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Analysis Of Factors Of Delay In Rehabilitation And Reconstruction Work Of Buildings In Palu City Indonesia

Muhammad Aulia Ridwan[1] Nirmalawati[2], Gusti Made Oka[2]
[1] *Postgraduate Student Of Civil Engineering Department, Tadulako University,Indonesia*
[2,3] *Civil Engineering Department, Faculty of Engineering, Tadulako University, Indonesia*
Corresponding Author: tutang.untad@gmail.com

Abstract:. *The implementation of the rehabilitation and reconstruction work of the constructing is so urgent that it may be used at once, so it is predicted that the final touch of the challenge may be finished on time. however, within the implementation of this challenge, it's far inseparable from the risk of delays due to the complexity of the rehabilitation and reconstruction venture of the constructing. this is what underlies this take a look at to investigate the elements of delays in the rehabilitation and reconstruction paintings of the building within the town of Palu. The sort of studies used on this study is a descriptive form of research, the sampling approach in this take a look at is general sampling, the respondents are from the service customers, consultants and implementing Contractors totaling 35 respondents. To obtain facts, the researcher used questionnaire and documentation distribution techniques, even as the evaluation approach used in this look at is issue evaluation. based at the consequences of this observe, there are six elements that impact the delay in the rehabilitation and reconstruction work of buildings in the metropolis of Palu, the 4 elements are paintings implementation management, cloth troubles, procedures and work environment, work coordination. The results of the evaluation display that the factor that has the best influence on the postpone is the paintings implementation control aspect with a Variance cost of 34.415 percent.*

Keywords: *Delay, Project delay factors, Building projects, factor analysis*

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I. INTRODUCTION

Indonesia is one of the growing nations that is actively growing infrastructure together with roads, bridges, water buildings, and homes(Koroteev et al., 2020). The purpose of this improvement isn't always only to facilitate and make it less difficult for people to carry out their each day sports, however additionally to create prosperity and welfare for the humans. consequently, the outcomes of the development executed via the authorities ought to be felt by means of the whole network fairly and evenly(Gage et al., 2019)

Palu city is a city that keeps to broaden with a level of improvement that in no way shows a decline. The rapid infrastructure development hobby in Palu city is one of the drivers for the growing quantity of provider company organizations today. this is the background to the wish of getting big profits. however, if the carrier company enterprise, either as a planner or as an implementer, simplest goals to are searching for and advantage income without balancing it with excellent and mature time calculations, this could absolutely have fatal effects and can be unfavorable. due to the fact with out a terrific and mature calculation of the anticipated time for completing the challenge, it could bring about delays in finishing a project(González et al., 2007; Muhtar Kamaludin, 2021).

Each production mission has a specific plan and implementation time table, whilst the construction undertaking will begin, while the project may be completed, how the construction task could be completed, and how sources will be supplied for the undertaking(Newman et al., 2014).

The fulfillment of a task is inspired by means of the performance of every issue of the paintings implementer together with the assignment proprietor. based totally on its nature and targets, each factor concerned has specific interests which if not managed optimally could be a capability for disputes in various forms and complexities that may probably boom construction charges and delays in of entirety of labor(Hammadi & Nawab, 2016; Muhtar Kamaludin, 2024)

As one sort of construction undertaking, building creation has specific characteristics from different construction initiatives along with civil buildings together with roads, bridges, dams, and different infrastructure.(Al-Momani, n.d.) building construction work is achieved in a extraordinarily narrow vicinity, calls for management particularly for labor-intensive paintings progressing and has a scope and level of constructing era in widespread that is an awful lot large and more complex.(Koroteev et al., 2020)

