



# Analysis of Contractual Based Construction Implementation and Self-Managed Construction Implementation Based on Community Empowerment

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## ABSTRACT

This research aims to determine community empowerment-based self-management construction projects and contractual-based construction projects in Sumenep District, using the AHP (Analytical Hierachy Process) method. The AHP method is used to analyze the results of the questionnaire so that the weight value of the criteria and sub criteria can be known as the basis for selecting the implementation of construction activities. Based on the results of the analysis of alternative construction implementation contractual weight is 0.501 and community empowerment is 0.499. The implementation of contractual-based construction projects is preferred with consideration of a more organized implementation, both in time (time schedule) and regulations governing it such as sanctions and fines when there are obstacles in the field being part of the responsibility for the implementation of contractual-based construction. Contractual-based construction implementation tends to be more organized and in accordance with strict schedules and regulations, including sanctions and fines if there are obstacles in the field. In contrast, self-managed construction based on community empowerment, such as in the village fund program, often has leeway in terms of a longer implementation period and supervision carried out by the community itself, not by experts. Thus, stakeholders are expected to clarify the regulations governing which works are carried out in a self-managed manner and which works are carried out contractually in government programs.

Keywords: Self-management of Community Empowerment, Contractual, Analytical Hierachy Process

## 1. Introduction

Infrastructure development is one of the indicators used as a benchmark in assessing the success of a country, so to realize the success of infrastructure development in Indonesia which is also mentioned in one of the nawacita of the President of the Republic of Indonesia Ir. Joko Widodo is infrastructure development, starting from a large scale to those that enter remote villages. In order to strengthen regions and villages, and maintain the unitary state, one of the ways to do this is by building infrastructure from the periphery. Development is also no longer centered in urban areas (centralization), but must also be carried out spread throughout Indonesia, namely the periphery and villages (decentralization).

Of the various types of construction development activities in Indonesia are more dominated by top-down activities, starting from the initial stage of ideas, planning, implementation to maintenance of construction development activities, the authority of the government or institutions is very dominant. (Sudrajat & Kusdian, 2021). From that, every development activity that is built on the basis of this authority results in the implementation of creative ideas of the community that have not been fully absorbed to the

fullest. With the development of construction in Indonesia which is always top-down, the aspirations of the community's ideas in every stage of construction development are not perfectly absorbed, resulting in public antipathy towards every government policy (Yulianto et al., 2022). In this case, the role of the community is only as beneficiaries, so it is not uncommon for the development carried out to sometimes be off-target and not function as it should be needed by the community.

In addition to adopting contractual-based activities, Indonesia also implements self-management activities based on community empowerment. This understanding is the opposite of top-down activities to bottom-up activities. In a general sense, the community becomes the subject of the actor, every activity implemented is an aspiration of creative ideas and ideas from the community so that community enthusiasm and participation becomes greater in every construction development activity (Muhendra & Hasibuan, 2018).

This self-management activity based on community empowerment involves a lot of community contribution from every stage, starting from ideas, planning, implementation and even maintenance also involves the local community. The problem that occurs with the existence of self-management activities based on community empowerment is that the quantity and quality of human resources owned is very limited, which means that in terms of the quality of human resources, there are still not many trained human resources and if the quantity of work is large, the problem that arises is that construction costs are more expensive with a limited quantity of human resources (Nugroho et al., 2019). Community empowerment is one of the strategies in implementing the concept of community-centered development as the object or actor of development. Community empowerment can be carried out starting from the village consultation, planning, implementation, supervision and maintenance stages. In addition to involving the community in every stage, it can also empower the community by utilizing the local potential of the village such as natural resources, customs, culture and human resources in the local village which each location has different natural resources depending on the geographical location, landscape and climate of each village.

