Model for Optimizing Human Resources Performance in the Banking: Analytical Hierarchy Process Method

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ARTICLE INFO	ABSTRACT
	Human resources are one of the factors that greatly influence a company's success, for this reason this research was conducted, namely building a model for measuring human resources in the banking sector. This research uses a qualitative method with random judgment sampling, namely selecting samples with criteria that are appropriate to the banking sector, data processing methods using the Analytical Hierarchy Process, namely looking for weights and rankings of criteria and sub-criteria, from this research four main criteria and twelve sub-criteria, and the sub-criterion with the highest weight is the Training Instruction sub-criterion 0.395, while the lowest weight sub-criteria is People Orientation with a value of 0.247. By creating this model, it is hoped that banks can fulfil decent work and increase economic growth.

1. Introduction

Human resources are one of the factors that greatly influences a company besides the availability of capital. So existing human resources must be managed well to increase the effectiveness and efficiency of the Company. Human resources are the main study in companies so that they can contribute to achieving company goals, human resources or employees in a company have dignity and dignity that must be respected because they have skills, abilities and can think rationally [1-3].

Problems in human resources can be viewed through two aspects, namely quantity and quality. Quantity talks about how many human resources there are, while quality relates to the quality and abilities of employees both in physical and non-physical abilities. The quality of employees is an important factor because it is an acceleration carried out by the company [4-6].

Success in a company is determined by the quality of the employees who work, uncertain economic conditions require the ability of employees to be able to analyse developments and problems that exist both internally and externally to the company, so that performance assessment becomes an important need to measure the extent of the company's progress and development.

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Employee performance is an important factor as a form of individual work behaviour as work performance that has a role in the company in a certain period, so that employees also become a determining factor in success and existence in a business, whether government or private, both in the industrial and banking fields [7-9].

Employee performance capabilities can be seen from how they complete their tasks well and this responsibility also applies to human resources in banking. There are things that can influence employee performance such as quality, quantity, responsibility, cooperation and initiative [10-12]. Factors that influence employee performance include recruitment, job training [13,14]. Compensation and organizational culture can influence the performance of human resources including employees in banking [8,10,14]. The success of banking employees in completing their duties and responsibilities can be seen from ratio the return on assets (ROA). If there is no stability in profit achievement from year to year, this indicates that employee performance is disrupted. Ratio the return on assets (ROA) provides evidence of management effectiveness in generate profits that are invested and credit distributed to people in need [7-9].

To see employee performance capabilities starting from recruitment, holding job training, compensation and work culture, this will be measured using the Process Hierarchy Analysis (AHP) method, and the results of the measurement criteria will be translated into artificial intelligence, hopefully using the Artificial Intelligence method. can affect the quality of employee work [15-18].

2. Research Methods

This study applies a quantitative approach involving the distribution of questionnaires to respondents in two phases and the use of purposive judgment sampling the criteria for respondents are outlined in the following table:

Table 1
Criteria of respondents

NO	Position	Year of Service
1	Bank Director	>= 5 Years
2	Head of HRD Bank	>= 5 Years
3	Head of the Financial Bank	>= 5 years

The questionnaire was disseminated based on the information in the table above. A Based on the diagram below, this investigation was conducted in three phases [19]:
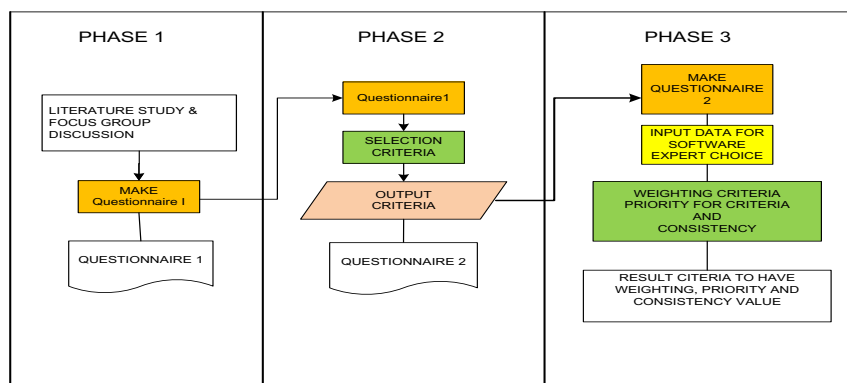
Fig. 1. Design Research

The first phase is literature study and FGD to obtain references regarding the criteria that will be used in making the questionnaire. After the first stage questionnaire is filled in, the next step is to select the criteria that will be used to create measures in decision making for the private banking human resource measurement model using a linked scale with the formula [19-21]:

$$75\% \times (\textstyle\sum \text{Respondent} \times \text{Maximum Score}) \tag{1}$$

