

# Comparative Analysis of Contract Prices with Basic Prices for Structural and Architectural Works (Case Study: Construction of The Jayapura III-19 Military Court Office Building)

Erwin<sup>1</sup>, Antas Haulian Sinaga<sup>2</sup>, Adrian Carlos<sup>3</sup>

<sup>1,2,3</sup> Jurusan Teknik Sipil, Fakultas Teknik, Universitas Cenderawasih, Kota Jayapura, Indonesia and  
[tandekerwin@gmail.com](mailto:tandekerwin@gmail.com)

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## ABSTRACT

This research aims to analyze the comparison between contract prices and basic prices for structural and architectural works in the construction project of the Military Court Office Building III-19 Jayapura. This comparison is essential to ensure budget efficiency and to prevent budget misuse through unreasonable mark-up practices. The research employs a quantitative approach and the cost-plus pricing method, with data obtained from field surveys (primary data) and project documentation (secondary data). The results indicate a price difference of 2.4% for structural work and 10.4% for architectural work between contract prices and basic prices. According to the fair profit analysis based on the Ministry of Public Works Regulation No. 1 of 2022, most of the works fall within the acceptable profit margin of 10–15%. This study is expected to serve as a reference for future planning and control of construction project budgets.

**Keywords:** Basic Price, Contract Price, Structure, Architecture, Cost-Plus Pricing, Fair Profit.

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## 1. INTRODUCTION

In general, the construction of the Military Court III-19 office building in Jayapura City is a crucial construction project to improve the legal infrastructure in the region. During its implementation, it is crucial to ensure transparency and fairness in comparing the agreed contract price with the base price for materials, work, and services involved in the project [1]. Comparative analysis of the contract price with the base price is crucial to ensure efficient budget utilization and prevent potential underfunding or misappropriation in the construction project [2].

In the Construction of the Jayapura III-19 Military Court Building located in Jayapura City, a survey of the materials needed for the Structural and Architectural work is needed to determine the prices of Structural and Architectural materials available in Jayapura City. However, there are several Structural and Architectural materials that are not available in Jayapura City, so a survey is needed through the E-Catalog platform to find out the prices of materials available outside Jayapura City. Based on Presidential Regulation No. 12 of 2021 concerning Amendments to Presidential Regulation No. 16 of 2018 concerning Government Procurement of Goods/Services Article 66 (Use of Domestic Products), paragraphs 1 and 2: Ministries/Institutions/Regional Apparatus are required to use domestic products, including national design and engineering. The obligation to use domestic products as referred to in paragraph (1) is carried out if there are participants offering goods/services with a Domestic Component Level (TKDN) value plus a Company Benefit Weight (BMP) value of at least 40%.

The results of the survey of the price of materials for structural and architectural work in this study will be analyzed to obtain the Basic Price for structural and architectural work. Next, the author conducted a comparative analysis between the Basic Price for structural and architectural work and the Contract Price used by the implementing party to determine the difference between the basic price for structural and architectural work and the contract price. The purpose of the

comparison is to determine the price and reasonable profit, based on the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia (PERMEN PU) Number 1 of 2022 concerning Guidelines for Compiling Cost Estimates for Construction Work in the Field of Public Works and Public Housing, Article 6 Paragraph (3) "The amount of indirect costs as referred to in paragraph (1) is calculated at 10% (ten percent) to 15% (fifteen percent) of direct costs".

A comparative analysis of the basic price with the contract price is necessary to ensure efficient budget utilization and prevent potential underfunding or misappropriation in the construction project. Misappropriation of funds in construction projects can occur in the form of markups to the project budget that are not in accordance with the contractual agreement.

