



RESEARCH ARTICLE

# Employee Performance Assessment Application Using AHP Weighting with Moora Method (Study Case: PT. Astra Honda Motor Bengkulu)

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## Abstract

At PT. Astra Honda Motor conducts employee performance appraisals every year. The assessment is carried out annually where each employee will be given a score which is divided into 2 categories, namely the Work Outcome Category and the Process and Work Attitude Category. In the performance appraisal process, it is still done manually using the provided form so that errors often occur in providing final results in employee performance appraisals and also take a long time. The AHP method and the Moora method are one of the methods of decision support systems, where the AHP method is used to determine the weights for each assessment criteria, while the Moora method is used to calculate employee performance appraisals through the stages of employee performance appraisal applications at PT. Astra Honda Motor Bengkulu was created to help make it easier to manage employee data and evaluate employee performance. This employee performance appraisal application can help process employee performance appraisal data at PT. Astra Honda Motor Bengkulu and can provide information on the results of employee performance appraisals based on the calculation of the Moora Method and the Weighting Criteria of the AHP Method. Based on the employee performance appraisal test data as many as 13 people, the results of the employee performance appraisal who have the highest score are Anita with the results of the Moora Method 55.94. Based on the black box testing that has been done, the results show that the functionality of the application runs as expected and the application is able to display the results of employee performance assessments through the stages of the Moora Method.

**Keyword :** Application; Employee Performance; AHP Weighting; Moora Method; PT. Astra Honda Motor Bengkulu

## Introduction

Currently, information technology is a very important means of information for a company/organization on a small, medium or large scale. Information is expected to facilitate and expedite work/activities and the objectives can be achieved optimally and maximally.

At PT. Astra Honda Motor conducts employee performance appraisals every year. Employee performance appraisal at PT. Astra Honda Motor Bengkulu is held every year where each employee will be given a score which is divided into 2 categories, namely the Work Result Category and the Process and Work Attitude Category. The employee performance appraisal system is conducted annually based on predetermined criteria per value category as the basis for the assessment. However, in the assessment process, it is still done manually using the provided form so that errors often occur in providing final results in employee performance appraisals and also take a long time.

Therefore, to overcome these problems, we need an application that can help process employee performance appraisal data and provide output from the calculation of employee performance appraisals that have been carried out annually at PT. Astra Honda Motor. In calculating the performance appraisal of each employee, it is carried out using the Moora Method where the weighting of each criterion is obtained through the AHP method.

The AHP method and the Moora method are one of the Decision Support System methods that can be used to find the best alternative with many available alternatives. In this case it is an employee performance appraisal. The AHP method is used to determine the weight of each assessment criteria, while the Moora method is used to calculate employee performance appraisals step by step.

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## Ease of Use

### A. Sistem Pendukung Keputusan

Sistem pendukung keputusan (SPK) adalah sistem berbasis komputer yang interaktif, yang membantu pengambil keputusan memanfaatkan data dan model untuk menyelesaikan masalah-masalah yang tak terstruktur dan semi terstruktur. Pada dasarnya SPK dirancang untuk mendukung seluruh tahap pengambilan keputusan mulai dari mengidentifikasi masalah, memilih data yang relevan, sampai mengevaluasi pemilihan alternatif (Limbong, 2020:15).

### B. Metode AHP

Metode Analytical Hierarchy Process (AHP) merupakan salah satu metode pengambilan keputusan yang menggunakan faktor-faktor logika, intuisi, pengalaman, pengetahuan, emosi dan rasa untuk di optimasi dalam suatu proses yang sistematis, serta mampu membandingkan secara berpasangan hal-hal yang tidak dapat diraba maupun yang dapat diraba, baik itu data kuantitatif dan data kualitatif (Ginting, 2020:60).

Cara kerja AHP adalah dengan menyederhanakan suatu permasalahan kompleks yang tidak restruktur, strategi dan dinamik menjadi bagian-bagian.

### C. Metode Moora

Multi Objective Optimization on the basis of Rasio Analysis (MOORA) adalah multiobjektif sistem mengoptimalkan dua atau lebih atribut yang saling bertentangan secara bersamaan. Metode ini diterapkan untuk memecahkan masalah dengan perhitungan matematika yang kompleks. Moora diperkenalkan oleh Brauers dan Zavadskas pada tahun 2006. Pada awalnya metode ini diperkenalkan oleh Brauers pada tahun 2004 sebagai Multi Objective Optimization yang dapat digunakan untuk memecahkan berbagai masalah pengambilan keputusan yang rumit pada lingkungan pabrik. Metode moora diterapkan untuk memecahkan banyak permasalahan ekonomi, manajerial dan konstruksi pada sebuah perusahaan maupun proyek (Nofriansyah, 2017:75).

