ANALYSIS OF FACTORS AFFECTING EMPLOYEE PERFORMANCE AT BKPSDM PAYAKUMBUH CITY USING BINARY LOGISTIC REGRESSION

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ABSTRAK

Penelitian ini bertujuan untuk menganalisis faktor-faktor yang mempengaruhi employee performance pada Badan Kepegawaian dan Pengembangan Sumber Daya Manusia (BKPSDM) Kota Payakumbuh. Metode yang digunakan adalah regresi logistik biner dengan variabel dependen (Y) adalah employee performance, sedangkan variabel independen meliputi work initiative, discipline, qualification, competence, dan leadership. Hasil analisis menunjukkan bahwa competence dan leadership memiliki pengaruh yang signifikan terhadap employee performance. Temuan ini menunjukkan pentingnya pengembangan competence dan penguatan leadership dalam meningkatkan employee performance. Dari hasil regresi logistik biner, diketahui bahwa pegawai dengan kinerja rendah berjumlah 16 orang, sementara pegawai dengan kinerja tinggi berjumlah 15 orang. Saran yang diberikan mencakup pengembangan competence pegawai, penguatan leadership, monitoring discipline dan work initiative, serta evaluasi qualification secara berkala. Implementasi saran-saran ini diharapkan dapat membantu meningkatkan employee performance dan kualitas pelayanan pada BKPSDM Kota Payakumbuh.

***Kata Kunci** : Analisis Binary Logistik Regresi, Employee performance, work initiative, discipline, qualification, competence, dan leadership*

ABSTRACT

This research aimed to examine the factors influencing employee performance at Payakumbuh City Personnel and Human Resources Development Agency (BKPSDM). Using binary logistic regression, the dependent variable (Y) represented employee performance, while the independent variables included work initiative, discipline, qualifications, competence, and leadership. The analysis revealed that competence and leadership significantly impacted employee performance. These findings highlighted the critical role of competency development and leadership strengthening in enhancing employee performance. The binary logistic regression results indicated that 16 employees exhibited low performance, while 15 employees demonstrated high performance. Recommendations were made, including the need for the development of employee competencies, enhancement of leadership capabilities, monitoring of discipline and work initiatives, and periodic evaluation of qualifications. The implementation of these recommendations is expected to contribute to improved employee performance and service quality at BKPSDM Payakumbuh City.

***Keywords:** Binary Logistic Regression Analysis, Employee Performance, work initiative, discipline, qualifications, competence and leadership*

Introduction

Indonesia comprises over 17,000 islands and had a population of 278.69 million as of mid-2023, reflecting an annual growth rate of 1.05% compared to the previous year. This significant population size necessitates the provision of high-quality public services by the government to ensure public satisfaction and effectively address the needs of its citizens. Public service, in this context, refers to the fulfillment of societal desires and needs by state administrators. The establishment of the state by its citizens inherently aims to enhance societal welfare. Thus, the government, as the primary executor of state functions, must strive to meet these needs, which encompass collective rather than individual interests, addressing a broad spectrum of societal expectations.

Public service delivery is closely tied to the role of the State Civil Apparatus (Aparatur Sipil Negara, ASN). To achieve good governance, it is essential to enhance the professionalism of the ASN, who operate within the framework of government institutions. Professionalism among the ASN is a critical factor in ensuring effective and efficient governance and public service delivery.

In this regard, Payakumbuh City Personnel and Human Resource Development Agency (Badan Kepegawaian dan Pengembangan Sumber Daya Manusia, BKPSDM) was established under the Mayor of Payakumbuh's Regulation Number 65 of 2021 concerning the Organizational Structure, Duties, Functions, and Work Procedures of the Agency. The BKPSDM serves as a supporting element of government administration in the areas of personnel management and human resource development. The head of this agency sends reports directly to the Mayor through the Regional Secretary. The primary mandate of the BKPSDM is to assist the Mayor in executing supporting functions related to personnel and human resource development, thereby contributing to the overall effectiveness of governance and service delivery in Payakumbuh City.

Improving employee performance is a critical factor in ensuring the efficiency and effectiveness of organizational operations, including those of the Human Resources Development and Personnel Agency (BKPSDM) in Payakumbuh City. In the context of a rapidly evolving work environment, this research seeks to examine and analyze the factors influencing employee performance at BKPSDM using the binary logistic regression method. The research specifically investigates the relationship between work initiative, discipline, qualifications, competence, and leadership as independent variables and employee performance as the dependent variable.

Employee performance plays a vital role not only in achieving organizational goals but also in delivering high-quality public services to the community. As an institution responsible for managing human resources, BKPSDM Payakumbuh City requires a comprehensive understanding of the factors that can either enhance or hinder the performance of its workforce. This research was peformed to bridge both conceptual and practical gaps by offering actionable insights and recommendations for human resource development within BKPSDM and similar organizations.

