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e-Procurement in Bangladesh:

Market Concentration, Collusion, and Political Influence

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Introduction

Bangladesh introduced e-Procurement through the e-GP portal twelve years ago with support from the World Bank[1]. The initiative aimed to reduce corruption risks, promote fair competition, and ensure transparency in public procurement. Despite several positive outcomes, the e-GP system has not made a significant impact in reducing corruption, political influence, and collusive bidding through syndication[2]. A 2023 study by TIB also highlights some inherent weaknesses in the system[3]. Around 46% of contracts receive fewer than four bids overall, with 65% of OTM (Open Tendering Method) contracts attracting less than four bidders. Alarmingly, one in five contracts is awarded through a single bid, reflecting a lack of competition. Moreover, the top 5% of contractors control nearly 30% of e-contracts, and their market dominance continues to grow[4]. Over the past decade, the market share of the top 5% of contractors increased by almost 12%, indicating that a few firms wield significant control over public procurement. This clearly points to a serious market concentration problem in Bangladesh's e-Procurement system.

In public procurement, understanding the market structure is essential for analyzing how participants — both bidders and contracting entities — operate and interact. According to Toth et al. (2015), three key factors shape the behavior and dynamics of these actors within a market:

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[1] Assessment of Bangladesh Public Procurement System (2020); available at https://openknowledge.worldbank.org/server/api/core/bitstreams/141e8d31-5961-5e4d-aca6-ab43d79dba96/content

[2] TIB, Governance in Public Procurement: Effectiveness of E-GP in Bangladesh (2020) available at; https://www.tibangladesh.org/articles/research/6137

[3] TIB (2023), e-Government Procurement in Bangladesh: A Trend Analysis of Competitiveness (2012-2023) available at; https://ti-bangladesh.org/images/2023/report/e-gp/e-GP-main-report.pdf?v=1

[4] Ibid

i) Coordination Ability: This refers to how well market participants can align their actions, whether for legitimate collaboration or anti-competitive practices like collusion. Strong coordination among a few dominant players can lead to market manipulation, reducing fair competition.

ii) Internal Sustainability: This involves maintaining discipline within the group of established actors. It depends on the presence of a credible punishment system and effective mechanisms for detecting and addressing non-compliance or cheating within the network. When these systems are robust, they ensure that members adhere to the agreed behavior — whether lawful or not.

iii) External Sustainability: This reflects the market's ability to prevent new entrants from participating, often by creating high entry barriers. Established players may use their influence to limit competition by excluding smaller or emerging firms, thereby maintaining their dominance.

Moreover, different market structures shape the likelihood of collusive behaviour, while at the same time, collusive behaviour can reinforce and create specific market structures. Considering Bangladesh's e-procurement market, which shows characteristics of a highly concentrated structure — with the top 5% of contractors controlling one-third of the total market share — it becomes crucial to assess the depth and implications of this concentration. Understanding the rules of engagement and identifying any potential misconduct within this market structure is essential to evaluate how competition functions and whether smaller players are being systematically excluded. This paper aims to explore these issues, shedding light on the underlying dynamics and their impact on market fairness and efficiency.

Research Objectives:

In view of the above context, this study analyzes the open source data on e-GP based public procurement in Bangladesh for the period 2015-2024 in order to:

- analyses the overall extent of market concentration (in terms of value);
- Market Concentration pattern among the top spending ministries, their changes over time;
- Identify the collusive pattern or hidden networks contributed to market concentration.
- Identify the extent of political influence in the e-procurement system.

Methodology

To achieve the above objectives, we divide the paper in three segments:

1)Market share analysis: Evaluate the market share of the top 5% and bottom 10% of contractors by value of contracts within the highest-spending ministries and divisions. We calculate the market share of top 5% and Bottom 10% based on this formula:

- **Top 5% Market Concentration** $= \mathrm{S}\sum \mathrm{i} = 1\mathrm{k}c_i \times 100$

  Where $\boldsymbol{n}$ = Total number of contractors

  $\boldsymbol{c_i}$= Contract value of the ith contractor

  S= Total sum of all contract values, calculated as:

  $$S = \mathrm{i} = 1\sum \mathrm{nCi}$$

  k = Number of top 5% contractors, where:

$$k = \lceil 0.05 \times n \rceil$$

This is the ceiling function, rounding up to ensure at least 5% of the total contractors are included in the calculation

Sum of the top 5% contract values: $\mathrm{Sum} = \mathrm{i} = 1 \sum \mathrm{kCi}$

2. Collusive Bidding and Cartelization Patterns: In the second part we have employed graph theory-based Network Analysis of joint bidding or consortia. By applying the Louvain algorithm, collaborative clusters of bidders can be identified, revealing patterns of cooperation and potential collusion within the bidding process.

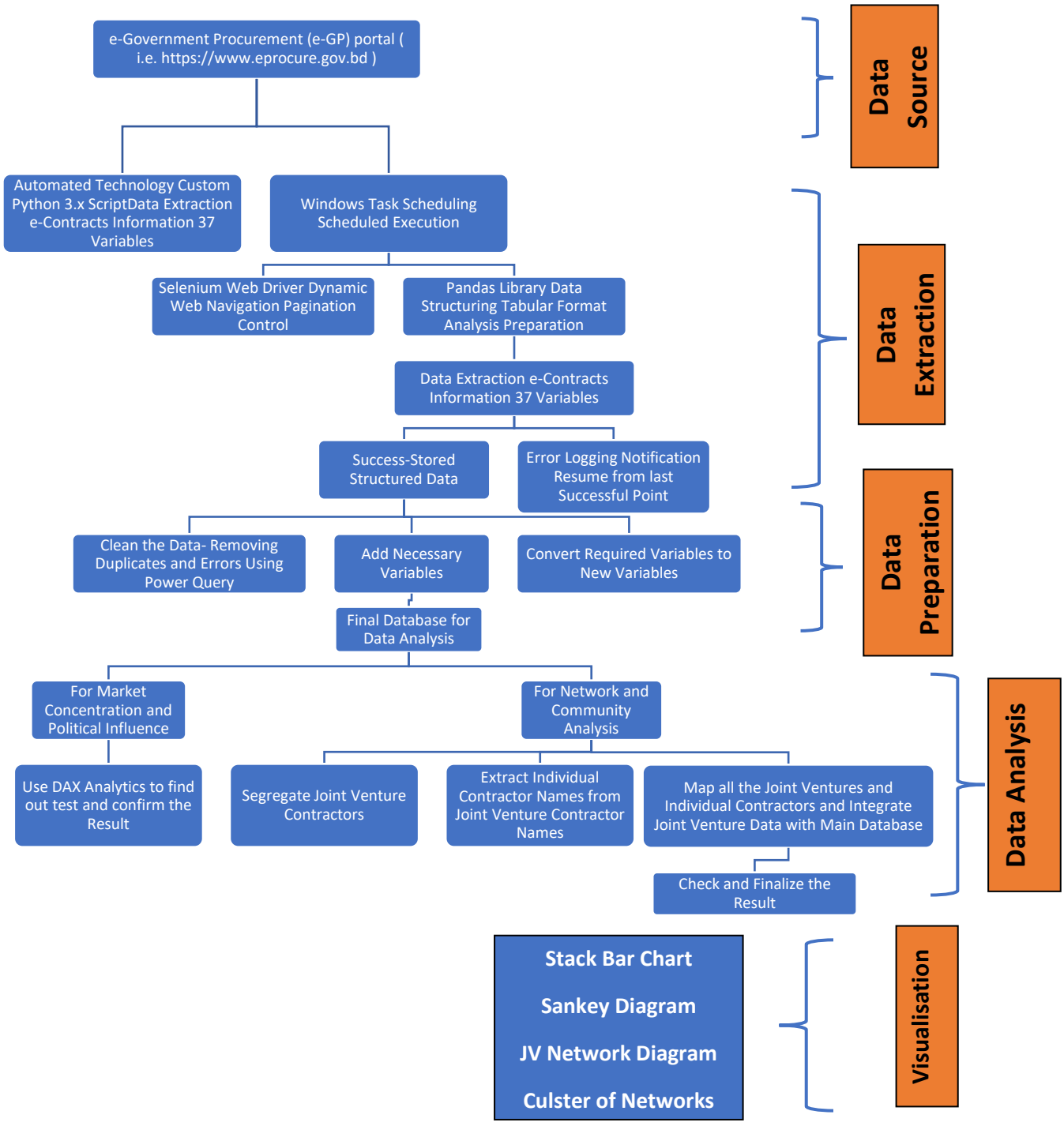
3. Contractor-Political Links: Explore changes in the contractor landscape over time, correlating these shifts with political officeholders or transitions in political leadership

To do that we have followed four step-by-step procedure:

- Step-1: Source of data & Collection process
- Step-2: Data Preparation
- Step-3: Data Analysis
- Step-4: Data Visualization

Details of the procedure are discussed below

Methodology: Step by Step



Step-1: Source of data & Collection process

This study relies on a comprehensive dataset of contract award notification notices sourced from the Bangladesh e-Government Procurement (e-GP) system. Given the substantial volume of data and the dynamic nature of the platform, an automated data collection approach was employed to ensure efficiency and accuracy.

The data was extracted using a custom-built Python script. This automated method facilitated the retrieval of a large corpus of tender information, minimizing manual labor and reducing the risk of human error.

Core Technologies Utilized

Python 3.x: Python has established itself as a leading programming language for data extraction and processing, largely due to its robust framework. The language provides a clean syntax with extensive community support and a rich library ecosystem, making it particularly attractive for data-related tasks.

Selenium WebDriver: This tool allowed for the automated navigation of the e-GP system's web interface. Selenium provided the capacity to interact with dynamic web elements such as pagination controls and dropdown menus, thereby enabling the accurate retrieval of data from multiple pages and sections of the website.

Pandas Library: This library was utilized for efficient data management. Specifically, Pandas was employed to structure the extracted information into organized tabular formats, which facilitated subsequent analysis. The use of Pandas enabled the seamless conversion of raw data into a structured dataframe suitable for data manipulation and statistical processes.

To ensure consistent and timely data acquisition, the execution of the Python script was automated using Windows Task Scheduler. The scheduler was configured to execute the script on a daily basis. Furthermore, the automated workflow incorporated robust error logging and notification mechanisms. These features enabled the monitoring of execution status and the proactive addressing of any interruptions, ensuring that the data collection process could be resumed from the last successful operation without data duplication.

This automated workflow offered several advantages, including data reliability, reduced human error, and the ability to overcome technical challenges associated

with large-scale data retrieval from a dynamic web environment. The collected dataset formed the foundation for the analyses presented in this study. Data quality and validity were paramount and the automated approach was selected to assist in achieving these aims.

Step-2: Data Preparation

Once all the data has been collected, the necessary data cleaning process was carried out. This involved removing typos and eliminating duplicate entries. Additionally, specific variables were converted as needed, such as converting all contract values to Crore BDT. These tasks were accomplished using Power Query in Power BI. With the data now prepared, the next step is to proceed to Data Analysis.

Market Concentration and Political Influence

For Market Concentration and Political Influence Analysis, the prepared data is used for further analysis. Some segregation and aggregation of data has been done using DAX for find out market concentration and political influence. All the calculations have been done using Power BI DAX.

Data Preparation for Joint Venture Analysis

The dataset under analysis was processed to focus exclusively on joint venture collaborations. This involved identifying records within the "Name of Supplier/Contractor/Consultant" column where explicit references to joint ventures were present. For instance, entries such as "Joint Venture of DEDA and SSL20 (JVCA Partners: Starlite Services Limited, Desh Engineering & Development Agency (Pvt.) Ltd.)" were used to classify and isolate relevant rows.

Data Preparation Process is described below-

Categorize Joint Venture Contractors- Joint Venture Contractors has been distinguised from all the Contractors. If the contractors name contains terms indicative of joint ventures, such as "JV," "Joint Venture," or similar patterns has been identified as Joint Venture Contractors. This task has been done by Power BI DAX.

Extracting Contractor Names: From the Extracted Joint Venture Contractors, Individual contractor names were extracted. We searched the individual single contractor in Joint Venture Contractor name, and segregate them. This part is done by Python Code

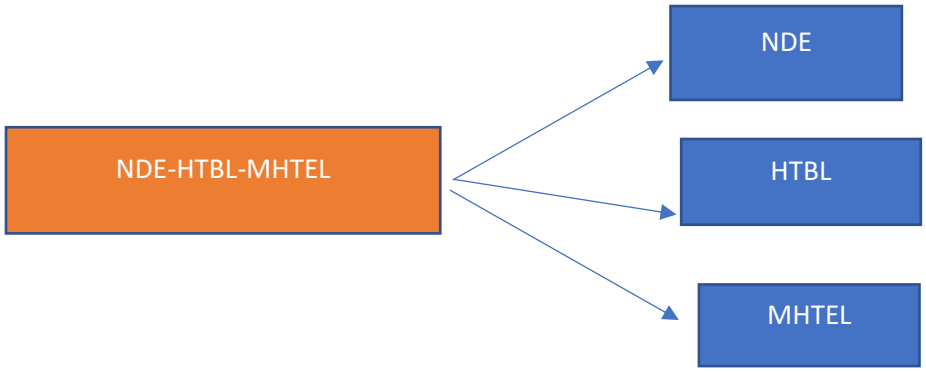
Mapping Contract Values: Corresponding financial values for each joint venture contract were extracted from relevant columns, ensuring all monetary amounts were converted into a consistent format for analysis. This task is also done by Python Code.

Integrate the Extracted Joint Venture Data with Main Database: Finally we integrated the extracted Joint Venture Data with the Main Database for integrated analysis. This part is done in Power BI using DAX and Power Query.

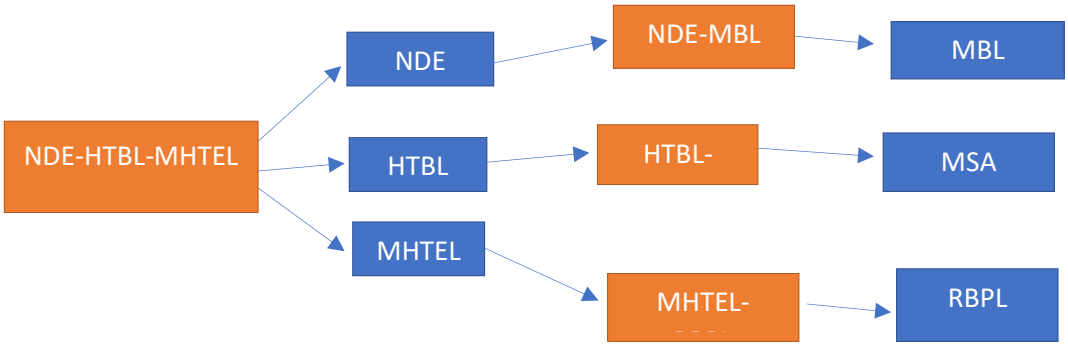
Let's see an example-

1. One Joint Venture Contractor has been identified named – "NDE-HTBL-MHTEL"

2. Then Individual Contractors has been extracted from this Joint Venture Contractor-



3. Finally, when perform this process for all the Joint Ventures and integrate the data. Then We Find the complete mapping of the Joint Ventures made by individual single contractors. We finally get a picture like this



