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Factors Affecting Construction Workforce Performance on Road Improvement Projects in Sigi District

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Abstract:- Many projects do not run as expected due to low workforce performance. Therefore, the aim of this research is to determine the factors that influence performance and the factors that most influence the performance of construction workers on road improvement projects in Sigi Regency. The type of research used is descriptive research with a quantitative approach. In this research, the sampling technique used was nonprobability sampling with the technique taken being saturated sampling (census) with a total of 50 respondents. To collect data using observation techniques and distributing questionnaires. Data analysis using Factor Analysis. Based on the research results, there are five factors that influence the performance of construction workers on road improvement projects in Sigi Regency. These five factors are individual and supervisor factors, educational factors and facilities provided, discipline and work system factors, leadership and supervision factors, and changes in work environment. The magnitude of the influence resulting from all these factors reached 65.075% while the remaining 34.925% was influenced by other factors whose influence was not significant, this was obtained from the factor analysis test.

Keywords:- *Performance Factors, Construction Labor, Road Improvement Project, Sigi District.*

I. INTRODUCTION

Construction projects are projects related to the construction of buildings and infrastructure which generally include basic work which is included in the field of civil engineering and infrastructure.[1] Apart from that, it also involves other fields of science, such as industrial engineering, mechanical engineering, electrical engineering, geotechnical engineering. The stages of a construction project, starting from the emergence of the development initiative, are then followed up with surveys and so on, until the construction is actually standing and can be operated in accordance with its functional purpose.[2] Road construction projects include excavation, backfilling, road paving and construction of bridges and drainage structures. Road construction is usually planned by local public works departments and differs from building construction in terms of activities between owners, planners and contractors.

One of the factors that supports the success of a construction project is the guarantee of various supporting resources and one of them is human resources or labor. [3]If these human resource aspects can be fulfilled, it is hoped that worker performance will increase.

Every human resource in an organization, including workers and leadership, contributes to performance.[4] A multitude of factors, both inside and external to the human resources department, impact their ability to execute. Each employee possesses talents based on their knowledge, skills, competency for the work they do, motivation for their work, and job happiness. But employees' personalities, attitudes, and behaviors can also affect how well they work. Other resources that impact an organization's performance include finances, supplies, machinery, technology, internal and external work environments, and work methods.

The way to find out whether the performance of construction work, especially road work, is going well in Sigi Regency, is to carry out a performance assessment. The practice of evaluating how well employees have performed their jobs over a given amount of time is called performance appraisal, and it involves identifying the different elements that affect workforce performance.

In carrying out work in the field, a decrease in workforce performance can sometimes occur due to the workforce being less effective in their work.[5] Individual factors such as smoking habits while working, not wearing complete personal protective equipment, not being punctual or lacking discipline, not understanding instructions, using a cell phone while working, lack of experience and unskilled work will have an impact on the performance of the project itself.

The aim of this research is to find out what factors influence the performance of construction workers on road improvement projects in Sigi Regency and find out what factors most dominantly influence the performance of construction workers on road improvement projects in Sigi Regency.

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II. LITERATURE REVIEW

Several concepts and literature studies that are related to and support the research object are as follows:[6]

A. Construction Projects

An infrastructure building is the subject of a construction project, which often entails fundamental work in the domains of civil engineering and architecture. [7] These structures encompass a wide range of public interest because they include residential housing, multi-story apartment and office buildings, factories and industrial buildings, bridges, highways with flyovers, railways, nuclear power plants, dams, and hydroelectric power plant (PLTA) tunnels; airports and airplane hangars; seaports and offshore buildings; electricity and telecommunications networks; and so forth. Engineering design, procurement, construction, and feasibility studies are the primary tasks involved in construction projects.[8] The end result is the development of roads, buildings, ports, bridges, and other infrastructure that can typically accommodate high resource requirements and a big user base. The conceptual idea stage, feasibility study stage, detailed design stage, procurement stage, implementation stage, operation and maintenance stage, and so on, is where the construction project cycle begins.

Every construction project involves the processing of resources, which calls for management to ensure that everything goes well and that the desired outcomes are achieved. Resources are diverse forces that make it possible to accomplish a particular outcome. The six materials, money, materials, machine, manpower, market, method, information, space, and time that make up these resources are: money, materials, machines, manpower, market, and information.