The Ministry of Public Works and Public Housing thru the valuable Sulawesi regional settlement Infrastructure center, the constructing association improvement dedication Making Officer at the important Sulawesi Provincial agreement Infrastructure Implementation work Unit handles the implementation of rehabilitation and reconstruction paintings inside the health facilities area and buildings stricken by herbal disasters, so one can be completed in 2024.(Gage et al., 2019)

planning a construction assignment usually refers back to the estimates that exist when the improvement plan is made, so troubles can arise if there's a discrepancy between the plan that has been made and the actual truth. consequently, the effect of the discrepancy is the postpone in the challenge implementation time and the growth within the price of enforcing the undertaking(Smith et al., 2010). Delays inside the final touch of work that arise on a creation assignment can occur due to numerous elements. elements that motive delays in the crowning glory of labor on a venture include mistakes in calculating the envisioned time required to finish the work. but, problematic work environment situations, materials, exertions, and price range can also be elements that allow delays in the finishing touch of a assignment to occur.(Newman et al., 2014)

Delays in the completion of a undertaking can definitely be negative to numerous parties worried. each the proprietor and the contractor experience losses in phrases of expenses or time. those losses actually result in a discrepancy within the predicted earnings income through each parties due to the delay in venture completion(Ferguson et al., 2019).

however, if the implementation of a construction project is walking and finished on time, as said within the contract, it's far positive that both parties, each the proprietor and the contractor(Meena & Suresh Babu, n.d.), will get the advantages in accordance to what's desired. consequently, the carrier issuer company will continually try to make sure that each task paintings is done in line with the estimated time that has been set or the provider issuer corporation attempts to limit the prevalence of delays in finishing the challenge work with the aid of taking corrective or preventive moves that need to be taken by using thinking about elements which have the capability to motive delays in finishing the undertaking paintings. consequently, a have a look at is needed to identify and analyze the elements that affect the postpone in finishing a assignment.(Hammadi & Nawab, 2016)

II. LITERATURE REVIEW

The achievement of a task is influenced by way of the overall performance of every factor of the paintings implementer along with the undertaking owner. based totally on its nature and objectives, every thing worried has exclusive pastimes which if now not managed optimally may be a capacity for disputes in diverse bureaucracy and complexities that could potentially increase creation fees and delays in completion of labor(Koroteev et al., 2020)

As one form of construction venture, building production has exclusive characteristics from different creation tasks along with civil homes along with roads, bridges, dams, and different infrastructure. constructing production paintings is performed in a noticeably slender vicinity, calls for control mainly for exertions-extensive paintings progressing and has a scope and stage of constructing technology in standard that is a good deal large and greater complex.(Gage et al., 2019). Control is a solidarity that includes strategies/strategies and approaches completed to reap predetermined dreams systematically and effectively, by way of carrying out numerous movements within the shape of planning, organizing, imposing (actuating), and controlling (controlling) which might be performed with the aid of utilizing all to be had assets efficaciously(Newman et al., 2014).

The function of the planning action is as a tool which can supervise and manipulate an hobby, or as a tenet in sporting out sports, and as a means to select and determine the activities needed. Of all of the control procedures carried out, the implementation feature is the most important of the existing capabilities, because this function is so emphasised at the direct courting and sports of each member of the agency, even as planning and organizing have a more abstract or oblique nature. Implementation is an attempt made with the aim of moving members of the organization in step with the dreams and efforts of individuals to understand the dreams of the company and participants inside the corporation due to the fact every member additionally has non-public goals. actions taken within the characteristic(Hammadi & Nawab, 2016)

A production venture is a chain of activities which can be only accomplished once and are commonly brief-term. in this collection of sports there's a system that methods assignment sources right into a end result of activities inside the shape of homes. production tasks may be divided into corporations of homes, specifically homes and civil buildings.

Every civil mission requires engineering during its construction duration because it's miles dynamic. that is indicated via changing assets at any time by adjusting the desires that occur inside the discipline. thus, non-stop evaluate and adjustment are needed always to be able to finish the venture in an powerful and efficient time.

creation initiatives have their own traits beginning from the activities performed, goals and targets, and the very last merchandise produced. the main sports of a construction undertaking are design engineering feasibility studies, procurement and construction. these activities are finished for no different cause than to obtain

consequences within the form of constructing creation, highways, bridges, ports and so forth. From the construction system to the belief of the results of a construction undertaking, in fashionable, it's going to soak up massive resource desires and can be utilized by many human beings.(Koroteev et al., 2020)