By focusing on key determinants such as work initiative, discipline, qualifications, competence, and leadership, this research is expected to contribute significantly to the field of human resource management. The findings from the binary logistic regression analysis will provide a nuanced understanding of the influence of each factor on employee performance and identify the variables with the most substantial impact.

Improving employee performance is not solely an individual responsibility but a collective outcome of collaboration between management, employees, and various factors influencing the work environment. This research aims to provide a comprehensive perspective and serve as a foundation for policymaking and the development of more effective human resource management strategies at the Human Resources Development and Personnel Agency (BKPSDM) of Payakumbuh City.

In an evolving organizational landscape, the success of institutions such as BKPSDM depends on the optimal performance of its employees. Enhancing employee performance is a critical necessity, requiring a thorough understanding and management of the factors that significantly impact the achievement of organizational goals.

This research focuses on key variables—work initiative, discipline, qualifications, competence, and leadership—as influential factors in shaping employee performance. By analyzing the role and contribution of each of these factors, this research aims to provide actionable insights into how BKPSDM Payakumbuh City can strengthen its workforce and achieve institutional objectives effectively.

According to Robbins, S. P., Judge, T. A., and Campbell (2017), performance represents the accomplishment of individuals or groups in executing their core tasks in alignment with assigned responsibilities. It encompasses the successful outcomes of work performed in accordance with the roles and functions undertaken. Similarly, Fahmi (2017) defines performance as the

achievement of individuals or groups in fulfilling their duties and responsibilities in accordance with established standards. The standards include the measurable outcomes attained by individuals or groups in carrying out their primary tasks and functions.

Work initiative is defined as an individual's spontaneous response to changes and challenges in the workplace, undertaken without waiting for directives from superiors or the organization (Taylor, 2016). It reflects an individual's maturity in thought and decision-making processes (Taylor, 2016). However, this spontaneous reaction may vary depending on the individual's willingness and effort to cultivate it. Considering the positive impact of initiative on performance and adaptability, individuals are encouraged to actively develop this trait. Notably, initiative is not an inherent characteristic but a skill that can be nurtured and trained over time.

Saydam (1996: 284) defines discipline as "an attitude of willingness and readiness of a person to obey and comply with all applicable regulatory norms around them." This highlights that the key elements of work discipline are the attitudes and behaviors of individuals who consciously adhere to and respect established regulations. Similarly, Hasibuan (2012: 115) describes discipline as "the awareness and willingness of an employee to obey all regulations and norms within a government organization." Mangkunegara (2012: 129) emphasizes discipline as "a management activity aimed at strengthening organizational guidelines." These perspectives collectively underscore discipline as both an individual commitment and a managerial tool essential for ensuring order and compliance within organizations.

According to the Great Dictionary of the Indonesian Language, educational qualification refers to the expertise required to perform specific tasks or to hold certain positions. Ningrum (as cited in Alim, 2010:13) further elaborates that educational qualification encompasses the requirements that must be fulfilled concerning the skills necessary to perform a job. Educational qualifications serve as an indicator of an individual's credibility in executing their work, thereby contributing to improved productivity. Similarly, Miarso (as cited in Alim, 2010:13) defines educational qualifications as the skills and knowledge an individual must possess to effectively carry out their assigned tasks, which in turn supports enhanced work productivity.

The term "competence" originates from the English word "competence". According to Fullan (2006: 188), the essence of competence focuses more on what an individual is capable of doing rather than solely on what they know. Competence refers to an individual's ability,

demonstrated through attitudes and behaviors that align with the requirements of their work. As an input, competence represents the capacity or potential within a person to effectively solve problems.

Coombe (as cited in Taufik, 2007: 144) identifies two sources of competence input: first, abilities acquired through learning, training, and experience; and second, innate abilities within the individual that significantly influence their performance. Meanwhile, McAshan (as cited in Mulyasa, 2009: 41) outlines three dimensions of employee competence: knowledge, attitude, and skills.

Kartono (2017) defines leadership as the ability to influence others, subordinates, or groups by directing their behavior toward achieving organizational or group goals. Similarly, Edison et al. (2018) describe leadership as the act of influencing others or subordinates to work collaboratively toward the attainment of specific objectives. In line with these perspectives, Suwatno and Priansa (2018) characterize leadership as the capacity to exert a constructive influence on others, encouraging cooperative efforts to achieve predetermined goals.

Research Methods

In this research, the author utilized Binary Logistic Regression for data analysis, employing the SPSS 26 program. According to Field, A. (2013), "Binary Logistic Regression is a statistical method used to measure the relationship between a binary dependent variable and one or more independent variables by providing results in the form of predicted probabilities of the occurrence of one category of the dependent variable." Similarly, Hosmer, D.W., and Lemeshow, S. (2000) describe Binary Logistic Regression as a statistical method used to estimate the probability of a binary or dichotomous event's occurrence, which can be explained by one or more independent variables. Agresti, A. (2018) further clarifies that Binary Logistic Regression is used when the dependent variable is binary (with two categories), aiming to model the probability of one category's occurrence based on the independent variables' values.