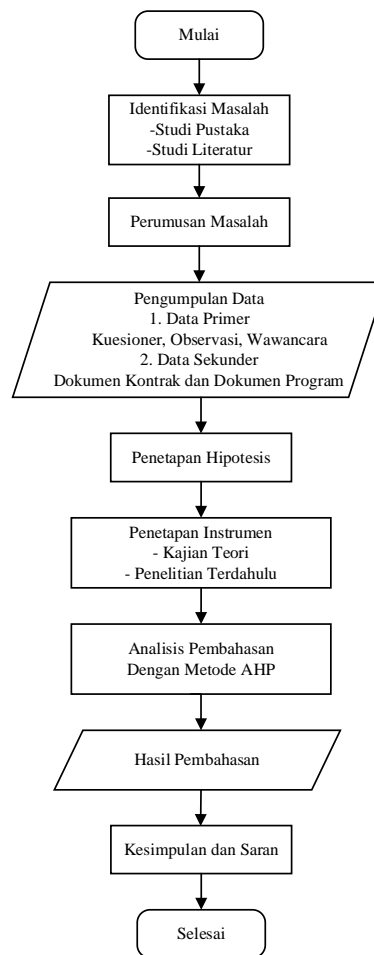
Self-management activities based on community empowerment in the village fund program prioritize the active participation of village communities to reduce unemployment and poverty, as stated in the provisions in the village fund program which requires allocating a minimum of 30% of the workforce in one of its infrastructure activities called village cash-intensive activities (PKTD) (Achmad & Misnaini, 2021). In addition to prioritizing local human resources, community empowerment-based self-management activities in the village fund program prioritize using local products or materials to raise the selling value of natural resources in the village (Aziiz & Prastiti, 2019). To analyze and evaluate performance in an activity implementation to achieve strategic goals, an indicator is needed, one of which is project management KPI (Key Performance Indicator) as a measuring tool in describing the criteria that determine the success of an organization's goals. KPI is also one way to find out about the validity of an alternative so that it really reaches the goal or purpose of a process. A good KPI must have several criteria as a measuring tool for an alternative analysis. KPIs are also used as navigation in making the direction of a goal that can be used as a target in the discussion.

In order to make decisions to analyze and evaluate the implementation of an activity, a method is needed. One method that is often used is the analytical hierarchy process (AHP) method (Soetjipto et al., 2021). This method has the ability to prioritize and also decompose complex multi-criteria and variable problems into a hierarchical structure. The basic principles of AHP are setting up a hierarchical structure, assessing criteria with pairwise comparisons, determining priorities and consistency of methods. The objectives to be achieved in this study are to determine the implementation of community empowerment-based self-management construction projects and contractual-based construction projects in Sumenep District using the AHP (Analytical Hierachy Process) method (Setiawan, 2017).

## **2. Methodology**

### **2.1. Research Flow**

The research flow is a method used to determine the research steps in order to produce a flow that is in accordance with the objectives and characteristics of the research. The research flow is described in the form of a flowchart diagram as below:



Source: Processed by Researcher, 2024

**Figure 1. Flowchart of Research Flow**

## 2.2. Research Object

The object of this research is to focus on analyzing the implementation of community empowerment-based self-managed construction and contractual work in the village fund program in Sumenep District, East Java Province.

## 2.3. Research Instruments

The research instruments used in this study include several tools and materials. Firstly, documents referring to existing documents in Juruan Daya Village, Batuputih Sub-district, Sumenep District, East Java Province, as well as in the relevant Regional Apparatus Organization (OPD). Secondly, stationery used to record the results of interviews and observations. Third, a cellphone camera to document the activities and observations.

## 2.4. Data Collection Procedure

### a. Primary Data

Primary data is obtained directly either from the results of observations or direct observations in the field, questionnaires and interviews with respondents. Manual distribution of questionnaires distributed to 40 respondents where these respondents are parties involved in the project or construction implementation program (Zulkarnain, 2019).

### b. Secondary Data

Secondary data is data obtained from planning documents, implementation and accountability of the Juruan Daya Village government, Batuputih District, Sumenep Regency, East Java Province. As for the sampling carried out is by judgment sampling method, meaning that the sample is selected based on the

judgment of the researcher that the person concerned is the best party to be sampled and also uses random sampling, meaning that the sample is taken randomly. In this study the respondents were taken as many as 40 (forty) people with different levels of education and work experience.

**2.5. Data Analysis Technique**

At this stage of data analysis will be carried out after all the required data has been collected. This analysis aims to select the dominant priority success factor using the AHP (analytical hierarchy project) method, project guidelines and facts that occur in the field by looking at the physical condition of the building, implementation procedures, and analyzing the results of data in the self-management management system (Jamal, 2021).

**3. Results and Discussion**

From the results of data analysis that has been carried out using the paired matrix method and document research in the field, what follows is a discussion of the results of data analysis.

