OPEN ACCESS

International Journal Of Modern Engineering Research (IJMER)

A Construction Management Analysis with Community Empowerment System on Rigid Pavement Road Construction Project at Rejoso – Gading Road Section of Pasuruan Regency

Sukaryono[1*], Sutanto Hidayat[2], Lies K. Wulandari[3]
[1,2,3] *Department of Urban Planning and Design, Institut Teknologi Nasional, Malang, Indonesia – 65145*
**Corresponding Author: Sukaryono*

ABSTRACT: *The community-based infrastructure development program applies a community-based sustainable development approach through holistic community involvement in every stage of the work activities starting from preparation, planning, fund disbursement, construction and operation or handover of project result. The community-based sustainable development program and the community empowerment program refers to standard guidelines from central, provincial, district to village levels.Research methodology used in this study was a descriptive qualitative by statistical method aided by Microsoft Excel software. The primary data collected through field observation and questionnaire distribution to community, workers and related parties. While secondary data in the form of planning documents, implementation documents, and final reports were obtained from Pasuruan Regency Public Works Agency. The methodology used in this study is descriptive quantitative, using statistical methods with the help of Microsoft Excel. Primary data was collected through field observations and questionnaires distributed to the community, workers, and related parties. Secondary data, in the form of planning documents, implementation documents, and final reports, were obtained from the Pasuruan Regency Public Works Agency.Result analysis of this study showed: (1) both construction management approaches have equal influence on project implementation, (2) Standardized Construction Management excels in technical aspects with RRI value of 0.902, while Community-Based Construction Management excels in participatory aspect with RRI value of 0.866*

KEY WORDS: *Construction Management, Rigid Road Pavement, Community Empowerment*

Date of Submission: 14-02-2026 Date of acceptance: 27-02-2026

I. INTRODUCTION

Infrastructure planning and development are carried out solely by government without involving the community, as a result of not prioritizing community necessities without involving the related community comes in form of project failure or ineffective /inefficient project. To have an effective and efficient project, the government make a shift in its development paradigm to direction where a development implementation model will prioritize community empowerment principles. This effort ensures development project align with the community needs and ensure sustainability of development outcomes.

Infrastructure development community-based program applies sustainable development community-based approach through full involvement of community in all activity stages as starting from preparation stage, planning stage, fund disbursement stage, construction process stage, to operation or handover work result stage. The community-based sustainable development program and the community empowerment program refer to standard guidelines from central, provincial, district to village levels.

Under these considerations, making a real comparison using real project implementation with standardized construction management and community-based construction management is necessary.
From the above background outline, this research is conducted to answer the following research questions:

1. What are the differences between parties involved in community-based construction management to parties involved in standard construction management?
2. How does the implementation of management function (mechanism or sequences) differ in terms quality,

cost, and time in community-based construction management?
3. How does the implementation of the standard construction management system compare to the community-based construction management system?

II. LITERATURE REVIEW

2.1. Definition of Project Management

According to [1], project management defines as "The art and science of coordinating people, equipment, materials, money and schedules to complete a specified project on time and within approved cost."
In other words, project management is a system or procedure for carrying out an organization's specific tasks, limited by time, objectives and costs.

2.2. Community-Based Construction Management

Community-based construction management is a development approach which actively involves community in its decision-making, implementation, and supervision activities. This model is suitable for project aimed to empower residents and increase their sense of ownership over the finished/result of project [2].
Main characteristic of community-based construction management are consensus-based decisions, workforce dominated by local communities, more flexible organizational structure, and rapid field adaptation. These characteristics are in contrast to standard construction management where some of the characteristics are highly democratic, formal and hierarchical, with community satisfaction is only technical aspect in nature.
In essential, Construction Management (CMS or *ManajemenKonstruksi/MK)* aims to control the implementation of construction projects to achieve target in scopes of quality, cost and time. However, the applied approaches can differ in the fundamental aspect depending on the organizational structure, implementation characteristic and level of stakeholder participation [3].