The Ministry of Public Works and Public Housing via the relevant Sulawesi nearby agreement Infrastructure middle, the building association improvement commitment Making Officer at the significant Sulawesi Provincial settlement Infrastructure Implementation paintings Unit handles the implementation of rehabilitation and reconstruction paintings within the health facilities quarter and homes tormented by herbal disasters, on the way to be carried out in 2024.(Sirois et al., 2004)

In construction tasks, delay may be defined because the time that exceeds the finishing touch date distinct within the contract, or the date agreed upon with the aid of the events for a assignment. For the proprietor, delay approach lost sales thru loss of production facilities and rented area or dependence on existing centers.(Arifin & Kamaludin, n.d.)

construction challenge postpone is a situation in which a construction undertaking can't be finished in line with the previously deliberate or agreed schedule. This delay may be partial (late in sure components of the work) or general (late in the ordinary of completion of the challenge) :common causes of creation task postpone, bad planning,layout changes within the middle of the challenge, delays in cloth procurement, lack of professional exertions, adverse climate situations, monetary or funding problems, weak challenge control, licensing and regulatory constraints.

III. METHODOLOGY

Basicallyresearch sports are finished with the purpose of watching a task to be able to draw conclusions. therefore, in a study, assisting and reliable records is needed, so that you can achieve suitable effects from the study, and in a have a look at, a method is needed. This bankruptcy explains the research method regarding the degrees that are handed in accomplishing research. The research vicinity for this have a look at is Palu town, important Sulawesi Province(Choudhary et al., 2012; Smith et al., 2010). This observe will attention at the rehabilitation and reconstruction work of buildings that have been broken after the natural disaster in Palu city to research the factors that have an effect on the delay inside the work.On this look at, there are two varieties of facts used, specifically number one records and secondary statistics. primary records is statistics accrued through engaging in discipline studies received without delay from respondents thru questionnaires which have been allotted to experts running inside the subject of consulting or contractor offerings and coverage makers(Ferguson et al., 2019; González et al., 2007).

Secondary information is data obtained from literature studies and is records that has been processed, both in the form of news, books, journals, notes, or other files needed on this examine. Primarily based on the theoretical foundation that has been described, it can be concluded that venture delays can be classified into 9 agencies, specifically projects, owners or provider users, contractors, specialists, designs, substances, equipment, labor, and others. each of those variables will be divided into several signs(Fakunle, 2020; Ophiyandri et al., 2011).

Validity trying out is completed to decide how correct the tool or items are in measuring what's to be measured. Invalid questionnaire objects suggest that they can not measure what's to be measured, which means that the results acquired cannot be trusted. consequently, invalid gadgets ought to be removed.

There are conditions if an device (questionnaire) is said to be valid and dependable. An instrument can be stated to be valid if the questions are capable to show some thing in an effort to be measured by way of the instrument. facts validity testing is carried out using the SPSS software program device using the (r) Corrected item general Correlation results via the dimensions menu in the Reliability analysis choice, (r) table can be seen in Appendix 12 with the cost N, specifically the variety of respondents. If there is a corrected item-overall correlation result, particularly(Arantes & Ferreira, 2020)

(r) matter, with the subsequent provisions:

- If there's a negative one, then the query item will become invalid

If high-quality, with (r) depend < (r) table then the question item is invalid, and

If positive, with (r) count > (r) table then the query item is legitimate.

Reliability checking out is used to check the consistency of the measuring tool, whether or not the consequences stay steady or now not if the dimension is repeated. Measurements that can not be depended on whilst the questionnaire tool isn't reliable in order that the measurement effects can't be relied on.

The principle purpose of reliability checking out is to determine the consistency or regularity of the measurement outcomes if the device is used again as a respondent size tool.

The results of the reliability take a look at replicate whether or not a research tool can be trusted or no longer primarily based on the extent of stability and accuracy of the measuring instrument within the feel that the measurement effects acquired are the correct degree of a degree. Cronbach's Alpha is measured based on the

Cronbach's Alpha scale of zero to at least one. If the dimensions is grouped into 5 classes with the equal range, then the Alpha stability measure may be interpreted as follows.