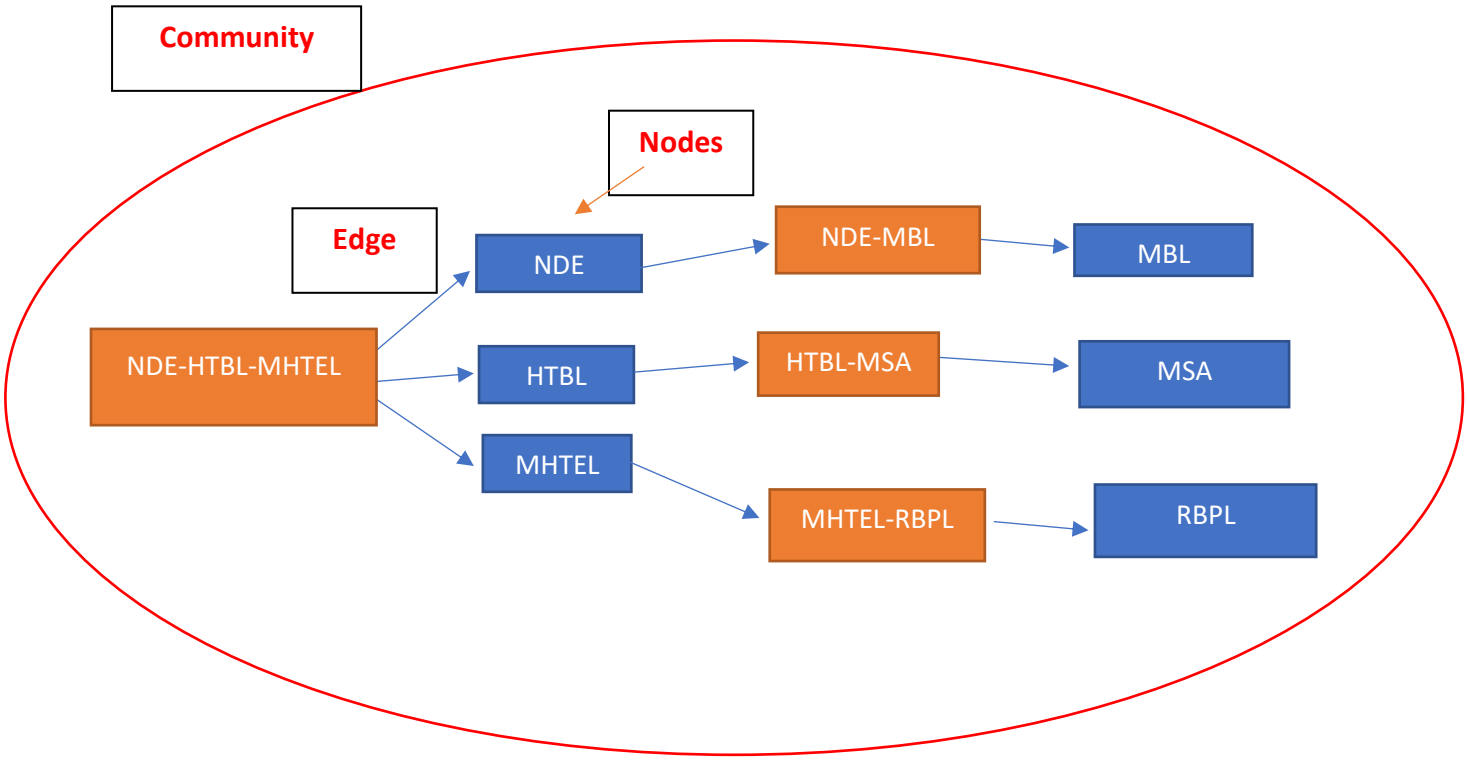
This data preparation process resulted in a dataset structured for network analysis, with nodes representing unique contractors and edges representing their joint ventures. Edge weights were assigned based on the financial value of joint venture contracts, facilitating insights into collaboration intensity.

Step-3: Data Analysis

Network Analysis Model

The contractor collaboration network was modeled as a graph comprising three core elements:

1. **Node**: Represents an individual contractor as a unique entity involved in joint ventures (e.g., Contractor A).
2. **Edge**: Represents a collaboration between two nodes, with edge weight quantifying the financial value of their joint venture contracts. For instance, an edge between Contractor B and Contractor C with a weight of $500 reflects the monetary scale of their collaborative engagement.
3. **Community**: Represents a subgroup of contractors forming densely interconnected clusters, indicating frequent or high-value collaborations. Communities were identified using the Louvain Algorithm, which systematically detects structural groups within the network.



Analyzing Contractor Collaborations Using the Louvain Algorithm

We employ the Louvain Algorithm to uncover community structures within a contractor collaboration network[5]. It is a modularity-based algorithm created to extract communities from large networks[6]. The dataset consists of weighted edges, where weights represent the financial value of joint venture contracts between contractors. By identifying these cohesive subgroups, the research aims to provide insights into collaboration patterns, market dynamics, and inform strategic decision-making for industry stakeholders and policymakers. The Louvain algorithm focuses on maximizing modularity (Q), which measures the strength of community structures in a network. Modularity helps evaluate how well a network is divided into communities (or clusters) by comparing the actual connections between nodes to expected connections in a random network. Let's break down the formula:

[5] Victor et. al, Graph Data Mining for Detecting Collusions in Bidding Processes: A Case Study
[6] Herrera Murillo, D.J (2019); Using social network analysis in open contracting data to detect corruption and collusion risks, Eindhoven University of Technology; https://pure.tue.nl/ws/portalfiles/portal/139867043/Final_Report_Dagoberto.Jose.Herrera.pdf

$$Q = \frac{1}{2_m} \sum_{(i,j)} \left[A_{ij} - \frac{k_i k_j}{2m} \right] \delta(c_{i,} c_j)$$

Description of the Formula:

- A_{ij} = Weight of the edge between nodes i and j: Represents the actual connection between the nodes. In an unweighted network, this would be 1 if there's an edge and 0 if there's not. In weighted networks, it reflects connection strength.
- k_i= Sum of the weights of all edges connected to node i: This is the degree of node i, or the total strength of its connections.
- m= Total weight of all edges in the network: This is the sum of all edge weights, which normalizes the modularity score and scales it based on network size.
- $c_i$and c_j = Communities of nodes i and j: These indicate the groups or clusters to which the nodes belong.
- $\delta(c_{i,} c_j)$= Indicator function:

$$\delta(c_{i,} c_j) = \begin{cases} 1 \ if \ c_i = c_j & (same \ community) \\ 0 \ if c_i = c_j (different \ communities) \end{cases}$$

How Modularity (Q) Works:

- A_{ij} captures the real network connections, while$\frac{k_i k_j}{2m}$ represents the expected number of connections between nodes i and j in a random network.
- The difference $\left[A_{ij} - \frac{k_i k_j}{2m} \right]$shows how much stronger or weaker the actual connection is compared to random chance.
- If nodes i and j belong to the same community$(c_i = c_j)$, the term contributes to the modularity sum, increasing the value of Q.
- If they belong to different communities, the term is ignored (multiplied by 0).

- The higher the modularity (Q), the better the community structure, meaning that more connections exist within communities than between them.

Interpretation of Modularity (Q):

- Q close to 1: Strong community structure, where nodes within communities are highly interconnected and few connections exist between different communities.
- Q close to 0: Weak or no community structure, where connections appear random and are evenly distributed across the network.
- Negative Q: Indicates that the network structure is worse than random chance, suggesting incorrect or forced community assignments.

Step-4: Data Visualization

Market Concentration and Political Influence

After performing Data Analytics using DAX, the result is shown using PowerBI Visuals. Different Charts and Graphical Presentations has been made for Visualization. For Market Concentration, 100% Stack Column Chart has been used. For showing Political Influence and Market Control of the Contractors, Ribbon Chart and Sankey Chart has been shown. For Visualize the Charts and Graphs in Presentation and Reports, Segmented Data has been exported into Excel, then Charts are made and exported into PowerPoint.

Joint Venture Analysis

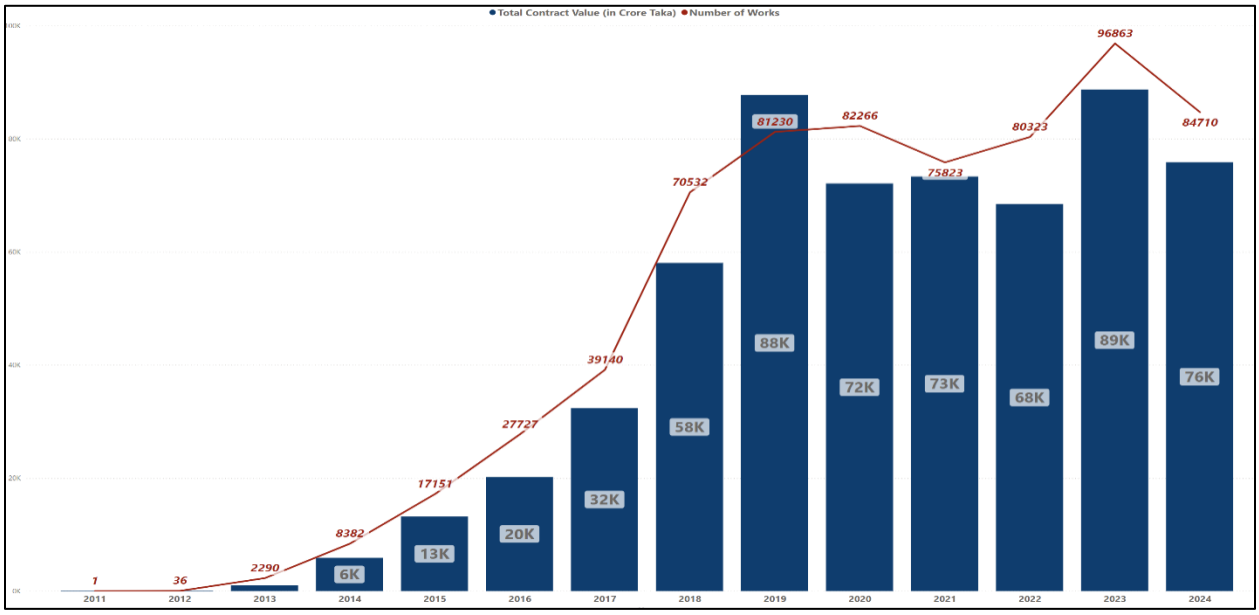
For Visualizing the Joint Venture Data, we have used several techniques. For Network Analysis Model, we have used PowerBI Visual Drill Down Network and Forced- Directed Graph. For Visualizing Louvain Community we use Python Tools. Panda and Matpotlib Library has been used for developing Joint Venture Community Diagrams.

Contract Details

In the process of analyzing public procurement data, a comprehensive dataset of e-contract awards has been compiled, encompassing 666,474 contracts issued by 66 ministries and divisions. These contracts were awarded through 6,914 procuring entities, engaging a total of 52,837 contractors. The cumulative value of these contracts amounts to BDT 596,921 crore, covering the period from 2012 to 2024. A critical finding from this dataset is the highest recorded contract value of BDT 881 crore. Public procurement contracts exceeding this amount (BDT 881 crore) conducted during the period fell outside the scope of e-GP and were therefore not covered in this study. This observation also underscores a significant gap in the electronic Government Procurement (e-GP) system, as high-value contracts continue to be awarded outside the e-GP platform through manual tendering processes. Yearly procurement trend through e-GP system also indicates the same if we compare the government total procurement outlay. According to the Bangladesh Public Procurement Authority, the country spends approximately USD 30 billion annually to public procurement, accounting for 45% of the national budget and nearly 85% of the Annual Development Program (ADP)[7]. Where In 2023, the e-GP system recorded its highest number of awarded contracts, exceeding 96,000 (exactly 96,863), with a total procurement value of BDT 89,000 crore, marking the peak in both volume and value (See Chart-1), which is only one fourth of the total yearly procurement. In 2024, despite political turmoil and a regime change, 84,710 e-contracts were awarded, amounting to BDT 76,000 crore in spending. This trend indicates that public procurement has largely recovered from COVID-19-related disruptions, with the government moving away from the austerity measures previously imposed during the pandemic. In contrast, the years 2020, 2021, and 2022 saw a notable decline in procurement value following the BDT 88,000 crore spent on 81,230 contracts in 2019, highlighting the pandemic's impact on government purchasing trends.

[7] https://businesspostbd.com/national/e-gp-becomes-a-major-breakthrough-as-tk792664cr-tenders-invited

Chart-1: Yearly Procurement Trend



Distribution of works by procurement methods

A significant majority of contracts, 85.11%, are allocated to works, indicating a strong focus on infrastructure and construction projects, while goods contracts account for 14.89% (Chart-2). In terms of procurement methods, the Open Tendering Method (OTM) dominates at 52.83%, followed by the Limited Tendering Method (LTM) at 44.15%, reflecting a mix of competitive and restricted bidding processes (Chart-3). Other methods, such as Request for Quotation (RFQ) (0.99%) and One-Stage Two-Envelope Method (OSTETM) (2.02%), play minor roles, while Direct Procurement Method (DPM) and Selection of Fixed Budget (SFB) are not utilized.

Chart- 2 Types of Works

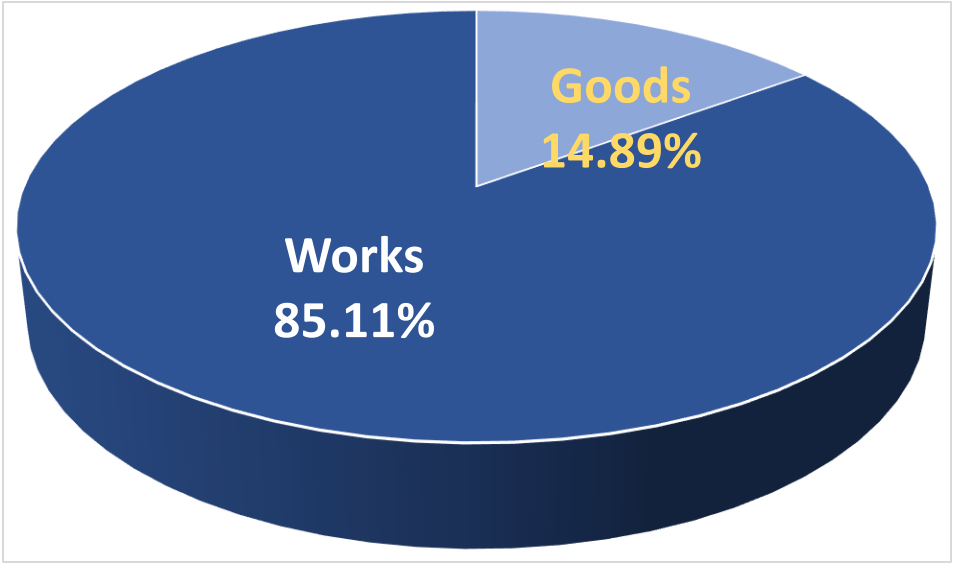
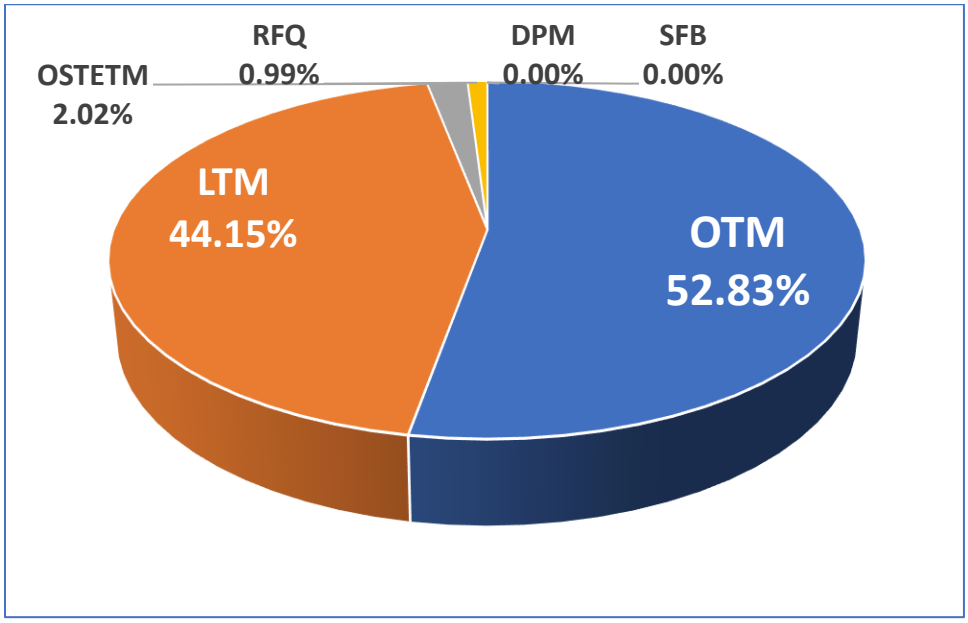