1. Organization structure and decision flow

The standardized construction management uses a hierarchical structure with a decision-making process established through technical regulations. Roles of service provider, consultant, and project owner are clearly defined and non-overlapping. In contrast, community-based construction management has a more flexible structure where certain roles can be shared depending on the field conditions. This allows a higher degree of field adaptation, but also reduces certainty of quality control.

2. Quality control

In standardized construction management, quality control carried out in systematic way through standard procedures such as SOPs, technical specification, material testing schedule, and periodic inspection. While community-based construction management although still quality oriented, it tends to rely on local experiences and internal community consensus, so the standard quality can vary.

3. Human resources and technical competency

Standardized construction management employs experts, professional forement and trained workers as this technical competence minimizes errors. Meanwhile, in community-based construction management, the workforce is predominantly local thus it has benefit point of view from high participation numbers but lacking in technical professionalism.

4. Risk management

Standardized construction management has formal risk management mechanism that include mitigation, monitoring and regular evaluation. While community-based construction management, risks are managed more informally and adaptively. This is advantageous for addressing field condition, but it can potentially lead to variations in outcomes.

5. Cost effectivity and cost administration

Standardized construction management tends to have administrative costs due to stricter technical documentation [4]. While community-based construction management offers efficiency in administrative costs but is relatively slower in obtaining technical decisions [5].

6. Participation level

Community-based construction management excels in the aspect of participation level, local involvement and workforce empowerment. While standardized construction management are stronger in aspects of professionalism and certainty of implementation.

Table 1. The Difference of Standardized CM Stages with Community-Based CM Stages

Stages in Construction Management	Standardized Construction Management	Community-Based Construction Management
Planning	Focus on technical accuracy	Focus on field suitability and community participation
Procurement	Administrative in nature, following regulation or bureaucracy	Local agreement is more dominant
Implementation	Strong advantages in expert availability and quality control	High Flexibility
Result Delivery	Optimum technical result	Higher social acceptance level

III. RESEARCH METHODS

Research Location

This study uses the Rigid Pavement Project for Rejoso – Gading Pasuruan Road as study object. The Rejoso – Gading road section is connector road of Rejoso District and Winongan District, Pasuruan Regency with a total length of 4.71 km and a road width of 6 meters. On this road section, the road condition is classified as severely damaged, due to the frequent use of heavy tonnage vehicles that exceed the road's bearing capacity. Intensive activity from large-road trucks passing through on this road section causes excessive pressure on the road structure and makes the road surface quickly cracks, has potholes, and waves. This condition is exacerbated by lack of supervision of vehicle tonnage limit. As a result, road quality continues to decline and has the potential to endanger the safety of road users and congesting the smoothness flow of road traffic.

Type of Research Data

1. Primary Data

1) Field Survey: Conducting interviews and direct observations to obtain information about road conditions, community needs, and potential community participation [6]; (2) The parties to be interviewed are: Service Providers, Budget User Authorization, Commitment Making Officials, Work Implementation Teams, Village Governments, Facilitators, Non-Governmental Organizations or Self-Help Groups or Activity Implementation Teams, Community Leaders and Community Users; (3) Distribution of Questionnaires; and (4). Focus Group Discussions

2. Secondary Data

1) Data of project implementation that has been carried out so far in forms of planning documents, implementation documents and final report documents obtained from Pasuruan Regency Public Works Agency, and 2) Statistical data: collecting data from government agencies in relation to road condition, road traffic, and regional demographics.

Data Collection Method

Data collection method is a part of the research design and will be beneficial for data analysis, hypothesis testing and a solution development [7]. Data collection in this study was conducted using questionnaires. The questionnaires were distributed directly to respondents and it consisted of two sections:

Part 1: respondents data section covering personal data (name, educational background, occupation, position in the project, and work experiences in the construction services sector.

