field of industry in the Office of Cooperatives, Small and Medium Enterprises, Industry, Trade Aceh Jaya from 5 staff employees has 1 staff of employees who have very high performance in the internal field and within the Office of Cooperatives, Small and Medium Enterprises, Industry and Trade Aceh Jaya, namely pegawai 4. Employees who are appointed as outstanding employees, in this election based on the results of the employee staff questionnaire named Dessi, S. T pegawai 4 which has an A scale as a staff of the Kasi cooperative in the field of industry that has asi.

Conclusion

Based on the results of the research that has been carried out, it can be concluded that several things are the ultimate goal of this research, namely:

1. The linkage of sub criteria and the criteria for assessing work behavior based on the results of the questionnaire obtained, a sub criteria relationship does not have to have the relationship of the criteria itself, but the relationship between the sub criteria can be related to other sub criteria of different criteria.
2. The assessment of the work behavior of civil servants has 5 employees assessed. Employees who are assessed as having the highest and lowest scores, of the 5 employees who have the lowest scores, namely Employees 1,2,3 and 5 who have behavioral values of 3,7289214, 3,8545035, 3,294166 and 3,916054 then Employees 1,2,3 and 5 have high performance, but employees who have the lowest scores must be able to make changes to improve the assessment of work behavior in the coming year. The highest value of work behavior was obtained by Employee 4 who had a behavioral value of 4.259907 and very high performance. The highest value of work behavior can be used as a reference as an employee in the environment of the Office of Cooperatives, Small and Medium Enterprises, Industry and Trade of Aceh Jaya
3. Work Behavior Assessment using the rating scale method, is more effective for assessment because in the aspects recommended by the government, namely about assessments that must be objective and measurable, they have been arranged in the *rating scale* method.

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