Chart -3 Methods of Procurement

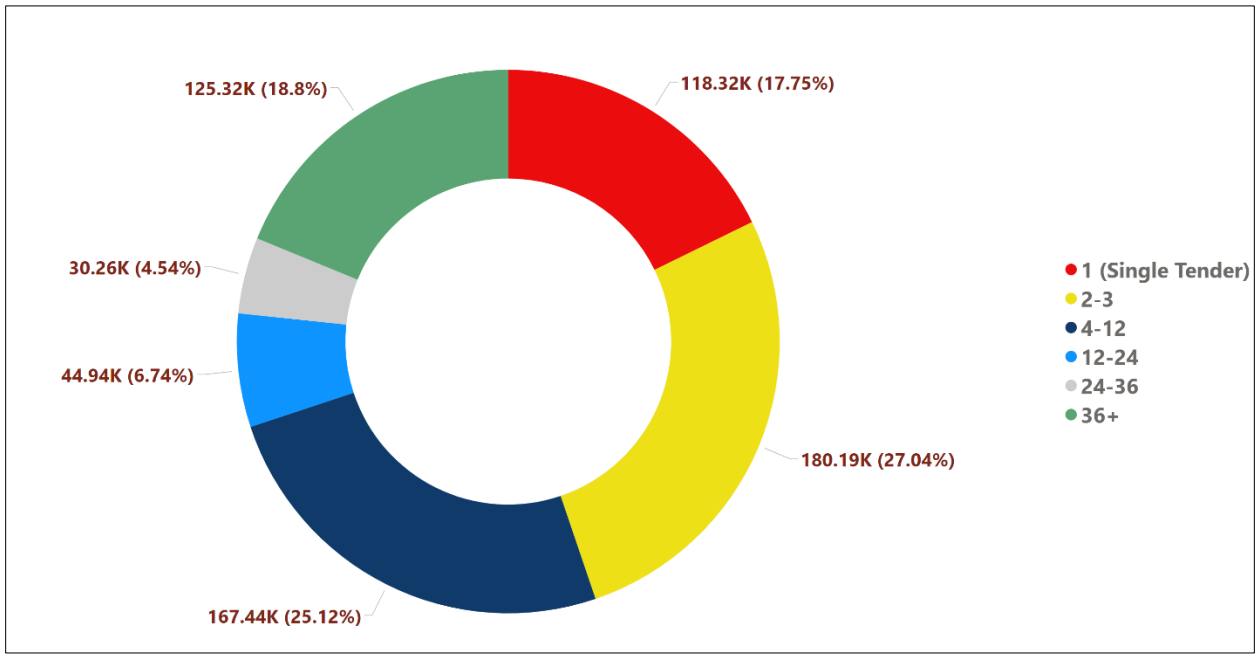


Distribution of Tender by Number of Bids

If we look at the distribution of tenders based on the number of bids received, offers valuable insights into the level of competition in the procurement process. A significant 27.04% (180.19K tenders) received only 2-3 bids, while 25.12% (167.44K) had between 4-12 bids, indicating moderate competition (Chart-4). Alarmingly,

17.75% (118.32K tenders) were awarded through single tendering (red section), raising concerns about transparency and competitiveness. It means almost 47 % tender received less than 4 bids, indicates a e-GP procurement has serious competition problem. On the other hand, only a small proportion of tenders attracted a large number of bidders—6.74% (44.94K) received 12-24 bids, 4.54% (30.26K) had 24-36 bids, and 18.8% (125.32K) saw 36 or more bids, indicating high competition in select cases.

Chart- 4: Distribution of Tender by Number of Bids



Ministry Wise distribution of works

An analysis of the top 10 ministries and divisions in Bangladesh based on contract value from 2015 to 2024 reveals that the Local Government Division leads procurement spending, accounting for 47.2% of the total contract value(Table-1). With 243,191.39 crore BDT spread across 286,782 contracts, this dominance reflects the high volume of works managed at the local level. The Road Transport and Highways Division follows, securing 82,506.12 crore BDT, highlighting substantial investment in road and transport infrastructure. Other key ministries include Water Resources, Housing and Public Works, and Education, each overseeing significant contract allocations. Interestingly, while the Ministry of Housing and Public Works

has a lower total contract value, it manages 103,824 contracts—the second-highest number after Local Government—indicating a focus on frequent but relatively smaller-scale projects. Meanwhile, the Ministry of Health and Family Welfare ranks lowest among the top 10, with 6,755.55 crore BDT, suggesting relatively limited procurement spending compared to infrastructure-focused ministries. Overall top 10 ministries control 91.72 Percent of total contract Value.

Table-1: Works distribution (ministry wise)

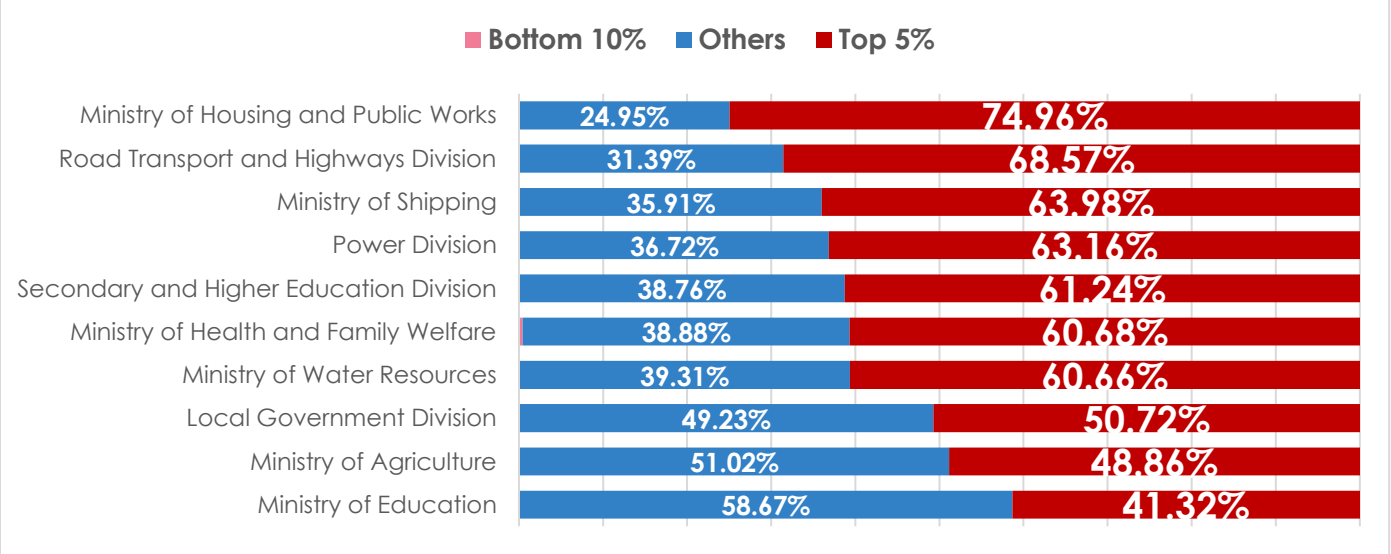
	Ministry/Division:	Total Contract Value(In Crore BDT)	Number of Contracts
1.	Local Government Division	243,191.39	286,782
2.	Road Transport and Highways Division	82,506.12	39,489
3.	Ministry of Water Resources	57,809.10	23,305
4.	Ministry of Housing and Public Works	51,435.60	103,824
5.	Ministry of Education	32,330.59	36,742
6.	Secondary and Higher Education Division	24,543.57	35,119
7.	Power Division	21,397.18	37,097
8.	Ministry of Shipping	13,169.44	9,108
9.	Ministry of Agriculture	7,812.24	18,463
10.	Ministry of Health and Family Welfare	6,755.55	12,491

PART-1: Market Concentration

Ministry-wise Market concentration

To assess the ministry wise market concentration in the e-procurement system, we chose to study the business share of the top 5% and bottom 10% of the contractors/ suppliers. Data shows that in most ministries, a small group of top contractors (5%) controls a significant share of the contract value (Chart-5). The Ministry of Housing and Public Works has the highest concentration, with 74.96% of the total contract value awarded to just 5% of contractors. Followed by Road Transport and Highways Division (68.57%), Ministry of Shipping (63.98%), Power Division (63.16%). These figures indicate a reliance on a limited number of contractors, particularly for infrastructure and construction projects. The Local Government Division accounts for the highest total contract value (243,191.39 crore BDT) and shows a moderate concentration, with 50.72%. The Ministry of Education (41.32%) and the Ministry of Agriculture (48.86%) has the moderate concentration in the top 5%. On the contrary, bottom 10% contractors have a minimal Share. Across all ministries, the bottom 10% of contractors receive less than 1% of the total contract value, as indicated by the small pink section, which indicates limited opportunities for smaller or new contractors in government procurement. While high concentration raises concerns about competition, efficiency, and transparency in public procurement.

Chart-5 Ministry wise Market Concentration



Understand the market concentration pattern over time we compare concentration trends for the top 10 ministries in Bangladesh over two periods: 2015–2019 and 2020–2024. Across most ministries, the top 5% of bidders increased their market share, indicating that fewer contractors are receiving a larger portion of the total contract value (Table-2). Ministry of Housing and Public Works saw one of the largest increases in concentration (15%), rising from 60.32% to 75.06%, suggesting a greater reliance on a select few firms for major road and highway projects. The Road Transport and Highways Division and ministry of education also saw 10% increase, with top bidders' market share growing from 68.96% to 78.58% and from 38.41% to 48.70% respectively. Only the Ministry of Shipping (highlighted in green) saw a only decrease in market concentration from 65.24% to 63.61%. The rising market concentration suggests that a small number of contractors are dominating government procurement, potentially reducing competition.

Table-2: Comparison of concentration between two periods

(2015-2019 and 2020-2024)

Ministry	Total Contract Value (2015-2019)	Total Contract Value (2020-2024)	Top 5% bidders Market Share (2015-2019)	Top 5% bidders Market Share (2020-2024)
Local Government Division	88,242.26	154,949.13	45.62%	53.63%
Road Transport and Highways Division	36,315.44	46,190.68	60.32%	75.06%
Ministry of Education	23,173.50	9,157.09	38.41%	48.70%
Ministry of Housing and Public Works	19,342.25	32,093.35	68.96%	78.58%
Ministry of Water Resources	15,660.59	42,148.51	55.63%	62.52%
Power Division	10,272.38	11,124.80	59.25%	66.77%
Ministry of Health and Family Welfare	3,420.87	3,334.68	59.60%	61.78%
Ministry of Shipping	3,022.10	10,147.34	65.24%	63.61%
Ministry of Agriculture	1,515.46	6,296.78	45.16%	49.75%
Secondary and Higher Education Division	333.67	24,209.89	61.13%	61.24%

Then we look into the yearly market concentration trend of individual ministries to understand the gravity of market concentration.

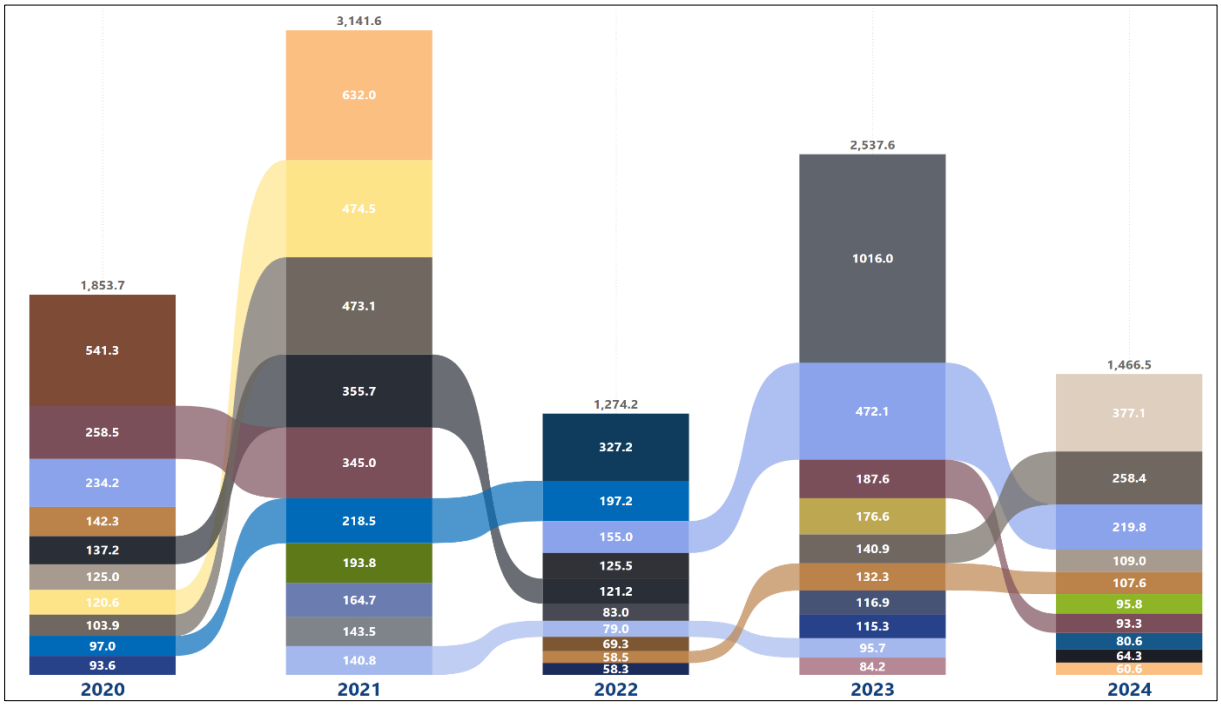
1)First Ministry of Housing and Public Works as its procurement market heavily concentrated. Data shows that the Top 5% of contractors dominate the market throughout the period, with their share starting at **84.33%** in 2015 and gradually declining to **76.74%** in 2024 (Chart-6). Although their share fluctuates slightly over the years, it remains consistently high, which means a small group of large firms holds over three-quarters of all market procurement. On the contrary bottom 10%(smallest players) hold negligible 0.12% of the market. This indicates a near-total exclusion of small businesses from meaningful participation. Data also shows that 'others' 85% of the contractors held only one fourth of the market share 23.14% in 2024 though starts with 15.52% in 2015 and peaking at 32.34%(2019). This distribution underscores a highly concentrated market, where a few dominant firms control the majority of procurement opportunities, mid-sized firms struggle to compete, and small businesses are largely sidelined.

Chart-6: Ministry of Housing and Public Works

To identify the largest contractors for the ministry, we analyzed the top 10 contractors per year from 2020 to 2024 and visualized the results using a Sankey diagram (Chart-7).Our findings reveal that 19 individual contractors and 9 joint ventures (JVs) consistently dominated the top 10 list during this period. Many of these contractors appeared repeatedly across multiple years. Among them,

NATIONAL DEVELOPMENT ENGINEERS LTD., Spectra Engineers Ltd., and Padma Associates & Engineers Ltd. Emerged as the most dominant contractors, securing top positions year after year

Chart-7: **Ministry of Housing and Public Works**
Top 10 Contractors per year (2020-2024)



When we expand the time frame for 10 years (2015- 2024), a total of 63 contractors have made it to the top 10 list at least once in the last 10 years. The combined contract value of these 63 contractors is 18,229.23 crore BDT. This accounts for 35.44% of the total contract value, meaning one-third of all awarded contracts have gone to these top 63 contractors. Among them NATIONAL DEVELOPMENT ENGINEERS LTD. is the largest contractor with a total contract value of 1,294.73 crore BDT. Spectra Engineers Ltd. and Padma Associates & Engineers Ltd. follow closely with 1,123.48 crore BDT and 1,090.22 crore BDT, respectively (See Table-3).