Part 2: this section filled with statements regarding main influential points to implementation of a standardized construction management work system compared to a community-based construction management as assessed from aspects of: planning or design, procurement or auction, implementation of construction activities, and operation or result delivery with following levels of influence assessment:

Score 4: Highly influential (*Sangat Berpengaruh/* SB)
Score 3: Influential (*Berpengaruh*/B)
Score 2: Less influential (*KurangBerpengaruh*/KB)
Score 1: No influential (*TidakBerpengaruh*/TB)
Then, the questionnaire results will be described as follows:

Table 2. Assessment of Questionnaire Result

Average Score (X)	Description
$3{,}25 \leq X \leq 4{,}0$	Highly Influential
$2{,}5 \leq X < 3{,}25$	Influential
$1{,}75 \leq X < 2{,}5$	Less influential
$1{,}0 \leq X < 1{,}75$	No influential

IV. RESULTS AND DISCUSSIONS

4.1 Questionnaire Result Test

Before analyzing the research data, an instrument testing was conducted to make sure validity and consistency of the questionnaire. The testing is using Pearson validity test and Cronbach Alpha reliability test.

4.2 Validity Test

Validity test was performed on each research variable used in this study. There were 36 variables for each section from research questionnaire. This test was calculated with a 95 % confidence level with a 5 % margin of error. R value for section 1 was the standardized construction management while R value for section 2 was community-based construction management. Value of R_{tabel} is obtained from R table with a sample size of 28 respondents with value of 0, 3061. Full detailed result is displayed in the following table (Table 3).

. Table 3. Result of Validity Test

No	Variable	R1	R2	R_{table}	Result
1	Administrative simplification speeds up planning time	0.827	0.830	0.306	Valid
2	Available time to make planning (work drawings) is adequate	0.869	0.915	0.306	Valid
3	Community participation speeds up planning time	0.571	0.856	0.306	Valid
4	Sufficient planning cost from the government	0.804	0.895	0.306	Valid
5	Precise work calculation volume in accordance with predermined design result	0.783	0.828	0.306	Valid
6	Provide clear material specification in the budget plan (RAB)	0.778	0.825	0.306	Valid
7	Conformity of design quality with implementation	0.774	0.828	0.306	Valid
8	Quality compliance with government standard	0.771	0.816	0.306	Valid
9	Experts are available for handling technical constraint during the planning process	0.737	0.784	0.306	Valid
10	Administrative simplification speeds up procurement or auction time	0.855	0.934	0.306	Valid
11	Punctual time implementation of the procurement or auction stage	0.770	0.821	0.306	Valid
12	Public participation speeds up procurement or auction time	0.693	0.873	0.306	Valid
13	Procurement cost allocation uses government costs	0.780	0.825	0.306	Valid
14	A precise work volume calculation in accordance with the predetermined design result	0.807	0.836	0.306	Valid
15	Changes on result material specification from service provider offer during the procurement or auction stage.	0.831	0.892	0.306	Valid
16	Document completeness	0.902	0.914	0.306	Valid
17	Quality compliance with government standards	0.858	0.908	0.306	Valid
18	Expert available during the procurement or auction process	0.870	0.920	0.306	Valid
19	Professional project scheduling	0.726	0.774	0.306	Valid
20	Good equipment and labor management	0.893	0.930	0.306	Valid
21	Community participation accelerates construction activities	0.750	0.933	0.306	Valid
22	Fund for construction activity cost are sufficient from the government	0.893	0.919	0.306	Valid
23	Work volume calculation is not accurate and does not match the specified design result	0.826	0.909	0.306	Valid
24	Provide clear material specification in the budget plan (RAB)	0.883	0.935	0.306	Valid
25	Conformity of design quality with implementation	0.728	0.788	0.306	Valid
26	Shop drawing making by the contractor in accordance with planning drawing	0.646	0.850	0.306	Valid
27	Expert available for handling technical constraint during construction activities	0.774	0.881	0.306	Valid
28	Completion of construction activities on time	0.669	0.784	0.306	Valid
29	Implementation of effective construction management ensures construction completion on time	0.774	0.832	0.306	Valid
30	Community participation accelerates construction activities	0.596	0.804	0.306	Valid
31	Construction activity cost is in accordance with planning	0.652	0.784	0.306	Valid
32	Work volume is the same as planned	0.445	0.771	0.306	Valid
33	Allocation of operating cost or delivery cost is coming only from the government	0.471	0.753	0.306	Valid
34	Conformity of design quality with implementation	0.525	0.690	0.306	Valid
35	Optimal planning result	0.728	0.802	0.306	Valid
36	User or community satisfaction	0.751	0.845	0.306	Valid

Validity test showed all 36 variables in questionnaire part 1 (Standardized Construction Management) and in questionnaire part 2 (Community-based construction management) resulted in r_{count} value above the r_{table} value (0.3061). It indicates each indicator is declared as valid.