After the criteria have been selected, the next step is to make a questionnaire, the second stage of the questionnaire is filled in, then selected using the pair method, using the formula:

$$R = [(1+R1)\,(1+R2)\,(1+R3)\ldots..(1+Rn\,)]1/n - 1 \tag{2}$$

Details:
R1…Rn= result of respondents 1 for respondent n

After getting the results, the next step is to input the data and analyse the data using the Analytical Hierarchy Process [21-24].
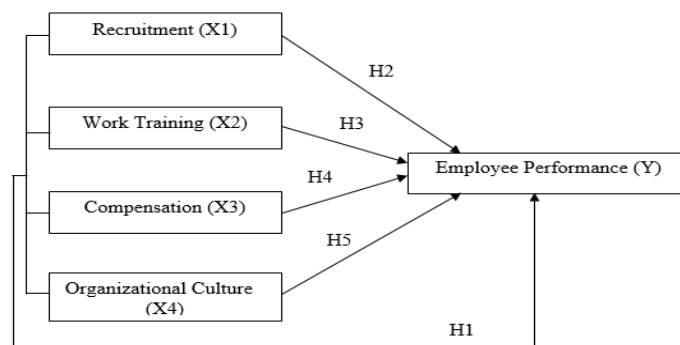
Fig. 2. Framework Research

Processing research data on measuring human resources in banking is obtained from the research framework as the main criterion, sub-criteria are derived from the research framework then a questionnaire is created for the human resource measurement model in banking, from these criteria and sub-criteria can be analysed as reference material in measuring human resources in private banking, with this measure it can help managerial decisions to improve the quality of human resources in private banking. So that the performance of private banking can be improved and will add positive value to the image of the private bank [25,26].

3. Results
3.1 Hypothesis Testing Results
3.1.1 F test (together)

F-Statistics testing to determine the feasibility of an equation model in measuring independent variables which jointly influence the dependent variable. The results of data processing using SPSS software are shown in Table 2 below.

Table 2

ANOVA test

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5378.543	4	1344.636	56,955	,000 [b]
Residual	1629.013	70	23,609		
Total	7007.556	74			

Source: SPSS Statistics 25 data processing results

Based on the results of multiple linear regression data processing, the F-count value was 56.955 or Sig (0.0000) < α5%, so H_0 it was rejected, which means Recruitment (X1), Training (X2), Compensation (X3) and Organizational Culture (X4) together -the same has a significant effect on Employee Performance (Y) of private banks.

3.1.2 Test R^2 (Coefficient of determination)

Testing the coefficient of determination to measure how far the independent variable can influence the dependent variable. The results of data processing using SPSS software are shown in Table 3 below.

Table 3

Coefficient Test Results R^2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,876 [a]	,768	,754	4.85890

Source: SPSS Statistics 25 data processing results

Based on the results of multiple linear regression data processing, the result of the summary model is that the Adjusted R-Square value is 0.754, which means that the variables recruitment (X1), training (X2), compensation (X3) and organizational culture (X4) are able to influence employee performance (Y) by 75 .4% while 24.6% is influenced by external variables not included in this study. From the results of the hypothesis test above, the sub-criteria for each of the main criteria mentioned above are looked for.

3.2 Main Criteria

The main criteria for measuring private banking human resources have four criteria and of each of these criteria the one with the highest score is Recruitment which has a score of 0.395, while the criterion with the lowest score of the four main criteria is the Work Training criterion which has a score value. 0.134, according to Table 4

Table 4

Main Criteria

No	Criteria	Score
1	Recruitment	0.395
2	Organizational Culture	0.208
3	Compensation	0.266
4	Work Training	0.134

3.3 Sub Criteria
3.3.1 Recruitment sub criteria

The main criteria for Recruitment have three sub-criteria which measure the performance of private banking employees. Of these three sub-criteria, Recruitment Source has the highest value or score, namely 0.302, while the lowest sub-criteria in this criterion is Recruitment Method which has a score of 0.213, according to Table 5.

Table 5
Recruitment Sub-Criteria

No	Sub-Criteria	Score
1	Recruitment Source	0.356
2	Recruitment Requirements	0.312
3	Recruitment Method	0.291

3.3.2 Organization culture sub criteria

The main criteria for Organization Culture have three sub-criteria which measure the performance of private bank employees. Of these three, the Results Orientation sub-criterion has the highest value or score, namely 0.244, while the lowest sub-criterion in this criterion is the People Orientation sub-criterion, which has a value of 0.161, according to with Table 6.

Table 6
Organization Culture Sub-Criteria

No	Sub-Criteria	Score
1	Results Orientation	0.342
2	Team Orientation	0.310
3	People Orientation	0.247

3.3.3 Compensation criteria

The main criteria of the Compensation Criteria have three sub-criteria which measure the performance of regional bank employees. Of these three sub-criteria, the Salary sub-criteria have the highest value or score, namely 0.328, while the lowest sub-criterion in this criterion is the Facility sub-criteria, namely 0.205 according to Table 7.