## 2. LITERATURE REVIEW

### 2.1 *Basic Price*

Basic Price is a term borrowed from several government agencies. According to the 2020 Cambridge dictionary, Basic Price is the price paid for something, excluding the price of any additional features such as transport and security costs, and sometimes excluding taxes. The basic price is the amount received by a producer from a buyer for a unit of goods or services produced as output, minus any taxes payable, and plus any subsidies receivable, by the producer as a result of its production or sale. This does not include transportation costs billed separately by the producer [3], [4]. The basic price is the price received by a producer from a buyer for a unit of goods or services produced as output, minus any taxes payable on that unit as a consequence of its production or sale (i.e., product taxes), plus any subsidies receivable on that unit as a consequence of its production or sale (i.e., product subsidies). This does not include transportation costs billed separately by the producer [5].

### 2.2 *Fair Price*

PSAK No. 50 Financial Instruments: Presentation states that fair value is the price that would be received to sell an asset or the price that would be paid to transfer a liability in an orderly transaction between market participants on the measurement date. According to Government Accounting Standards (SAP) defines fair value as "the exchange value of an asset or the settlement of a liability between parties who understand and wish to conduct an arm's length transaction" (par 8 PSAP 01 Presentation of Financial Statements). Financial Accounting Standards (SAK) define fair value as the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants on the measurement date. In Presidential Decree No. 54 of 2010, Article 97 paragraph 4: The Implementation of Procurement of Goods/Services as referred to in paragraph (3), can only be followed by domestically produced Goods/Services as long as the Goods/Services are in accordance with the required technical specifications, a reasonable price and the ability to deliver the Work results in terms of time and quantity.

### 2.3 *Fair Profit*

According to [6], a reasonable profit is also a normal profit, which should maintain a balance of costs for all production factors, including the interests of the actors. Meanwhile, according to [7], a reasonable profit means the rate of return on capital required by a business in general, considering whether or not to provide services of

general economic interest for the entire period of neglect, taking into account the level of risk. The related regulations are contained in the 2022 Regulation of the Minister of Public Works and Public Housing (PUPR) (Article 6 paragraphs 1-4).

#### 2.4 Cost-Plus Pricing Method

Cost-plus pricing is the determination of the selling price by adding the expected profit above the full future costs of producing and marketing the product. There are two elements taken into account in determining the selling price: the estimated full cost and the expected profit. Cost-plus pricing is a method of determining the selling price by adding the expected profit above the full future costs of producing and marketing the product [8]. Cost-plus pricing, or the selling price of goods or services under normal circumstances, is the determination of the selling price by adding the expected profit above the full future costs of acquiring the goods or services [9]. According to [10], costs are an important component that must be considered in determining the selling price of a product or service. The definition of Cost-Plus Pricing is the value of a certain cost plus a specified mark-up.

### 3. METHODS

#### 3.1 Research Location

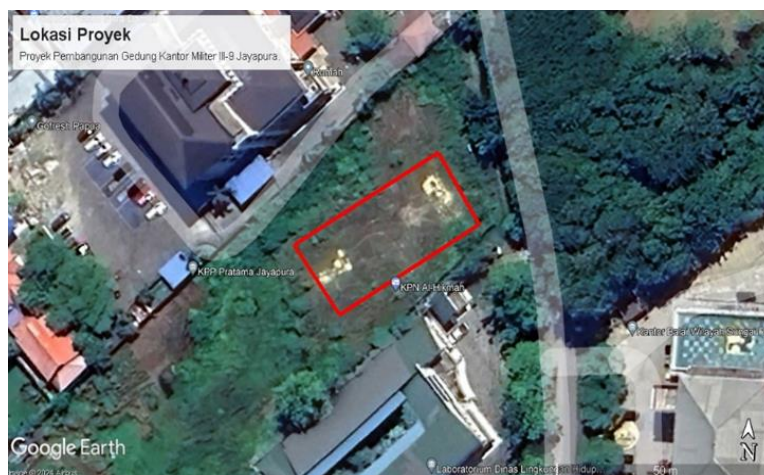


Figure 1. Research Location

Jalan Autonom No.3, Wahno, Kec. Abepura, Jayapura City, Papua 99224. The research location is located on the Autonomous Entrance Road.