4.3 Reliability Test

Reliability testing is used to determine the level of consistency of a questionnaire. This reliability calculation in this study is performed using SPSS and results of the data processing is displayed in the following table (Table 4).

Table 4. Result of Reliability Test

Reliability Statistics		
Cronbach's Apha	Part 1	Part 2
	0,978	0,989

As result of reliability test, it can be concluded that part 1 has value of 0.978 which is greater than the specified standard value of 0.6 so part 1 questionnaire is approved to have high reliability and automatically, the part 2 of the questionnaire also has high reliability value.

4.4 Questionnaire Data of Standardized Construction Management and Community-Based Construction Management

Research data on factors that able to influence construction management work system in planning or design process, in procurement or auction stage, in implementation of construction activities and in operation or result delivery stage are stated with the following assessment:

- A score of $3.25 \leq \times \leq 4$ is a highly influential factor.
- A score of $2.5 \leq \times < 3.25$ is an influential factor.
- A score of $1.75 \leq \times < 2.5$ is a less influential factor.
- A score of $1 \leq \times < 1.75$ is a non-influential factor.

Analysis was started by ranking the used variables for this study. To determine the dominant influence both from standardized construction management and community-based construction management, the average or mean value from questionnaire was calculated. While in determining the extent of influencing factors and the most determining factors, the index method was used.

The index method applied in this study is based on a static, non-parametric model which calculates Relative Importance Index (RII). Index values then put into sequential arrangement in a table starting with factor with the lowest average value to factor with the highest average value. Factor with highest average value will be determined as the most influential factor in the construction management work system.

4.5 Analysis of Standardized Construction Management System Questionnaire

Standardized construction management is characterized by strong technical aspect, work quality, administrative clarity and availability of skilled personnel. This is reflected in relatively high IKR/RII scores for technical and administrative indicators at each stage of construction implementation.

The questionnaire results were scored on a scale of:

TB (No Influential) = 1
KB (Less Influential) = 2
B (Influential) = 3
SB (Highly Influential) = 4

Then, the result is calculated from average value through a systematic way as follow:

For example, to calculate mean value of variable 1 in the Planning stage, the Time section (Community participation accelerates planning time):

$$average\ score = \frac{amount\ of\ score}{number\ of\ sample}$$

$$\bar{x} = \frac{\Sigma x_i}{n}$$

$$\bar{x} = \frac{(2 \times 1) + (6 \times 2) + (10 \times 3) + (7 \times 4)}{28} = \frac{72}{28} = 2{,}571$$

Then, to calculate IKR (*Index KepentinganRelatif)* value, divide the average value by four. As presented in the following example:

$$\bar{x} = \frac{2{,}571}{4} = 0{,}643$$

According to the assessment above, this score indicates an ‘influential’ factor. Therefore, ‘Community participation accelerates planning time’ is an influential factor in standardized construction management.

Terms description:
TB = *Tidak Berpengaruh*/No Influential (score = 1)
KB = *Kurang Berpengaruh*/Less Influential (score = 2)
B = *Berpengaruh*/Influential (score = 3)
SB = *Highly Influential* (score 4)
Valid = number of respondents who fill the questionnaire
Missing= number of respondents who do not fill the questionnaire (empty)
$\sum x_i$ = total value
$\bar{x}$ = average/mean value
$\bar{x}F$ = average value per category
IKR = *Indeks Kepentingan Relatif*/relative importance index (RII)

4.6 Analysis of Standardized Construction Management Questionnaire
In general, all variables in standardized construction management fall into the “Influential” to “Very Influential” categories. The average value ranges from 2.786 to 3.464, while the IKR/RII value ranges from 0.696 to 0.866.

