

# Assessment of the Budget Allocation and Utilization Trend of Mandandeupur Municipality, Nepal

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### ABSTRACT

**Purpose:** *To assess the budget allocation and utilization trend of Mandandeupur Municipality newly formed municipality in Kavrepalanchowk district under Bagmati province of Nepal.*

**Design/Methodology/Approach:** *This was an analytical (ex post facto) research design to look up and to decide on trends of Budget utilization with respect to budget allocation of municipality by the review of the annually published budget book. Calculations like Earn Value Analysis and Trends analysis were done.*

**Findings/Result:** *It was found that, when executing the project, the construction method and design were changed, and the entire element included in the Detailed Project Report (DPR) was not included in the project, like landscape. Also, it was found that one project cost was higher than that of the Detailed Project Report (DPR) and the reason behind it was that all the elements were not included and unforeseeable elements occurred in the project. In this study, it was found that the difference in budget utilization and budget allocation by the municipality ranged from 7.31% to 96.12%. The difference between budget allocation and contract award varies from 4.76% to 69.01%. The difference between contract award and budget utilization ranges from -6.85% to 19.19% and the average percentage is 4.13%. Similarly, these budgetary trends of seal quotation are also found.*

**Originality/Value:** *The analysis of the data from Mandandeupur Municipality over five consecutive fiscal years provided valuable insights into the budget allocation and utilization, bidding trends, and contract administration practices in the construction projects. The findings of this study contribute to a better understanding of the challenges and opportunities in project management and budgeting in the context of the municipality.*

**Paper Type:** *Empirical Research*

**Keywords:** *Allocation, Construction Projects, Earn Value Analysis, Trends, Utilization*

### 1. INTRODUCTION :

Nepal officially turned into a government country with the declaration of its new constitution in September 2015 with the execution of federalism, the general construction of Nepal administration framework changed essentially. The state power in the past unitary framework was isolated into three levels of government; Bureaucratic, Commonplace, and Neighborhood. Nepal has 7 territories and 753 neighborhood states (Dahal et al, (2021). [1]). Neighborhood government (LG) is a public foundation in a little geographic region, like a city, town, or district, which are the most storeroom and reliable associations of the nearby resident (Acharya, (2018). [2]). Financial exchange is naturally perceived in Nepal. The actual constitution imagines four sorts of financial exchanges' specifically monetary balance, restrictive, coordinating and extraordinary awards (Devkota, (2020). [3]). The financial plan is an instrument through which the public authority controls the whole economy where as planning is the spending plan a course of getting ready, arranging and concurring a quantifier and explicit arrangement for an association, ordinarily for a year (Upadhay, (2017). [4]). The monetary cycle is generally acknowledged as a proficient methodology to achieve the advancement objectives of the

country. The idea of impact of yearly financial plan infers the stock side of the improvement interaction (Sharma, (2016). [5]). The 59th Report of the Workplace of the Reviewer General expressed that the service had burned through 90.13 percent of the dispensed financial plan for capital use in the year 2016/17. Essentially, it burned through 92% in 2017/18 and 76 percent in 2018/19. In 2019/20, the year in which saw the beginning of the Coronavirus pandemic, the service had burned through 53% as capital consumption. The actual service burned through 67% in 2020/21, however in the past monetary year, going over 53 percent couldn't. The Service of Actual Framework and Transport, which has the fundamental obligation regarding propelling the formative activities in the nation, has spent just 53% of its allotted spending plan on capital consumptions in the past monetary year 2021/22 (Lamsal, (2022). [6]).

## 2. RESEARCH OBJECTIVES :

To assess the budget allocation and utilization trend of Mandandeupur Municipality.

## 3. LITERATURE REVIEW :

### 3.1 Development of Budgeting system in Nepal:

Spending plan is likewise a monetary asset that assumes a vital part in the working of the state. Whether a spending plan is adjusted, in excess or in lacking, straightforwardly impacts the state's activity. A financial plan portion not just lays out a linkage with the current strategies yet additionally addresses the requests of residents. The nearby level association, neighborhood delegates and parliamentarians play an essential part in supporting for specific projects or tasks that address the issues of their bodies electorate. Hence, a spending plan addresses a designation of assets in light of the requests and needs of the residents. Planning is significant on the grounds that Market instrument can't carry out the roles of the economy. Public strategy is expected to guide and enhance to the financial capability overall. The financial plan assumes fundamental part to take care of the issues like, to get the condition government meddle is fundamental, to tackle issues of externalities. Backing to government arrangements through market activity, issues of limiting in future, cost steadiness, high joblessness, dissemination of pay and abundance, and so forth. (Devkota, (2020). [3]).

### 3.2 Recent major provision of Budget

Nepal isn't new to the idea of planning with itemized rules, arrangements and regulation as set up. Nepal, government assumes a significant part for the financial advancement of the country. The issue of huge extent of the capital use being unspent is demonstrative of the underutilization of the assets in the country. Financial plan use has forever been an issue with larger part of the spending occurring towards the finish of the monetary year. The planning assumes an imperative part in the method of monetary improvement of a country. As the world ecological is turning out to be increasingly intricate, planning has become vital and specialized also (Sharma, (2013). [5]). The public authority of Nepal has for quite some time been scrutinized for its hierarchical preparation, insufficient, bad and tip top controlled organization, all of which have debilitated institutional frameworks and the neighborhood government framework. In non-industrial nations nearby government address as grassroots level government units, which are nearest to the residents and capable to convey not just decentralized benefits and regulate the neighborhood administration framework yet additionally speed up the social and financial improvement to propel the demo case values and public support in decision making at the neighborhood level. Nepal started the excursion of decentralized administration with the authorization of Neighborhood Self Administration Act (LSGA) in 1999. LSGA (1999) gives the lawful premise to the administration of nearby government bodies in Nepal [7]. To emerge the decentralization, the constitution assigns 22 restrictive powers and 15 simultaneous power that have been divided between the government, the common and the neighborhood levels. Moreover, broad errands including public administrations, comprising of arranging execution, monetary turn of events (horticulture, domesticated animals, co-usable and modern), social turn of events (training, wellbeing, imperative enrollment, federal retirement aide recompenses appropriation, affirmations/proposal), climate framework and institutional advancement have been made through new regulation Neighborhood Government Activity Act (LGOA-2017) to accelerate the nearby administration process. This planned to advance co-activity, conjunction and coordination between the bureaucratic, regions neighborhood government give proficient and profoundly quality administrations by guaranteeing individuals' interest, responsibility

and transparencies and standardized authoritative, leader and legal practice at nearby level (Acharya and Scott, (2022). [8]).

**3.3 Fiscal Transfers from the Province to Local Governments:**

In Nepal, the arrangement of neighborhood government has been characterized of constitution that represents the significant obligations of LGs are to convey a scope of determined administrations to depicted region. Above all, these institutional units work the regulative, leader and legal executive controls over the littlest geological regions recognized for regulatory and political purposes to level the public interest (Acharya, (2018). [2]). Different variables had obstructed spending plan execution at the nearby level. The absorptive limit of nearby legislatures especially concerning the execution of the ventures under capital consumption is impacted by a few variables including project determination and cost assessment managed without legitimate review; the politicization of task choice and execution; restricted managerial and specialized limit; absence of public support; procedural obstacles in the public obtainment act; and inadequate observing and assessment. Taking into account these impediments: neighborhood government utilized different interaction to expand their absorptive limit and make project more powerful. They looked over different public acquisition strategies relying on to the idea of venture, the chance of client's cooperations, neighborhood government's authoritative limit and its assessed cost of the tasks. The cross country managerial rebuilding according to the arrangement of another constitutions of the government republic of Nepal 2072, neighborhood levels are engaged and are being independent to choose and execute the projects by making their own demonstrations and guideline without disregarding the principal soul of constitution. In light of the constitution of Nepal there are three degree of government: the central government; common government; nearby level government. District and Provincial region are remembered for the neighborhood government framework through compelling authoritative framework advancement and execution of improvement related exercises (DRCN, 2019). [9]). The neighborhood level arrangement and Financial plan Detailing Rule, 2017 suggests that a metropolitan get together ought to endorse its yearly tasks and program by the last seven day stretch of June, after which the ventures and projects ought to be carried out by the nearby leaders. While spending the financial plan to execute projects, neighborhood government ought to determine the methodology cutoff time and the power/official liable for project execution. Likewise, standards for the observing and assessment of venture ought to be founded on material regulations, including the Public Obtainment Act and Rules (DRCN, 2019). [9]). Area based advisory groups to contribute toward of the occasional advancement plan (RECOFTC, 2020).