After getting the suggest price (common cost) from the evaluation above, the order or ranking of the elements causing delays in the of entirety of the construction assignment is obtained. In English, the phrase ranking honestly way 'ranking'. ranking is the manner of arranging a sequence primarily based on positive benchmarks. the position inside the sequence is known as a rank.

IV. RESULT AND DISCUSSION'

From the results of the study it is known that the status of respondents consists of project owners of 29%, Consultants of 40% and implementing contractors of 31%. It can be concluded that the respondents who are more dominant have the status of Consultants. From the results of the study, data on the work experience of respondents consisted of <2 years of 0%, 3-6 years of 54% and> 6 years of 46%. This data shows that the work experience of respondents is dominated by 2-6 years. From the results of the study, 0% of respondents worked on 1-story buildings, 57% worked on 2-story buildings, and 43% worked on buildings> 2 stories. It can be concluded that the majority of respondents are those who work on 2-story buildings.

a. Uji Validitas

Validity testing is a test used to show the extent to which the measuring instrument used in a measurement measures what is being measured.

Table 1. Validity test results

Variabel	Pearson Correlation Value (r count)	Significance	Information
X1.1	0,425	0,011	Valid
X1.2	0,373	0,027	Valid
X1.3	0,508	0,002	Valid
X2.1	0,565	0,000	Valid
X2.2	0,438	0,008	Valid
X2.3	0,432	0,010	Valid
X2.4	0,507	0,002	Valid
X4.1	0,373	0,027	Valid
X4.2	0,339	0,046	Valid
X4.3	0,482	0,003	Valid
X4.4	0,441	0,008	Valid
X5.1	0,437	0,009	Valid
X5.2	0,413	0,014	Valid
X5.3	0,379	0,025	Valid
X6.1	0,527	0,001	Valid
X6.2	0,604	0,000	Valid
X6.3	0,67	0,000	Valid
X3.1	0,423	0,011	Valid
X3.2	0,375	0,026	Valid
X3.3	0,54	0,001	Valid
X7.2	0,635	0,000	Valid
X7.3	0,497	0,002	Valid

Question items that correlate significantly with the total score indicate that these items are able to provide support in revealing what is to be revealed Valid If r count ≥ r table (2-sided test with sig. 0.05). Because in this study the number of respondents used was 35 people, it can be determined that the r table is 0.344. Based on the results of the validity test above, it can be concluded that all variables used in this study are declared valid because they have a calculated r value greater than the r table value, so that each variable can be used in further research.

b. Reliability Test

The reliability of a test refers to the degree of stability, consistency, predictive power, and accuracy. In general, reliability is considered satisfactory if ≥ 0.600.

Table 2. Validity test results

Reliability Statistics	
Cronbach's Alpha	N of Items
.833	22

So the results of the reliability coefficient show that each variable has a "Cronbach's Alpha" value greater than 0.600

Descriptive Statistics

Data processing from raw data that has been collected is stored and processed in the SPSS program. Descriptive statistical analysis is a statistic used in analyzing data by describing or depicting the data that has been collected. Based on table 4.3, it is known that from a total of 22 question items analyzed, the respondent's answer choices that have a high average answer score are 4.74 on item X4.3 "Contractor's financial condition", 4.71 on item X6.2 "Implementation method applied", 4.69 on item X2.4 "Project managerial personnel", 4.69 on item X5.1 "Availability of materials at the location". This shows that according to respondents' perceptions, the most influential delays occur in the cost factor, namely the contractor's financial condition, then the method factor due to poor implementation methods, then there is a material factor, namely because the availability of materials at the location does not match the needs, and because of the managerial factor, namely the project managerial personnel involved in the implementation.

Factor Analysis

Factor analysis is a technique used to find factors that can explain the relationship or correlation between various independent indicators observed. Factor analysis is an extension of principal component analysis. It is also used to identify a relatively small number of factors that can be used to explain a large number of interrelated variables. In general, the stages of factor analysis in this study include the following:

KMO Test and Bartlett's Test

The steps taken after each variable to be included in the analysis is obtained, namely testing the adequacy of the sample through the Kaiser Meyer-Olkin (KMO) index, the significance value of the Bartlett's Test of Sphericity, and the Measure of Sampling Adequacy (MSA). This index is used to examine the appropriateness of the use of factor analysis. If the KMO value is between 0.5 and 1 and the significance of the Bartlett's Test of Sphericity is less than the significance level ($\alpha = 0.5$) used, it can be interpreted that factor analysis is appropriate to use. The following is Table 4.10 which presents the results of the KMO and Bartlett's Test of Sphericity:, which means that the variables in this study are declared reliable or meet the requirements.

