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ANALYSIS OF FACTORS AFFECTING THE PERFORMANCE OF CONSTRUCTION MANPOWER ON THE RISHA PERMANENT RESIDENTIAL PROJECT (HEALTHY SIMPLE INSTANT HOUSE) IN CENTRAL SULAWESI

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ABSTRACT

The performance of these construction workers will determine the success of the Huntap project with the RISHA concept, and of course the good or bad performance of these workers is largely determined by several important factors that need to be studied in depth. Therefore, the purpose of this study is to find out what factors affect the performance of construction workers on fixed housing development projects with the RISHA system, and to determine the factors that have the most dominant influence on the performance of construction workers on fixed housing development projects with the RISHA system. RISHA. This study used a purposive sampling technique with a total of 45 respondents. For data collection using questionnaires and documentation distribution techniques. Data analysis with factor analysis method. Based on the results of the study that there are five factors that influence the performance of construction workers in a permanent housing development project with the RISHA system in Central Sulawesi, the five factors are HR and management factors, competency factors and worker management methods, Talent, Interests and Material factors, change factors weather and equipment conditions, as well as skill factors and division of labor, in which the effect resulting from these five factors is 74.495% while the remaining 25.505% is influenced by factors that do not influence dominantly. Meanwhile, the results of the study also show that HR and management factors have the most dominant influence on the performance of construction workers in permanent housing development projects with the RISHA system in Central Sulawesi, with the highest variance value of 43.444%.

Keywords: factors, performance, construction workforce, permanent occupancy, risha.

INTRODUCTION

The 7.4 SR earthquake with a depth of 10 km north of Palu City, Central Sulawesi Province, which was followed by a tsunami and liquefaction at several points on 28 September 2018 has displaced more than 50,000 people and damaged main infrastructure and thousands of public and social facilities including schools, hospitals, and a number of roads and bridges in Palu City and the surrounding regencies. The severity of soil deformation near faults and liquefaction at these locations is unprecedented globally. A quick count carried out by BNPB and UNDP indicates the total damage and losses reached 18.48 trillion rupiah [1]. This figure includes damage and losses in the housing, infrastructure, social and economic sectors.

The rehabilitation and reconstruction process in Palu City, Donggala and Sigi Regencies, Central Sulawesi continues. The refugees due to the earthquake, tsunami and liquefaction that occurred on September 28 last year gradually moved from temporary tents to temporary shelters, both those built by the Ministry of Public Works and Public Housing of Republic of Indonesia (PUPR) and donors. Will be given assistance in the form of permanent housing as a form of government concern for the survivors who still live in the shelters and refugee camps.

Long-term rehabilitation of community housing is crucial to prevent such damage from occurring. Ministry of Public Works and Public Housing of Republic of Indonesia (PUPR) will use earthquake-resistant housing technology or RISHA to rebuild thousands of houses affected by the earthquake and tsunami in Palu and Donggala, Central Sulawesi. The Simple Healthy Instant Home System or often abbreviated as RISHA was created to facilitate and shorten the time for assembling residential building structures for earthquake and tsunami victims in Palu and Donggala.

The settlement rehabilitation project through the Huntap program with the RISHA concept for disaster victims is a project that involves many parties in its implementation and is very expensive, of course, in implementing this project good project management is needed, especially related to project workforce, because the most influential aspect in the completion of a construction project is human resources. The success or failure of a construction project depends on the effectiveness of resource management. One of the resources is the human factor, namely the workforce (workers and workers) to be the determinant to achieve the level of performance [2]. To complete a construction project in accordance with the planned cost, quality and time, it is necessary to have a performance that is realized with good quality work from its human resources.