**Table 1:** Sector based development

| S.N. | Sector Based Development   | Sub Sector   |
|------|----------------------------|--|
|      | Economic development       | Agriculture<br>Industry<br>Commerce<br>Tourism<br>Cooperatives<br>Financial institutions   |
|      | Social development         | Education<br>Health<br>Water and sanitation<br>Culture<br>Global enabling sustainability initiative  |
|      | Infrastructure development | Roads<br>Bridges<br>Suspension bridges<br>Irrigation<br>Buildings and urban development<br>Energy<br>Micro and small hydropower supply<br>Alternative energy |

|  |   |  |
|--|---|--|
|  |   | Communication  |
|  | Environment and disaster management                             | Forest and soil conservation<br>Watershed protection<br>Environment protection<br>Climate change<br>Solid waste management<br>Water-induced disaster management<br>Disaster management   |
|  | Institutional development services delivery and good governance | Human resource development<br>Institutional capacity development<br>Setting service delivery standards<br>Use of electronic information technology in service delivery<br>Revenue mobilization<br>Fiscal discipline<br>Internal audit and control mechanism<br>Financial audit |

### Institutional Development, Service Delivery, and Good Governance

#### Local Government Planning Process

Local governments are the closest administrative units that deliver public services to citizens in the current federal structure of Nepal. The annual planning process at the local level typically involves the following seven steps:

Receive an outline of fiscal transfers and budget and planning guidelines (mid-January) and receive budget ceiling from the federal and provincial government (mid-March).

Estimate resources and determine budget ceiling (around April 25).

Hold ward and settlement meetings for the selection of projects and programs (by mid-May).

Prioritize the projects that come through the ward meetings (by the end of May).

Formulate the budget and programs (around June 20).

Approve the budget and programs from the municipal executive (around June 25).

### 3.4 Issues of budgeting system and Procurement Practice:

#### Issues of Budgeting System:

Albeit the constitution ensures the independence of nearby government, their principal wellsprings of money is the financial exchange given by the bureaucratic and the common states. The neighborhood legislatures decided the size of their financial plan in light of these exchanges. Nonetheless, nearby agents griped that their yearly financial plan definition was impacted by the postpones in sending the assessments of the monetary exchanges. Despite the fact that the spending plan of the bureaucratic, common and nearby government were reported consecutively, partners communicated their disappointment that neighborhood spending plans must be ready in a hurry since they were given an extremely short time span inside which to set them up. Generally, the prescribed procedures of awards allotment like straightforwardness, consistency and opportune endorsing of awards were not completely followed by the bureaucratic and the common states [11-17].

#### Disputes between elected representatives:

Misunderstandings between elected representatives and interference into each other's jurisdictions have affected the annual planning process at the local level in Nepal. The Local Government Operation Act, 2017 divides responsibilities between the chairperson or mayor and the vice-chairperson and deputy-mayor, with the vice-chairperson or deputy-mayor leading the Budget and Program Drafting Committee.

According to a report by the DRCN (2019), there were more frequent disagreements and misunderstandings reported between chairpersons and their vice-chairpersons in Province 2 compared to other provinces. This has consequently delayed the passing of the budget, as the planning process has been affected by these conflicts between the elected representatives. [9].

#### Delay in approving the budget from the local assembly:

According to the existing provisions, local governments in Nepal are required to present their budgets

for approval at the local assemblies by the third week of June, to be discussed and approved by mid-July. However, data from the Ministry of Federal Affairs and General Administration (MOFAGA) shows that only 77 percent of the local governments across the country had managed to present their budgets at their local assemblies by the stipulated deadline of June 24 for the fiscal year 2020-21.[18]. To effectively manage the current practice of federalization and devolution, a significant volume of budget needs to be allocated to the local levels based on factors such as the size of administrative area, population, and poverty indicators. This is necessary to accomplish the required services. Additionally, local governments need to formulate various laws and regulations, including those related to tax collection, local legislation, social security, development planning, administration, and work division. Despite these requirements, figures indicate that only 18 percent of the total annual budget of the country in FY 2016/017 was used by the local levels. Furthermore, less than 10 Acts and regulations have been formulated at the local level. The key reasons for this were the absence of human resources with the necessary technical background, knowledge, and experience in local governance. (Acharya, 2018)[2].

#### **Local government:**

Local governments in Nepal have relatively less experience and inadequate human capacity to effectively formulate and execute plans, programs, and projects. They have very limited scope to prepare their own budgets due to the constraints of having only a few income sources. As a result, decentralization and power devolution are more in words than in practice.

The central government continues to hold significant power, while local governments are unable to enhance their own capacity and income resources independently. Consequently, local governments often find themselves in a position where they have to follow the directives of the central government. Moreover, weak coordination between the central government and local governments has led to duplication in programs and projects. This lack of effective collaboration and communication between the different tiers of government has hindered the efficient utilization of resources and the delivery of services to the citizens.

To address these challenges, local governments need to build their institutional capacity, develop skilled human resources, and diversify their income sources. The central government, on the other hand, should empower local governments by providing them with the necessary resources, autonomy, and support to carry out their responsibilities effectively. Strengthening the coordination and communication between the central and local governments is crucial to ensure the smooth implementation of federalism and the effective delivery of public services. (Sharma, 2020)[19].

#### **Issues of Procurement Practice:**

There are several issues in the public procurement system of Nepal. Public entities often procure without an approved multi-year and annual procurement plan. Timely and need-based public procurement is crucial for development and nation-building by utilizing public expenditure effectively. Weak implementation of procurement contracts is another serious concern in the procurement process (Shah, 2022) [20].

The implementation of the electronic procurement system has faced challenges in terms of digital literacy among public entities and the Public Procurement Monitoring Office (PPMO), which is the guiding body. The existing procurement laws are more process-oriented than result-oriented, necessitating amendments.

There is a tendency among public entities to select the lowest-priced bid, often neglecting the quality aspect. The procurement laws should focus on both the costs and quality of services. It is necessary to make the procurement system easy, smart, technology-friendly, and development-oriented. Conducting procurement audits to measure the effectiveness of public procurement is crucial. Promoting integrity and ethics is the most important factor in ensuring exemplary procurement practices. (Komakech, (2016). [21]).

Public procurement is an integral part of public financial management, with around 60 percent of the annual national budget being implemented through public procurement. It should be utilized to achieve maximum benefits for the public interest by adopting the principles of public procurement and international best practices. However, a range of secondary objectives, which may not be related to or even conflict with the principles of best value, often influence public procurements. Examples include promoting national industries by shutting out foreign competition, favoring certain foreign currencies or discriminating against certain foreign products or services, rewarding political supporters, and

recognizing and favoring well-placed firms. These practices vary across countries, legal systems, cultures, organizations, management levels, and strategies.

The Public Procurement Monitoring Office (PPMO), established under the Public Procurement Act of 2007, has been working towards creating a conducive public procurement environment in Nepal. It is committed to empowering public procurement entities to deliver their services with more transparency, efficiency, and competitiveness. The PPMO is also playing a significant role in improving relations between the government and its suppliers, contractors, consultants, and service providers to build an atmosphere of trust and confidence. (PPMO, (2013). [22-25]).

#### **4. METHODOLOGY :**

##### **4.1 Research Design:**

This was an extended [26] analytical (ex post facto) research design to look up and to decide on trends of Budget utilization with respect to budget allocation of municipality, Engineers estimate, awarded bidding amount on the projects that lies under the Detailed Project Report (DPR). This research was based on projects where Detailed Project Report (DPR) were done and specially focused on the budgetary trend on procurement practice on these projects. The research was done by the review of the annually published budget book of Mandandepur Municipality, data from related project record files and asking the project manager about the project.

The research methodology employed in this study involved a multi-step approach:

**Review of Secondary Information Sources:**

The first step involved a thorough review of secondary information sources, such as academic literature, government reports, and relevant policy documents.

This review led to the identification of the key research questions and the formulation of the study objectives.

Based on the research questions and objectives, the appropriate sets of tools and techniques were identified for data collection and analysis.