Table 7
Compensation Sub-Criteria

No	Sub-Criteria	Score
1	Salary	0.358
2	Facilities	0.331
3	Incentives	0.310

3.3.4 Work training criteria

The main criteria of the Work Training Criteria have three sub-criteria which measure the performance of regional bank employees. Of these three sub-criteria, the Instructor Training sub-

criteria has the highest value or score, namely 0.217, while the lowest value of this criterion is the Training Objective sub-criteria, namely a score of 0.133, in accordance with Table 8.

Table 8
Work Training Sub-Criteria

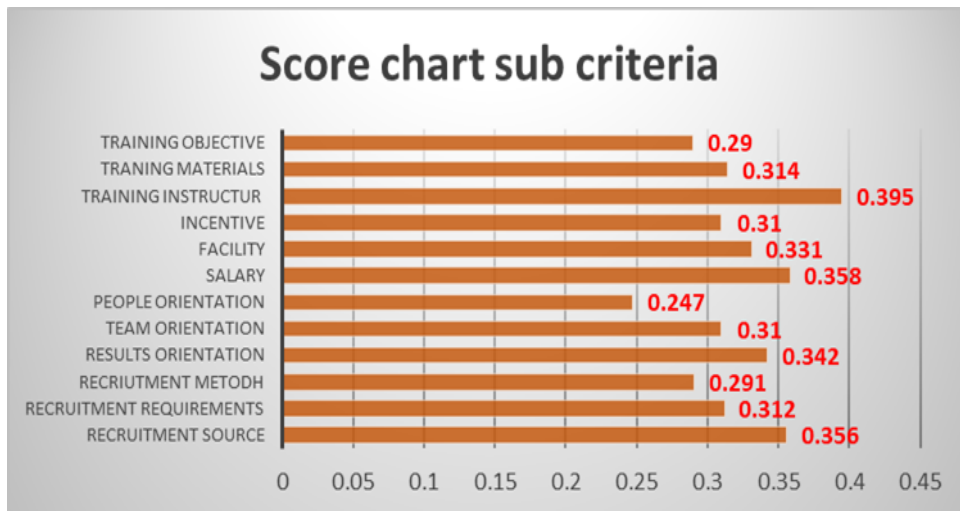| No	Sub-Criteria	Score
1	Instructor Training	0.395
2	Training Materials	0.314
3	Training Objectives	0.290

3.4 Weighting and Ranking

The results of data processing are the weights of each criterion and sub-criterion from the private banking human resource measurement model. These weights are then ranked from the highest value to the lowest value. The sub-criterion with the highest score is the training instructor sub-criterion. namely 0.395, while the sub-criterion with the lowest afternoon score is the people orientation sub-criterion which has a score of 0.247 as in Table 9.

Table 9
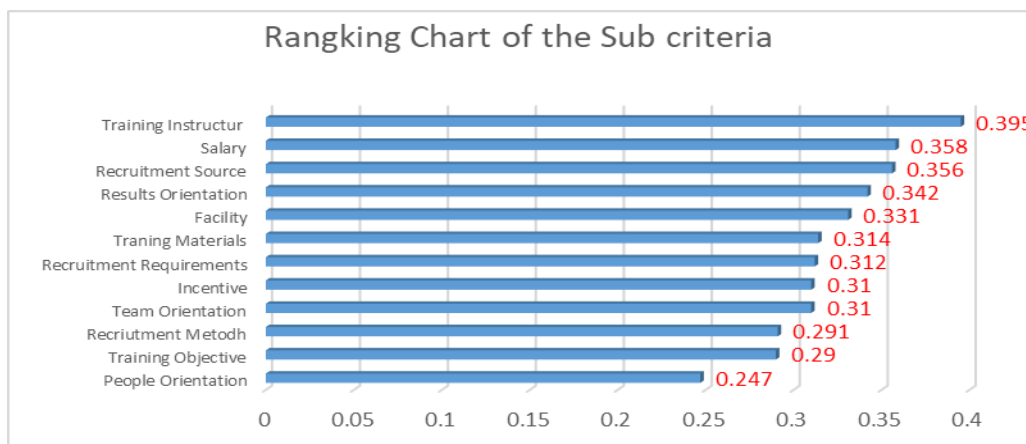Sub-Criteria Weights and Rankings

No	Sub Criteria	Score
1	Recruitment Source	0.356
2	Recruitment Requirements	0.312
3	Recruitment Method	0.291
4	Results Orientation	0.342
5	Team Orientation	0.310
6	People Orientation	0.247
7	Salary	0.358
8	Facilities	0.331
9	Incentives	0.310
10	Instructor Training	0.395
11	Training Materials	0.314
12	Training Objectives	0.290

Based on Table 9, the 12 sub-criteria that have been processed from each sub-criteria can be illustrated with a graph as in Figure 3 below.

