

Comparative Study of Unit Price Analysis of Wages, Materials and Equipment on Excurement Work and Head Works Between SNI Method and Field

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ABSTRACT

In this study, an analysis of the results of the analysis calculation was carried out unit price of work by using the SNI analysis method with Field. This research takes a case study of Village Road Improvement Mukun Komba City District, East Manggarai Regency, Nusa Province East Tenggra. Equation in calculating the unit price analysis of work, on the job Ordinary Soil Excavation and Ordinary Backfill of the two methods are components which include wages, materials and equipment. While the difference is the calculation of the coefficient value and unit price. Where in the analysis The field does not have equipment that is in accordance with the SNI method, such as: Water Tank Truck, Excavator Motor Grader, and Motor Grader. Comparison calculation results for ordinary soil excavation work the results obtained for field analysis obtained the lowest price, namely Rp 77,770,00 compared to the SNI analysis of Rp 93,578.87. As for the results Comparative calculations on ordinary embankments get results for field analysis get the highest price, which is RP 1,001,391.00 compared to the analysis SNI is IDR 183,097,79.

Keywords: : Unit Price of Work, Comparison, Wages, Materials, Equipment

1. INTRODUCTION

In a construction project the contractor will make time planning, labor, materials, equipment and construction costs of the building. Required project data in the form of plan drawings, unit price analysis, and other data, so get what is called a Budget Plan. Budget plan The cost of a project is a calculation of the amount of costs required for materials and wages. The budget for the same project will differ from region to region each due to differences in labor wages. In general, the contractor makes an analysis bid price that does not overall based on SNI analysis, most contractors calculate the price work units with their own estimates based on the M2 field size in order to estimate the total cost of the project. The purpose of this study is to make a comparison between the analyzes obtained from literature, in the form of SNI and Field Methods for later Compared to its application in the field, it will have an effect on being used in the world the current construction, the objectives to be achieved in this study are as follows: to find out the percentage difference between the unit price of materials and work wages, knowing the most dominant component that makes the difference in preparation of unit price analysis between the SNI method and the field

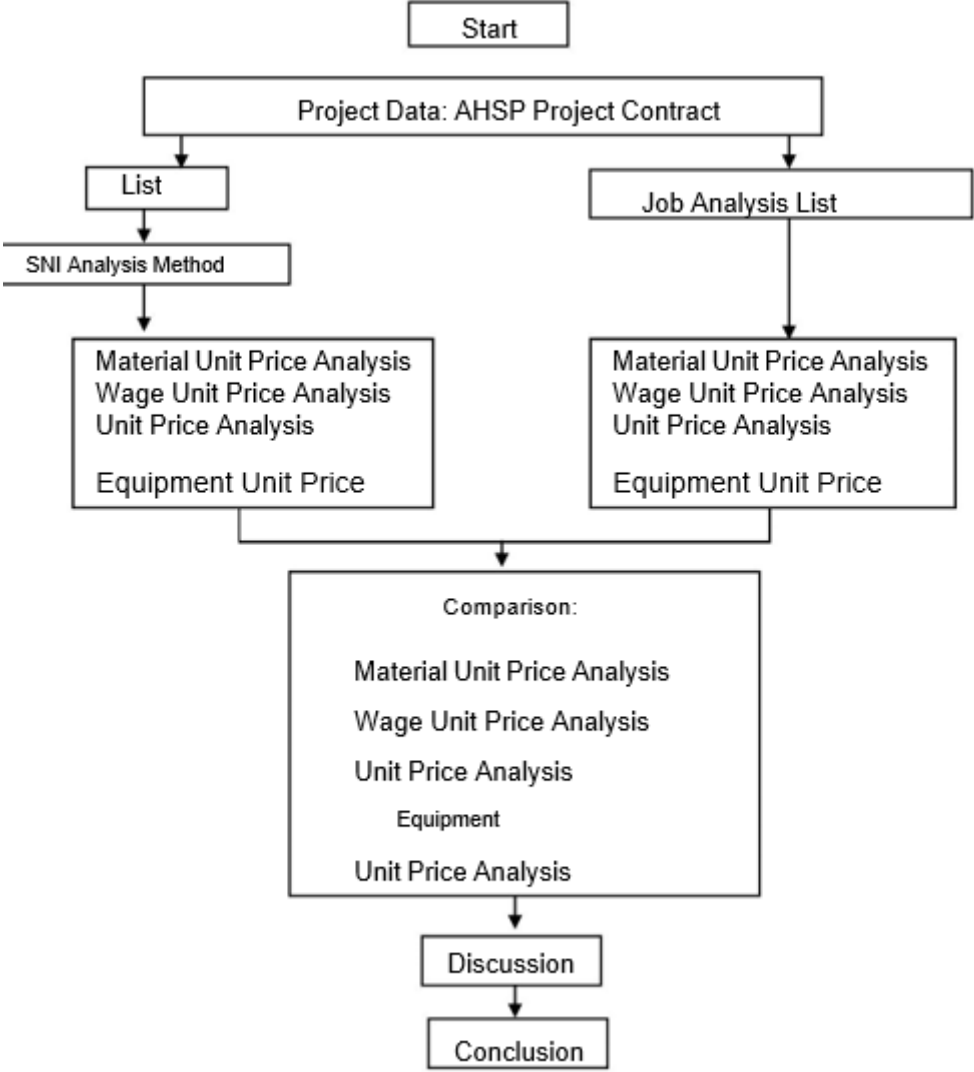
2. METHODS

Literature Review

Agung [1] regarding the comparison of work unit prices in building project using BOW, SNI, and field methods, Kristoforus [2] about the analysis of the coefficient of materials and wages in the Rusunawa construction project, Fajar [3] regarding the comparison of unit price analysis coefficients for slope repair work using SNI and BOW methods, Khalid [4] regarding the analysis of the unit price of work in building construction using the method SNI and Field. Wita Roesita Rifiani: comparison of budget plans between BOW analysis and analysis of SNI in 2008, the research took a study on building projects The Banjarbaru

DPRD aims to find out the differences in the analysis of price components material unit, unit wage price, tool price and work unit price between methods BOW and SNI. As well as knowing the magnitude of the difference in costs and comparison ratios between the components of the unit price of material, unit price of wages, unit price of tools, and price work unit. This study uses the BOW and SNI methods with compare budgets.