The performance of construction workers is very important in completing a job. Lack of awareness of performance is the cause of the low work produced. The performance of these construction workers will determine the success of the Huntap project with the RISHA concept, because performance is an aspect that shows the good and bad quality and quantity of work of the construction workers in working on the project, and of course the good

or bad performance of these workers is largely determined by several factors. Important to be studied in detail. The service provider or often called the contractor must know what factors can affect the performance of the workforce so as to improve the performance of the workforce. The factors that affect the performance of the workforce based on the theory and previous research are described in Table-1.

Table-1. Factors influencing labor performance based on theory and previous research.

No	Factor	Sub Factor		source
1	Labor condition factors	1.1	Education	[3]
		1.2	Experience	
		1.3	Labor age	[4]
		1.4	Worker's physical condition	[5]
		1.5	Skills	[6]
		1.6	Talents and interests	[7]
		1.7	Labor attitude	[8]
2	Work system factor	2.1	Practical working method	[4]
		2.2	Fulfillment of workers' rights	[5]
		2.3	Overtime intensity	
		2.4	Overtime facility	
		2.5	Workload rate	
		2.6	Division of work	
		2.7	Job change	
3	Environmental factor	3.1	Changes in the weather	[9]
		3.2	Field physical condition	[10]
		3.3	Workers' social relations	[5]
4	Equipment and material factors	4.1	Project equipment condition	[5]
		4.2	Quality of materials used	[4]
		4.3	Material availability	[9]
5	Occupational health and safety factors	5.1	Worker Health	[3]
		5.2	Completeness of occupational safety and health support tools	[5]
		5.3	Workers' understanding of the importance of Occupational Health and Safety	
6	Supervision	6.1	Inspection	[9]
		6.2	Work motivation	[11]
		6.3	Management of the workforce	[10]
		6.4	Project leadership	

Meanwhile, the purpose of this research is to determine the factors that affect the performance of the construction workforce on a permanent residential development project with the RISHA system, and to determine the factors that have the most dominant influence on the performance of the construction workforce on a permanent residential development project with the RISHA system. Where it is hoped that research can be used as a guideline or benchmark in improving the competence of construction workers, and as input and evaluation material for the implementation of construction services, which consists of the implementation of construction services business and the implementation of building provider businesses, whether carried out by the government or the private sector.

RESEARCH METHOD

The type of research used in this thesis is descriptive research, that is, the research is conducted by

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collecting data to test the researcher's questions or relating to current events.

Study sites are located in Palu City and Donggala Regency, Central Sulawesi Province, in the permanent housing development project using the RISHA structure, namely the Post-Disaster Permanent Residential Development work package in Central Sulawesi along with basic infrastructure for Phase 1B unit lots spread over two areas. Palu City and Donggala Regency are presented in Table-2.

Table-2. Permanent residential employment data using the RISHA structure in Palu city and Donggala regency.

No	Project Location	Number of Units	Project Owner Work	Job Package	Executing contractor	Constitutional Court Consultant
	Palu City (Independent Palu)					
1.	Petobo Village	35	PPK Permanent Residential Work Unit for Central Sulawesi Province	Construction of Permanent Residential After the Central Sulawesi Disaster and Basic Infrastructure of Unit Plots Phase 1 B	PT. X	PT. Y
	Kayumalue Village	5				
	mpanau	9				
2.	Donggala District,Ganti Village	94				

Source: PT. X, 2021

When the research was carried out during working hours, below is the data on the number of workers used to assemble the RISHA structure which is presented in Table-3.

Table-3. Data on the number of workers used in the post-disaster residential development package in Central Sulawesi and the basic infrastructure for unit plots phase 1 B.

No	Work Locatio	Number of workers (person)	Job title/ Type of skill
1	Petobo Village	20	Foundation works, panel structure assemblers, panel casters, metal fabricators.
2	Kayumalue Village	15	
3	Mpanau	15	
4	Donggala District, Ganti Village	59	

Source: PT. X, 2021

Data collection techniques from a research are generally divided into two, namely qualitative and quantitative. Data collection techniques used in this study is as follows:

a. Questionnaire Distribution

The questionnaire used by the researcher as a research instrument. The measurement of the questionnaire was carried out using a Likert scale where respondents were given a choice (option) which then remained to choose the degree of agreement/disagreement with the questions posed. The value of the linkert scale is:

a) Very influential answers are given a value of 5

b) Influential answers are given a value of 4

c) The answer is quite influential is given a value of 3

d) Answers with no effect are given a score of 2

e) Answers that have no effect are given a score of 1

b. Documentation

Data collection is done by studying and processing data based on records and reports in the company related to the problem under study.