B. Project Management

The use of information, expertise, and skills, along with the best technological methods and limited resources, is what project management is all about. Its purpose is to achieve predefined goals and objectives in order to get the best possible results in terms of work safety, cost, quality, and time performance.[9] The planning and control phases of the project management process are predicated on inputs such as the project's goals and objectives, the information and data used, and the appropriate allocation of resources in accordance with the needs. In project management, what needs to be considered so that the project output is in accordance with the planned goals and objectives is identifying various problems that may arise when the project is implemented.[10]

C. Definition and Classification of Roads

In accordance with Peraturan Pemerintah No. 34 Tahun 2006, "land transportation infrastructure" refers to all road segments, including auxiliary structures and traffic-directing machinery, that are on the ground, above the ground, below the ground and/or water surface, and above the water surface, with the exception of railroads, truck routes, and cable roads.[12] The classification of public roads according to the system is divided into 2 road network systems including:

- *Primary Road Network*

It is a road network system that plays a role in distribution services within an area that connects the national territory to the provincial capital, district/city capital, sub-district, sub-district and lower levels.[13] Apart from that, this road network functions as a link between the provincial capital areas.

- *Secondary Road Network*

The secondary road network is a road network system that plays a role in distribution services in an urban area connecting areas of primary function, secondary function to lower levels.[14] Three types of roads make up the secondary road network system: secondary arterial roads, secondary collector roads, and secondary local roads. These are separated based on the functions of the individual roads.

- *Classification of Public Roads According toPeraturan Pemerintah No. 34 Tahun 2006, Grouped Include:*

- National roads are toll roads, national strategic roadways, primary arterial roads, and primary collector roads connecting provincial capitals..
- Provincial highways are primary collector roads that link the provincial capital to the capitals of districts or cities; they are also provincial strategic routes and the roads in Jakarta's Special Capital Region.
- Primary collector roads, which do not include provincial and national roads; primary local roads that link the district capital to the sub-district capital; the district capital to the village center; the sub-district capital to the villages; secondary roads that do not include secondary roads within the city; and district strategic roads are examples of regency roads..
- Within the city's secondary road network, City roadways are public roadways.
- Village roads are public roads that link locations and/or between settlements within villages. They are a network of primary environmental roads and primary local roads, excluding district highways in rural areas.

D. Construction Labor

Employee complianceUnlawful-Unlawful No. 13 of 2013 When it comes to employment, it refers to someone who is able to work in order to create goods and/or services for the community or for themselves. Not just individuals who hold jobs already are referred to as workers. Nonetheless, the labor force also consists of individuals of working age who are seeking employment..[16] There are specific classifications and requirements for construction workers. The scientific disciplines of (1) architecture, (2) civil, and (3) mechanical, as well as (4) environmental management and (5) implementation management, are used to categorize construction professionals.

E. Construction Project Performance

The cost, quality, timeliness, and work safety performance indicators can be used to gauge the success of a project. Carefully and comprehensively plan every allocation of personnel, tools, supplies, and money to ensure that it meets

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all requirements.[17] Project performance requirements must be as precise and specific as feasible throughout the process to minimize deviations and provide the best possible results. Benchmarks for project performance in reaching project goals and objectives include cost, quality, time, and work safety.

F. Factors that Influence the Performance of Construction Workers

The satellite model illustrates the relationship between performance and affecting factors.[18] The combination of knowledge components, non-human resources, strategic position, human resource procedures, and structure yields organizational performance, as per the satellite model. From the standpoint of the parties involved, performance is measured by the accomplishment of corporate and social objectives and duties. Technical, administrative, humanitarian, and systemic problems are examples of knowledge factors. Resources other than people include machinery, factories, workspaces, technology, capital, and money utilized. Social policy, human resources, economic or market challenges, and environmental change are examples of strategic perspectives. In the humanitarian process, values, attitudes, norms, and interactions are all important considerations. Structure, on the other hand, deals with flexibility, information systems, management systems, and organizational concerns.

Factors that influence or influence labor productivity on construction projects are the skills of the workforce, damaged equipment, availability of materials and ease of handling them, delays in payments to workers, absence of workers (absenteeism), lack of work motivation, weather conditions. (wind, temperature, rain) and lack of work experience.[19]

G. Factor Analysis

The goal of factor analysis is to identify a subset of new variables that are less in number than the original variables and that indicate which of the original variables are common factors by examining the interdependence between variables.[20] By describing the original variable as a linear combination of several factors, factor analysis is a statistical technique used to minimize the dimensionality of data. The goal is to maximize the number of factors that can account for the diversity of data that the original variable can explain. Explaining the structure of links between numerous variables in the form of factors, latent variables, or created variables is the primary objective of factor analysis. The factors that have formed are random quantities that were not previously observable, quantifiable, or directly determined.