Table 3. Results of KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,523
Bartlett's Test of Sphericity	Approx. Chi-Square	513,925
	df	231
	Sig.	0,000

From the SPSS output, the KMO value is 0.523 and the Bartlett's Test of Sphericity significance value is 0.00, so it can be concluded that factor analysis is appropriate to simplify the sets of variables in this study. The next step is the Measure of Sampling Adequacy (MSA) test. The Measure of Sampling Adequacy (MSA) is used to determine whether the variables are adequate for further analysis. This value can be seen in the anti-image correlation matrix value. If the MSA value is greater than 0.5, then the variable is adequate for further analysis. If there is an MSA value of less than 0.5, it must be removed one by one from the analysis, sorted from the variable with the smallest MSA value and no longer used in further analysis. From the output results using SPSS, the MSA values are obtained as follows:

Table 4. MSA Test Results

Variabel	Symbol	MSA Value
Labor shortage	X1.1	0.448
Labor skills	X1.2	0.422
Labor motivation	X1.3	0.633
Communication between project owner and contractor	X2.1	0.457
Communication between consultant and contractor	X2.2	0.608
Owner decision making	X2.3	0.416
Project managerial personnel	X2.4	0.580
Design changes	X3.1	0.551
Design errors	X3.2	0.412
Additional work	X3.3	0.485
Land conditions that do not match the plan	X3.4	0.642
Delay in payment of service providers	X4.1	0.387
Financial problems of the project owner	X4.2	0.563
Financial conditions of the contractor	X4.3	0.492
Availability of materials on site	X5.1	0.609
Quality of materials	X5.2	0.570
Delay in delivery of materials	X5.3	0.496
Lack of control in the implementation of work	X6.1	0.662
Implementation methods applied	X6.2	0.398
Project implementation procedures	X6.3	0.661
Rain intensity during implementation	X7.1	0.607
Work space requirements	X7.2	0.542

From Table 6 above, it is known that there are ten variables whose MSA values are below 0.5, so it is necessary to do a retest, so to do this retest, the researcher removed variables that have MSA values below 0.400, for the results of the retest can be seen from the following test results.

Table 5. Results of KMO and Bartlett's Test Stage 2

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0,551
Bartlett's Test of Sphericity	Approx. Chi-Square	457,734
	df	190
	Sig.	0,000

From the SPSS output, the KMO value is 0.551 and the Bartlett's Test of Sphericity significance value is 0.000, so it can be concluded that factor analysis is appropriate to be used to simplify the set of variables. From the table above, it is known that there are four variables whose MSA values are below 0.5, so it is necessary to do a retest, so to do this retest, the researcher removed variables that have MSA values below 0.500, for the results of the retest can be seen from the following test results. From the SPSS output, the KMO value is 0.560 and the Bartlett's Test of Sphericity significance value is 0.000, so it can be concluded that factor analysis is appropriate to be used to simplify the sets of variables in this study.

Table 6. Results of MSA Phase 3 Testing

Variabel	Simbol	Nilai MSA
Labor skills	X1.2	0.468
Labor motivation	X1.3	0.499
Communication between project owner and contractor	X2.1	0.444
Communication between consultant and contractor	X2.2	0.558
Decision making by owner	X2.3	0.573
Project managerial personnel	X2.4	0.545
Design changes	X3.1	0.527
Land conditions that do not match planning	X3.4	0.401
Financial problems of project owner	X4.2	0.425
Availability of materials on site	X5.1	0.646
Quality of materials	X5.2	0.655
Delay in delivery of materials	X5.3	0.650
Lack of control in implementing work	X6.1	0.567
Project implementation procedures	X6.3	0.675
Rain intensity during implementation	X7.1	0.621
Work space requirements	X7.2	0.619

From the table above, it is known that there are five variables whose MSA values are below 0.5, so it is necessary to carry out retesting, so to carry out this retest, the researcher removed variables that had MSA values below 0.500, the results of the retest can be seen from the following test results.