The method was applied to predict factors influencing employee performance at BKPSDM Payakumbuh City. The data were sourced from personnel records at BKPSDM Payakumbuh City, with a sample size of 31 employees. The variables used in the analysis include Work Initiative, Discipline, and Leadership, derived from the SKP assessment data of BKPSDM Payakumbuh City employees, as well as the Qualification and Competence variables, which were obtained from the

ASN Professionalism Index of BKPSDM Payakumbuh City. The formula used in the analysis is as follows:

$$\log \left\{ \frac{Y}{1-Y} \right\} = C + B1X1 + B2X2 + \ldots\ldots$$

Results and Discussion

Data processing in this research began with inputting the data into Microsoft Excel, followed by the use of the SPSS program to conduct Binary Logistic Regression analysis, aiming to identify the factors that significantly influence the performance of BKPSDM Payakumbuh City employees. The stages involved were as follows: first, data from the SKP assessments and the ASN Professionalism Index of BKPSDM Payakumbuh City employees were entered into Microsoft Excel. The data were then analyzed using the SPSS version 26 Binary Logistic Regression program to examine the potential factors that could influence employee performance at BKPSDM Payakumbuh City.

The results of the analysis are presented as follows.

Table.1

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1ª	Work initiative	0,308	0,365	0,713	1	0,398	**1,361**
	Discipline	-0,307	0,294	1,094	1	0,296	**0,736**
	Qualification	-0,097	0,196	0,244	1	0,621	**0,908**
	Competence	0,256	0,126	4,130	1	0,042	**1,292**
	Leadership	0,378	0,184	4,209	1	0,040	**1,460**
	Constant	**-40,670**	**29,477**	**1,904**	**1**	**0,168**	**0,000**

a. Variable(s) entered on step 1: Work Initiative, Discipline , Qualification, Competence, Leadership .

Variables with significant influences obtain values <0.05. Based on this threshold, the following conclusions were drawn.:

a. Work initiative (0.398), discipline (0.296) dan Qualification (0.621) have no significant influence on Y (employee performance).

b. Competence significantly affected Y (employee performance) with a significance value of 0.042

c. Leadership significantly affected Y (employee performance) with a significance value of 0.040

The analysis revealed two variables which significantly affected the performance of BKPSDM employees in Payakumbuh City: Competence and Leadership. Subsequently, these significant variables (Competence and Leadership) were reprocessed using SPSS. The following results were obtained.

Tabel.2

Variables in the Equation

		B	S.E.	Wald	Df	Sig.	Exp(B)
Step 1ᵃ	Competence	0,213	0,100	4,569	1	0,033	1,238
	Leadership	0,247	0,100	6,133	1	0,013	1,280
	Constant	**-33,800**	**13,407**	**6,355**	**1**	**0,012**	**0,000**

Variable(s) entered on step 1: Competence, Leadership.

Competence and Leadership obtained values lesser than 0.05, indicating that these variables can be used to predict employee performance at BKPSDM Payakumbuh City. Based on these findings, it can be concluded that Competence and Leadership significantly influence employee performance at BKPSDM Payakumbuh City. Therefore, the regression formula for predicting employee performance at BKPSDM Payakumbuh City is as follows:

$$Y = \frac{1}{1+exp(-(C+\beta 1\ X1 +\beta 2\ X2\ ))}$$

$$Y = \frac{1}{1+exp(-(-33.800+0.213X1 +0,247X2\ ))}$$

The author determined the Cut Off for the dependent variable (Y) to be 0.7, meaning that if an employee has a Y value greater than 0.7, their performance is classified as high, while a Y value less than 0.7 indicates low performance. Among the 31 employee data from BKPSDM Payakumbuh City, 16 employees were identified as having low performance, and 15 employees were classified as having high performance.

The accuracy of the data reached 87.1% as presented in Table 3.

Tabel.3

Classification Table[a]

			Predicted		
			Performance		Percentage Correct
			0	1	
Observed					
Step 1	Performance	0	11	2	**84,6**
		1	2	16	**88,9**
	Overall Percentage				**87,1**
a. The cut value is .500					

Conclusion

As found in this research, factors that significantly affect employee performance at BKPSDM Payakumbuh City are the Competence and Leadership variables. In contrast, the variables of work initiative, discipline, and qualifications do not significantly influence employee performance at BKPSDM Payakumbuh City. The model demonstrated an accuracy of 87.1% in predicting employee performance. Based on the assessment results of the equation, it was found that 16 employees exhibited low performance, while 15 employees demonstrated high performance.

The binary logistic regression performed in this research indicated that the Competence and Leadership variables have a significant impact on employee performance. To address this, the development of employee competencies should be prioritized through targeted competency development programs that focus on the key aspects identified as significant in the research. Offering additional training and educational opportunities can enhance employees' skills and knowledge, enabling them to be more effective and efficient in carrying out their duties. This approach will contribute to improving overall performance and ensuring that employees are better equipped to meet organizational goals.

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