III. RESEARCH METHODS

The research method is one of a series of research carried out, which will describe the research procedures or techniques that will be used to compile the research.[21]

A. Location and Time Of Research

The study location is in Sigi Regency on a road section that will be handled in the 2023 fiscal year. For its implementation, this research is planned to be carried out from July to September 2023, which will be carried out from morning to evening during working hours.

B. Data Collection Techniques

Data collection techniques in this research use 2 data management methods, namely:

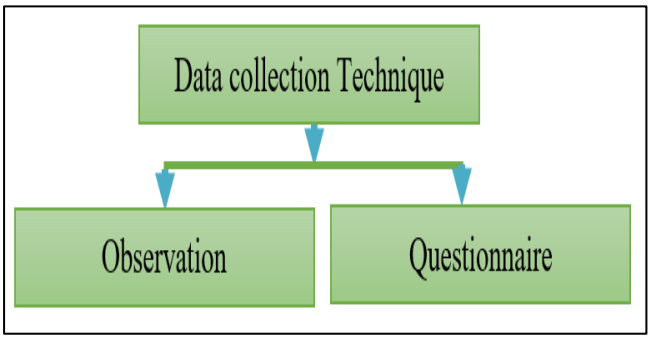

Fig 1: Data Collection Process

C. Research Instruments

The quality of research tools and the quality of data collection are the two key factors that affect the quality of research results. [22] A questionnaire was the research tool employed in this study. In quantitative research, the validity and reliability of the research instruments are of utmost importance, and the accuracy of the data collection procedures is the measure of research instrument quality. Tests, interview guidelines, observation guidelines, and questionnaires are some of the tools used in quantitative research. A questionnaire is a method for gathering data in which participants are provided with a list of questions or written statements to complete.[23] This study's instrument, a Likert scale, measures a person's or a group's attitudes, views, and perceptions of a social phenomenon with the goal of producing accurate data. The five-point Likert scale is explained as follows, specifically:

Table 1: Questionnaire Answer Criteria

No	Assessment criteria	Likert Scale
1	Very Influential	1
2	No effect	2
3	Quite Influential	3
4	Influential	4
5	Very influential	5

D. Data Analysis

Using Staistica Product and Service Solution (SPSS) software, quantitative statistical analysis approaches are used for data analysis in this study. Data obtained from the questionnaire is compiled first before being processed. At this stage, a process of assessment scale and parameter interpretation is also carried out which is intended to determine the dominant factors that influence workforce performance on road improvement construction projects. Respondents must answer questions based on the opinions of respondents who have experience being involved in the implementation.

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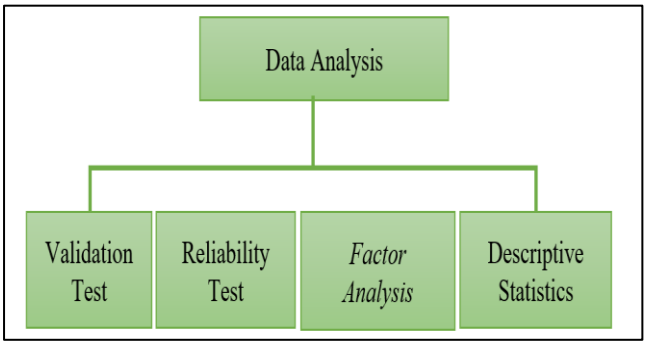

Fig 2: Data Analysis

IV. RESULTS AND DISCUSSION

In this research, those chosen as research objects by the researcher are those that describe the characteristics/traits of the object. Below we will explain the general characteristics of respondents according to gender, age and level of education.