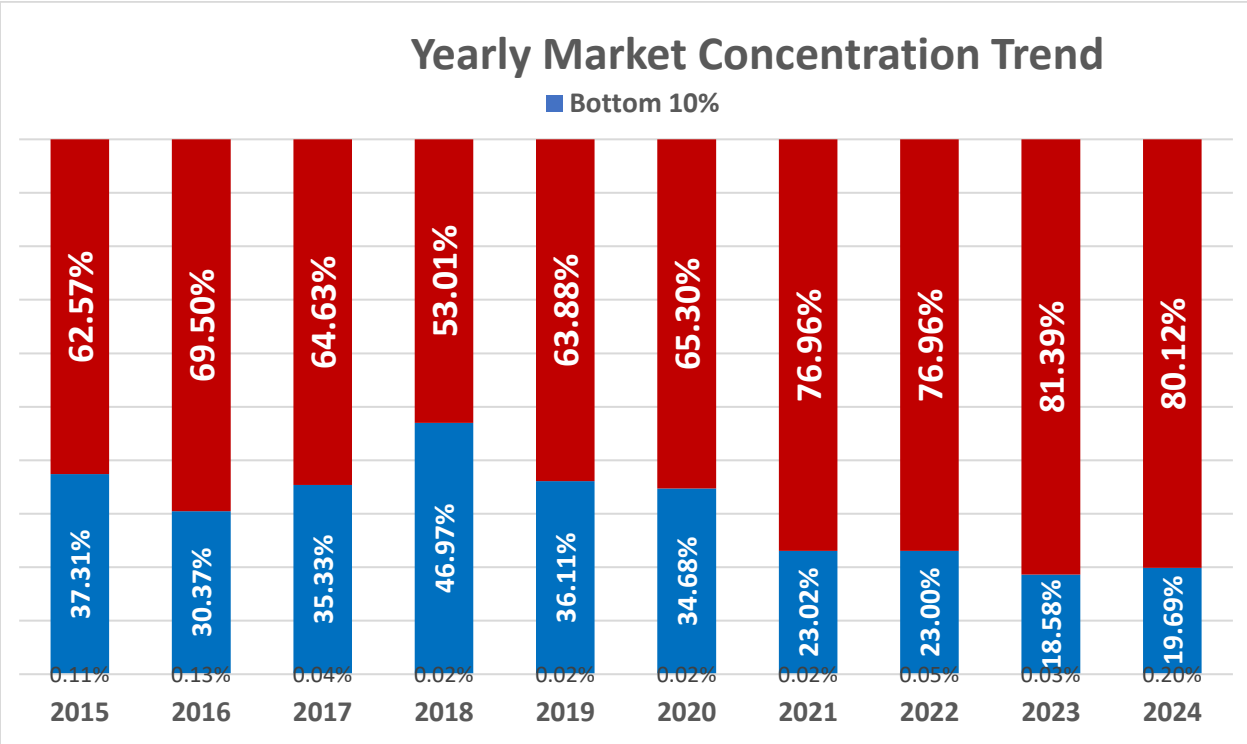
Table-3: Ministry of Housing and Public Works

Top 15 contractor list

Top 15 Contractors in last 10 Years	Total Contract Value
NATIONAL DEVELOPMENT ENGINEERS LTD.	**1,294.73**
Spectra Engineers Ltd.	**1,123.48**
Padma Associates & Engineers Ltd.	**1,090.22**
Noorani Construction Ltd	**1,034.57**
Mazid Sons Construction Ltd.	**954.42**
Kusholi Nirmata Limited	**885.97**
M Jamal & Company Limited	**885.11**
Banga Builders Limited	**856.52**
Sazin Construction Ltd.	**850.87**
M/S. Amanat Enterprise	**706.05**
Wahid Construction Ltd.	**698.64**
G.K.B & Company Private Limited	**607.47**
Mohammed Eunus & Brothers (Pvt.) Ltd.	**485.63**
BABOR ASSOCIATES	**484.66**

2) Road Transport and Highway Division: Data shows that in 2015, the top 5% of contractors of the Road Transport and Highway Division control 62.10% of the market (Chart-8). By 2023, their share had grown to 81.39%, and in 2024, it remained high at 80.12%. This shows that large firms have become more dominant over time, securing a bigger share of contracts. Other Contractors (excluding the top 5% and bottom 10%) held 37.31% of the market in 2015. By 2024, this share had shrunk further to 19.69%, meaning smaller and mid-sized firms are receiving fewer contracts. The bottom 10% of contractors consistently hold a very small percentage of total contracts (~0.1% to 0.2%). This indicates that small firms struggle to secure significant contracts. The increasing dominance of a few major contractors means competition is shrinking, and smaller and mid-sized contractors are getting pushed out of the competition in that division.

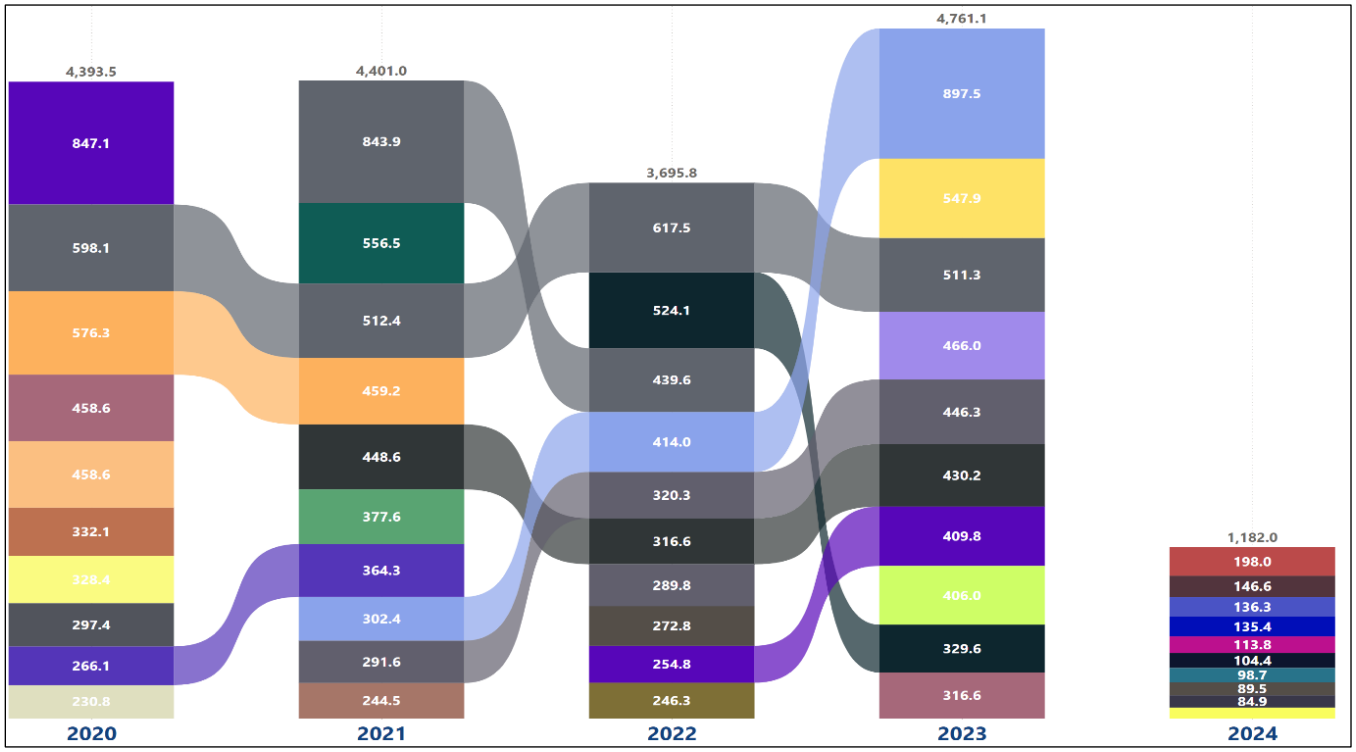
Chart-8: Road Transport and Highway Division



When we analyzed the top 10 contractors per year from 2020 to 2024 and visualized the results using a Sankey diagram (Chart-9). Our findings reveal that total 33 contractors consistently dominated the top 10 list during this period. Among them 12 joint ventures (JVs). Most of the Contractors are repeated each year. Diagram also reveal that Muhammad Aminul Haque (Pvt.) Ltd, NATIONAL DEVELOPMENT ENGINEERS LTD, MOZAHAR ENTERPRISE (PVT.) LTD, Spectra Engineers Ltd. and Hassan Techno Builders Ltd are dominant players. It also reveals that dominant contractors are missing from the top 10 contractors list of 2024.

Chart-9: **Road transport and highway division**

Top 10 Contractors per year (2020-2024)



In the 10 year's time frame (2015-2024) we found total 59 Contractors in Top ten list, 25 of them are joint ventures. These 59 contractors control 45.18% of total contract value of the division worth BDT 37,278 crore. Mozahar Enterprise (Pvt.) Ltd. tops the list secured contract worth 2,440 crore BDT, closely followed by Muhammad Aminul Haque (Pvt.) Ltd(2406 Crore BDT). and Md. Moyenuddin (Bashi) Limited (2107 crore BDT). NATIONAL DEVELOPMENT ENGINEERS LTD. (NDE), Spectra Engineers Ltd., and Rana Builders (Pvt.) Ltd are also top performer (Table-4).

Table 4: Road transport and highway division

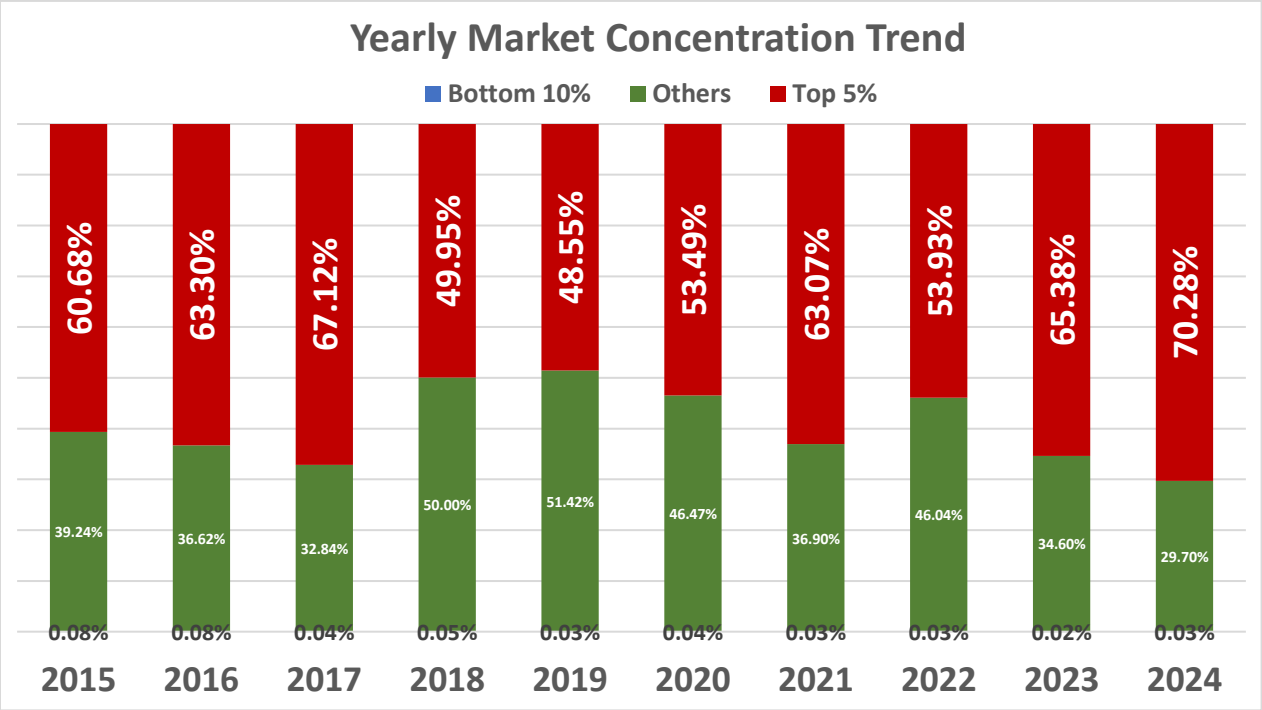
Top 15 contractor list

Top 15 Contractor in Last 10 Years	Total Contract Value
MOZAHAR ENTERPRISE (PVT.) LTD.	2,440.54
Muhammad Aminul Haque (Pvt.) Ltd.	2,406.30
MD. MOYENUDDIN (BASHI) LIMITED	2,107.74
NATIONAL DEVELOPMENT ENGINEERS LTD.	1,826.41
Spectra Engineers Ltd.	1,757.20
Rana Builders (Pvt.) Ltd.	1,650.34
Masud Hi-Tech Engineering Ltd.	1,542.29
Hassan Techno Builders Ltd.	1,530.92
Taher Brothers Ltd.	1,246.27
M. M. Builders & Engineers Ltd.	1,244.43
Wahid Construction Ltd.	1,149.68
Toma Construction & Co. Limited	1,077.11
RAB-RC (PVT) LIMITED	969.20
Md. Mahfug Khan Ltd	877.27

3) Ministry of Water Resources:

In the Ministry of Water Resources The Top 5% of contractors dominate the market throughout the period, with their share ranging from 60.68% in 2015 to a peak of 67.12% in 2017 (Chart-10). While their share slightly fluctuates over the years, it remains consistently high, accounting for highest 70.28% in 2024. The middle-tier group (Others) experiences a declining share overall. Bottom 10% market share almost negligible (.03-.08%).

Chart-10: Ministry of Water Resources



When we look into the Top 10 contractors per year for the period of 2020-2024 data revealed that total 30 contractors in Top 10 list (Chart-11). 7 of them are joint ventures (JV) or (JVC). Sankey diagram reveals that GOLAM RABBANI CONSTRUCTION LTD., M. M. Builders & Engineers Ltd. and M/S Saleh Ahmed appeared repeatedly almost every year in the top 10 contractor list from 2020 to 2024, meaning they have consistently secured contracts in this period. In 10 years time period 58 contractors secured a place in the Top 10 list. 25 of them are joint venture companies. Total 23.233 crore BDT worth works won by those contractors, which is 40.19% of total contract value. GOLAM RABBANI CONSTRUCTION LTD tops in the list of Top 15 Contractor in last 10 Years won 2313.98 crore BDT worth contract (Table-5). Following by Mohammed Eunus & Brothers (Pvt.) Ltd. (1,699.08 crore BDT) and M/S. Amin & Co. (crore 1,181.81 BDT)