Primary data to be processed is obtained from representatives of service users and construction service providers consisting of:

a) Task giver (owner) (10 respondents)

b) Supervisory Consultant (5 respondents)

c) Representatives of construction companies (30 respondents)

The next step is to collect secondary data. Data is collected by submitting a written request for data to the relevant Government Service and construction projects currently carrying out permanent housing construction using the RISHA structure.

Data collection instruments are tools that are selected and used in data collection activities so that data collection activities become systematic and easy[12]. The instrument used in this study was in the form of a questionnaire (questionnaire). The tools used to test the instruments in this study are the Validity Test and Reliability Test.

For the process of analyzing factors that affect the performance of construction workers, especially skilled workers, it begins by identifying the variables that can affect the productivity of construction workers obtained from literature studies or sharing journals and studies that have been done previously.

Data analysis was carried out to determine the priority order of the factors that most influence the performance of the construction workforce using descriptive statistical methods and factor analysis using SPSS 26. Primary data that has been processed was analyzed using the Confirmatory Factor Analysis (CFA) method to identify the relationship between the constituent variables. factor or dimension with the formed factor, by using the correlation coefficient test between the factors and their constituent components, this confirmatory factor analysis is a priori based on theories and concepts that are already known, understood or determined beforehand, then a number of factors will be formed and what variables are included in each of the factors that are formed and have definite purpose. The steps involved in factor analysis are: formulating problems, compiling a correlation matrix, extracting factors, rotating factors, interpreting factors, making factor scores and finally selecting a surrogate variable, which is a variable that can best represent a factor or a summated scale, which is a combination of several variables in a factor.

RESULTS AND DISCUSSIONS

Description of Respondents Based on Demographics
The questionnaires distributed in this study were forty-five (45) questionnaires, this is in accordance with the number of subjects in this study, namely a number of parties involved in permanent housing development projects using the RISHA structural system or technology. The following are the characteristics of respondents based on age grouping in Table-4.

Table-4. Characteristics of respondents by age.

No	Age	Number Of Respondents	Percentage (%)
1	20-30 years old	9	20.00
2	31-40 years old	18	40.00
3	41-50 years old	12	26.67
4	>50 years old	6	13.33
Total		**45**	**100**

Table-4 shows that the majority of respondents based on age are 31-40 years old with a percentage of 40%, this indicates that most of the people involved in project implementation are those who are of productive age, so it is possible to support the achievement of the success of the project. The project. Then the education level of respondents in this study can be seen in Table-5.

Table-5. Characteristics of respondents based on last education.

No	Education	Number of Respondents	Percentage (%)
1	S1	18	40.00
2	D3	16	35.56
3	D4	0	0.00
4	STM	11	24.44
Total		**45**	**100**

From what is described in Table-5, it can be seen that most of the respondents in terms of their latest education level are respondents with an undergraduate education that dominates, namely with a percentage of 40%, meaning that in this study the sample (respondents) of researchers mostly had a level of education. S1 level. The distribution of data on the characteristics of respondents based on work experience can be seen in Table-6.

Table-6. Characteristics of respondents based on work experience.

No	Work experience	Number of Respondents	Percentage (%)
1	< 2 years	4	8.89
2	2-5 years	19	42.22
3	6-9 years	13	28.89
4	>9 years	9	20.00
Total		**45**	**100**

Based on Table-6, it can be seen that the majority of respondents are workers with a work experience level of 2-5 years with a total of 19 respondents or 42.22% of the total respondents, and the minority of respondents are those with less than 2 years of experience as many as 4 people or 8.89% of the total respondents involved in this study.