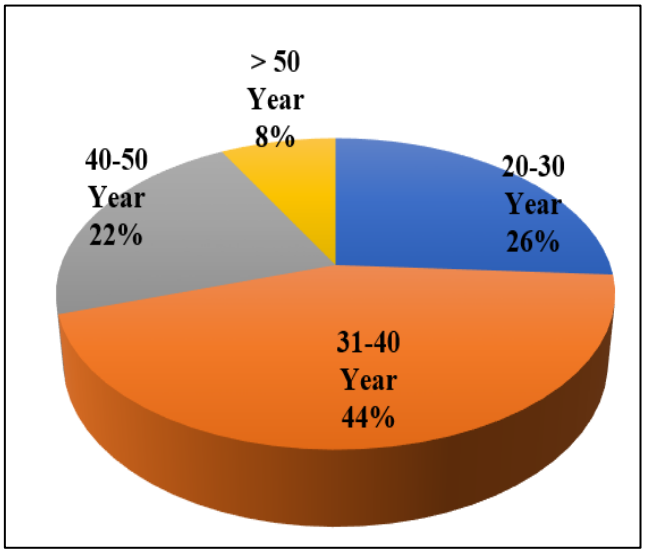

Fig 3: General Description of Respondents Based on Age

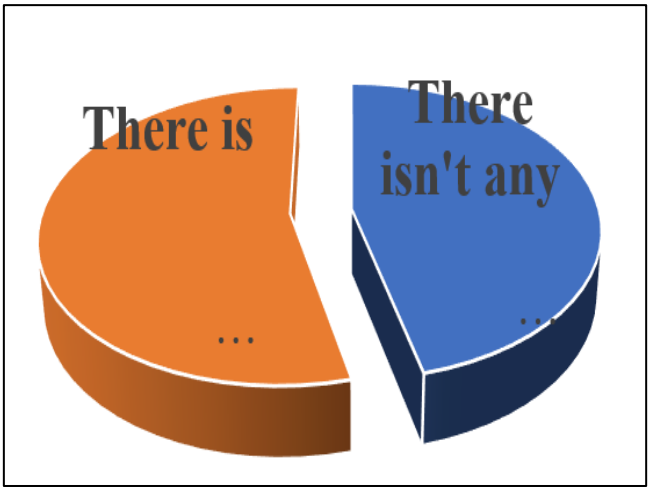

Fig 4: General Description of Respondents Based on Gender

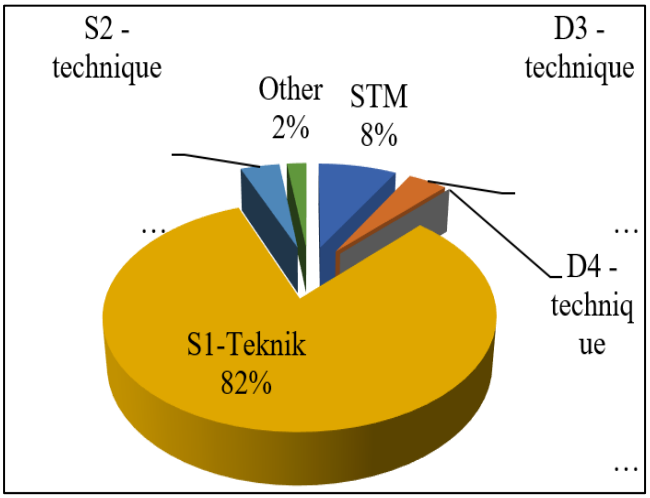

Fig 5: General Description of Respondents Based on Education Level

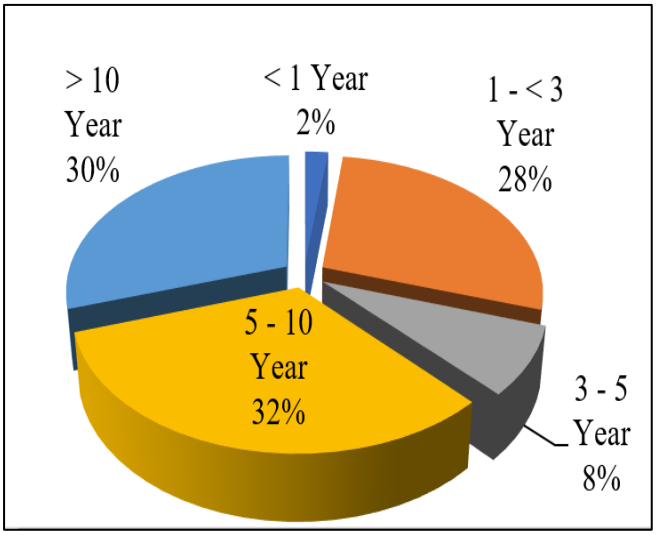

Fig 6: General Description of Respondents Based on Work Experience

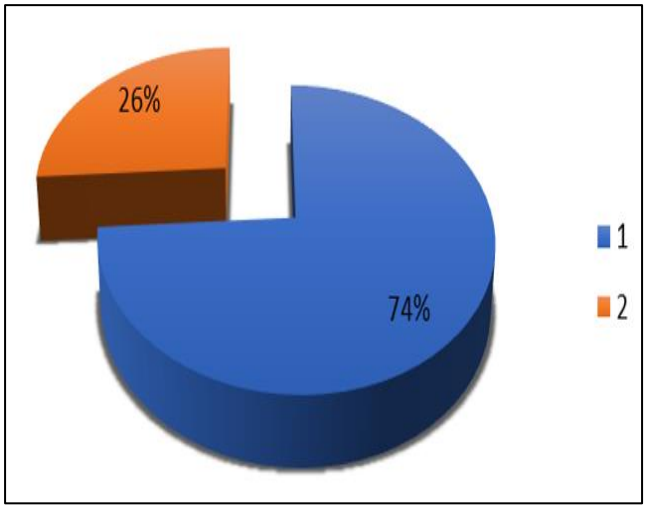

Fig 7: General Description of Respondents Based on Expertise Certificates

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V. VALIDATION TEST

A validity test must be performed to determine if a questionnaire is valid for each of these variables.[24] Bevariate Pearson Correlation is the correlation method that was employed in this study to assess the reliability of the statement items. Correlating each indicator item score with the questionnaire's overall variable score allows for this. An instrument is deemed valid if its rcount is greater than or equal to its rTable; otherwise, it is deemed invalid. A significant value (2-tailed) < α = 0.05 is another option. Using a 95% confidence level or a level of significance (α) = 0, 05, researchers assessed the replies of 50 respondents in this validity test. The results showed that the resultant rtable was 0.273. The following table displays the validity tests that were performed for this study:

Table 2: Research Variable Validity Test Results

	r_{hitung}	r_{tabel}	Information
X1.1	0.523**	0.273	Valid
X1.2	0.385**		Valid
X1.3	0.584**		Valid
X1.4	0.672**		Valid
X1.5	0.663**		Valid
X1.6	0.613**		Valid
X1.7	0.607**		Valid
X2.8	0.759**		Valid
X2.9	0.686**		Valid
X2.10	0.815**		Valid
X2.11	0.693**		Valid
X3.12	0.798**		Valid
X3.13	0.873**		Valid
X4.14	0.811**		Valid
X4.15	0.642**		Valid
X4.16	0.695**		Valid
X4.17	0.679**		Valid
X5.18	0.848**		Valid
X5.19	0.826**		Valid

All of the indicators in the questionnaire are deemed legitimate since, as can be seen from the validity test computations results in the table above, rcount > rtable (0.273). This allows for additional analysis of the data for each indicator.

A. Reliability Test