4.6.1. Planning/Design Stage

IKR/RII value at the planning stage is located in the ‘Influential ’category with a range value of 0.643 – 0.777. Variable with the highest value is ‘Providing clear material specification in the Budget Plan/RAB’ with an $\bar{x}$ value of 3.107 and an IKR/RRI of 0.777 (influential).Its shoes in a standardized system, clarity in technical documents is the main foundation to ensure the smooth running of the next stage. Complete material specification provides clear direction to service providers and technical personnel, thereby reducing error potentiality in work implementation.

Meanwhile, the variable with the lowest x¯ is "Community participation accelerates planning time" with a value of 2.571 and an IKR/RRI value of 0.643 (Influential). This indicatesthe planning process tends to be determined by experts and consultants alone in standardized construction management, so the community's role is not dominant in accelerating design preparation. This is in accordance with nocratic character that more into standardized construction management.

In general, standardized construction management at the planning stage emphasizes technical aspects (quality and specifications), while participatory aspects are scored lower. This suggests a standardized planning prioritizes the certainty of technical documents over community participation.

4.6.2. Procurement or Auction Stage

The IKR/RRI value at the procurement/auction stage is located in the "influential" category, with a range of 0.634 - 0.821. Variable with the highest value is "Completeness of Documents" with an $\bar{x}$ value of 3.286 and an IKR/RRI value of 0.821 (very influential). This indicates the main strength of standardized construction management lies in orderly administration and documentation. The procurement process is highly dependent on the conformity of documents, including technical specifications, budget plan/RAB, and administrative requirements.

Meanwhile, the variable with the lowest $\bar{x}$ is "Community participation accelerates procurement" with a value of 2.536 and an IKR/RRI value of of 0.634 (Influential). The role of the community in procurement is minimal because this stage is more formal and based on government regulations. Decisions typically involve the PPK, procurement committee, and service providers, without the community.
The standardized construction management has very strong points for process certainty, complete documentation, and regulatory compliance. While its main weaknesses lie in minimum public participation during the procurement process.

4.6.3. Construction Activity Implementation Stage

IKR/RRI value at construction implementation stage lies in the ‘Influential’ category with range value of 0.705 – 0.902. As variable with the highest value is ‘Availability of experts for technical constraints’ with an $\bar{x}$ value of 3.607 and an IKR/RRI value of 0.902 (very influential). Experts are a dominant factor in the success of standardized construction management. The presence of professionals allows technical problems to be resolved quickly and accurately.

Meanwhile, the variable with the lowest x¯ is "Community participation accelerates construction activities" with a value of 2.821 and an IKR/RRI value of 0.705 (Influential). As in the previous stage, community participation is not a dominant aspect in the standardized system because it places more emphasis on the role of contractors and professionals.

Manajemen konstruksi terstandar memiliki kekuatan utama pada sisi profesionalitas tenaga kerja dan konsistensi mutu. Pengendalian mutu berjalan baik karena adanya dokumen teknis dan struktur organisasi yang jelas.

Primary strength of standardized construction management lies in the professionalism of its workforce and consistent quality, where the quality control runs in an effective way due to the existence of complete technical documentation and a clear organizational structure.

4.6.4. Operation or Result Delivery Stage

The IKR value at the operational/delivery stage lies in the “influential” category, with a range value of 0.750 – 0.902. The variable with the highest value is “Implementation of effective construction management makes completion on time” with an $\overline{x}$ value of 3.607 and an IKR/RRI value of 0.902 (very influential). This confirms that the implementation of standardized construction management plays a crucial role in ensuring the project will be completed on time and according to specifications.

Meanwhile, the variable with the lowest $\overline{x}$ is "Operating cost allocation from the government only," with a value of 2.929 and an IKR/RRI value of 0.732 (Influential). Despite its relatively high value, this indicator is the lowest at the operational stage because community involvement is typically stronger in community-based systems.

4.7 Analysis of Community-Based Construction Management Questionnaire

In general, all variables in community-based construction management fall into the “Influential” to “Very Influential” categories. The average value ranges from 2.786 to 3.464, while the IKR/RRI value ranges from 0.696 to 0.866.