#### 3.2 Data collection

The data used in this study is divided into two, namely:

##### 1. Primary Data

Primary data was obtained by conducting interviews and direct surveys at shops providing material and construction equipment rental services in Jayapura, to find out the Basic Price in Jayapura city.

##### 2. Secondary data

Secondary data in this study, namely the budget plan, was obtained from the project implementer, which includes the basic price listed in the contract price. The unit price analysis used by the implementer, or the price listed in the contract, is also used.

### 3.3 Research Flowchart

The research flowchart can be seen in Figure 3.2

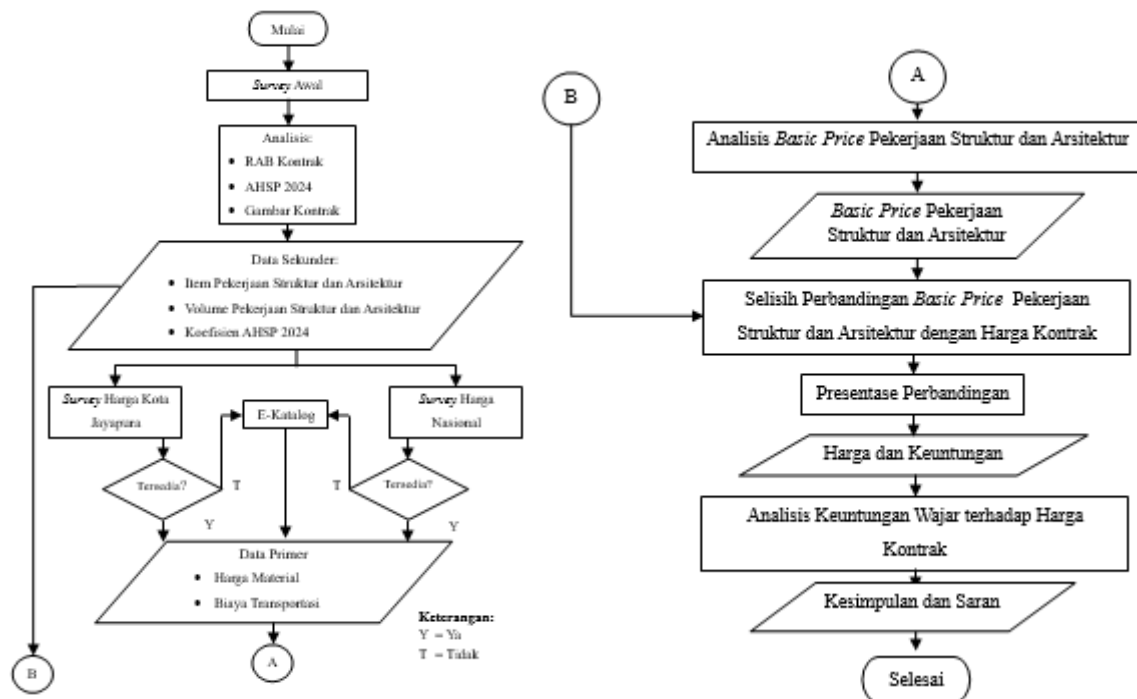


Figure 2. Research Flowchart

## 4. RESULTS AND DISCUSSION

### 4.1 Comparison of RAB Contract Price with RAB Basic Price for Jayapura City Structural and Architectural Works

The comparison conducted was comparing the price of the Structural work item in the Budget Plan based on the contract price with the Basic Price of Jayapura City. Where the initial price of the Structural work was Rp19,830,500,000,- to Rp19,351,200,000,- experiencing a price decrease of Rp479,300,000,- with a price difference percentage of 2.4%, using the following equation:

1. Difference in Price of Structural Work = IDR 19,830,500,000 - IDR 19,351,200,000 = IDR 479,300,000
2. Price Difference Percentage P. Structure =  $(\text{Rp. } 19,830,500,000 - \text{Rp. } 19,351,200,000) / (\text{Rp. } 19,830,500,000) \times 100\%$   
= 2.4%