Chart-11: **Ministry of Water Resources**

Top 10 Contractors per year(2020-2024

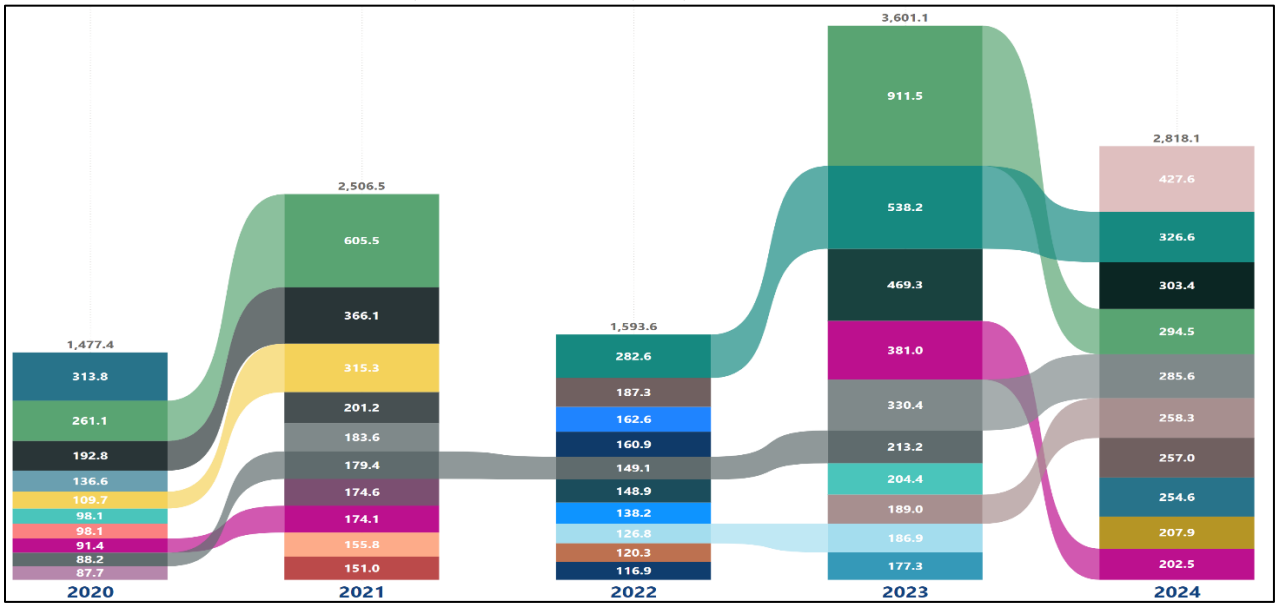


Table-5 **Ministry of Water Resources**

Top 15 contractor list

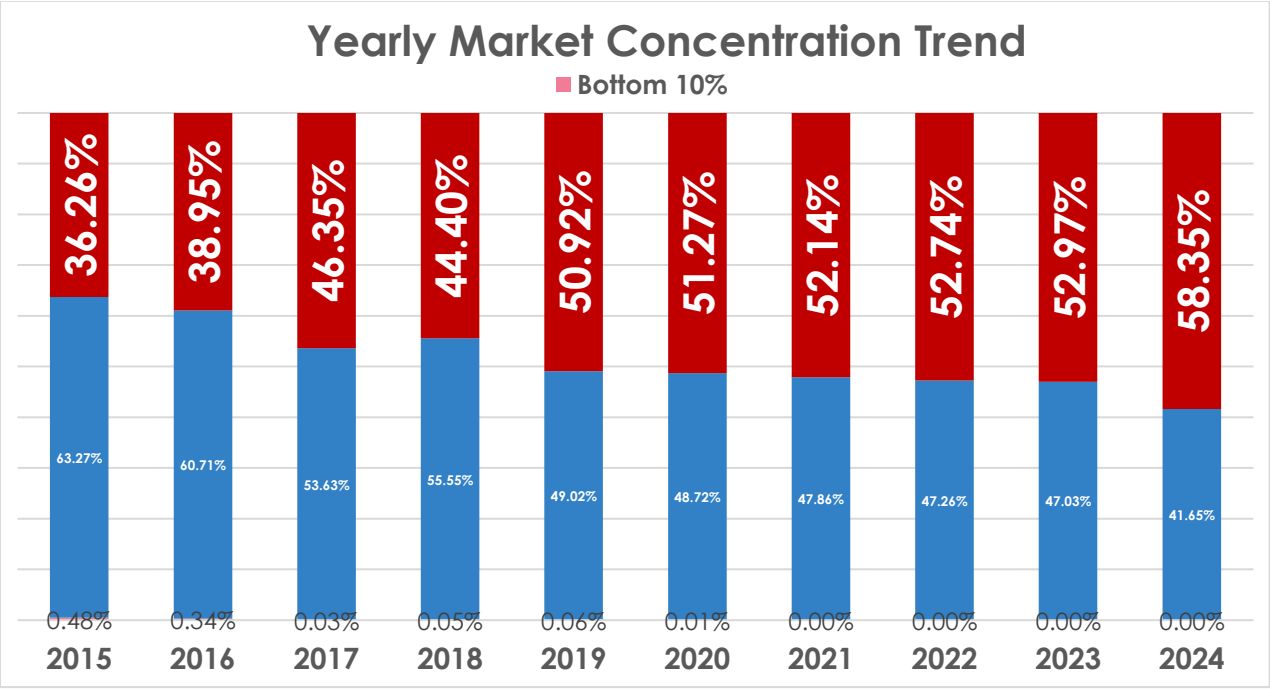
Top 15 Contractor in Last 10 Years	Total Contract Value
Golam Rabbani Construction Ltd.	2,313.98
Mohammed Eunus & Brothers (Pvt.) Ltd.	1,699.08
M/S. Amin & Co.	1,181.81
M. M. Builders & Engineers Ltd.	967.96
Nationtech Communications Ltd	950.65
M/S Saleh Ahmed	826.27
M/S. Hassan & Brothers	814.93
Western Engineering (Pvt.) Ltd.	806.90
M/S Rahman Engineering	785.85
M/S. Md. Jamil Iqbal	736.20

M/S. Amir Engineering Corporation	**607.35**
Dockyard & Engineering Works Limited	**546.12**
M/S. A. S. Construction	**537.30**
M/S Abul Kalam Azad	**496.72**

4) Local Government Division

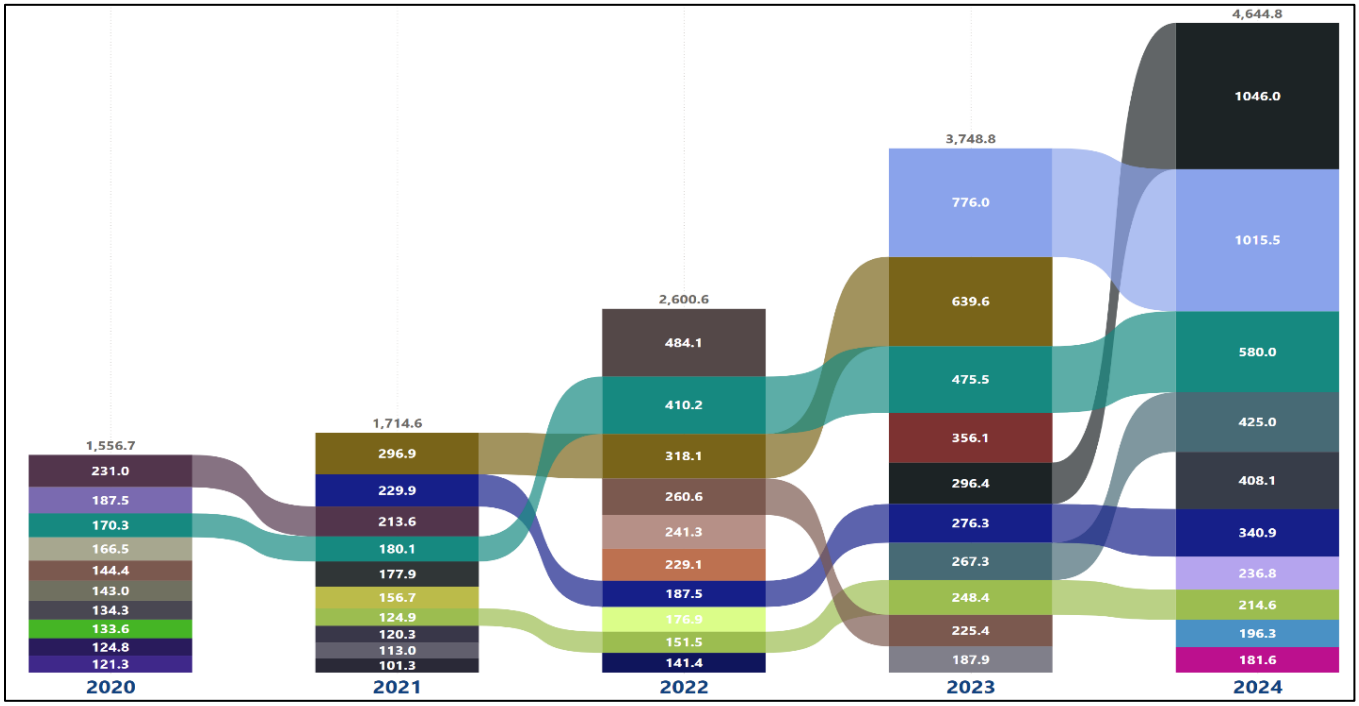
Compared to other government ministry or division Local Government Division has moderate concentration problem. The dominance of the top 5% contractors has grown substantially from 36.26% in 2015 to a staggering 58.35% in 2024 (Chart-12). On the contrary share of mid-tier contractors ("Others") has consistently declined from 63.27% in 2015 to 41.65% in 2024. This trend suggests that medium-sized contractors are losing their foothold in LGD procurement.

Chart-12: Local Government Division



Analyzing the Top 10 contractors per year from 2020 to 2024, we identified a total of 32 contractors, including 6 joint ventures (JVs) (Chart-13).bThe data highlights Md. Khairul Kabir Rana, M/S Hamim International, and Mohammed Eunus & Brothers (Pvt.) Ltd. as the most consistent performers, appearing in the list every year. Additionally, Monir Engineering And Construction Ltd. (absent in 2024) and EFTE.ETCL (PVT.) LIMITED (absent in 2020) secured a place in the Top 10 for four out of five years, demonstrating strong and steady performance.

Chart-13: Local Government division
Top 10 Contractors per year (2020-2024)



Over the 10-year period (2015-2024), a total of 65 contractors appeared in the Top 10 list, collectively securing 11.71% of the total contract value, amounting to 28,475 crore BDT. Mohammed Eunus & Brothers (Pvt.) Ltd. emerged as the top contractor, with a total contract value of 2,342.48 crore BDT, followed closely by NATIONAL DEVELOPMENT ENGINEERS LTD., which secured 1,793.62 crore BDT (Table-6). Ranking third and fourth, M/S Hamim International and EFTE.ETCL (PVT.) LIMITED secured 1,537.26 crore BDT and 1,451.77 crore BDT, respectively, demonstrating their strong presence in the industry.

Table-6: Local Government Division

Top 15 contractor list

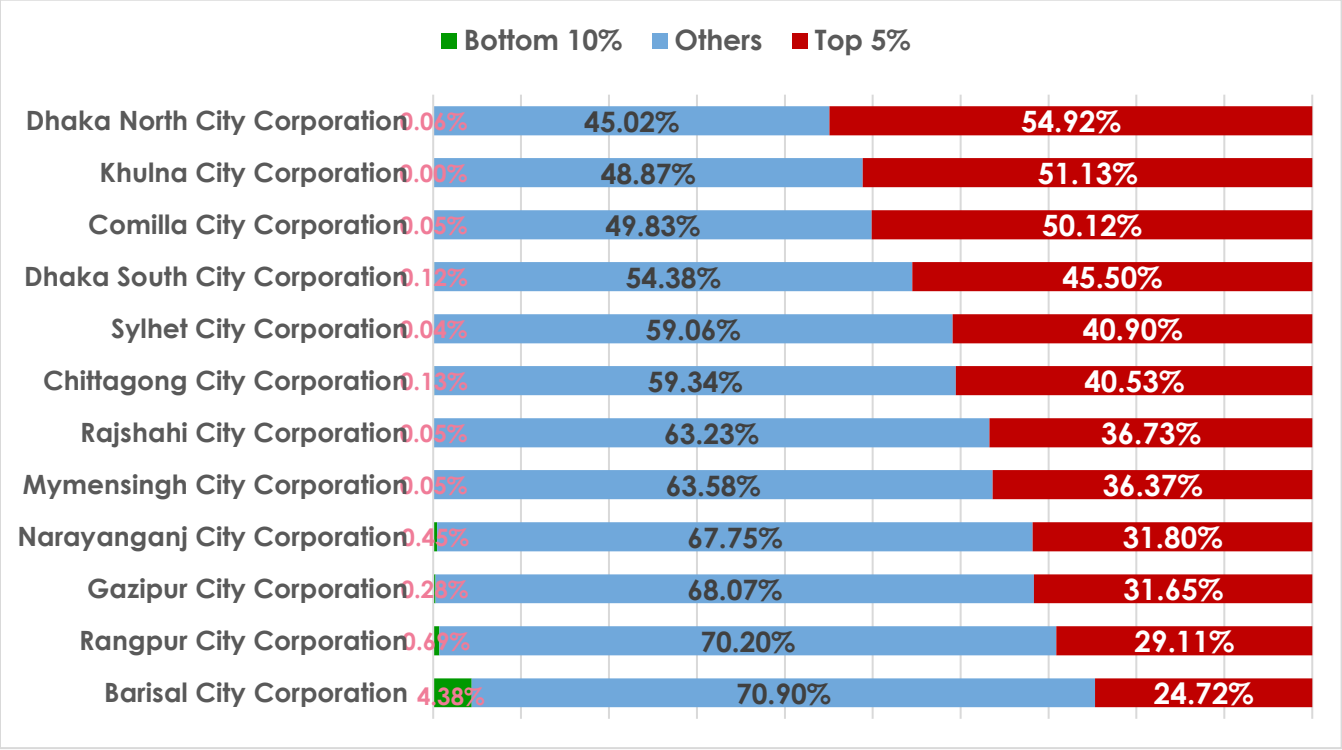
Top 15 Contractor in Last 10 Years	Total Contract Value
Mohammed Eunus & Brothers (Pvt.) Ltd.	2,342.48
NATIONAL DEVELOPMENT ENGINEERS LTD.	1,793.62
M/S Hamim International	1,537.26
EFTE.ETCL (PVT.) LIMITED	1,451.77
Barendra Construction Ltd.	1,342.42
Md. Khairul Kabir Rana	1,203.77
M/S. Kohinoor Enterprise	857.63
Monir Engineering And Construction Ltd.	780.69
JAKAULLAH AND BROTHERS LIMITED	735.47
Mr. U.T.Mong	699.49
M/S Hasan Enterprise	694.80
M/S Shamim Traders	660.56
S. Ananta Bikash Tripura	629.85
Shaikat Enterprise	622.55

5) Market Concentration in City Corporations

In most city corporations, the top 5% of contractors control a significant portion of the total contract value (Chart-14). Dhaka North City Corporation (54.92%), Khulna City Corporation (51.13%), and Comilla City Corporation (50.12%) have the highest concentration of contract value within the top 5%. Barisal City Corporation (24.72%) has the lowest contract concentration among the top 5%, indicating a more distributed allocation. Barisal (70.90%), Rangpur (70.20%), and Gazipur (68.07%) have the highest proportion of contracts distributed among mid-level ("Others" Category) contractors. In most city corporations, the bottom 10% hold a negligible share (close to 1%). Barisal City Corporation (4.38%) is the only exception where smaller contractors hold a comparatively larger share. Market concentration pattern

of development authorities in major cities such as Rajdhani Unnayan Kortipokkho (RAJUK), Chittagong Development Authority (CDA) and Khulana Development Authority (KDA) is more acute. Top 10 contractors are awarded 45.4% of entities total contract value worth 518.81 crore BDT. 96.7% of CDA's total contract value awarded to Top 10 contractors (Total Contract Value 1306.25 Crore BDT). Similarly, Top 10 Contractors Awarded 95.5% of KDA's Total Contract Value. (Total Contract Value 397.13 Crore BDT).

Chart-14: Market Concentration in City Corporations (2020-2024)



Part-2: Joint Venture or Consortia analysis & pattern of Collusion

The findings clearly indicate that e-government procurement is highly concentrated and exhibits oligopolistic characteristics, where a few dominant contractors control a significant share of the market. The frequent presence of joint ventures (JVs or JVCs) in the Top 10 (5 years) and Top 15 (10 years) lists further underscores this pattern, as major players collaborate with each other or mid-sized firms to strengthen their market position, which is not easily detectable and not reflected in the market share discussed above. A prime example is Mymensingh City Corporation's Top 15 list, which consists of eight individual contractors and seven joint ventures, showcasing how leading firms strategically partner to secure contracts. Notably, UDC Construction Ltd. participates in multiple JVs, including UDC-NHE JV, UDC Construction Ltd.-M/S. Rumi Construction JV, and UDCMRCJV. Similarly, Faridpur Jannat Construction Ltd. is involved in two JVs with RAB-RC (PVT) LIMITED and MBPL-FJCL JV. Other notable collaborations include AWR Developments (BD) Ltd. & Sagar Info Builders Ltd. in SIBL-AWR JV and M/S Mohiuddin Ahmed & M/S K.K Enterprise JV. These trends highlight two key insights: 1)top contractors consistently secure contracts through JV formations, and 2)their actual market influence is even greater than it appears, reinforcing their dominance in the procurement system.

In a concentrated market structure, three primary collusion schemes—based on bidding behaviours—have been identified by Tóth et al. (2015) [8] and Fazekas & Tóth (2023) [9]. These include Withheld Bids (Type A), Losing Bids (Type B), and Joint Bids (Type C).

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[8] Tóth, B., Fazekas, M., Czibik, Á., & Tóth, I. J. (2014). Toolkit for detecting collusive bidding in public procurement: With examples from Hungary. Budapest: Government Transparency Institute

[9] Fazekas, M., Toth, B., Wachs, B., (2023) Public procurement cartels: A large-sample testing of screens using machine learning Working Paper series: GTI-WP/2023:02 Budapest, Hungary: Government Transparency Institute

- Type A (Withheld Bids): Firms eliminate competition by strategically withholding bids, allowing pre-selected contractors to win without genuine competition.
- Type B (Losing Bids): Firms simulate competition by submitting deliberately losing bids or inflated bid prices, ensuring a predetermined winner while maintaining the illusion of a fair process.
- Type C (Joint Bids): Competing firms collaborate by submitting joint bids, reducing competition in a structured manner. This form of collusion is formalized through contracts, making it distinct from the other types.