4.7.1. Design/Planning Stage

The IKR/RRI value at the planning/design stage lies in the "influential" category, with a range of 0.696 - 0.759. The variable with the highest value is "Implementation of effective construction management ensures timely completion" with an $\overline{x}$ value of 3.036 and an IKR/RRI value of 0.759 (influential). It illustrates the main strength of community-based construction management (high level of community involvement in the decision-making process). Village deliberations often accelerate priority setting and plan development.

Meanwhile, the variable with the lowest $\overline{x}$ is "Procurement cost allocation using government funds," with a value of 2.786 and an IKR/RRI value of 0.696 (Influential). Budgetary constraints are often become problems in community-based models and making efficiency a challenge during the planning stage.

This system excels in terms of participation and adaptation to local conditions. However, from a technical perspective, the quality of documents and budget certainty are not as strong as standardized construction management.

4.7.2. Procurement/Auction Stage

The IKR/RRI value at the procurement/auction stage lies in the “influential” category, with a range value of 0.696 – 0.795. The variable with the highest value is “Implementation of effective construction management makes completion on time” with an $\overline{x}$ value of 3.179 and an IKR/RRI value of 0.795 (influential). Internal community agreements simplify the scheduling and organization of local resources process.

Meanwhile, the variable with the lowest x¯is "Good equipment and workforce management" with a value of 2.786 and an IKR/RRI value of 0.696 (Influential). Limited equipment and expert availability cause value of this variable found to be relatively lower than other variable values.

4.7.3. Construction Activity Implementation Stage

The IKR/RRI value at the Construction Activity Implementation stage lies in the “influential” category, with a range value of 0.732 – 0.795. The variable with the highest value is “Community participation accelerates construction activities” with an $\overline{x}$ value of 3.179 and an IKR/RRI value of 0.795 (influential). Community work (*kerjabakti)* and communal work (*gotong royong)* are the main factors in accelerating construction implementation.

Meanwhile, the variable with the lowest x¯is "Construction activity costs according to plan" with a value of 2.929 and an IKR/RRI value of 0.732 (Influential). Costs can change due to field decision taken through deliberation act resulted in less stable budget certainty .

4.7.4. Operation or Result Delivery Stage

The IKR/RRI value at the procurement/auction stage lies in the "influential" category, with a range value of 0.759 - 0.866. The variable with the highest value is "Community Satisfaction" with an $\bar{x}$ value of 3.464 and an IKR/RRI value of 0.866 (very influential). High community satisfaction indicates participatory process has an impact on the acceptance of the work results.
Meanwhile, the variable with the lowest $\bar{x}$ is "Operating cost allocation using government costs" with a value of 3.036 and an IKR/RRI value of 0.759 (Influential). Some communities may feel the operational cost cannot fully covering the maintenance needs.

4.8 The Comparative Analysis between Standardized Construction Management and Community-Based Construction Management

Although the mean value and RRI values of both systems appear similar (has close range), characteristic of their influence patterns is fundamentally different, where it can be seen in the following table (Table 4).

Table 4. Comparison between Standardized CM with Community-Based CM

Analysis Indicator	Standardized Construction Management	Community-Based Construction Management
Planning/Design	Excellence in technical document, volume accuracy, and quality conformity	Excellence in participation and accelaration of communal meetings or deliberation process
Procurement/Auction	Very superior advantage at completeness of documents and certainty of procudures	Excels in flexibility and adaptability to local needs.
Construction Activity Implementation	Excellence in expert personnel, shop drawings, and quality control	Better in speed of field adjustment and local workforce mobilization
Operation/Result Delivery	Produces better technical quality	Produces high social satisfaction

From table 4 it is evident both approaches have their own respective advantages. Standardized construction management characteristics are democratic, structured, and regulation-based resulted in more stable quality, more orderly administration, better availability in skilled personnel, and better manageable timeline. Whereas the community-based construction management characteristics are participatory, adaptive, and socially communicative which resulted in higher acceptance by the community.

V. CONCLUSION

1. Both approaches, whether standardized construction management and community-based construction management have impact on project implementation. It is evident by IKR/RRI value ranging in category of ‘Influential’ to ‘Highly Influential’.