Research Analysis Results

a.   Validity test result
Whether or not an instrument is valid can be determined by comparing r arithmetic with r table where the value of r table (r Product moment) used is 0.294, so the results of the validity test show that labor conditions factors, work system factors, environmental factors, equipment and materials factors, and control factors are included in the valid criteria for all question items. The validity of all these variables is evidenced by all the question items having an r value greater than r table, so we can know that all the sub-factor questions used in this study are considered valid, and each question item on the questionnaire can be used in subsequent research activities.

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b. Reliability test result

One of the popular methods is the reliability test with Cronbach Alpha, where if the Cronbach's alpha value is > 0.60 then each variable being tested has a question item or a reliable indicator. The results of the reliability test showed that the Cronbach Alpha value for each factor was greater than 0.60. So it can be said that all statement items on each factor are declared reliable so that the data from the questionnaire results can be processed further.

c. Factor analysis

▪ Calculation of Kaiser Meyer Olkin (KMO) and Bartlett's Test

The condition for the fulfilment of this test is by looking at the KMO and Bartlett's Sphericity test values produced, if the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value is greater than 0.5 and the significance value is below 0.05, the factor analysis can be processed further. To find out the results of the KMO and Bartlett's Test can be seen in Table-7.

Table-7. KMO dan Bartlett's Test.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.699
Bartlett's Test of Sphericity	Approx. Chi-Square	1039.392
	df	351
	Sig.	0.000

Based on Table-7, it can be seen that the resulting KMO value is 0.699, of course the analysis results show that the value is above 0.5. In addition, Bartlett's Test shows that the significance value obtained from the results of this analysis is 0.000, which is less than 0.05.

▪ Measure Of Sampling Adequacy (MSA)

The next stage is to analyze the Measure of Sampling Adequacy (MSA). The MSA test requirement for each variable is that if the MSA value on the anti-image matrices is greater than 0.5, then the variables studied can be predicted and can be analyzed further. In the first test results, there are 4 sub-factors that have an MSA value of less than 0.5 and there are 23 sub-factors that have an MSA value of more than 0.5. If MSA = 1 the variable can be predicted without error by other variables, if MSA > 0.5 the item can still be predicted and can be analyzed further and if MSA < 0.5 the item is unpredictable and cannot be analyzed further. The first sub-factors that must be excluded are those that have an MSA value of less than 0.5 before retesting 23 sub-factors that have an MSA value of more than 0.5 until the appropriate results are obtained, i.e. there are no more indicators that have an MSA value of less than 0.5. After the second Measure of Sampling Adequacy (MSA) analysis process was carried out, no sub-factors were found that were below standard, meaning that the 23 sub-factors had MSA values above 0.5 so that the data from the 23 sub-factors could be processed further.

▪ Communality Estimation

The requirement for communalities value itself is greater than 0.5. This communalities value is obtained by adding up the eigenvalues of the existing factors. The test results show that the 23 sub-factors have a communal value above 0.5, so all these sub-factors can be tested using further factor analysis.

▪ Factor Extructed

The approach used to determine how many factors are obtained in this study is based on the eigenvalues. The factor will be formed from components that have an eigenvalue with the criteria of an eigenvalue >1. The eigenvalues are always ordered from largest to smallest. To find out the number of factors formed from the extraction results can be seen in Table-8.

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Table-8. Factor extraction results.