While Types A and B rely on subcontracting or side payments for rent allocation, Type C distributes profits transparently through formal agreements within the joint venture, indicating a more structured and legally embedded collusion scheme Effectively tackling Type-C collusion remains a significant challenge, as public procurement laws often fall short in addressing such sophisticated forms of bid coordination. Without advanced monitoring mechanisms, detecting and preventing these practices is nearly impossible. However, many countries counteract this issue through competition law. For example, the Competition Commission of South Africa has advised procurement officials to exercise heightened vigilance when evaluating joint bids, as these collaborations can potentially function as cartels, fostering collusion rather than fair competition[10]. While joint bidding can help smaller firms pool resources and compete for large-scale projects, it also opens the door for market manipulation, allowing dominant players to exert greater control over procurement processes. The OECD Competition Committee has cautioned member countries' procurement authorities to disqualify bidding consortia if the participating firms possess the economic, financial, and technical capacity to independently supply the procured goods or services[11].

Joint Venture (JV) in Bangladesh e-procurement

In Bangladesh's e-procurement system, Joint Ventures (JVs) account for 27.97% of the total awarded contract value, amounting to approximately 166,987 crore BDT,

[10] Competition Commission of South Africa: A Guide on Promoting Competition in Public Procurement (2022) accessed through: https://www.compcom.co.za/wp-content/uploads/2022/03/A-Guide-on-Promoting-Competition-in-Public-Procurement-15March2022.pdf

[11] OECD (2007) Public Procurement – The Role of Competition Authorities in Promoting Competition accessed through; https://www.oecd.org/content/dam/oecd/en/publications/reports/2008/01/public-procurement-the-role-of-competition-authorities-in-promoting-competition_fd723abe/8ed0c7ba-en.pdf

despite representing only 2.87% of the total number of works (Table-7). This suggests that JVs are primarily engaged in large-scale, high-value projects. Additionally, competition is significantly lower in JV contracts, with an average of only 3.95 bids per project, compared to 24.08 bids for single contracts. This trend raises concerns about market concentration and potential collusion, as firms may be forming pre-arranged agreements that limit competitive bidding. To better understand the patterns of JV formation, identify the key players involved, and assess their impact on market concentration, we have developed a structured data processing and analysis method. This approach (detailed in the methodology section) allows us to visualize bidder collaboration networks across different ministries and divisions.

Table-7: Number of JVs and market share

	Single Contract	Joint Venture Contract
Number of Contractors	**42,846**	**11,448**
Total Contract Value	**429,934.07**	**166,987.06**
Percentage of Contract Value	**72.03%**	**27.97%**
Number of Works	**647,364**	**19,110**
Percentage of Number of Works	**97.13%**	**2.87%**
Average Bids	**24.08**	**3.95**

Road Transport and Highway division

In this division Joint Venture (JV) Contracts hold a larger share of contract value (53.66%) than Contracts awarded to single contractors (46.34%), despite representing only 3.91% of the total number of works (Table-8). This suggests that JVs are primarily securing large-scale, high-value projects, whereas single contractors handle a much higher number of smaller projects. Competition is significantly lower in JVs, with an average of only 3.88 bids per project, compared to

9.10 bids for other contracts. This could indicate potential market control by a select group of firms, possibly reducing open competition.

Table-8: Joint venture market share in Road Transport and Highway division

	Single Contract	Joint Venture Contract
Number of Contractors	3488	875
Total Contract Value	38,298.32	44,340.26
Percentage of Contract Value	46.34%	53.66%
Number of Works	38290	1558
Percentage of Number of Works	96.09%	3.91%
Average Bids	9.10	3.88

Data also reveals that Rana Builders (Pvt.) Ltd. leading the list of joint venture contractors in the division, by participating in a total 110 JVs secured 235 contracts while also securing 330 contracts individually (Table-9). Followed by Hassan Techno Builders Ltd. With 104 JVs secured 239 contracts. M. M Builders &Engineers Ltd. & MD. MOYENUDDIN (BASHI) LIMITED secured 126 and 134 contracts formed spider networks (Chart-15). stands out with the highest number of individual contracts (481) despite participating in 63 JVs. Some firms, such as Muhammad Aminul Haque (Pvt.) Ltd., appear to be heavily involved in individual contracting, securing 3,807 contracts individually, but only 29 through JVs. Conversely, M/S Janmabumi Nirmata and Ohiduzzaman Chowdhury show a greater reliance on JVs, with relatively low individual contract counts (22 and 23, respectively). This data suggests that some contractors use JVs as a primary strategy for securing projects.

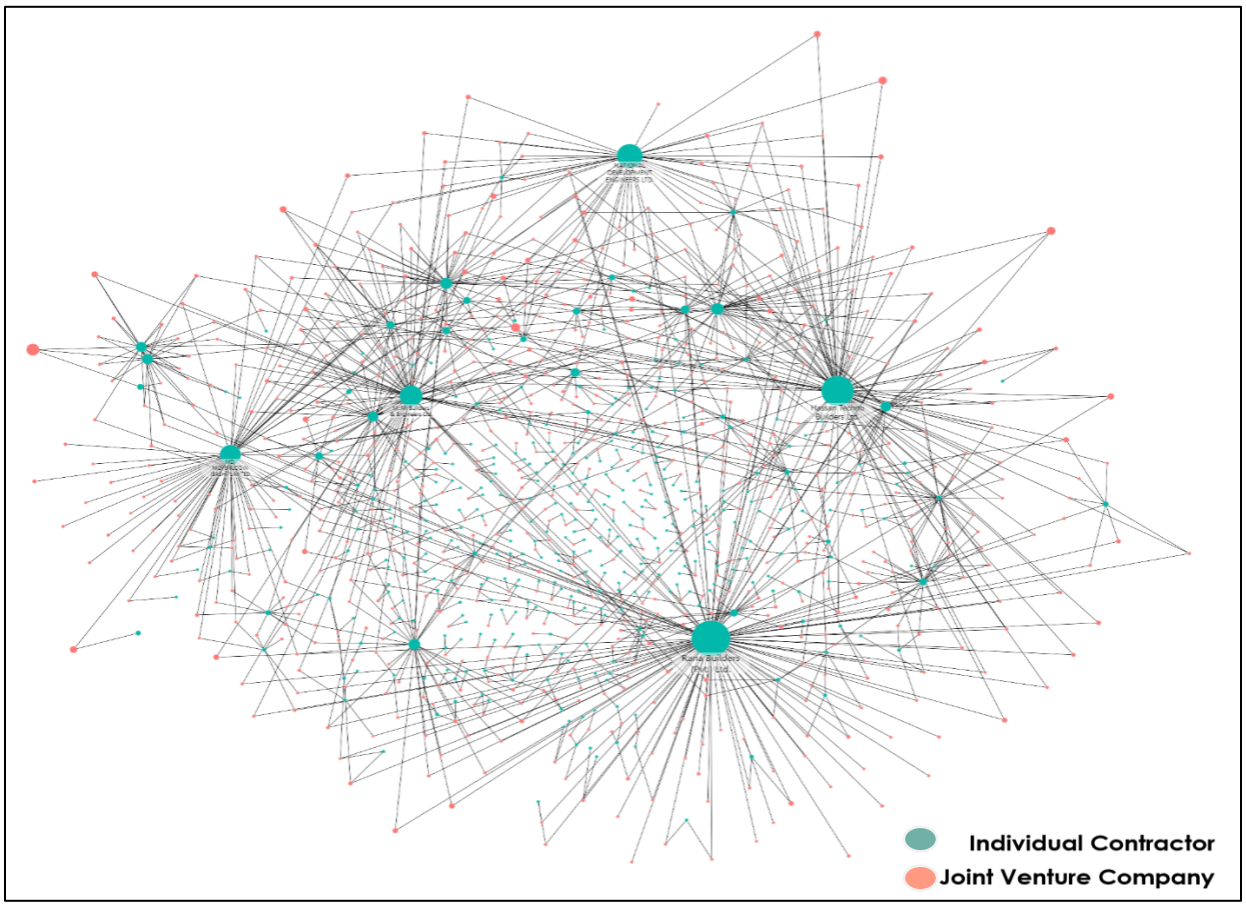
Table-9: Top 20 Joint Venture Contractors

Road Transport and Highway Division

Contractor Name	Number of Joint Ventures	Number of Contracts	Number of Contracts as Individual Contractor
Rana Builders (Pvt.) Ltd.	110	235	330
Hassan Techno Builders Ltd.	104	239	317
NATIONAL DEVELOPMENT ENGINEERS LTD.	45	83	130
M. M. Builders & Engineers Ltd.	62	126	330
MD. MOYENUDDIN (BASHI) LIMITED	63	134	481
Masud Hi-Tech Engineering Ltd.	35	64	98
M/S Saleh Ahmed	25	69	294
Orient Trading & Builders Ltd.	35	63	114
Taher Brothers Ltd.	29	55	115
M/S Janmabumi Nirmata	19	75	22
Ohiduzzaman Chowdhury	20	78	23
Muhammad Aminul Haque (Pvt.) Ltd.	29	73	3807
Spectra Engineers Ltd.	12	45	16
M/S. Md. Jamil Iqbal	16	33	114
M/S. Kohinoor Enterprise	18	41	440
Mir Habibul Alam	12	39	163
RAB-RC (PVT) LIMITED	17	35	153
MOZAHAR ENTERPRISE (PVT.) LTD.	13	31	1373
Wahid Construction Ltd.	8	31	74
Md. Mahfug Khan Ltd	12	27	198

Chart-15: Visualised Joint venture networks

Road Transport and Highway Division



When we match the JV contract value with individually awarded contract value for a contractor reveals that just 11% of contractors (384 out of 3,488) control a staggering 93.55% of the total contract value of that division. Furthermore, an even smaller elite group of 35 contractors (only 1%) control 72.9% of the total contract value, amounting to 60,237.67 crore BDT.

The Louvain algorithm analysis of the Joint Venture (JV) datasets provides deeper insights into market dynamics and uncovers hidden contractor networks that are not immediately visible. In this division, nine major contractor communities were identified, each consisting of at least 10 contractors (nodes) (Chart 16-23). These communities collectively include 242 individual contractors, connected through 319 contracts (edges).

Chart 16: Community-03 (R&H)

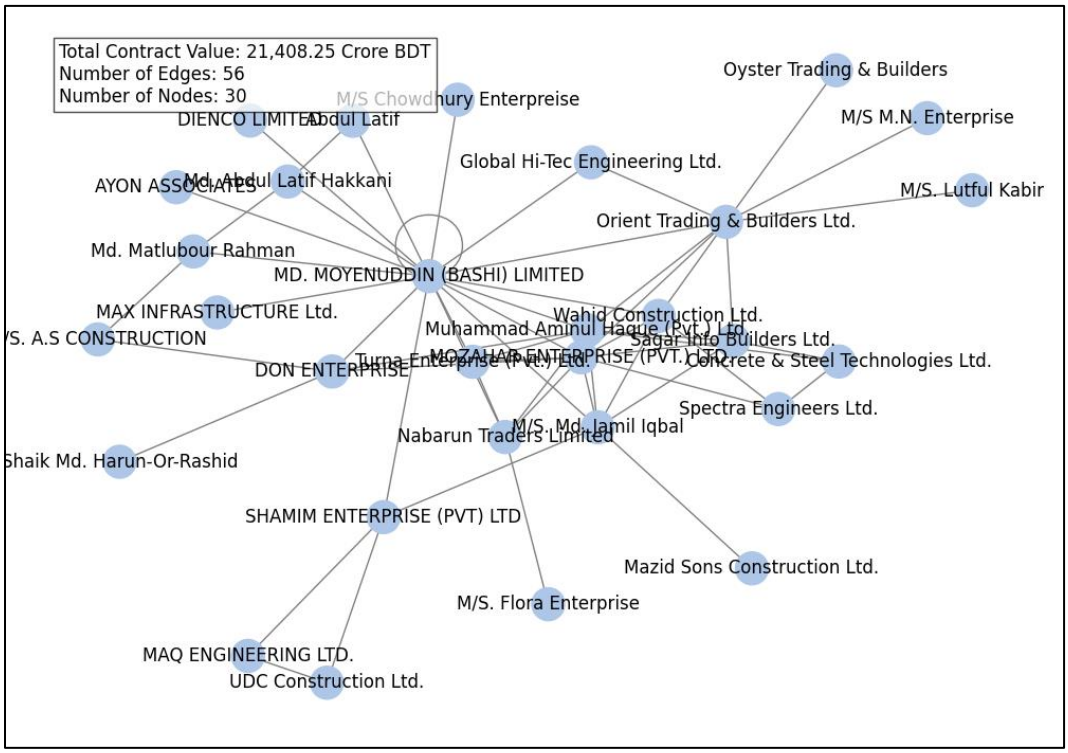


Chart 17: Community-01 (R&H)

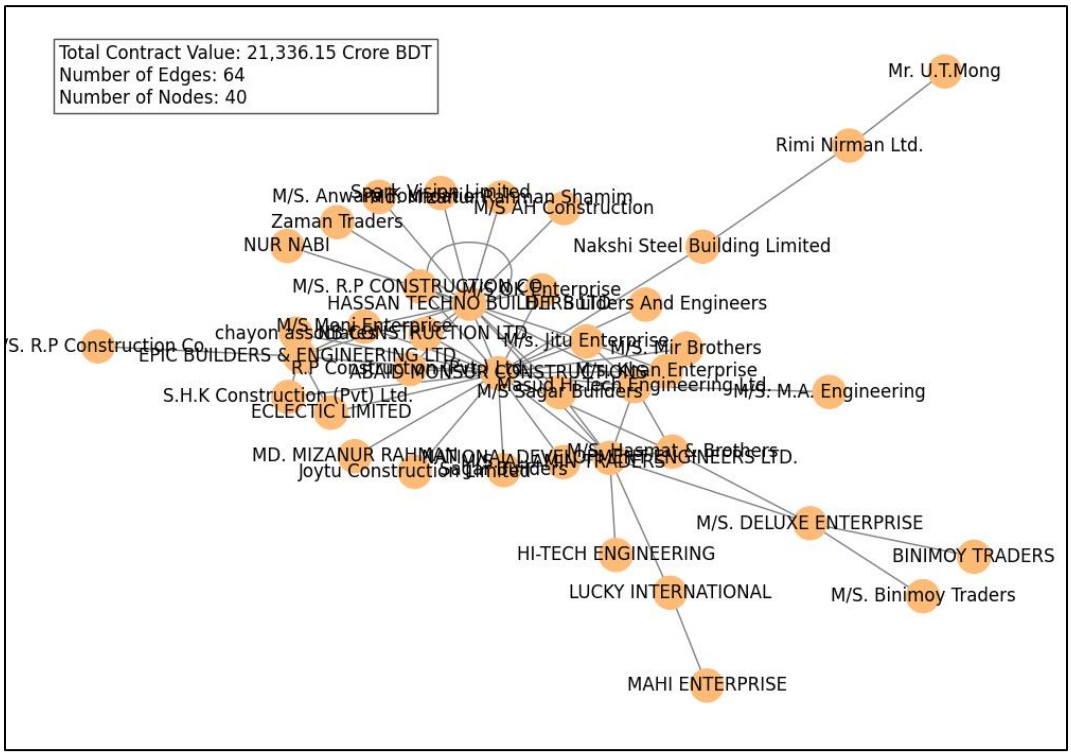


Chart 18: Community_0 (R&H)