**Data Collection:**

The study utilized a combination of qualitative and quantitative data collection methods to gather comprehensive information.

This included conducting in-depth interviews with key stakeholders, such as government officials, local community representatives, and subject matter experts.

Additionally, the research team collected and analyzed relevant statistical data and documents to supplement the qualitative insights.

**Data Analysis:**

The qualitative data obtained from the interviews was systematically analyzed using thematic analysis techniques to identify patterns, trends, and key insights.

The quantitative data was processed and analyzed using appropriate statistical tools and techniques to generate descriptive and inferential insights.

**Triangulation and Validation:**

The research team employed triangulation methods to cross-validate the findings from different data sources and ensure the reliability and validity of the results.

This involved comparing and contrasting the insights from the qualitative and quantitative data, as well as seeking feedback and validation from the study participants and other relevant stakeholders.

**Synthesis and Reporting:**

The final step involved synthesizing the findings from the various data sources and presenting them in a comprehensive and coherent manner.

The research team developed a detailed report that addressed the research questions, presented the key findings, and provided actionable recommendations for policymakers and practitioners.

This multi-step approach allowed the research team to gather robust and reliable data, conduct a rigorous analysis, and generate insights that can inform policy and decision-making processes. Various tools (questionnaire formal/informal interview of the technical/non-technical persons who were involved on procurement and budget allocation by any means) were used to collect primary and secondary information (data which are main basis of research) relevant to the objectives of the study. These research tools were selected based on the information they could provide to achieve the setout study objectives. The limitation of the resources available for the study was also considered while

selecting these tools.

#### 4.2 Study Area:

Mandandeupur Municipality is the youngest newly formed municipality in Kavrepalanchowk district under Bagmati province. It is located 55Km northeast of Kathmandu, the capital of Nepal. It covers 89 sq.km and Mandandeupur Municipality came into existence on B. S. 2073 Falgun 27 (10 march, 2017) after its publication in Rajpatra. It is bounded on the east by Bhumlu Rural Municipality, and the west by Bhaktapur and Kathmandu, on north by Sindhupalchowk district and on the South by Banepa and Pachkhal Municipality.

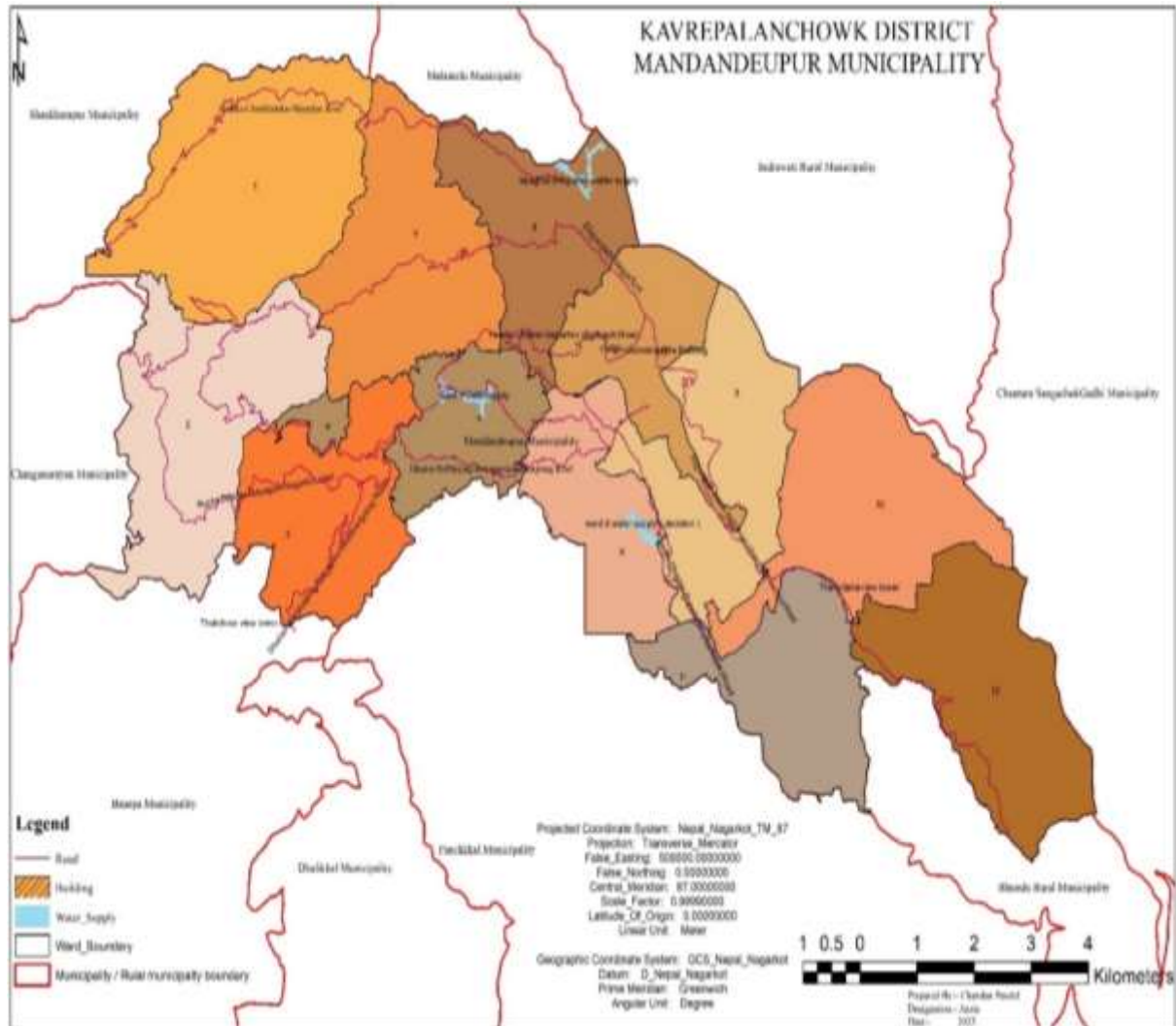


Fig. 1: Map of Mandandeupur Municipality with indication of DPR Project

#### 4.3 Research onion:

The research onion was developed by Saunders et al. in 2007 to illustrate the various stages required before developing an effective methodology. The first layer in the research onion is research philosophy and the research philosophy of this study is pragmatism, which focuses on the practical point of view. Research approaches are boarder methods used in research and the research approach of this study is deductive as it begins with the theory. Research strategies are another layer of the research onion and as the most effective method, surveys as well as archival data are used. Time horizons are the fourth layer of the research onion and in this research, a cross-sectional method is used as data are collected at a snapshot point in time. Finally, the Centre of the onion is reached, where techniques and procedures are selected for data collection and analysis for this study.