Tabel 7. Hasil KMO dan Bartlett's Test Tahap ke-4

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.694
Bartlett's Test of Sphericity	Approx. Chi-Square	187.723
	df	55
	Sig.	0,000

From the SPSS output, the KMO value is 0.694 and the Bartlett's Test of Sphericity significance value is 0.000, so it can be concluded that factor analysis is appropriate to simplify the sets of variables in this study.

From the table above, it is known that all variables have met the MSA standard, where the 11 variables have an MSA value above 0.5 so that the data for the 11 variables can be processed further.

A. Factor Extraction

Factor extraction is the process of reducing a number of variables into a number of new sets of variables or factors that are fewer in number. For example, there are p original variables, after being extracted it will become m factors where m <p. The factor extraction method is related to determining the number of factors that describe the data structure. In this study, the researcher used the principal component analysis method. By using the SPSS program. The extraction results can be seen in the table below.

Table 8. Factor Extraction Results

Total Variance Explained

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	3,786	34,415	34,415	3,786	34,415	34,415	2,508	22,803	22,803
2	2,664	24,221	58,635	2,664	24,221	58,635	2,306	20,963	43,766
3	1,193	10,848	69,484	1,193	10,848	69,484	2,232	20,292	64,059
4	1,058	9,620	79,103	1,058	9,620	79,103	1,655	15,045	79,103
5	0,662	6,017	85,120						
6	0,513	4,664	89,784						
7	0,371	3,375	93,159						
8	0,273	2,485	95,644						
9	0,195	1,772	97,416						
10	0,149	1,355	98,771						
11	0,135	1,229	100,000						

The first criterion used is the eigenvalue. Factors that have an eigenvalue of more than 1 will be retained and factors that have an eigenvalue of less than 1 will not be included in the model. From the table above, it is obtained that the eigenvalue greater than 1 is 4 factors. The second criterion is the determination based on the scree plot. The scree plot is a plot of eigenvalues against the number of factors extracted. The point at which the scree begins to occur indicates the exact number of factors. This point occurs when the scree begins to look flat. In Figure 4.1, it is known that the scree plot begins to flatten when the initial variables are extracted into 4 factors.

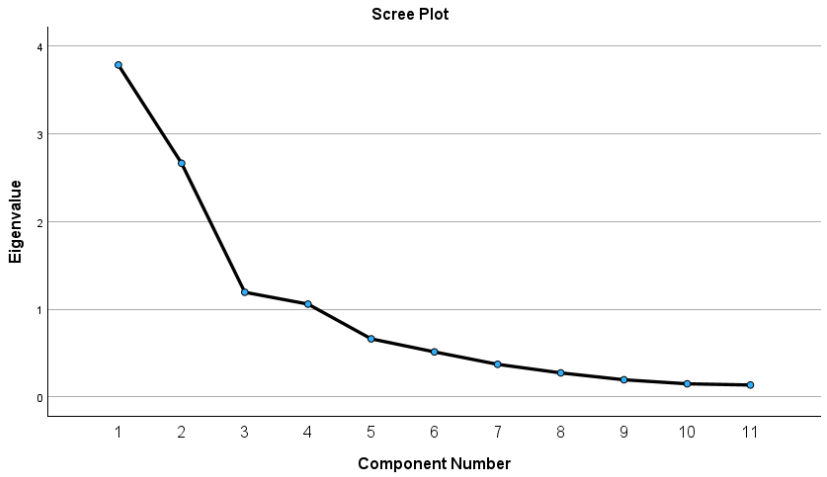

Figure 1. Scree Plot

From the combination of the two criteria, it can be concluded that the most appropriate factor extraction is 4 factors.