Fig. 3. Sub Criteria Weight Chart

Then, from the sub-criteria weight graph, we sort it to get the highest value. From the sorting results, the highest value is Training Instructor which has a weight score of 0.395, and the sub-criterion with the lowest weight score is the People Orientation sub-criterion 0.247, as in Figure 4 below.

Fig. 4. Sub Criteria Ranking Chart

3.5 Weight and Ranking Chart

The weight and ranking graph show that the highest weight for each sub-criteria is taken from Table 9. So, you get a graph that has the highest to lowest weight values. Like Figure 5 below.
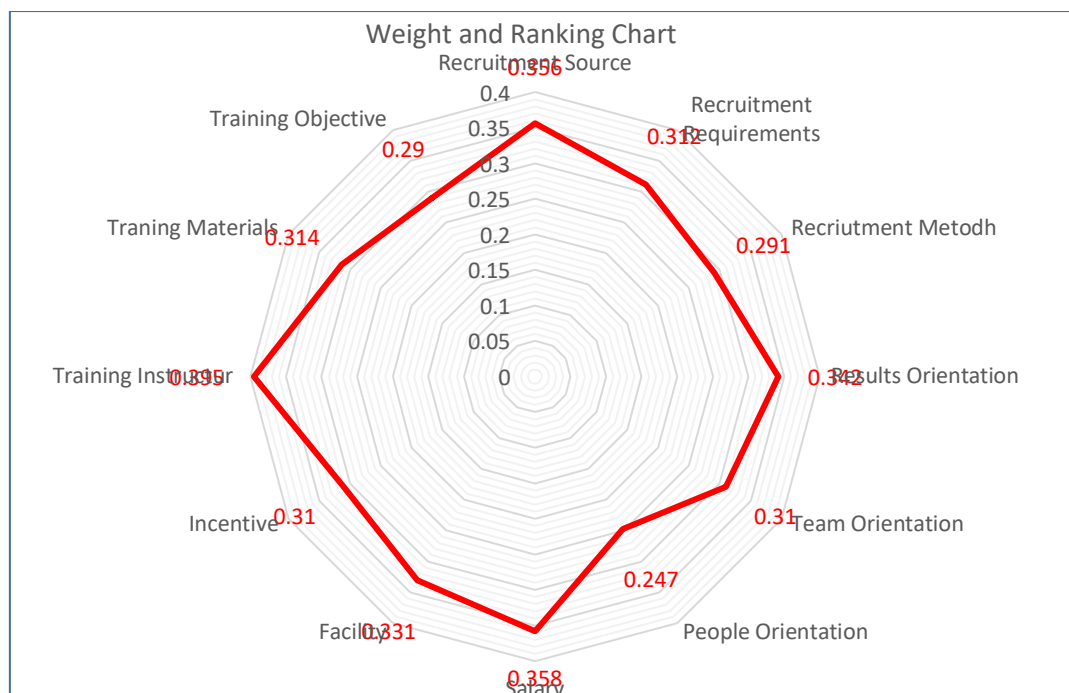
Fig. 5. Weighting and Ranking Chart of the Sub Criteria

From this graph it can be seen below that there are three very prominent points that have high scores, namely the highest score is 0.395 which is owned by the Instructor Training sub-criteria. This shows that providing training to employees is very important, the most important thing to pay attention to is during training or the workshop must be looked at who the instructor is because it will influence how employees do their work well and appropriately in the banking sector. Then from the graph above the second highest score is 0.358, namely the salary sub-criteria. This shows that a high salary level will influence the level of employee loyalty so that with good loyalty, the work will be carried out in its entirety, then the third highest score is 0.356, namely the recruitment source sub-criteria, this shows that human resources have good qualities and good skills who can do and complete the work correctly and quickly.

From this graph we also see that there are the same criteria scores, namely the incentive and team orientation sub-criteria with a score of 0.31, this shows that there is a relationship between these two sub-criteria and good team work results and targets being achieved, so the team will get additional incentives.

From this graph, it is also clear that the smallest value of all sub-criteria is the people orientation sub-criteria, which has a score of 0.247, this shows that employees who are not able to work together with a team will have a poor assessment of their achievements in the organization.

4. Conclusion

The results of this research, there are four (4) main criteria for creating a human resource measurement model in the banking sector, namely Recruitment, work training, compensation, organizational culture. Of the four main criteria, there are twelve (12) sub-criteria, of each sub-criterion the highest score is the Training Instruction criterion. This sub-criterion has a very important role in training employees in banking in order to improve the quality of workers. The people orientation sub-criterion, which has the lowest score of 0.247, shows that employees who

are unable to work together with a team will have a poor assessment of work performance in the organization.

Acknowledgement

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