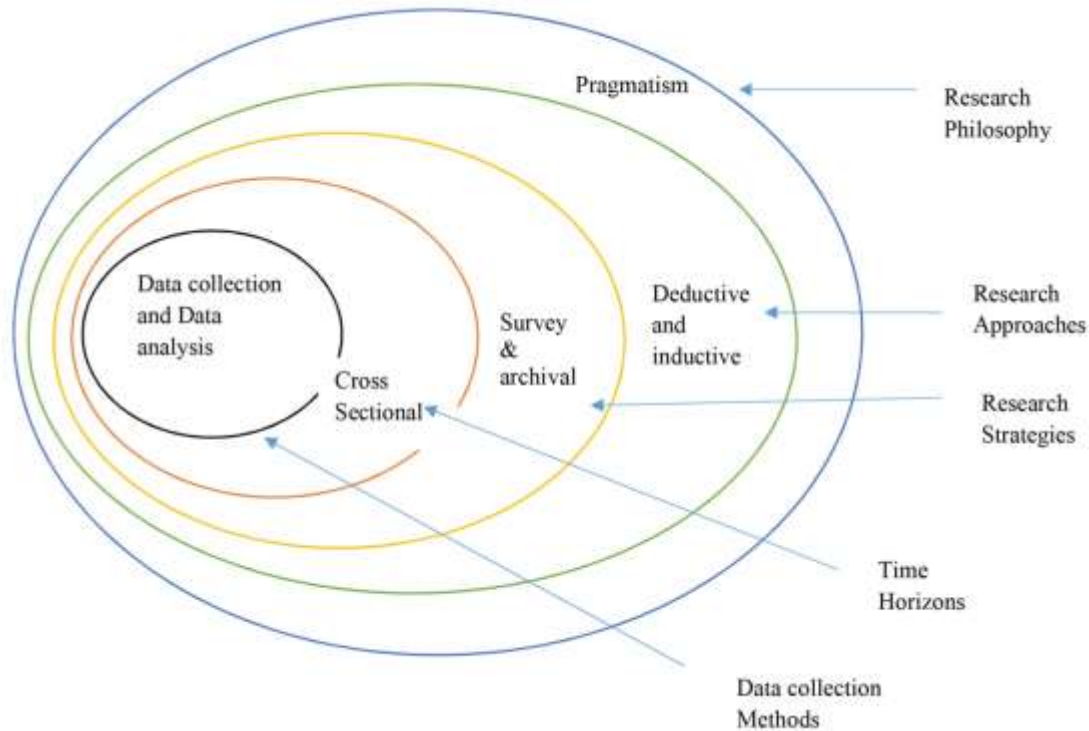


Fig. 2: Research Onion

**4.4 Sampling:**

There were several numbers of projects (road, public building, water supply and sanitary, bus park and stadium) whose DPR were conducted and budget allocation as well as budget utilization done on one tenure periods of F/Y 2074/075 B.S, 2075/076 B.S, 2076/077 B.S, 2077/078 B.S & 2078/79 B.S. The data was collected in various ways like annual budget book of municipality, record file, and questionnaire and focused group discussion. survey is done for report understanding as verification only.

**4.5 Data collection:**

The secondary source was collected from Published annual budget book of Municipality and other available records in the municipality. Various tools; questionnaires, formal/ informal interviews of technical/ non-technical staff and elected representative involving in procurement and budgeting process was collected. Additional information was collected from related articles, journals books, and websites.

**4.6 Data analysis and Presentation:**

After the data collection, data were arranged based on type of procurement conducted and categorized contract work to construction of road, public building, water supply and sanitation, Bus Park and stadium.

The secondary population data were collected accurately for this study from Mandandepur Municipality related to fiscal years i.e. F/Y 2074/075 B.S, 2075/076 B.S, 2076/077 B.S, 2077/078 B.S and 2078/079 B.S.

Definition and abbreviation used in finding out performance indicators are listed below:

Table 2: Earned Value Analysis Abbreviation and description.

| S.N. | Particulars   | Description   |
|------|---|---|
| 1    | Budget at Completion (BAC)                              | Baseline project cost   |
| 2    | Actual Cost (AC)/Actual Cost of Work Performance (ACWP) | Total costs incurred in completing work during a given period |

|   |   |   |
|---|---|---|
| 3 | Earned Value (EV)/Budgeted cost of Work performed (BCWP)  | Physical work completed during a given period               |
| 4 | Planned Value (PV)/ Budgeted cost of work schedule (BCWS) | Physical work schedule for completion during a given period |

[27-28].

**Table 3:** Earned Value Analysis Formulas.

| S.N. | Particulars                      | Description                            | Formula | Interpretation of Result            |
|------|----------------------------------|--|---------|-------------------------------------|
| 5    | Cost Variance (CV)               | Cost overrun during a given period     | EV-AC   | Positive = Under planned cost       |
|      |                                  |  |         | Negative = on planned cost          |
|      |                                  |  |         | Negative = Over planned cost        |
| 6    | Cost Performance Index (CPI)     | Cost efficiency ratio                  | EV/AC   | Greater than 1.0=Under planned cost |
|      |                                  |  |         | Exactly 1.0= On planned cost        |
|      |                                  |  |         | Less than 1= Over planned cost      |
| 7    | Schedule Variance (SV)           | Schedule slipped during a given period | EV-PV   | Positive = Ahead of schedule        |
|      |                                  |  |         | Negative = on schedule              |
|      |                                  |  |         | Negative = Behind schedule          |
| 8    | Schedule Performance Index (SPI) | Schedule efficiency ratio              | EV/PV   | Greater than 1.0=Ahead of Schedule  |
|      |                                  |  |         | Exactly 1.0= On schedule            |
|      |                                  |  |         | Less than 1= Behind schedule        |
| 9    | Estimate to Completion (EAC)     | Expected total cost                    | BAC/CPI | -                                   |

[27-28]

## 5. RESULTS AND DISCUSSIONS :

This section includes the results supported by the analysis and discussions based on the set-out objectives. The first part deals with the budgetary trend.

### 5.1 Budget Allocation and Budget Utilization Trend:

Budget allocation and budget utilization trends have been analyzed for the projects where DPRs were conducted and where the municipality has allocated the budget for the execution of the whole or some element of the DPR.

#### 5.2.1 Earn value analysis:

In this research, Earn value analysis (EVA) is necessary. Of the 32 NCB contracts, five were not completed yet due to various reasons like COVID, a shortage of construction materials, and public disturbances. So, to find out the cost after the completion of the project, an earn value analysis was conducted, as this research was study about budget utilization and the cost after the completion of the project was needed for the study.

**Table 4:** Ongoing contract details

| S.N. | Contract    | Estimated Amount (In thousands NRs) | Agreement Amount (In thousands NRs) | Total Expenditure (In thousands NRs) | Durati on | Perfo rman ce |
|------|-------------|-------------------------------------|-------------------------------------|--------------------------------------|-----------|---------------|
| 1    | (01/WORKS/N | 218,412.06                          | 142,294.34                          | 101,912.06                           | 24        | 70%           |

|   |                            |            |           |           |          |     |
|---|----------------------------|------------|-----------|-----------|----------|-----|
|   | CB/MDM/077/078)            |            |           |           | months   |     |
| 2 | (01/Works/NCB/MDM/078/79)  | 101,526.11 | 55,372.37 | 41,535.46 | 9 months | 75% |
| 3 | (04/WORKS/NCB/MDM/077/78)  | 19,994.12  | 11,884.14 | 1,617.88  | 5 months | 15% |
| 4 | (03/WORKS/NCB/MDM/078/079) | 33,963.68  | 20,019.26 | 6,417.28  | 9 months | 30% |
| 5 | (04/WORKS/NCB/MDM/078/79)  | 8,126.52   | 6,166.51  | 4,246.93  | 6 months | 65% |

**Table 5:** Project Performance Definition

| Contract No.                       |                    | 01/WORKS/NCB/MDM/077/078 | 04/WORKS/NCB/MDM/077/78 | 03/WORKS/NCB/MDM/078/079 | 01/Works/NCB/MDM/078/79 | 04/WORKS/NCB/MDM/078/79 |
|------------------------------------|--------------------|--------------------------|-------------------------|--------------------------|-------------------------|-------------------------|
| Contract Amount (In thousands NRs) |                    | 142,294.34               | 11,884.14               | 20,019.26                | 55,372.37               | 6,166.51                |
| Planned                            | Start Date         |                          | 10/4/2077               | 8/23/2078                |                         |                         |
|                                    | Completion date    |                          | 3/5/2077                | 5/23/2079                |                         |                         |
|                                    | Duration (Month)   | 24                       | 5                       | 9                        | 9                       | 6                       |
|                                    | % Complete         | 100                      | 100                     | 100                      | 100                     | 100                     |
|                                    | Planned value (PV) | 142,294.34               | 11,884.14               | 20,019.26                | 55,372.37               | 6,166.51                |
|                                    | % Complete         | 70                       | 15                      | 30                       | 75                      | 65                      |
|                                    | Actual value (AV)  | 101,912.06               | 1,617.88                | 6,417.28                 | 41,535.46               | 4,246.93                |
|                                    | Earned value (EV)  | 99,606.04                | 1,782.62                | 6,005.78                 | 41,529.28               |                         |