A reliability test must be conducted in this study to assess the consistency of the questionnaire used to gauge the impact of the following factors: system factors (X4), contextual/situational factors (X5), team factors (X3), leadership factors (X2), and personal factors (X1). The degree of stability, consistency, accuracy, and predictive capacity of a test is referred to as its reliability. Measurements with high dependability are those that yield trustworthy data. A commonly employed technique is the Cronbach's Alpha reliability test, wherein each variable under investigation has a reliable indicator if the Cronbach's Alpha value is greater than 0.60. Table 2 below displays the findings of the reliability test conducted on this research variable:

Table 3: Reliability Test Results

Factor	*Cronbach's Alpha*	Information
Personal Factors (X1)	0.721	Reliable
Leadership factors (X2)	0.709	Reliable
Team Factors (X3)	0.890	Reliable
System Factors (X4)	0.703	Reliable
Contextual/situational (X5)	0.835	Reliable

B. Factor Analysis (Factor Analysis)

Factor analysis is used to condense large amounts of data or condense previously defined variables that have undergone significant modification into a small number of new variables known as factors that retain the majority of the original variables' information.

- *Calculation of Kaiser Meyer Olkin (KMO) and Bartlett's Test and Measure of Sampling Adequacy (MSA)*

Checking to check if an assumption is met as a prerequisite for factor analysis is the first step towards determining whether the analysis is feasible. The Kaiser-Meyer-Olkin (KMO) coefficient and Bartlett's Sphericity Test are two crucial components of this research that determine if the data in this study can be handled in a factor analysis. The KMO statistical test is employed to assess the sufficiency of sampling. This measure contrasts the partial correlation

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coefficient's magnitude with the observed correlation coefficient's. A low KMO score suggests that factor analysis may not be appropriate because the correlation between pairs of variables cannot be explained by other variables. Factor analysis will be suitable if the resulting KMO value.