**3.1. Analysis Data Document**

In general, the implementation of construction projects, both contractual-based and self-management-based (community empowerment), is divided into 5 (five) stages as follows:

**Table 1. Detailed Stages of Construction Implementation**

No	Stages of Implementation	Contractual	Self-management
1	Initiation Stage	This stage is the initial stage of a project that accommodates all aspirations both from institutions/agencies and from the community through the district development plan deliberation (musrenbangkab).	This stage is the initial stage of an activity carried out by absorbing aspirations with the community in the village musyarawah forum or village development plan deliberation (musrenbangdesa).
2	Planning Stage	This stage is carried out by involving experts to prepare detailed DED (Detailed Estimated Design) documents such as working drawings, RAB and work plans and conditions.	This stage is carried out by involving simple workers and the community in the village to prepare planning documents such as working drawings, RAB etc.
3	Pre Implementation Stage	This stage is the stage of rechecking conditions in the field before work is carried out	This stage is the selection of several elements of the community to become the activity implementation team (TPK).
4	Contract Execution Stage	This stage is the core stage of all stages so that management is needed in each item of implementation so that the work runs smoothly. This stage is also the realization of planning so that continuous supervision from experts is needed.	This stage is the realization of the planning that has been done and is the core stage of all stages so that active supervision and community participation are needed so that the work runs smoothly.
5	Termination Stage	This stage is carried out the handover of work and continued with the maintenance period which is the responsibility of the third party (contractor).	This stage is handed over through the village deliberation forum and maintenance is handed over to the community together with the village government.

Sumber: Olahan Peneliti, 2024

### 3.2. Data Analysis of Questionnaire Results

Based on the results of the analysis with the AHP (Analytical Hierarchy Process) method from the results of the questionnaire distributed to all respondents, the criteria weights are as follows:

**Table 2. Weighting of Construction Project Implementation Criteria**

No	Criteria	Code	Weight	Rank
1	Time	W	0,192	3
2	Cost	B	0,203	2
3	Quality	M	0,235	1
4	Community Participation	P	0,144	4
5	Labor	T	0,117	5
6	Administration	A	0,110	6

Source: Processed by Researcher, 2024

In this study, all respondents have been heavily involved in the implementation of construction projects, both contractual-based and community empowerment-based (village fund program). From the data table 4.3 above, it can be concluded that by using the AHP method, a sequence is obtained that can be taken into consideration in the implementation of construction. Order 1 is quality with a weight of 0.235, order 2 is cost with a weight of 0.203, order 3 is time with a weight of 0.192, order 4 is community participation with a weight of 0.144, order 5 is labor with a weight of 0.117 and order 6 is administration with a weight of 0.110.

**Table 3. Weighting Order of Criteria and Sub-Criteria**

No	Criteria	Weight	Sub Criteria	Code	Weight	Rank
1	Time	0,192	The accuracy of the implementation start schedule	W1	0,339	4
			Accuracy of work completion	W2	0,395	3
			Completion of work ahead of implementation time	W3	0,266	10
2	Cost	0,203	Appropriateness of funds used	B1	0,234	15
			Transparency of funds	B2	0,180	18
			Unit price calculation	B3	0,183	17
			Reporting of accountability for the use of funds	B4	0,156	20
			Details of the use of funds	B5	0,155	21
			Fund holder structure/organization	B6	0,091	24
3	Quality	0,235	Implementation method used	M1	0,304	7
			Equipment used	M2	0,276	9
			Quality conformity	M3	0,420	1
4	Community Participation	0,144	Community involvement in planning	P1	0,262	11
			Active role of the community in the activity stages	P2	0,248	13
			Smooth implementation of activities	P3	0,311	5
			Supervision by the community	P4	0,180	19

No	Criteria	Weight	Sub Criteria	Code	Weight	Rank
5	Labor	0,117	Expertise/Skills	T1	0,231	16
			Discipline	T2	0,249	12
			Worker wage data	T3	0,128	23
			Communication between workers and foremen	T4	0,153	22
			Experience	T5	0,239	14
6	Administration	0,110	Administration Details	A1	0,307	6
			Orderly Administration	A2	0,412	2
			Administration Supporting Data	A3	0,281	8