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.992	43.444	43.444	9.992	43.444	43.444	5.523	24.014	24.014
2	2.520	10.956	54.400	2.520	10.956	54.400	4.165	18.109	42.122
3	1.749	7.603	62.003	1.749	7.603	62.003	2.892	12.573	54.695
4	1.689	7.343	69.346	1.689	7.343	69.346	2.338	10.165	64.860
5	1.184	5.149	74.495	1.184	5.149	74.495	2.216	9.635	74.495
6	0.990	4.303	78.798						
7	0.882	3.835	82.633						
8	0.778	3.382	86.015						
9	0.663	2.882	88.897						
10	0.468	2.036	90.933						
11	0.406	1.763	92.696						
12	0.335	1.458	94.155						
13	0.279	1.214	95.369						
14	0.235	1.020	96.389						
15	0.209	0.910	97.299						
16	0.194	0.842	98.142						
17	0.141	0.613	98.755						
18	0.080	0.347	99.102						
19	0.076	0.329	99.431						
20	0.047	0.205	99.636						
21	0.035	0.153	99.789						
22	0.025	0.108	99.897						
23	0.024	0.103	100.000						

In the Total Variance Explained table above, it shows that there are 5 factors formed from 23 sub-factors that are entered. Each factor eigenvalue > 1. Component 1 has an eigenvalue of 9.992 with a Variance of 43.444%, Component 2 has an eigenvalue of 2.520 with a Variance of 10.956%, Component 3 has an eigenvalue of 1.749 with a Variance of 7.603%, Component 4 has an eigenvalue of 1.689 with a Variance of 7.343 %, and Component 5 obtained an eigenvalue of 1.184 with a variance of 5.149%. The eigenvalues describe the relative importance of each factor in calculating the variance of the 23 sub-factors analyzed. If all the variables added up the value is 23 (equal to the number of variables).

The total variance if from 23 sub-factors that have been extracted into 5 factors, which to determine the value of the influence of these five factors is as follows: 43,444% + 10,956% + 7,603% + 7,343% + 5,149% = 74,495%

The amount of variance that can be explained by the five newly formed factors shows the magnitude of the influence value given by these five factors on the performance of the construction workers in the Huntap project in Central Sulawesi, where after totalling the variance values, the total influence produced by these five factors is of 74.495% while the remaining 25.505% is influenced by factors that do not influence dominantly.

▪ Matrix and Rotation Components

The rotation process in the results of this study aims to obtain factors with a loading factor that is clear enough for interpretation. The rotational component matrix (rotated component matrix) is a correlation matrix that shows the distribution of variables that is clearer and more significant than the component matrix. More details can be seen in table 9:

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Table-9. Results of rotated component matrix.

Rotated Component Matrix[a]					
	Component				
	1	**2**	**3**	**4**	**5**
X1	0.186	0.778	0.140	0.044	0.123
X2	0.548	0.126	0.104	0.074	-0.599
X3	0.679	-0.243	0.040	0.185	0.281
X4	0.623	0.302	0.187	0.239	-0.243
X5	0.204	0.182	0.182	0.140	0.851
X6	0.250	0.201	0.786	0.134	0.319
X7	0.294	0.624	0.017	0.030	0.073
X8	0.328	0.725	0.308	0.410	0.071
X9	0.664	0.592	0.162	0.202	0.154
X10	0.608	0.432	0.052	-0.130	-0.109
X12	0.569	0.544	0.173	0.116	0.120
X13	0.206	0.216	0.159	0.181	0.843
X15	0.159	0.150	0.075	0.876	0.147
X18	0.105	0.376	0.251	0.708	0.108
X19	0.078	0.088	0.905	0.087	-0.031
X20	0.100	0.151	0.927	0.134	0.090
X21	0.639	0.203	0.291	0.399	0.084
X22	0.718	0.259	0.146	0.006	0.122
X23	0.769	0.212	-0.063	0.007	0.116
X24	0.747	0.189	0.192	0.416	0.098
X25	0.825	0.376	0.135	0.081	0.047
X26	0.090	0.670	0.028	0.399	0.010
X27	0.224	0.743	0.286	0.369	0.138
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with KaiserNormalization.[a]					
a. Rotation converged in 7 iterations.					