Table 4: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	**,721**
Bartlett's Test of SphericityApprox. Chi-Square	Fsffwf41 419,557
df	171
Sig.	s, 000

Table 4 demonstrates that the Bartlett's Test yields an approximate Chi-Squere figure of 419.557 with a Degree of Freedom (df) value of 171 and a significance value of 0.000, which is a lesser value than 0.05. The KMO value generated in the first study is 0.721 > 0.5. As a result, the data in this study are regarded as practicable, and the data analysis can move on to the following phase.

An investigation of the Measure of Sampling Adequacy (MSA) is the next step. The MSA test is a tool used to assess the homogeneity across variables and perform filtering so that only variables that satisfy the criteria are eligible for additional processing. The purpose of this test is to evaluate the sample's suitability for each variable under investigation. This is evident in the section on anti-image correlation found in the analysis findings output table, which identifies the variables that are appropriate to move on to the subsequent factor analysis phase. With the rank "a" for every integer in the anti-image matrices table in the anti-image correlation column, MSA values are equal. For any variable, the MSA test mandate is that if the.

➢ *Factor Extracted*

Finding out how many factors are employed to portray the data and how much each element contributes to the research phenomenon is the aim of factor extraction. Factors with a smaller number than the total number of variables analyzed may be produced by this approach. Principal Component Analysis is the method utilized in this study to extract factors. The methodology utilized in this study is based on Eigen values, variance percentages, and scree plots to ascertain the number of components collected. Components meeting the requirement of an eigenvalue > 1 will be used to build factors. Largest to smallest eigenvalues are always arranged in this manner. The value of each variable under analysis is displayed in the Total Variance Explained table, which indicates that there are five new components derived from the 19 indicators were examined. With a variance of 33.673%, Component 1 has an eigenvalue of 6.398 > 1, Component 2 has an eigenvalue of 2.048 > 1, Component 3 has an eigenvalue of 1.652 > 1, Component 4 has an eigenvalue of 1.214 > 1, Component 5 has an eigenvalue of 1.052 > 1, and Component 5 has an eigenvalue of 1.052 > 1. Of the five factors, each has an eigenvalue > 1. When determining the variance of the 19 indicators under analysis, the eigenvalue shows how important each item is in relation to the others. Add up the variance values in the following manner to ascertain the impact of these five factors:

33.673% + 10.779% + 8.695% + 6.390% + 5.538% = 65.075%

The value of impact exerted on construction workers' performance is 65.075%, according to the amount of variance that can be described by the three newly developed components; the remaining 34.925% is influenced by factors other than the indicators employed in this study. The following analysis can proceed since the cumulative variance value, at 65.075%, above the necessary cumulative variance of 60%. In addition to table 4 above, the following Scree Plot graphic also displays the extraction of research factors:

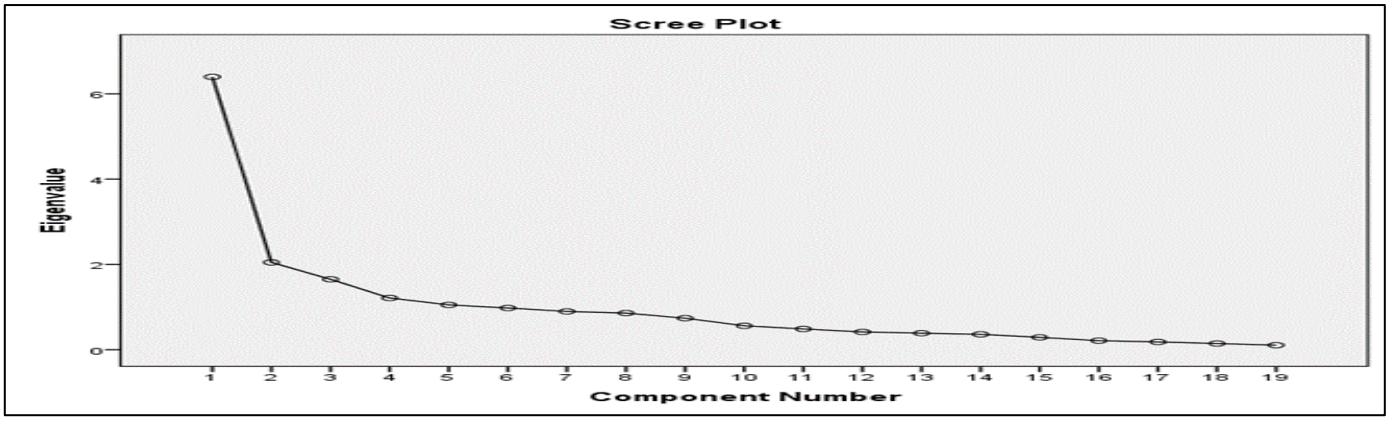

Fig 8: Scree Plot

The Scree Plot graph shows that there are five components that have an eigenvalue of more than 1, so the extraction of these factors produces 5 new factors.