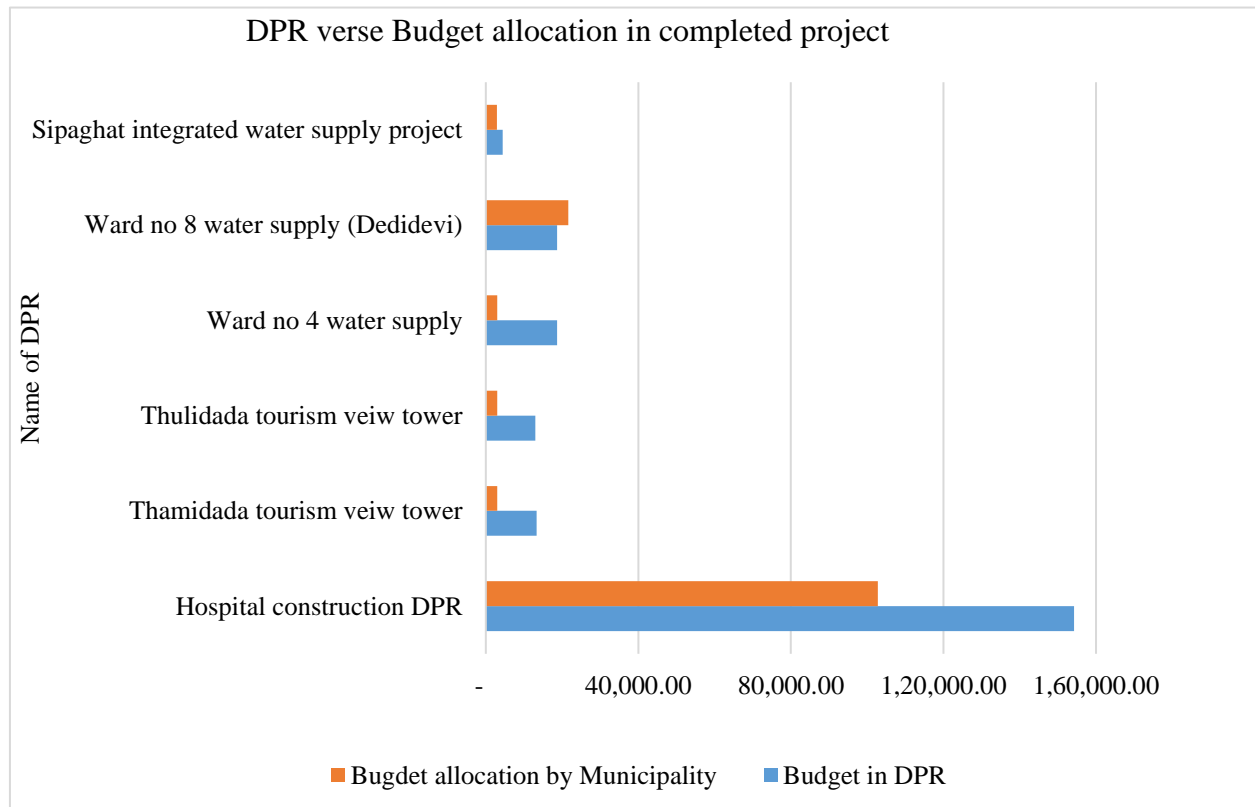
**Table 6:** Earned value analysis

| Contract          |             | 01/WORKS/NCB/MDM/077/078 | 04/WORKS/NCB/MDM/077/78 | 03/WORKS/NCB/MDM/078/079 | 01/Works/NCB/MDM/078/79 | 04/WORKS/NCB/MDM/078/79 |
|-------------------|-------------|--------------------------|-------------------------|--------------------------|-------------------------|-------------------------|
| Budget            | Overall BAC | 142,294.34               | 11,884.14               | 20,019.26                | 55,372.37               | 6,166.51                |
|                   | PV          | 142,294.34               | 11,884.14               | 20,019.26                | 55,372.37               | 6,166.51                |
| Earned Value      | EV          | 99,606.04                | 1,782.62                | 6,005.78                 | 41,529.28               | 4,008.23                |
| Actual value      | AV          | 101,912.06               | 1,617.88                | 6,417.28                 | 41,535.46               | 4,246.93                |
| Duration          | d           | 24.00                    | 5.00                    | 9.00                     | 9.00                    | 6.00                    |
| Cost variance     | CV          | (2,306.02)               | 164.74                  | (411.50)                 | (6.18)                  | (238.69)                |
|                   | CV%         | -2.31                    | 9.24                    | -6.85                    | -0.014                  | -5.95                   |
| Schedule Variance | SV          | (42,688.30)              | (10,101.52)             | (14,013.48)              | (13,843.09)             | (2,158.28)              |
|                   | SV%         | -30                      | -85                     | -70                      | -25                     | -35                     |
| Performance       | CPI         | 0.98                     | 1.10                    | 0.94                     | 1.00                    | 0.94                    |

|                  |     |            |           |           |           |          |
|------------------|-----|------------|-----------|-----------|-----------|----------|
| nce Index        | SPI | 0.70       | 0.15      | 0.30      | 0.75      | 0.65     |
| Project Cost     |     | 145,588.66 | 10,785.89 | 21,390.94 | 55,380.62 | 6,533.73 |
| Project Schedule |     | 34.29      | 33.33     | 30.00     | 12.00     | 9.23     |

**5.2.2 DPR and Budget allocation in Project:**

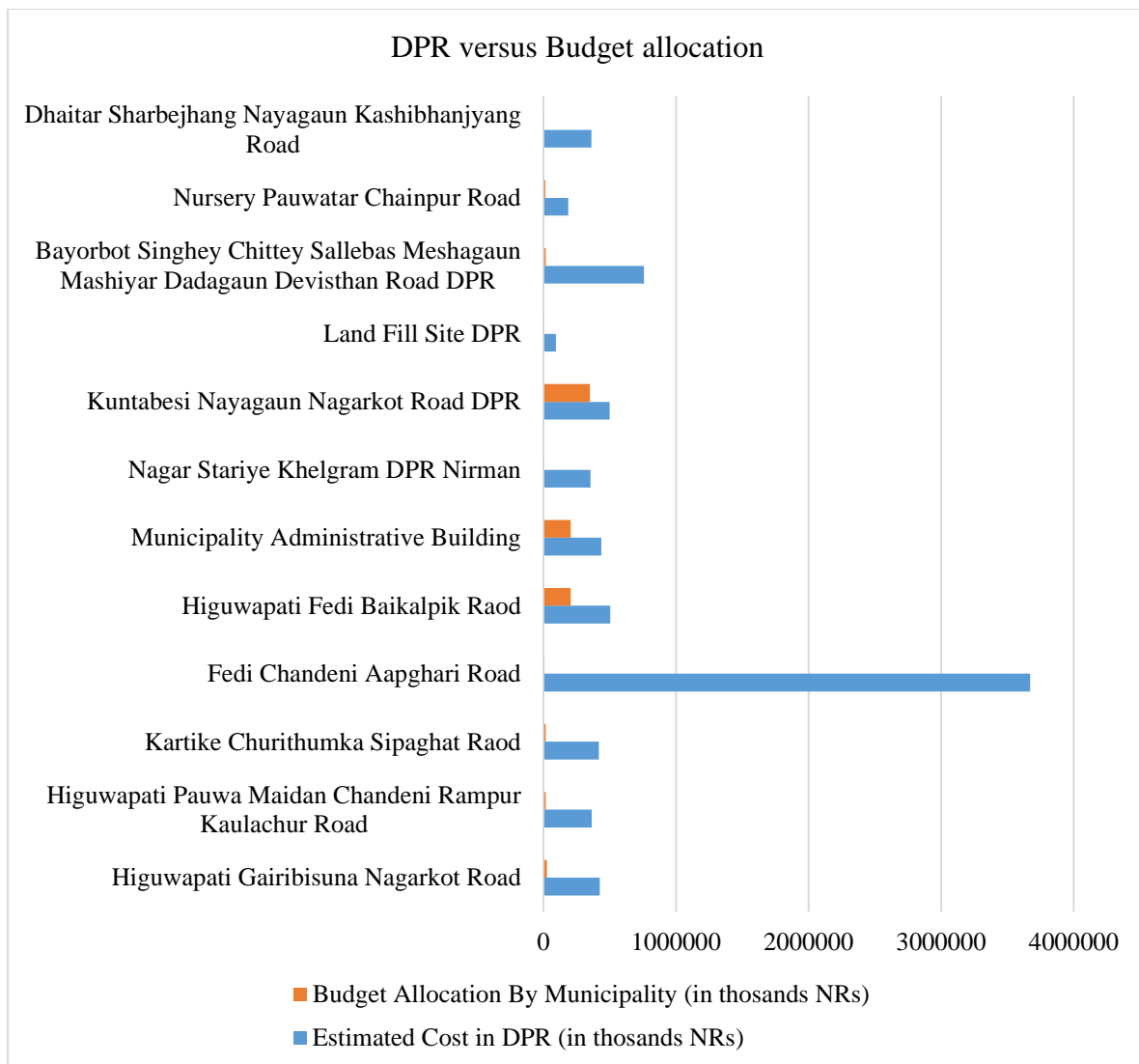
In Mandandepur Municipality, about 26 DPRs were done in one tenure period of new elected representatives. In addition, out of these 26 DPRs, 18 projects had been executed. Out of these 18 DPRs, six projects were completed, whereas 12 are still running and being implemented as multiyear projects. The budget for DPR and budget allocation by the municipality in 6 completed budgets are as follows:



**Fig. 3:** DPR vs. Budget allocation by Municipality in the completed projects

Here, it was found that among completed DPRs, the budget allocation was less than the cost of the DPR in most of the projects. The main reason identified by the interview of the key informant was that, in the case of multiyear project, the tendering process was executed after the budget was ensured and the budget was allocated accordingly. Other reasons were due to changes in the structure and model of the work when executing the project and not including the entire element in construction, which is included in the DPR. In Ward no 8 water supply, the budget allocation was higher than the cost mentioned in the DPR. The reason was found to be that it did not include the protection work when the DPR was being prepared, and the water from the borehole was not sufficient for the projects, so new water resources were managed, which were also not included in the DPR.

Similarly, the budget in DPR and the budget allocated by the municipality to the running projects up to the fiscal year 2078/079 B.S. are represented by the graph below.



**Fig. 4:** DPR vs. Budget allocation by Municipality in the incomplete projects

In these 12 DPRs, most of the projects were related to the roadway, and budget allocations for these projects were found to be higher than for other projects. So, it can be said that the municipality was more focused on the construction of roadways; however, the municipality also has the intention of constructing other major projects such as stadiums and landfill sites, as the DPRs for these projects were already prepared.

**5.2.3 Budget utilization trend with respect to budget allocation:**

In all 32 projects procured by National competitive bidding where Detailed Project Report (DPR) was prepared, budget utilization was taken as the cost paid to the contractor after the completion of the project, and budget allocation was taken as the budget allocated by the municipality for the particular project. The difference in budget utilization ranges from a surplus of 7.31% to 96.12%, and the average of these percentages is 40.20%. In figure 6, the project with budget utilization and budget allocation is mentioned.

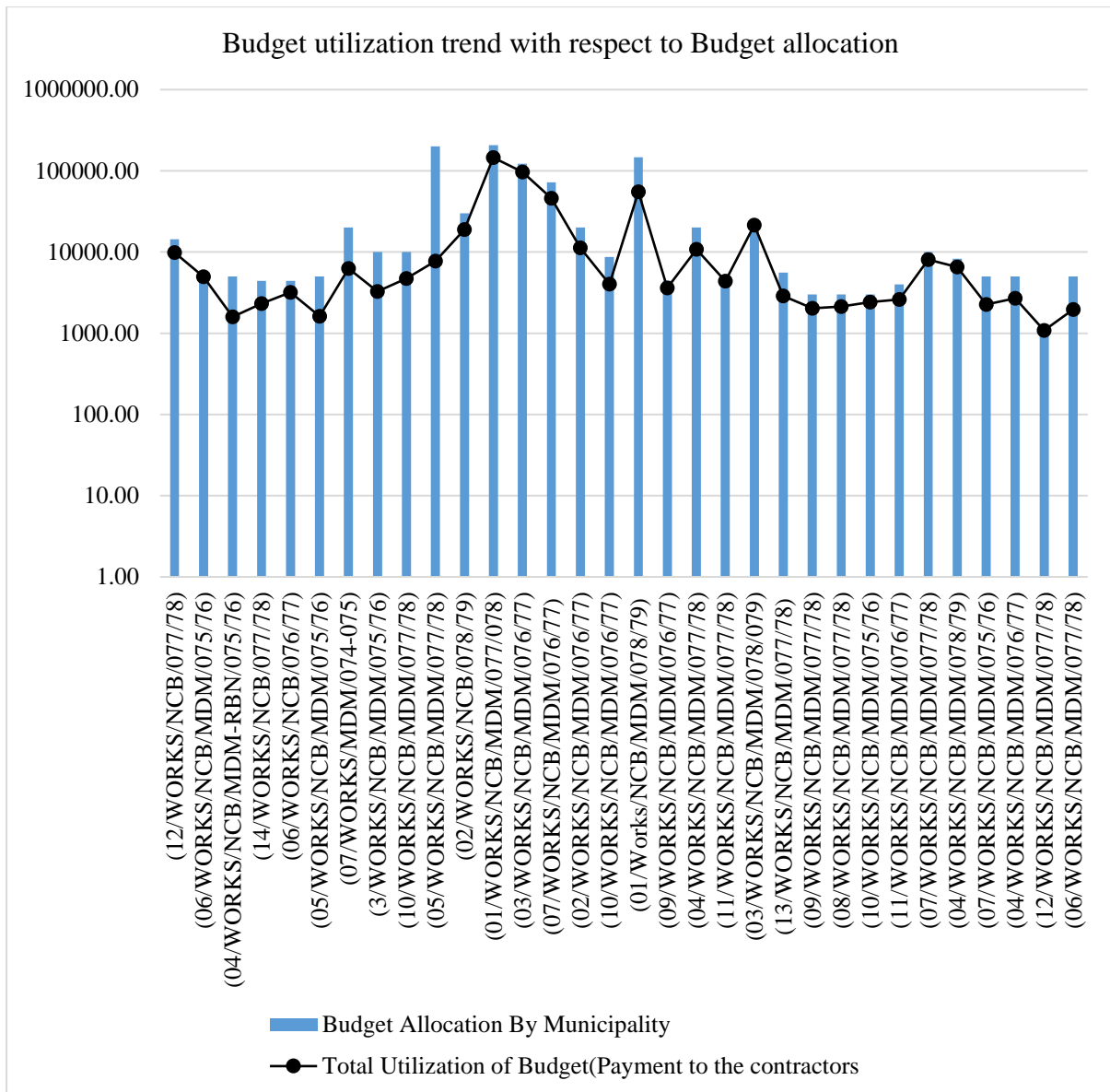


Fig. 5: Budget utilization and allocation by Municipality in respective project

**5.2.4 Contract award trend with respect to budget allocation:**

This study is intended to show the trend of the budget award with respect to budget allocation in the graph below. In figure 6, the graph between contract award and budget allocation is shown: From the analysis, it was found that the range of differences in budget allocation and contract award was from 4.76% to 69.01%, and the average of all the projects seemed to be 37.60%.