Source: Processed by Researcher, 2024

Based on table 3 above, it can be seen that the quality conformity sub-criterion (M3) on the quality criteria (M) obtained the highest weight value with a value of 0.420 amounting to 7.01% of the 24 (twenty four) sub-criteria studied. While the sub-criterion of the structure / organization of fund holders (B6) on the cost criteria (B) obtained the lowest weight value with a value of 0.091 at 1.52%. As for the results of the analysis of alternative construction project implementation can be seen in table 4. below:

**Table 4. Order of Weight of Construction Project Implementation Alternatives**

No	Alternative Implementation	Code	Weight	Rank
1	Contractual	K	0,501	1
2	Self-management	S	0,499	2

Source: Processed by Researcher, 2024

Based on table 4 above, it shows that respondents think that contractual-based construction implementation is preferable to community empowerment-based self-management construction implementation. Respondents who chose contractual-based construction implementation with a weight of 0.501 with a percentage of 50.06% while for community empowerment-based self-managed construction with a weight of 0.499 with a percentage of 49.94%.

**Table 5. Order of Criteria Weighting against Implementation Alternatives**

No.	Alternative Implementation	Code	Time	Cost	Quality	Community Participation	Labor	Administration
1	Contractual	K	0,584	0,491	0,501	0,264	0,568	0,556
2	Self-management	S	0,416	0,509	0,499	0,736	0,432	0,444

Source: Processed by Researcher, 2024

Based on the data in table 5 above, the order of the weight of the criteria for alternative construction implementation can be described as follows:

- a. Time criteria for the implementation of construction projects, respondents prefer contractual-based construction implementation because the implementation schedule (time schedule) in planning and from the employer is clear and there will be fines if it exceeds the predetermined time, while for the implementation of community empowerment-based self-managed construction, the schedule tends to be looser due to the budget year-based time period / time limit.
- b. Cost criteria for the implementation of construction projects, respondents prefer the implementation of community empowerment-based self-managed construction, because with materials / goods of the same quality, in the community will be obtained at a lower price, while the implementation of contractual-based construction will be more expensive because the unit price is still guided by government regulations.
- c. Quality criteria for the implementation of construction projects, respondents prefer contractual-based construction implementation because the quality is clearly written in the contract and also strict

- supervision activities, while for community empowerment-based self-managed construction implementation, the labor used comes from local residents who are mostly less skilled and lack expertise.
- d. Criteria for community participation in the implementation of construction projects, respondents prefer community empowerment-based self-managed construction implementation, because the community is actively involved and given the widest possible opportunity to participate from planning to maintenance.
  - e. Labor criteria for the implementation of construction projects, respondents prefer contractual-based construction implementation because the workforce used is skilled and experienced and some have even been certified, while for community empowerment-based self-managed construction implementation, the workforce used is from the local community with minimal expertise and experience.
  - f. Administrative criteria for the implementation of construction projects, respondents prefer contractual-based construction implementation because administrative reports are done by experts, administrative reports have become a requirement stated in the contract and are also a track record for third parties for further activities, while for community empowerment-based self-managed construction implementation, administrative reports are sometimes not very complete due to lack of supervision.

From the description above, it can be interpreted that the alternative chosen is the implementation of contractual-based construction. This is based on the results of the analysis that the criteria for implementing construction projects for contractual-based construction implementation are time, quality, labor and administration while for the implementation of community empowerment-based self-managed construction (village fund program) are cost and community participation (Cahyono et al., 2022).

### **3.3. Validasi Metode Analytical Hierarchy Process (AHP)**

The next step from the results of the analysis using the AHP method is validation which is carried out by interviewing representatives of respondents. Where representatives of respondents are asked to provide an assessment and explanation of the selected criteria. Based on the results of the interview, the assessment according to the respondent's perception is as follows:

- a. In the opinion of respondents, time is one of the criteria that determines the success of a project, both contractual-based construction implementation and community empowerment-based self-management construction implementation, therefore special attention needs to be paid in decision making regarding time criteria. Timeliness is always a reference both at planning and implementation time, both timeliness at the start of work and timeliness at the completion of work. Respondents argue that the time criteria for contractual-based construction implementation are more organized, with the time schedule the activity stage is more directed starting from the beginning of the implementation planning and the deadline for implementation, the implementation time (time period) for contractual-based construction implementation has been determined based on existing contracts such as 90 days or 120 days of implementation. Whereas in the implementation of community empowerment-based self-managed construction the planned time is less organized, because the time schedule is still not implemented correctly and also because there are still local customs, and in the implementation of community empowerment-based self-managed construction (village fund program) the implementation time (period) is considered based on the budget year, namely 1 (year) of implementation. In the implementation of contractual-based construction and the implementation of community empowerment-based self-managed construction, respondents argue that the accuracy of work completion and the accuracy of the implementation start schedule are things that also need to be considered because these sub-criteria rank 3rd and 4th out of 24 sub-criteria.
- b. Cost criteria in the implementation of contractual-based construction and implementation of self-managed construction based on community empowerment have been analyzed starting from the location survey to the construction to be carried out with various considerations taken into account. According to respondents, the implementation of contractual-based construction is clearly organized because everything is listed in the contract related to all specifications, reports that must be submitted and transparency of accountability that must be carried out, while the implementation of community empowerment-based self-management construction although not all based on contracts but in accountability is also very transparent, as evidenced by the participation of the community in conducting supervision with a self-help system and the display of activity realization banners in the corners of the

village and public places. On the other hand, the costs used will be slightly cheaper because the prices used are partly local prices with the same quality as government prices.

- c. Quality is one of the important criteria in every development activity, in the implementation of contractual-based construction the quality will be good if it is in accordance with the plan, apart from because all requirements including quality have been clearly and completely summarized in the work agreement letter (SPK) also because of the supervision of certified experts. Meanwhile, in the implementation of self-managed construction based on community empowerment, the quality is also good because there has been assistance from the village facilitator/companion and also from the sub-district verification team supported by supervision from the local community, although sometimes there are some people who think that development is said to be successful if it can be realized for a very long time without seeing the quality / quality so that it is evenly distributed. Respondents were of the opinion that quality conformity is something that must be considered because this sub-criterion ranks 1st out of 24 sub-criteria.
- d. In the opinion of respondents, community participation is the spirit in the implementation of self-management construction based on community empowerment, with the involvement and participation of the community at every stage of the activity is something good in the field of development, because the community can take part in building and advancing their village and can also supervise. With community involvement and participation, it will reduce community apathy towards the government and towards development in the village. The existence of community empowerment-based development provides autonomy for the village so that it can develop its ideas in developing the village in accordance with the conditions of the local community. So that there will be a sense of belonging and taking good care of the building. By involving the community in every stage, it can indirectly reduce existing unemployment, because the principle of the community empowerment program is to provide as much space as possible so that local natural and human resources can be absorbed. On the other hand, respondents also argued that the weakness of the implementation of self-managed construction based on community empowerment is the problems that arise internally because the people involved expect certain rewards.
- e. In the opinion of respondents, the labor criteria for contractual-based construction implementation are better because some workers have a lot of experience in projects and some are even certified. Whereas in the implementation of self-management construction based on community empowerment, workers involve more local residents to participate in development, and some even work without being paid (self-help) when the construction site is near their homes or passes through their land / rice fields.
- f. According to respondents' opinions regarding administration, in terms of contractual-based construction implementation, the administration is orderly and neatly organized, because the terms and obligations that must be fulfilled in the contract have been listed and are also supported by personnel who are accustomed to and skilled in reporting administration. And in terms of the implementation of self-managed construction based on community empowerment, the administration is also orderly and neat, although there must be regular and periodic guidance from the facilitator or village facilitator. This is because this program is still relatively new and the personnel in charge also regenerate every year or period. Therefore, respondents argue that the orderly administration sub-criterion in the administration criteria is ranked 2nd out of 24 (twenty-four) important sub-criteria that must be considered.

#### **4. Conclusion**

Based on the results of the analysis of contractual-based construction implementation and community empowerment-based self-managed construction implementation of 40 (forty) respondents, 50.06% thought that contractual-based construction implementation with a weight of 0.501 was preferred over community empowerment-based self-managed construction implementation with a weight of 0.499. With the consideration that the implementation of contractual-based construction is more organized, both in terms of time and regulations governing it such as sanctions and fines when there are obstacles in the field. The implementation of community empowerment-based self-managed construction (village fund program) still has a lot of leeway such as a longer implementation period because it is calculated per budget year and supervision rules are not carried out by experts but by the community itself.



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