The distribution of each indicator examined in the seven newly created components is shown in table 7 Component Matrix below. This is the first step in identifying a few of the most prominent items in each part.

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Table 5: Component Matrix

	Components				
	1	**2**	**3**	**4**	**5**
X1.1	,546	-.362	,040	.018	,072
X1.2	,475	-.580	,224	-.066	-.106
X1.3	,589	-.025	-.244	,338	-.275
X1.4	,593	-.042	,451	-.442	-.060
X1.5	,432	,499	,339	-.248	-.001
X1.6	,442	,662	-.063	-.134	-.015
X1.7	,459	,540	,038	.408	-.140
X2.8	,601	-.102	-.488	-.293	,067
X2.9	,517	,229	-.340	,034	,550
X2.10	,640	-.050	-.260	-.441	-.093
X2.11	,752	-.313	,154	-.082	-.034
X3.12	,623	-.099	-.112	,274	-.327
X3.13	,647	-.034	-.402	,069	-.089
X4.14	,720	-.214	-.019	,076	.211
X4.15	,489	,047	,547	,253	-.268
X4.16	,677	,429	,158	-.256	-.109
X4.17	,624	-.002	-.329	,156	-.133
X5.18	,501	-.404	,259	.121	,284
X5.19	,563	,171	,313	,334	,527

By examining the greatest value of each component, it is still challenging to identify the dominating sub-factors or indicators from the extraction results in the previous analytical phase. Because of this, rotating the factors is required to make it easier to identify the factors that are a part of the three factors that were generated. The goal of this research's rotation method is to produce factors with loadings that are sufficiently obvious for interpretation. In contrast to the Component Matrix, the Rotated Component Matrix is a correlation matrix that displays a more distinct and accurate factor distribution. There are various ways to use the orthogonal rotation approach; in this study, the Varimax method was employed by the author. Varimax rotation concentrates the examination either by narrowing the focus of the factor matrix columns or by limiting the dominance of item correlations to a single factor. In order to facilitate the interpretation of each dominating item, the strategy is to bring item correlations for each factor as close as possible to the absolute values of 1 and 0. See table 8 below for further information.

Table 6: Rotated Component Matrix Results

	Components				
	1	**2**	**3**	**4**	**5**
X1.1	,572	,001	,216	,206	.141
X1.2	,765	-.042	.137	,093	-.119
X1.3	,187	,059	,726	,162	,075
X1.4	,597	,604	-.081	,150	-.079
X1.5	,070	,768	,006	.018	,129
X1.6	-.230	,672	,233	,225	,217
X1.7	-.144	,456	,588	-.159	,299
X2.8	,209	,094	,252	,757	.108
X2.9	,002	,149	,145	,469	,691
X2.10	,302	,322	,193	,667	-.069
X2.11	,707	,229	,281	,240	,079
X3.12	,319	,112	,681	.117	-.006
X3.13	,187	,085	,551	,476	,146
X4.14	,543	,112	,302	,285	,367
X4.15	,450	,429	,366	-.394	,008
X4.16	,166	,773	,236	,233	,097
X4.17	,176	.101	,593	,358	.141
X5.18	,680	-.025	.073	,008	,329
X5.19	,337	,299	.144	-.149	,766

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The strength of the relationship between the statement and the constituents or elements formed is known as the loading factor. From this, it can be inferred that each factor's (or component's) greatest correlation value suggests that the sub-factor is a part of the newly created factor or component. For instance, factor group (component) 1, factor 1, as shown in table 4.13 above, has a sub-factor X1.1 correlation of 0.572 since factor (component) 1 has the highest loading value, which is 0.572 and 0.765, and so on.