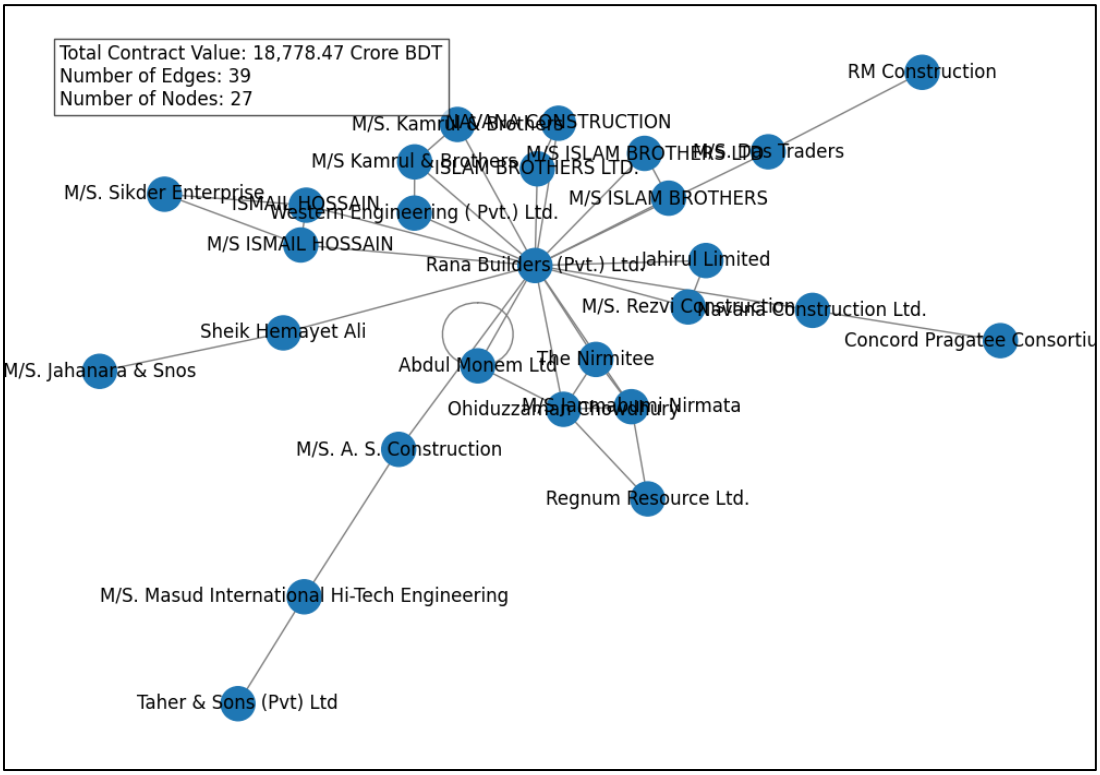


Chart 18: Community_0 (R&H)

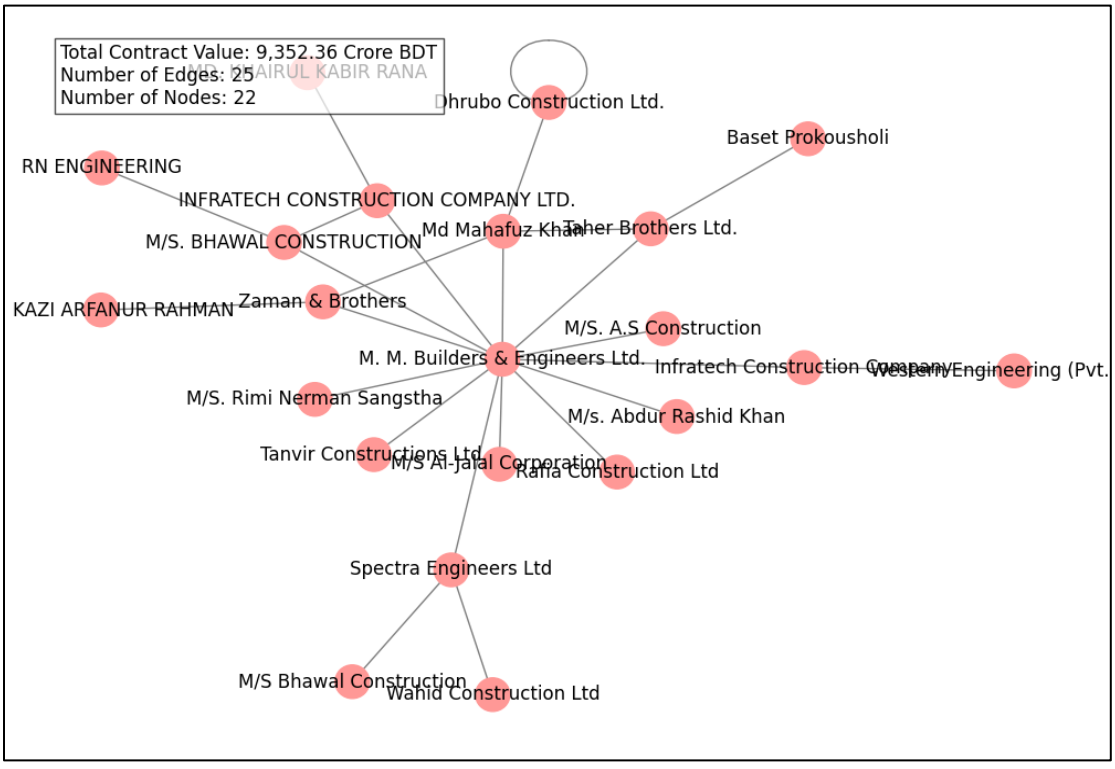


Chart 19: Community_13 (R&H)

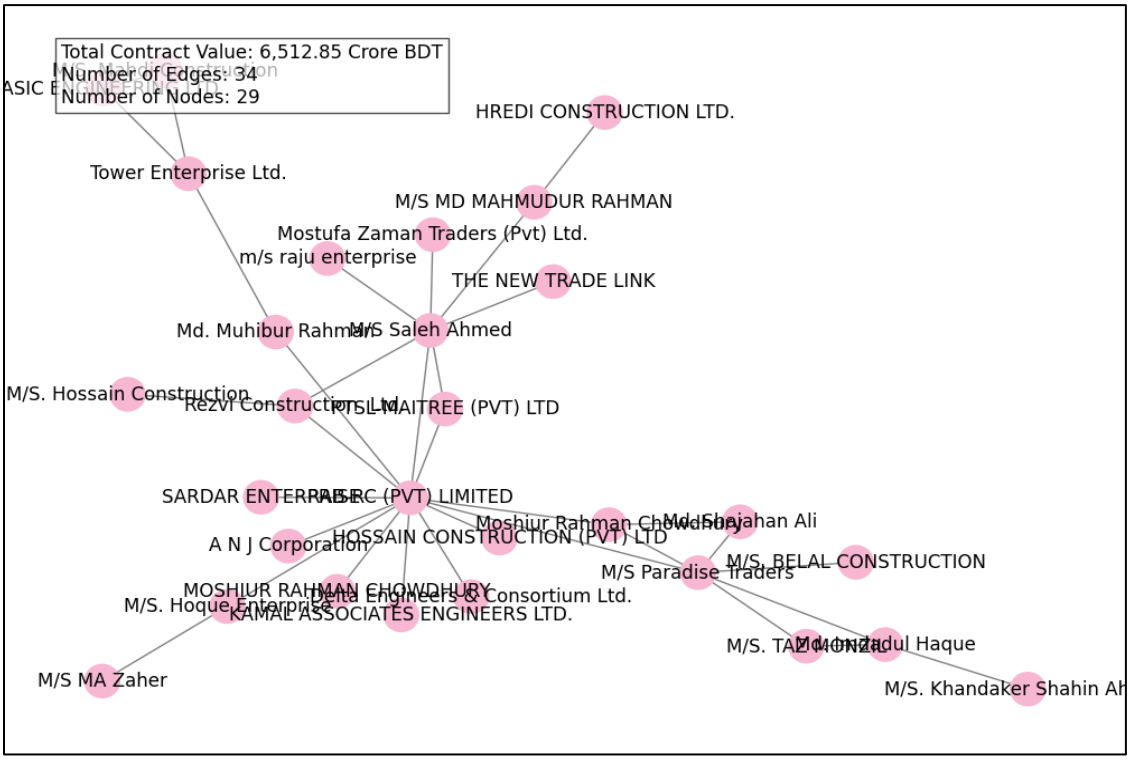


Chart 20: Community_5 (R&H)

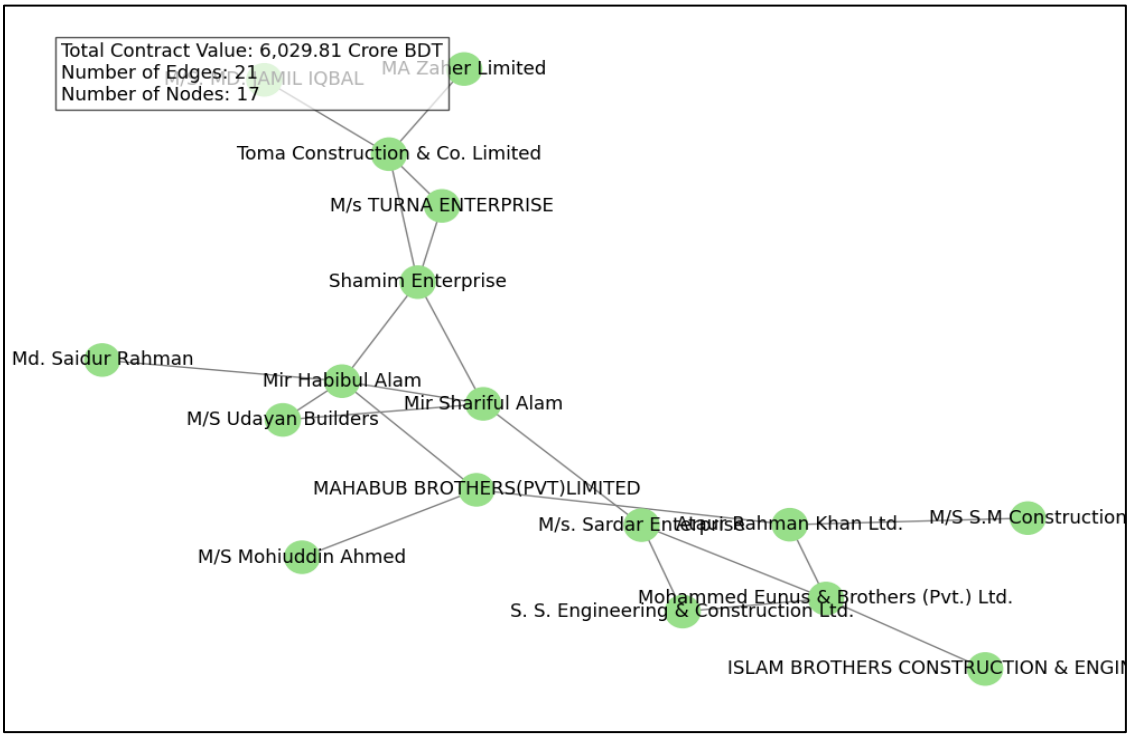


Chart 21: Community_6 (R&H)

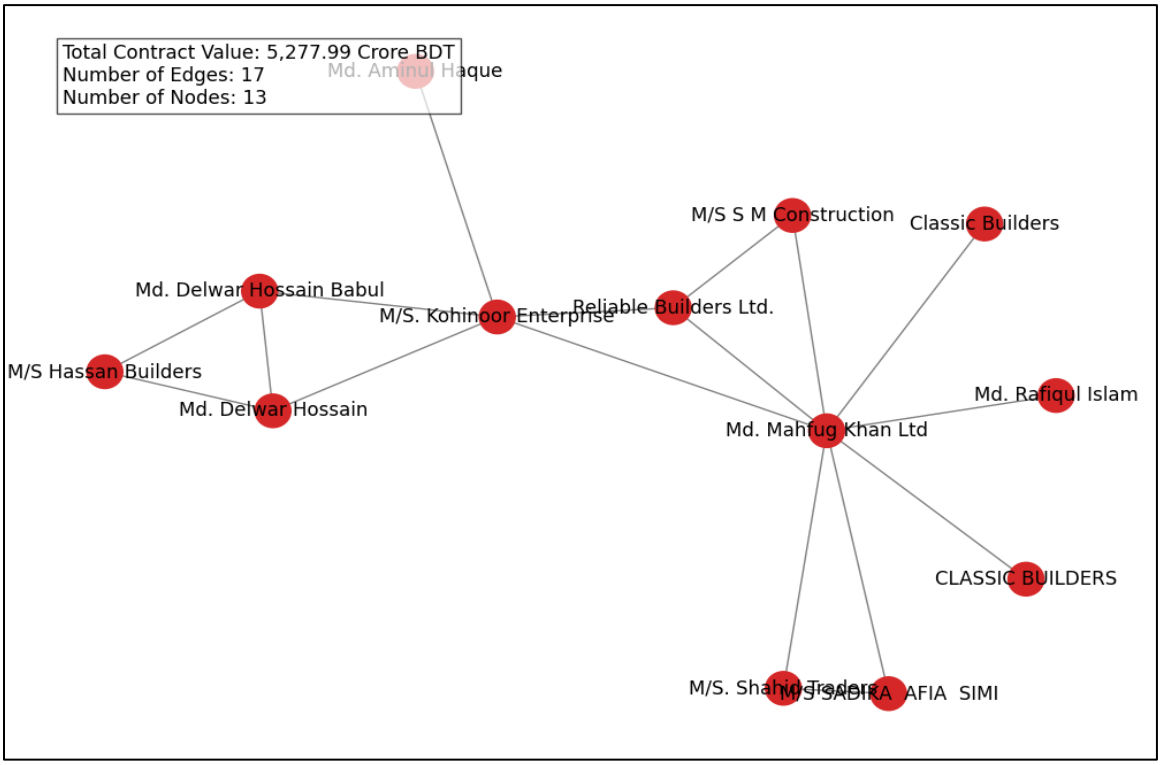


Chart 22: Community_9 (R&H)

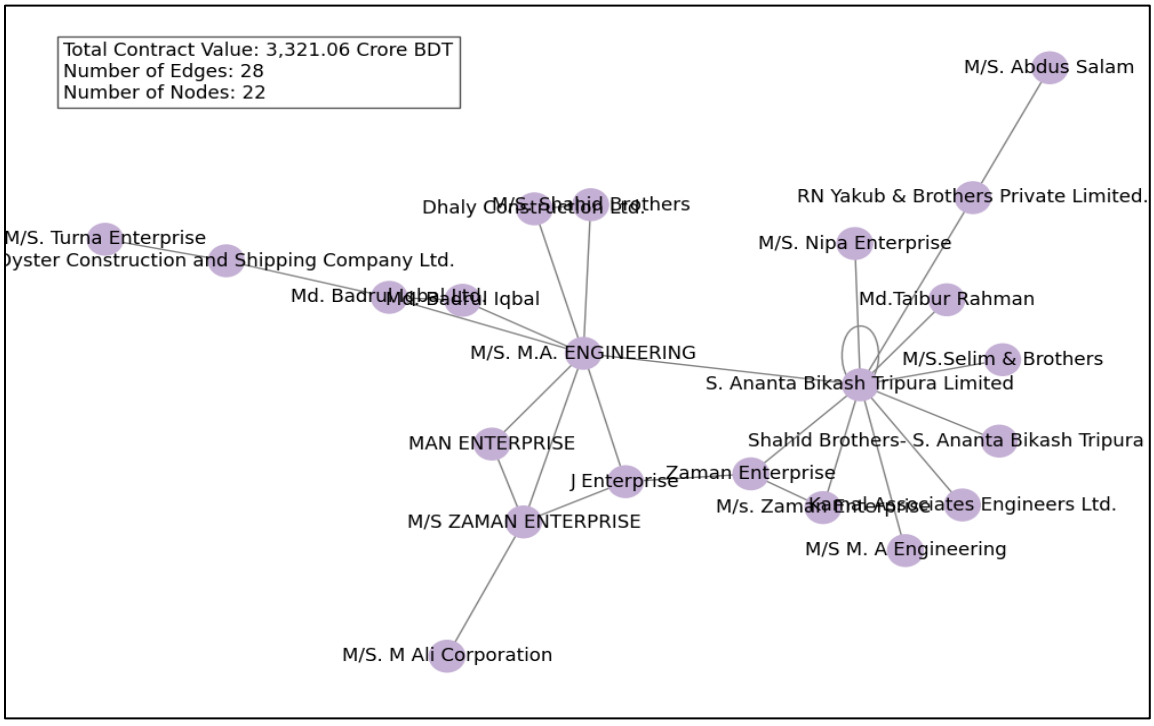
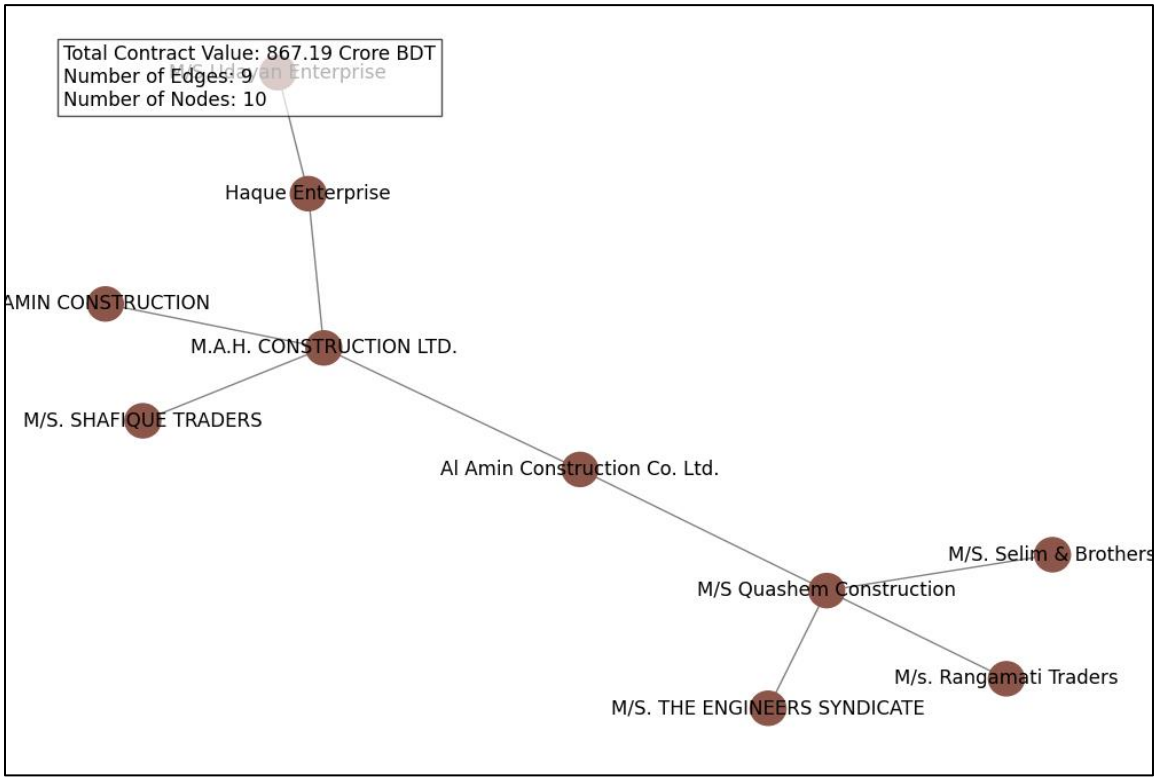