In this study, the rotation used was the varimax method. The trick is to make item correlations close to the absolute values of 1 and 0 on each factor, making it easier to interpret the dominant item. It can be seen that after rotation. We can more easily determine factor one, factor two or factor three and the following factors up to factor five.

▪ **Factor naming**

After the five factors are formed, the next step is to name each of these factors, as described in the following description:

a) **Factor 1**

This factor consists of eleven sub-factors that make up, including experience (X2), age of the workforce (X3), physical condition of the workforce (X4), fulfillment of workers' rights (X9), overtime intensity (X10), level of workload (X12), workers' health (X21), completeness of K3 support tools (X22), workers' understanding of the importance of K3 (X23), inspection (X24), and work motivation (X25). Based on the characteristics of the sub-factors that make up this new factor, it will be named the Human Resource Management Factor, where this factor has the highest variance value of 43.444% making this factor the factor with the highest and most dominant influence compared to other factors.

b) **Factor 2**

This second factor consists of five sub-factors that make up, which include education (X1), workforce attitudes (X7), practical work methods (X8), management of the workforce (X26), and project leadership (X27). Then, by looking at the characteristics of each of the sub-factors that make up this new factor, it will be named the Competence and Work Methods Factor, where this factor has the second highest variance value of 10.956% making this factor the second highest influencing factor after Human Resource management factors.

c) **Factor 3**

As for the third factor, it is supported by three sub-factors that make up, which include talent and interest (X6), the quality of the materials used (X19), and the availability of materials (X20). If you look at the characteristics of each of the sub-factors that make up this new factor, it will be named the **Talent, Interest and Material Factor**, where this factor has the third highest variance value, with a value reaching 7.603% making this factor the third highest influencing factor. after the two factors above.

d) **Factor 4**

Then in the fourth factor, this factor is formed by two sub-factors, which include changes in weather (X15) and the condition of project equipment (X18). If you look at the characteristics of each of the sub-factors that make up this new factor, it will be named the Weather Changes and Equipment Conditions Factor, where this factor has the fourth highest variance value, with a value reaching 7.343% making this factor the factor with the highest influence. Fourth in this study.

e) **Factor 5**

In the fifth factor, this factor is also formed by two sub-factors, which include skills (X5) and division of labor (X13). If it is seen from the characteristics of each of the sub-factors that make up this new factor, it will be named the Skills and Division of Work Factor, where this factor has the fifth or last highest variance value, with a value reaching 5.149% making this factor a factor The last one that has an influence on this research.

DISCUSSIOS

Based on research conducted by the author, it can be explained that there are five factors that affect the

performance of construction workers in a permanent housing development project with the RISHA system in Central Sulawesi, the five factors include Human Resource Management factors, competency factors and work methods, Talent, Interest and Material factors, weather change factors and equipment conditions, as well as skills and division of labor factors, where the influence generated from these five factors is 74.495% while the remaining 25.505% is influenced by factors that do not influence dominantly. As for the discussion of each of the factors that affect the performance of construction workers in a permanent housing development project with the RISHA system in Central Sulawesi, it can be seen in the following description:

A. Human Resource Management Factor

This factor has the highest variance value of 43.444% making it the factor with the highest and most dominant influence compared to other factors, this cannot be separated from the support of several sub-factors that make up, including:

a. Experience

Work experience greatly supports a person's performance, especially construction workers in permanent housing development projects with the RISHA system in Central Sulawesi, this is supported by the theory put forward by [12], where he says that the longer the employee's work experience, the easier it will be to work. Completing a product and the less experienced employees work will affect the production ability of employees to complete a product. The higher the work experience which includes a long working period, the application of information on work and good work methods, the higher the employee's performance.