Meanwhile, for architectural work, the initial price for structural work was Rp. 11,530,000,000,- to Rp. 10,333,490,000,- experiencing a price decrease of Rp. 1,196,510,000,- with a price difference percentage of 10.4%, using the following equation:

1. Difference in Price of Architectural Work = IDR 11,530,000,000 - IDR 10,333,490,000 = Rp1,196,510,000
2. Price Difference Percentage =  $(\text{Rp. } 11,530,000,000 - \text{Rp. } 10,333,490,000) / \text{Rp. } 11,530,000,000 \times 100\%$
3. Architectural Work = 10.4%

Table 1. Summary Table of Comparison of the Budget Plan, Contract Price with the Basic Price for Jayapura City

No.	URAIAN PEKERJAAN	JUMLAH HARGA KONTRAK (Rp)	JUMLAH HARGA BASIC PRICE (Rp)	%
B	I PEKERJAAN KONSTRUKSI			
	a PEKERJAAN PONDASI KONSTRUKSI	Rp 7.127.083.200	Rp 7.871.425.825	9%
	b PEKERJAAN BETON			
	1 PEKERJAAN BETON LANTAI BASEMENT	Rp 1.298.631.901	Rp 1.178.453.602	10%
	2 PEKERJAAN BETON LANTAI 1	Rp 3.543.063.259	Rp 3.137.182.024	13%
	3 PEKERJAAN BETON LANTAI 2	Rp 3.323.389.615	Rp 2.947.075.429	13%
	4 PEKERJAAN BETON LANTAI DAK	Rp 2.278.474.949	Rp 2.032.307.222	12%
	5 PEKERJAAN BETON RING BALOK DAN DAK TANGGA	Rp 294.664.609	Rp 267.071.166	10%
	JUMLAH RAB	Rp 17.865.307.533	Rp 17.433.515.269	2%
	PPN 10%	Rp 1.965.183.829	Rp 1.917.686.680	2%
	JUMLAH TOTAL	Rp 19.830.491.362	Rp 19.351.201.949	2%
	DIBULATKAN	Rp 19.830.500.000	Rp 19.351.200.000	2%
	III PEKERJAAN ARSITEKTUR			
	a PEKERJAAN LANTAI DAN DINDING	Rp 3.447.824.851	Rp 2.808.667.139	23%
	b PEKERJAAN KUSEN PINTU, JENDELA, DAN RAILING	Rp 3.328.802.054	Rp 3.053.385.783	9%
	c PEKERJAAN PLAFOND DAN DINDING PARTISI	Rp 539.185.434	Rp 513.308.492	5%
	d PEKERJAAN PENGGANTUNG DAN PENGUNCI	Rp 691.147.247	Rp 680.740.765	2%
	e PEKERJAAN PENGECATAN	Rp 525.420.753	Rp 467.169.644	12%
	f PEKERJAAN INTERIOR DAN EXTERIOR	Rp 1.854.838.526	Rp 1.786.177.286	4%
	JUMLAH RAB	Rp 10.387.218.865	Rp 9.309.449.109	12%
	PPN 10%	Rp 1.142.594.075	Rp 1.024.039.402	12%
	JUMLAH TOTAL	Rp 11.529.812.941	Rp 10.333.488.511	12%
	DIBULATKAN	Rp 11.530.000.000	Rp 10.333.490.000	12%

#### 4.2 Comparison Percentage of RAB Contract Price with RAB Basic Price for Jayapura City Structural and Architectural Works

Table 2. Comparison Diagram



#### 4.3 Fair Profit Analysis of Structural and Architectural Works

In the Cost Budget Plan for the Structural and Architectural work being carried out, where the Total Construction Cost is the total price based on calculations before being multiplied by VAT of 11%. For the Profit Margin Percentage using Overhead & Profit of 10%. Based on the Regulation of the Minister of Public Works and Public Housing of the Republic of Indonesia (PERMEN PU) Number 1 of 2022 concerning Guidelines for Compiling Cost Estimates for Construction Work in the Public Works and Public Housing Sector, Article 6 Paragraph (3) "The amount of indirect costs as referred to in paragraph (1) is calculated at 10% (ten percent) to 15%.