Factor Rotation

Interpretation of the results of the analysis is often troublesome. An important step in factor interpretation is factor rotation. Some experts suggest using orthogonal rotation, namely varimax (variance of maximum) because it produces a simple factor structure by maximizing the amount of variance of the factors that contain the squared loading value. With the varimax method, many variables can have high or near-high loadings on the same factor because the focus of the technique is to simplify the rows, so that there is a tendency to have high loadings

and some loadings approaching 0 (zero) in each column of the matrix. Therefore, in this study, the rotation method used is orthogonal rotation with varimax. By looking at the weighting factors, an item can be determined into which factor by looking at the magnitude of the weighting factor on each item against the four matrices of the formed factors

Tabel 9. Factor Rotation Results

Rotated Component Matrix[a]				
Variabel	Component			
	1	2	3	4
X2.2	-0,037	0,017	0,141	0,911
X2.3	0,492	0,017	0,040	0,712
X2.4	0,768	0,169	0,029	0,498
X3.1	0,900	-0,055	0,105	-0,118
X5.1	-0,114	0,809	-0,011	-0,030
X5.2	0,030	0,846	0,293	0,057
X5.3	0,157	0,743	0,477	0,058
X6.1	0,904	-0,038	-0,006	0,153
X6.3	0,058	0,517	0,642	0,098
X7.1	-0,015	0,284	0,803	0,127
X7.2	0,076	0,039	0,910	0,030

In this have a look at, the rotation used is the varimax approach. The mechanism of varimax rotation is to make the item correlation most effective dominant to as a minimum one detail. The method is to make the itcm correlation method sincerely the value of one and 0 on every issue, making it easier to interpret the dominant object. it is able to be seen that when rotation. we are able to more resultseasily determine component one, detail and element 3. From the consequences of the desk above, it is able to be defined

Based totally on the consequences of the take a look at, it indicates that in the validity test, all variables used in this examine are declared legitimate due to the fact they've got a calculated r price extra than the desk r cost or a calculated r cost> 0.334 and supplied in desk four.1 in which of the seven elements with as many as 22 variables inflicting assignment delays have a power at the do away with within the implementation of hard work. From the outcomes of the reliability take a look at wherein the reliability coefficient of each variable has a "Cronbach's Alpha" price more than 0.six hundred, because of this that that the variables on this observe are declared reliable or meet the necessities. The consequences of descriptive statistics received the most influential variables befell inside the cost detail, namely the financial condition of the contractor, then the technique issue due to terrible implementation strategies, then there's a material component, specifically due to the fact the supply of substances on the region does not suit the needs, and due to the managerial component, specially the assignment managerial employees concerned within the implementation.

The results of the issue evaluation via 4 tiers of MSA checking out obtained 4 new elements that were shaped from the extraction of things that prompted the remove in the rehabilitation and reconstruction of building homes in Palu metropolis, the 4 elements were artwork implementation management, cloth problems, strategies and art work environment, work coordination.

From this examine, the consequences of the brand new element analysis that have been fashioned additionally showed that the finest have an impact on on the delay within the rehabilitation and reconstruction of constructing homes in Palu city come to be the art work implementation management aspect with a Variance cost of 34.415 percentage. This indicates the lack of hard work manage achieved by the managerial employees concerned within the paintings, each from the making plans consultant and from the personnel who manage the implementation of the artwork can cause delays in the rehabilitation and reconstruction of constructing homes in Palu city. no longer exceptional the trouble of implementation control, from this study it could moreover be seen that the shortage of coordination in the paintings moreover influences the remove within the rehabilitation and reconstruction of constructing buildings in Palu city. lack of communique between professionals and contractors and gradual desire-making via the proprietor can motive risks and supply rise to disputes, that can end up barriers at some point of the implementation of the artwork.

V. CONCLUSION

From the consequences of this examine, 4 new factors were obtained that have been fashioned from the extraction of factors that influenced the postpone within the rehabilitation and reconstruction of building structures in Palu city, the 4 factors have been paintings implementation management, material troubles, paintings approaches and surroundings, work coordination. The component that had the finest impact on the put off in the rehabilitation and reconstruction of building systems in Palu city became the work implementation control aspect with a Variance price of 34.415 percentage.

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