C. Formed Factors

Table 7: Factor Interpretation Results

No	Symbol	Loading Value	Factor	Variance Value (%)
1.	X1.1 X1.2 X2.11 X4.14 X4.15 X5.18	0.572 0.765 0.707 0.543 0.450 0.680	individual and superior factors	33,673
2.	X1.4 X1.5 X1.6 X4.16	0.604 0.768 0.672 0.773	educational factors and facilities provided	10,779
3.	X1.3 X1.7 X3.12 X3.13 X4.17	0.726 0.588 0.681 0.551 0.593	discipline factors and work systems	8,695
4.	X2.8 X2.10	0.757 0.667	leadership and supervision factors	6,390
5.	X2.9 X5.19	0.691 0.766	factors changing the work environment	5,538

Five criteria have been identified from the previously processed and analyzed research results as influencing the performance of construction workers on road development projects in the Sigi district area. These five factors are individual and supervisor factors, educational factors and facilities provided, discipline factors and work systems, leadership and supervision factors, and changes in the work environment. The magnitude of the influence produced by these three factors on the performance of construction workers is 65.075%, while the remaining 34.925% comes from other factors outside of the indicators used in this research. So that the discussion of this research is more systematic, the author will present a discussion of each of these factors as follows:

- *Individual and Supervisor Factors*

Individual and superior factors are factors formed from six sub-factors, such as workforce behavior, skills, quality control, overtime work, wages, and high levels of pressure. From the results of factor analysis, This variable has the highest variance value 33.673% meaning that, in relation to other variables, it has the biggest or most dominant influence. This means that, to measure individual and superior factors, there are six sub-factors or indicators that can be used as benchmarks.

In construction work, especially in road improvement projects in Sigi Regency, behavior is a reflection of a person's actions towards an object in carrying out activities or work. Worker behavior plays an important role in producing work with good results in accordance with what is expected. A worker must be committed to doing his best to carry out his duties and responsibilities in completing the work. Looking at the characteristics of each type of behavior of these workers indicates that behavior is very influential or related to the personality of the workers themselves, so that this can influence their performance in carrying out the tasks and responsibilities given at work.

- *Education Factors and Facilities Provided*

The education factor and the facilities provided are factors formed from four sub-factors, such as workforce experience, education level, work motivation, and the facilities provided. From the results of factor analysis, this factor has the second highest variance value of the individual worker and superior factors, namely 10.779%, which means that this factor is a factor that has an influence on workforce performance. This means that the educational factors and facilities provided can be measured through these four indicators.

The work experience of both supervisors and the workers themselves is related to the workers' abilities and skills in carrying out the tasks assigned to them. This is an important factor that can also influence the performance of construction workers on road improvement projects in Sigi Regency. For example, for work experience, which is a basic reference for a worker in choosing and placing oneself appropriately in a job, including the art of mastering the chosen job. The more experience a worker has, the more

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skilled the worker will be in completing the work given or chosen. The work experience possessed by a worker will greatly support the creation of optimal workforce performance.

- *Discipline Factors and Work Systems*

Discipline factors and work systems are factors formed from several sub-factors or indicators. This factor has a variance value of 8.695%, which means that this factor is a factor that has an influence on workforce performance. This factor can be measured through five indicators, namely workforce discipline, self-confidence, cooperation between workers in the field, attention and support and work systems. These five indicators can influence the performance of construction workers for road improvement projects in Sigi Regency.

Self-confidence is a positive attitude that creates a strong belief in a person's ability to carry out an action or job without feeling anxious or doubtful, which generally arises because of the worker's experience and educational background. With the level of self-confidence that workers have, it can create a feeling of confidence and courage in facing challenges and risks at work, so that it can influence a worker's performance.

Self-confidence arises from good treatment from superiors, motivation given, as well as fulfilling moral and material needs, as well as fulfilling the need for respect and appreciation in the work environment.

- *Leadership and Supervision Factors*

Leadership and supervision factors are factors formed from several sub-factors or indicators. This factor has a variance value of 6.390%, which means that this factor is a factor that has an influence on the performance of construction workers for road improvement projects in Sigi Regency. This factor can be measured through two indicators, namely leadership and supervision.

- *Factors Changing the Work Environment*

Work environment change factors are factors formed from two sub-factors or indicators. This factor has a variance value of 5.538%, which means that this factor is a factor that has an influence on the performance of construction workers for road improvement projects in Sigi Regency. This factor can be measured through two indicators, namely instruction and changes in the internal / external environment.

VI. CONCLUSION

There are five factors that influence the performance of construction workers on road improvement projects in Sigi Regency, these five factors are: 1) Individual and superior factors; 2) Educational factors and facilities provided; 3) Discipline factors and work systems; 4) Leadership and supervision factors; 5) Factors changing the work environment. The magnitude of the influence resulting from all these factors reached 65.075% while the remaining 34.925% was influenced by other factors whose influence was not significant, this was obtained from the factor analysis test.

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