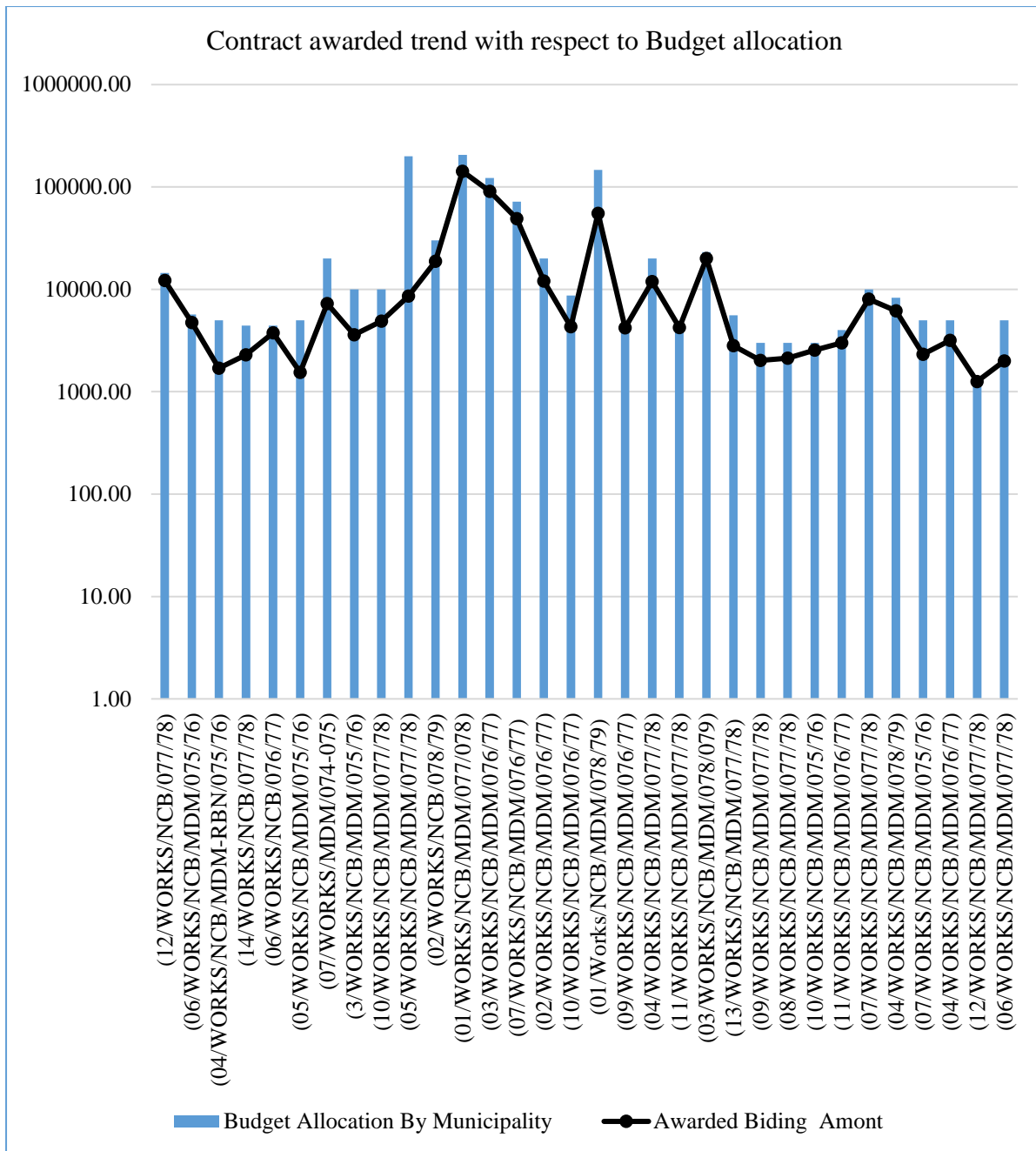


Fig. 6: Contract awarded and budget allocation by Municipality in respective project

**5.2.5 Contract awarded trend with respect to budget utilization:**

For the relation between the awarded bidding amount and the total expenditure of the project, a bar graph and a line graph were plotted, as shown in figure 7.

The above plots show the contract awarded and the budget utilization of the project. The difference between contract award and budget utilization ranges from -6.85% to 19.19%, and the average percentage is 4.13%. In some projects, the payment is done more than the contract awarded due to the variation in the process of project completion. Therefore, the budget utilization is high, and the average result is negative.

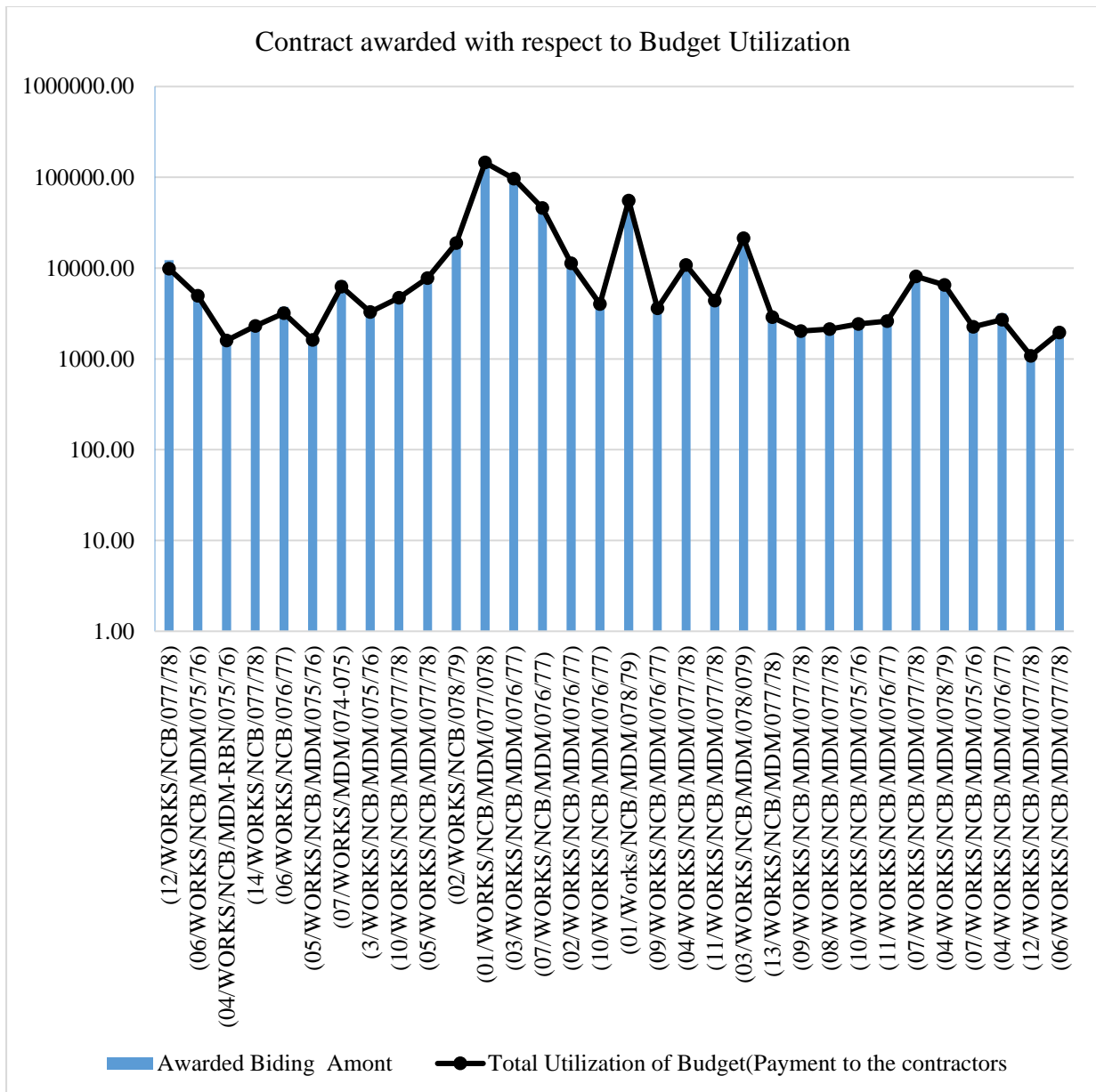


Fig. 7: Contract awarded and budget utilization by Municipality in respective project

**5.2.6 Contract award trend with respect to Engineer Estimate:**

Here, the plot of the contract awarded with respect to the engineer's estimate was shown as a bar graph and a line graph in figure 8.

The contracts were awarded with a minimum of 0.14% and a maximum of 63.58%.