2. The standardized construction management excels in technical aspect such as the document clarity, material specifications, expert availability and quality control, with the highest value appears in ‘availability of expert’ variable which able to obtain IKR/RRI value of 0.902. While the community-based construction management excels in aspect of participation and social acceptance, in particular in accelerating deliberations or communal meeting, field flexibility, and community satisfaction with project result. The highest variable in this approach is community satisfaction variable which able to obtain IKR/RRI value of 0.866.

3. Both approaches have their own advantages as stated below:

a) Standardized Construction Management

- Standardized construction management at the planning stage has advantage on technical aspects (quality and specifications) / prioritizes certainty of technical documents.
- The standardized construction management has strong advantage in terms of certainty process, completed documentation and compliance with regulations. Its main weakness lies in minimum public participation in the procurement process.
- The main strength of standardized construction management lies in the professionalism of its workforce and consistent quality. Quality control is effective because the existence of technical documents and a clear organizational structure.
- The highest score variable in this approach is ‘Implementation of effective construction management that ensures project completion on time’. It confirms that implementation of standardized construction management plays a crucial role for ensuring the project completion in accordance with correct schedule and specifications.

b) Community-Based Construction Management

- The community-based construction management has advantage on participation and adaptation to local condition. However, from a technical perspective, the quality of documents and budget certainty are not as strong as standardized construction management.
- The variable with highest value in this approach is "Implementation of effective construction management makes completion project on time'. It becomes evidence of the importance of internal community agreement to simplify the work scheduling and organizing local resources processes.
- Other variable in highest value in Community-Based CM is "Community participation accelerates construction activities. It becomes evidence of the importance of community service and mutual cooperation as the main factors in accelerating construction implementation.
- Variable of 'Community Satisfaction' also able to obtain highest value and proving that high community satisfaction indicates the participatory process has an impact on the acceptance of the project result.

REFERENCES

[1]. Oberlander, G.D. (2000). Project Management for Engineering and Construction. The McGraw-Hill Companies, Inc. United States of America.

[2]. Budiarti E., (2017). Analisis Penerapan Manajemen Konstruksi Dengan Sistem Pemberdayaan Masyarakat (Studi Kasus Proyek Pengaspalan Jalan, Proyek Pembangunan Saluran Air Limbah & Proyek Pembangunan Rumah Tinggal). Yogyakarta: Universitas Islam Indonesia.

[3]. Yuliana C., (2019). Manajemen Konstruksi (HSPB-604). Banjarmasin-Indonesia. Penerbit: Lambung Mangkurat University Press, 2018 d/a Pusat Pengelolaan Jurnal dan Penerbitan ULM Lantai 2 Gedung Perpustakaan Pusat ULM Jl. Hasan Basri, Kayutangi, Banjarmasin, 70123 Telp/Fax. 0511-3305195 ANGGOTA APPTI (004.035.1.03.2018).

[4]. Liow F.E.R.I., Lendra, Ratnasari L.D., Fitriadi A., Lunarindiah G., Astariani N.K., & Wardani A.A.A.M.C., (2025). Manajemen Proyek: Strategi dan Praktek Efektif. Batam. Penerbit Yayasan Cendikia Mulia mandiri.

[5]. Gumilang G.A., Saefudin A., & Susanto N., (2025). Evaluasi Manajemen Konstruksi Terhadap Biaya Dan Waktu Pelaksanaan (Studi Kasus Pembangunan Gedung Administrasi Dan Gedung Serbaguna Rsud Arjawinangun Kabupaten Cirebon). Jurnal Rekayasa Teknik Sipil STTC. Volume 3. Nomor 1. Pages: 25-32.

[6]. Kagoya T., Olfie B., & Laoh O.E., (2015). Partisipasi Masyarakat Terhadap Pembangunan Infrastruktur Jalan Desa di Kabupaten Lanny Jaya-Papua. Jurnal Berkala Ilmiah Efidiensi, Vol. 15. No. 2. Pages: 1-14.

[7]. Mulyadi M., (2015). Riset Desain Dalam Metodologi Penelitian. Jurnal. Studi Komunikasi dan Media. Volume 16, No. 1. Pages: 71-80.