##### 1. Fair Profit Based on Contract Price of Structural Work

The total construction cost for the structural work item based on the contract price is Rp17,865,307,533,- and overhead and profit are 13%. To determine a fair price, use the following equation:

- Fair Profit = IDR 17,865,307,533 + (IDR 17,865,307,533 × 13%)
- Structural Work = IDR 17,865,307,533 + IDR 2,322,489,979  
= Rp20,187,797,513

So, the total fair profit of the structural work obtained from the calculation above using the Cost-Plus Pricing method is IDR 2,322,489,979, and the total price of the structural work is IDR 20,187,797,513.

## 2. Fair Profit Based on Contract Price of Architectural Work

The total construction cost for the architectural work items based on the contract price is Rp10,387,218,865,- and an overhead and profit of 13%. To determine a fair price, use the following equation:

- a. Fair Profit = IDR 10,387,218,865 + (IDR 10,387,218,865 x 13%)
- b. Architectural Work = IDR 10,387,218,865 + IDR 1,350,338,453  
= Rp11,737,557,318

So, the total fair profit of the architectural work obtained from the calculation above using the Cost-Plus Pricing method is IDR 1,350,338,453, and the total price of the structural work is IDR 11,737,557,318.

## 3. Fair Profit Based on Basic Price of Jayapura City Structural Work

The total construction cost of the structural work item based on the contract price is Rp17,433,515,269,- and uses the lowest Overhead & Profit of 10% - 15%, which is 10%. To determine a reasonable profit, use the following equation:

- a. Fair Profit = IDR 17,433,515,269 + (IDR 17,433,515,269 x 10%)
- b. Structural Work = IDR 17,433,515,269 + IDR 1,743,351,527  
= Rp19,176,866,796

So, the total fair profit of the work obtained from the calculation above using the Cost-Plus Pricing method is IDR 1,743,351,527, and the total price of the structural work is IDR 19,176,866,796.

## 4. Fair Profit Based on Basic Price of Jayapura City Architectural Work

The total construction cost of the structural work item based on the contract price is Rp9,309,449,109,- and uses the lowest Overhead & Profit of 10% - 15%, which is 10%. To determine a reasonable profit, use the following equation:

- a. Fair Profit = IDR 9,309,449,109 + (IDR 9,309,449,109 x 10%)
- b. Structural Work = IDR 9,309,449,109 + IDR 930,944,911  
= Rp10,240,394,020

So, the total fair profit of the work obtained from the calculation above using the Cost-Plus Pricing method is IDR 930,944,911 and the total price of the structural work is IDR 10,240,394,020.

## CONCLUSION

Based on the results of calculations and discussions from the previous chapter, the following conclusions were obtained:

1. The Basic Price for Structural and Architectural work on the III-19 Papua Military Court Office Building Construction project in Jayapura is for Structural Work Items amounting to Rp. 19,351,200,000,- and for Architectural Work amounting to Rp. 10,333,490,000,-.
2. The difference in comparison between the contract price and the basic price in Jayapura City is that for structural work the price difference is Rp. 479,300,000 or 2.4%, while for architectural work the price difference is Rp. 1,196,510,000 or 10.4%.

3. Reasonable Profit Level Structural work only earns a profit of 2.4%, below the reasonable limit of 10%–15% according to PERMEN PU No. 1 of 2022, so it is unreasonable and for architectural work, it earns a profit of 10.4%, still within reasonable limits, so it is considered a reasonable profit.

## SUGGESTION

1. For future research, it is hoped that a comprehensive cost comparison calculation can be carried out for all work items so that the overall comparison of the planned cost budget can be known.
2. When preparing a project budget plan, contractors should consider a cost level that is not significantly different from the actual cost based on the basic price. This ensures that the budget plan can be implemented according to plan and achieve a reasonable profit.
3. This part of the research is considered to be still lacking, so from this suggestion, people can continue this research, namely by researching the parts that have not been researched in this research.

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