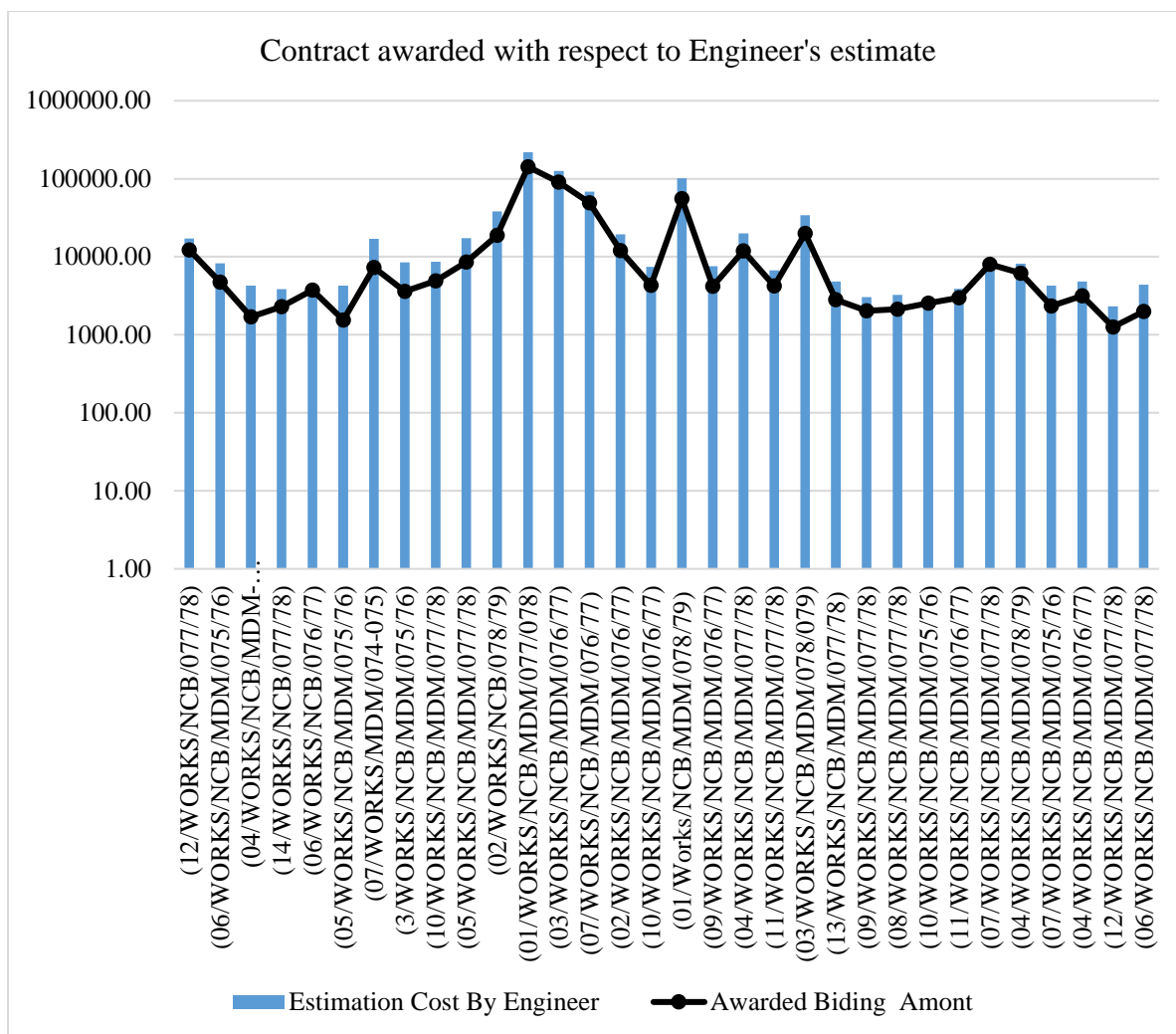


Fig. 8: Contract awarded and Engineer’s estimate by Municipality in respective project

**5.2.7 Budgetary Trend of Seal Quotation:**

Fourteen percent of projects were procured using the sealed quotation method. The budget allocation, engineer’s estimate, and award amount, along with the expenditure (utilization) of those projects, are shown in the following graph as figure 9 below.

Eight projects are accomplished by the method of seal quotation of the DPR. The difference between budget allocation and budget utilization ranges from 14.06% to 83.22%, and the average surplus is 32.24%. Similarly, the differences between budget allocation and the engineer’s estimate were in the range of -26.29% to 82.99%, and the average was 11.44%. It was found that the budget allocation was transferred to another project after the awarding of the particular project, resulting in a negative percentage in the budget allocation and the engineer’s estimate. The difference in budget allocation and contract awarded ranges from 12.29% to 83.09%, and the average is 29.82%. The difference between the engineer’s estimate and the contract awarded ranges from 0.46% to 41.93%, and its average is 16.36%.

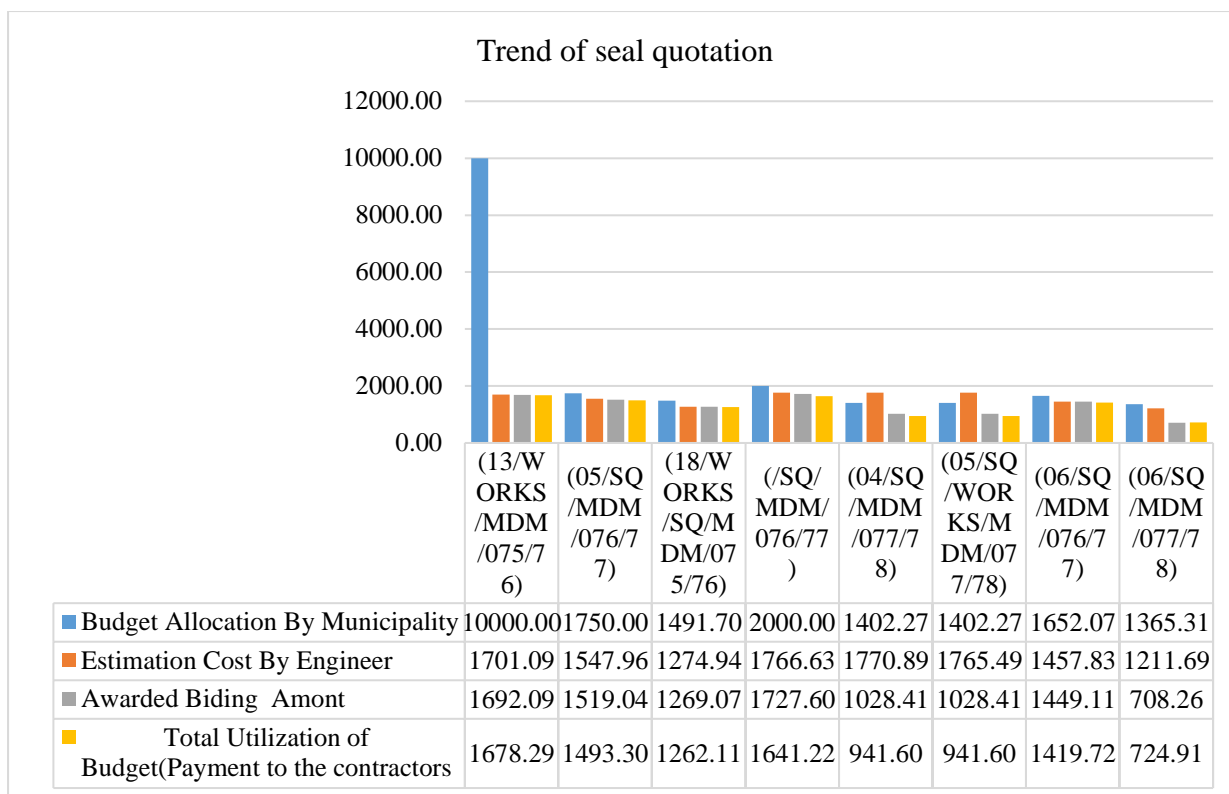


Fig. 9: Budgetary trend of seal quotation of Municipality.

### 6. CONCLUSION :

In completed DPR project, the difference in cost between the Detailed Project Report (DPR) and the cost of construction occurred, in the multiyear project process of tendering starts after the ensure of the budget and the municipality allocate the budget accordingly so the budget allocation are less than the cost in the Detailed Project Report (DPR). It was also found that, when executing the project, the construction method and design were changed, and the entire element included in the Detailed Project Report (DPR) was not included in the project, like landscape, etc. Also, it was found that one project cost was higher than that of the Detailed Project Report (DPR) and the reason behind it was that all the elements were not included and unforeseeable elements occurred in the project. In this study, it was found that the difference in budget utilization and budget allocation by the municipality ranged from 7.31% to 96.12%. The difference between budget allocation and contract award varies from 4.76% to 69.01%. The difference between contract award and budget utilization ranges from -6.85% to 19.19% and the average percentage is 4.13%. Similarly, these budgetary trends of seal quotation are also found. The analysis of the data from Mandandeupur Municipality over five consecutive fiscal years provided valuable insights into the budget allocation and utilization, bidding trends, and contract administration practices in the construction projects. The findings of this study contribute to a better understanding of the challenges and opportunities in project management and budgeting in the context of the municipality.

The study revealed that there were variations between the budget allocation and the actual cost of construction in completed projects. This difference can be attributed to factors such as changes in construction methods and designs during project execution, as well as unforeseen elements that were not included in the Detailed Project Reports (DPR).

Local governments should focus on other aspects of development besides road construction for economic growth. Irrigation projects should be given priority for economic development, and budget allocation for these projects should be increased.

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