This research is a case study, which is calculating the analysis of work units building which is carried out using the SNI Analysis method which is then compared with field analysis. In the analysis of the unit price of building works, secondary data is used obtained from field implementation and SNI analysis. The data consists of: list of unit prices of materials used at the research site. List of unit wages for research sites, Budget plan for project bidding. List of SNI analysis guidelines. In the analysis of the unit price of building works using the SNI analysis method and field analysis has important parameters that must be determined first and analyzed in the order as in the research flow chart below:



3. RESULTS AND DISCUSSION

The index is a coefficient factor as the basis for calculating costs materials and labor wages, where the materials index is a quantum index that shows the material needs of each type of work, while the labor index is a quantum that shows the time needed to do each unit type of work. SNI analysis method index of labor and equipment in ordinary earth excavation work with using the SNI analysis method can be seen in the following table: Table 5.1 Labor Price Index in ordinary earth excavation work using the method

SNI Analysis				
NO	DESCRIPTION	UNIT	COEFFICIENT	
A Power				
1	Worker	L01	0'blok	0.0511
2	Foreman	L03	0'blok	0.0256

The table above is the result of calculating the coefficient value for the description of wages or workers in each type of material and materials used in this type of work ordinary excavation from the calculation of the SNI method. Table 5.2 Equipment index in ordinary earthworks using the Analysis method:

SNI				
NO	DESCRIPTION	UNIT	COEFFICIENT	
A Equipment				
1	Excavators	E10	0'blok	0.2556
2	Dump Truck	E08	0'blok	0.3344
3	Device	Is		1.0

The table above is the result of calculating the coefficient value for the description of the equipment in every type of material and materials used in the type of earth excavation work usual from the calculation of the SNI method.

4. CONCLUSION

From the results of calculations and discussions that have been carried out, it is obtained several the following conclusions:

1. The difference in the comparison of the unit price of work for Ordinary Excavations gets the following results:
 - a. The unit price of wages for the field analysis method obtains a value that is greater than the SNI analysis, with a difference of comparison 4.06%
 - b. The unit price of the field analysis method equipment obtains a high value greater than the analysis, with a difference in comparison -15.50%
 - c. The total price of the work unit for the field analysis method obtains a value of which is larger than the SNI analysis, with a difference of comparison -13.11%
2. The difference in the comparison of work unit prices for Ordinary Pile obtain the following results:
 - a. The unit price of wages for the field analysis method obtains a value that is greater than the SNI analysis, with a difference of comparison 3.16%
 - b. The unit price of the field analysis method material obtains a value that is greater than the SNI analysis, with a difference of comparison 90.43%
 - c. The unit price of the field analysis method equipment obtains a high value smaller than the analysis, with a difference in comparison 57.17%
3. Ratio of work unit price comparison for Ordinary Soil Excavation obtain the following results:

- a. For the ratio of wage unit price comparisons, field analysis obtain a value greater than the SNI analysis, with a ratio of 9.77 . comparison
 - b. For equipment unit price comparison ratio, field analysis obtain a value greater than the SNI analysis, with a ratio of 0.84 comparison
 - c. For the ratio of total unit price comparison, field analysis obtain a value greater than the SNI analysis, with a ratio of 0.88 . comparison
 - d. The total price of the work unit for the field analysis method obtains a value of which is greater than the SNI analysis, with a difference of comparison 10.01%
4. The ratio of the unit price of work for Ordinary Embankment with obtain the following results:
- a. For the ratio of wage unit price comparisons, field analysis obtain a value greater than the SNI analysis, with a ratio of 1.21 . ratio
 - b. For the ratio of material unit price comparisons, field analysis obtain a value greater than the SNI analysis, with a ratio of comparison 39,548
 - c. For equipment unit price comparison ratio, field analysis obtain a value greater than the SNI analysis, with a ratio of comparison 0.03
 - d. For the ratio of material unit price comparisons, field analysis obtain a value greater than the SNI analysis, with a ratio of 5.46 . comparison
5. From the results of the calculation of the Unit Price analysis of wages, materials, and equipment in Ordinary embankment work between the SNI Analysis method and the Analysis method The field shows several differences including:
- a. From the results of the calculation of unit price analysis in the sub-section of wages and equipment, SNI analysis and field analysis both consist of the main components are the same, but at the value of the coefficient and price unit difference occurs. This happens because, SNI price analysis units and their coefficient values are determined or determined by the government, while the field analysis of unit prices and their coefficient values is calculated based on the calculation results of the contractor.
 - b. In the sub-section of Ordinary Fill Materials, the SNI analysis has 3 (three) the main constituent components while in the field analysis it has 5 (five) main constituent components as well as coefficient values and prices the units are different.
6. On ordinary soil excavation work between SNI Analysis and Analysis The field shows several differences including:
- a. in the sub-section of wages and equipment both have components or the same description, but at the value of the coefficient and the unit price different
 - b. in the equipment sub-section, field analysis only has 3 (three) main components while in the analysis of SNI has 6 (six) components and have different unit prices.

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