The experience of a construction worker in a permanent housing development project with the RISHA system in Central Sulawesi is an accumulation of success and failure as well as a combination of strengths and weaknesses in carrying out their work. Workers who are experienced in work will form expertise in their fields, so that in completing the work will be achieved quickly, so that experienced workers will be very productive.

b. Labor age

One of the factors that determine a person's physical ability is age. The relationship between age and performance is very important. Based on the observations made, the researchers saw that most of the construction workers on permanent housing development projects with the RISHA system in Central Sulawesi were between 20 to 45 years old, at that age they were still productive workers because they were still in fairly good physical condition in carrying out their duties. Construction work, so as to be able to complete work quickly, so by looking at this it can be said that age greatly supports the performance of a construction worker.

c. The Physical condition of the workforce

The physical endurance of the workforce in construction activities on permanent housing development projects with the RISHA system in Central Sulawesi is the ability possessed by these workers in carrying out work activities during working hours by utilizing endurance capabilities to prevent fatigue during work activities. The physical endurance of workers as long as they carry out work activities is closely related to the length of the activities carried out, namely the higher the activity, the higher their ability to be more productive, so that the work being done can be completed quickly.

d. Fulfilment of workers' rights

Of course, in this permanent housing development project with the RISHA system in Central Sulawesi, the construction company must pay attention to the rights of its workers, by giving rewards in the form of moral support such as praise for their work, material support such as giving bonuses and allowances to workers, giving Mess facilities around the project site, providing good consumption, providing wages according to the contract, and so on.

e. Overtime intensity

Construction workers who are given the responsibility of handling certain jobs in the project must be able to complete their work according to the time determined by the company, so sometimes companies encourage their workers to increase productivity by increasing working hours than usual (overtime), which is expected by This effort can increase the productivity of workers so that their performance will also get a good assessment.

f. Workload rate

From the survey conducted, the researchers saw that the workers were never given a workload that exceeded their capacity, where each unit worked on 4 or even 5 workers, so that the RISHA structure that was carried out could be completed quickly. The low workload given to workers causes the results achieved to be more maximal, so that workers have time to complete other units.

g. Worker health

The health condition of workers in construction activities on a permanent housing development project with the RISHA system in Central Sulawesi is a good health condition possessed by these workers in carrying out work activities during work activities. The physical health of the workers during their work activities is closely related to the fitness when their work activities are carried out, namely the better the health condition, the better their ability to be more productive, so that the work being done can be completed quickly

h. Completeness of occupational health and safety supporting tools

Occupational health and safety equipment in the form of personal protective equipment is very necessary as a form of protection for workers. Personal Protective Equipment is a set of safety equipment used by workers to protect all or part of their bodies from the possibility of exposure to potential hazards of the work environment to accidents and occupational diseases so that workers will consistently continue to be productive, and work will be completed quickly.

i. Workers' understanding of the importance of occupational health and safety

Then it is not only the problem of completeness of the supporting equipment for Occupational Health and Safety, workers' understanding of the importance of Occupational Health and Safety is also very important in reducing the number of accidents at the location of the permanent housing construction project with the RISHA system in Central Sulawesi, if understanding of the importance of Occupational Health and Safety is low in the area. Among workers, the number of accidents increases so that it interferes with worker productivity, which in turn causes the poor performance of construction workers at the project site. It is different if they really understand the importance of Occupational Health and Safety, they will work carefully and know about the importance of using personal protective equipment while working to minimize work accidents so that they will continue to be productive.

j. Inspection

The success of a permanent housing development project with the RISHA system in Central Sulawesi is highly dependent on the performance of the people involved in the project, one of which is the construction workforce who have an important role in implementing the project, because they are the ones who work on the construction of the project. In order for the performance of these construction workers to run well, strict supervision efforts are needed, this is done to monitor the work carried out by the workers so that they are in accordance with the plan.

k. Work motivation

This study shows that work motivation is one of the sub-factors that affect the performance of construction workers in a permanent housing development project with the RISHA system in Central Sulawesi, if a worker who works every day has good work motivation, it will certainly have a positive impact on loyalty and productivity which of course will encourage good performance also because work motivation itself has a positive impact on performance, because a motivated worker will carry out substantial efforts to support the achievement of the planned goals. [13]said the formation of a strong motivation, it will be able to produce good results or performance as well as quality from the work it does. This means that any increase in the motivation possessed by employees in carrying out their work will provide an increase in their performance. In contrast, an unmotivated worker puts only minimum effort in terms of work. And a worker will excel when his performance is appreciated, on the contrary if his efforts are not appreciated then he will not strive to excel.