Metode Moora memiliki tingkat fleksibilitas dan kemudahan untuk dipahami dalam memisahkan bagian subjektif dari suatu proses evaluasi ke dalam kriteria bobot keputusan dengan beberapa atribut pengambilan keputusan. Metode ini memiliki tingkat selektifitas yang baik karena dapat menentukan tujuan dari kriteria yang bertentangan. Dimana kriteria dapat bernilai menguntungkan (benefit) atau yang tidak menguntungkan (cost).

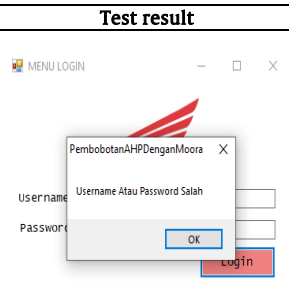
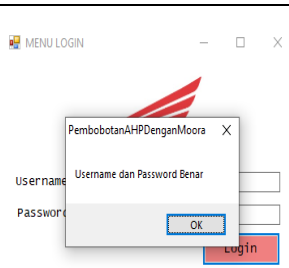
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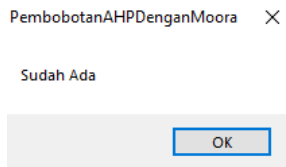
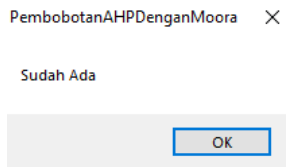
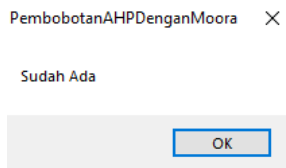
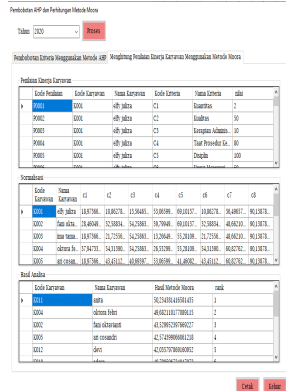
The research method used by the author is a system development method. The system development method used is Waterfall. In the analysis of the new system, a system will be developed that can manage employee performance appraisal data through the AHP and Moora method approaches. To support this, in this research also built an application that can help process employee performance appraisal data using the Visual Basic .Net programming language.

## Using the Template

System testing is carried out using the black box method, namely by testing the data input form contained in the employee performance appraisal application at PT. Astra Honda Motor Bengkulu. The tests carried out are shown in Table 1.

TABLE I. Blackbox Test Results

No	Form	Testing Scenario	Expected Results	Test result
1	Login Form	Entering the wrong username or password on the login form	the system denies the login access and gives an error message	
		Enter the correct username and password on the login form	the system accepts the access and gives a success message	

2	Employee Data Input Form	Entering prospective employee data by entering the employee code that is already in the database	the system denies access to save the data and gives an error message	
3	Criteria Input Form	Entering criteria data that already exists in the database	the system denies access to save the data and gives an error message	
4	Employee Performance Assessment Data Input Form	Entering data that is already in the database	the system denies access to save the data and gives an error message	
5	AHP Weighting and Calculation of the Moora Method	Carry out the AHP weighting process and the calculation of the Moora Method	the system successfully displays the results of the AHP weighting process and the calculation of the Moora Method	

Based on the black box testing that has been carried out, the results show that the functionality of the application runs as expected and the application is able to display the results of employee performance appraisals through the stages of the method.

## Acknowledgment

1. Application of employee performance appraisal at PT. Astra Honda Motor Bengkulu was created to help facilitate the PT. Astra Honda Motor Bengkulu in managing employee data and evaluating employee performance.
2. This employee performance appraisal application can help process employee performance appraisal data at PT. Astra Honda Motor Bengkulu and can provide information on the results of employee performance appraisals at PT. Astra Honda is based on the calculation of the Moora Method and the Weighting of the Criteria AHP Method.
3. Based on the employee performance appraisal test data as many as 13 people, the results of the employee performance appraisal who have the highest score are Anita with the results of the Moora Method 55.94.
4. Based on the black box testing that has been done, the results show that the functionality of the application runs as expected and the application is able to display the results of employee performance assessments through the stages of the Moora Method

## Supplementary Material

Supplementary material that may be helpful in the review process should be prepared and provided as a separate electronic file. That file can then be transformed into PDF format and submitted along with the manuscript and graphic files to the appropriate editorial office.

## References

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