B. Competence and Work Methods Factor

This factor has the second highest variance value of 10.956% making it the factor with the second highest influence, where the emergence of this factor is the result of several sub-factors that make up, including:

a. Education

Workers who have education will have broader insight to take the initiative, innovate and subsequently affect performance.

b. Labor attitude

Disciplined attitude or behavior of a worker is very important in supporting his performance in carrying out a task or responsibility in each of his work activities, as is the case for workers in permanent housing development projects with the RISHA system in Central Sulawesi, their performance depends on their attitude to work with discipline.

c. Practical working method

In a permanent housing construction project with the RISHA system in Central Sulawesi, workers can work quickly, because RISHA houses can be built quickly and easily because they do not require conventional materials to make houses. This house uses concrete panels and bolts as the basic material. You could say, building this panel house is like assembling Legos [13].

d. Management of the workforce

Very good management efforts in encouraging the performance of workers in construction companies, namely by conducting training as an effort to improve the quality of its workforce, coordinating or directing workers to be more focused in carrying out their duties, and placing workers in accordance with competence or expertise, as well as the implementation carried out on permanent housing development projects with the RISHA system in Central Sulawesi.

e. Project leadership

The right leadership style can also be a driving force for workers in the workplace to achieve better performance.

C. Talent, Interest and Material Factor

This factor has the third highest variance value of 7.603% making it the third highest influencing factor, where the emergence of this factor is the result of several sub-factors that make up, including:

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a.   Talents and interests
The need for talents and interests of the workers will of course have a good impact on the performance desired and expected by the company, so as to be able to advance the course of the project.

b.   Quality of materials used
The quality of the materials used is a specification of the quality of the materials used in construction activities, the quality or quality of these materials also determines the success of the workers in executing a project.

c.   Material availability

Availability of stock of materials in the form of quality construction materials is very important for the continuity of project work.

D. Weather Changes and Equipment Conditions Factor
This factor has the fourth highest variance value, which is 7.343% making it the fourth influential factor, where the emergence of this factor is the result of several sub-factors that support this factor, including:

a)   Changes in the weather
Weather changes are one of the factors that affect the performance of the workers in the permanent housing construction project using the RISHA system in Central Sulawesi, because the rapid changes in weather at the project site also affect worker productivity.

b)   Project equipment condition
Adequate condition of project equipment will greatly assist workers in completing their work.

E. Skills and Division of Work Factor
This factor has the fifth highest variance value, which is 5,149% making it the fifth influential factor, where the emergence of this factor is the result of several sub-factors that support this factor, including:

a. Skills
Skills are needed for every construction worker in supporting their performance.

b. Division of work
Workers must be divided responsibilities based on their skills, because with these skills they will encourage the implementation of better performance, because they will feel comfortable if they are placed in tasks and responsibilities that are in accordance with their abilities or competencies.

CONCLUSIONS
Based on the results of the study, it can be concluded that:
a)   There are five factors that influence the performance of construction workers in a permanent housing

development project with the RISHA system in Central Sulawesi, the five factors include Human Resources management factors, competency factors and work methods, Talent and Material Interest factors, change factors weather and equipment conditions, as well as skills and division of labor, in which the effect of these five factors is 74.495% while the remaining 25.505% is influenced by factors that do not influence dominantly.
b)   Meanwhile, the results of the study also show that HR management factors have the most dominant influence on the performance of construction workers in permanent housing development projects with the RISHA system in Central Sulawesi, with the highest variance value of 43.444%.

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