Chart 23: Community_10(R&H)



Ministry of Water Resources

The analysis reveals that 54.65% of the ministry's total contract value, amounting to 32,031.23 crore BDT, was awarded to individual contractors, while 45.35% (26,578.49 crore BDT) went to joint ventures (JVs) (Table 10)-. Despite accounting for only 7.64% of the total number of works (1,880 works), JVs secured nearly half of the contract value, highlighting their dominance in large-scale, high-value projects. In contrast, individual contractors handled 92.36% of the total works (22,740 works).

A key observation is the difference in competition levels: single-firm contracts attracted an average of 16.81 bids per contract, whereas JVs had significantly lower competition, with only 4.60 bids per contract. This suggests potential pre-arranged agreements or market entry barriers restricting competition in JV projects.

Table 10: Joint venture market share Ministry of Water Resources

	Single Contract	Joint Venture Contract
Number of Contractors	3,737	1,061
Total Contract Value	32,031.23	26,578.49
Percentage of Contract Value	54.65%	45.35%
Number of Works	22,740	1,880
Percentage of Number of Works	92.36%	7.64%
Average Bids	16.81	4.60

JV analysis shows that M. M. Builders & Engineers Ltd. leads with 32 joint ventures, securing 85 contracts in the Ministry of water resources. Other major players include M/S Saleh Ahmed (19 JVs, 51 JV contracts) and Orient Trading & Builders Ltd. (16 JVs, 33 JV contracts) (Table 11). A key observation is that many firms with a strong individual presence also engage in JVs, likely to increase their market reach and secure high-value contracts. Some firms, like M/S Abul Kalam Azad (372 individual contracts, 44 JV contracts, 27 JVs) and S. Ananta Bikash Tripura (998 individual contracts, 26 JV contracts, 11 JVs), show a heavy reliance on individual contracts despite their JV participation. Others, such as The Nirmitee (1 JV, 34 JV contracts, 1 individual contract), appear to operate almost exclusively through JVs. Overall, the data suggests that JVs play a strategic role in market expansion, allowing contractors to pool resources and access larger projects, but it also raises concerns about market concentration and collusion risks, given the recurring collaboration patterns among top firms. Visualisation of of JV networks gives us the impression that few contractors spread their spider networks gradullay. (Chart- 24)

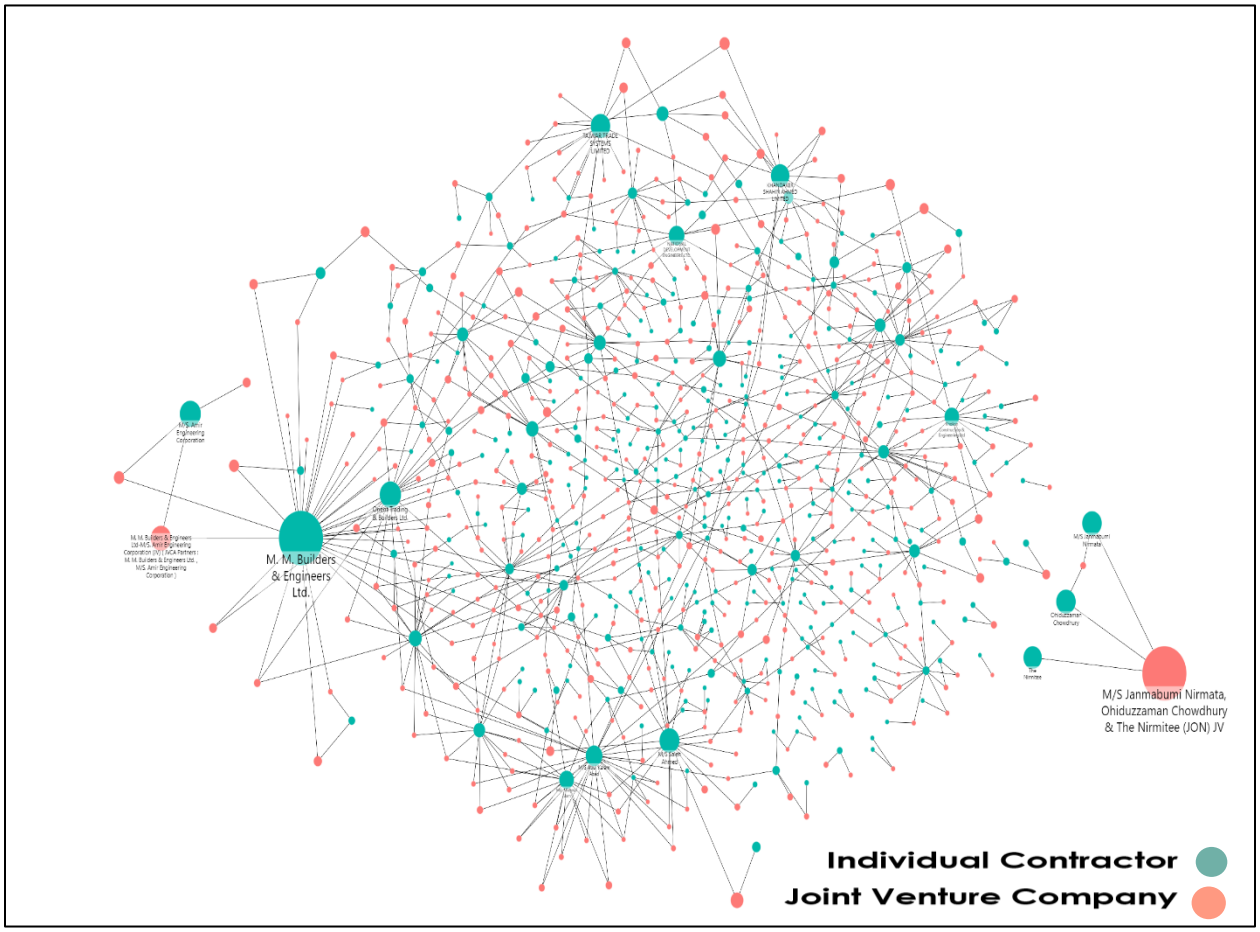
Table 11: Top20 joint venture contractor (ministry of water resources)

Contractor Name	Number of Joint Ventures	Number of Contracts	Number of Contracts as Individual Contractor
M. M. Builders & Engineers Ltd.	32	85	330
M/S Saleh Ahmed	19	51	294
Orient Trading & Builders Ltd.	16	33	114
M/S. Amir Engineering Corporation	3	35	265
M/S Janmabumi Nirmata	2	37	22
Ohiduzzaman Chowdhury	2	37	23
TAJWAR TRADE SYSTEMS LIMITED	16	34	68
KHANDAKER SHAHIN AHMED LIMITED	12	19	11
The Nirmitee	1	34	1
M/S Abul Kalam Azad	27	44	372
NATIONAL DEVELOPMENT ENGINEERS LTD.	9	14	130
Md. Mizanur Alam	18	34	97
Khokan Construction & Engineering Ltd	14	22	50
M/S. Tazul Islam	14	20	108
M/S. Kohinoor Enterprise	19	31	440
M/S K.K. Enterprise	13	21	119
M/S Rahman Engineering	14	32	114
LIAQUAT ALI & SONS LIMITED	6	10	5
M/S Mohiuddin Ahmed	14	20	380
S. Ananta Bikash Tripura	11	26	998

Further analysis reveals a highly concentrated market, where just 336 contractors (9%) control 91.5% of the total contract value. Even more striking, the top 38 contractors (1%) dominate 30.9% of the total contract value, amounting to 18,110.76 crore BDT. This extreme market concentration underscores the influence of a small group of firms, raising concerns about fair competition and market accessibility in public procurement.

Chart 24: Visualised Joint Venture networks

Ministry of Water Resources



Louvain Algorithm analysis of the ministry of water resources JVs dataset gives us deeper insights and identified 9 major communities (at least 10 Nodes) or network of contractors. These communities or networks has total 187 Nodes or individual contractors secured 205 edges or contracts. Among them largest network (Chart 25 Community-02) with 33 Nodes or contractors secured 46 contracts worth 9512.89 crore BDT. Followed by community_6 (Chart 26) network of 26 Nodes or contractors secured 5999.79 crore BDT, and Community_5 (Chart 27) network of 19 contractors secured contract worth 3286.11 crore BDT. See other networks (Chart 28-32).

Chart 25: Community_02 (MWR)

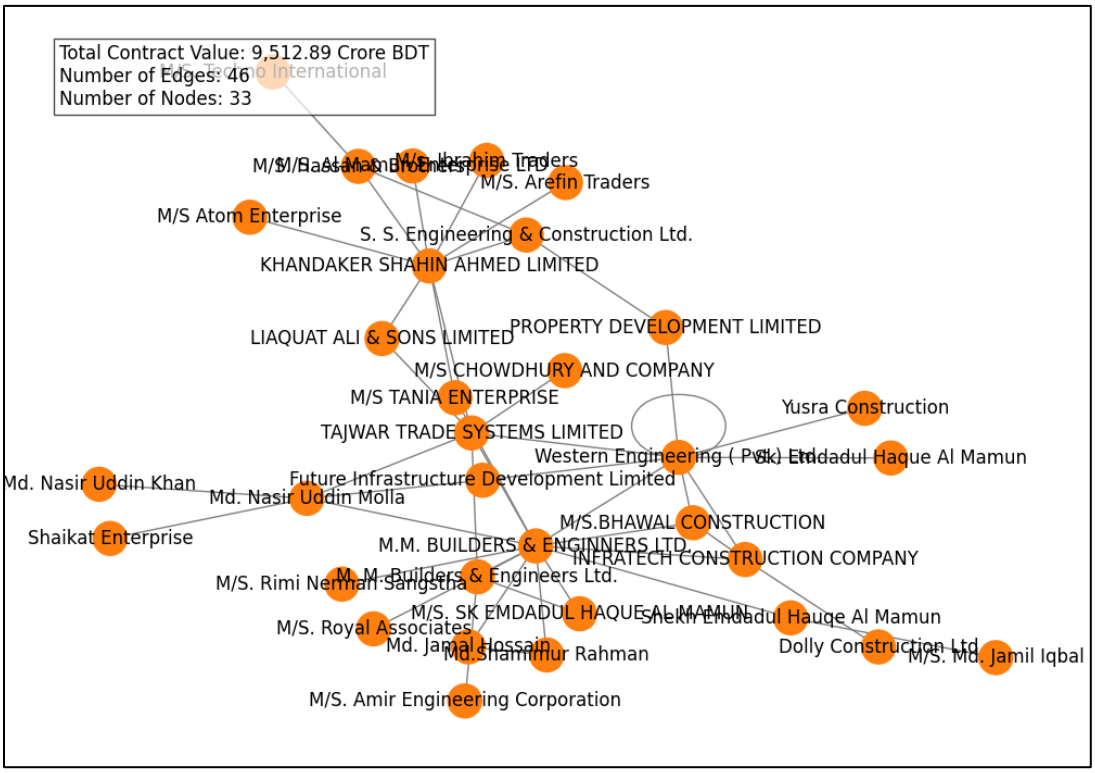


Chart- 26: Community_06(MWR)

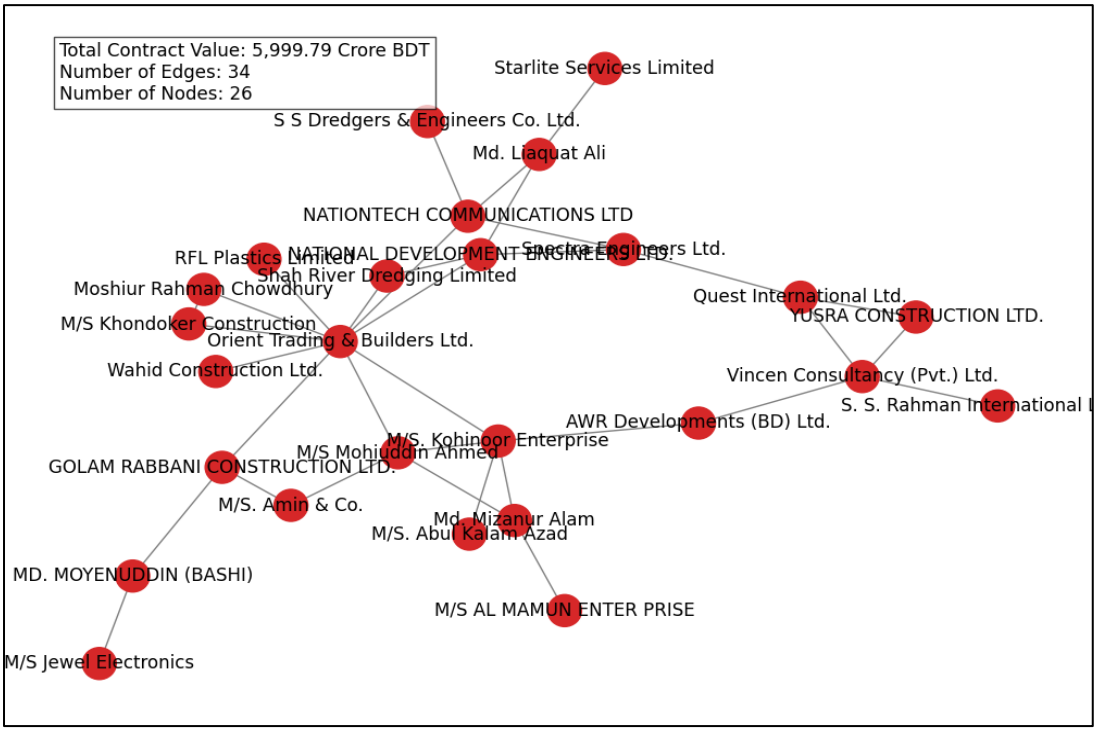


Chart 27: Community_05 (MWR)

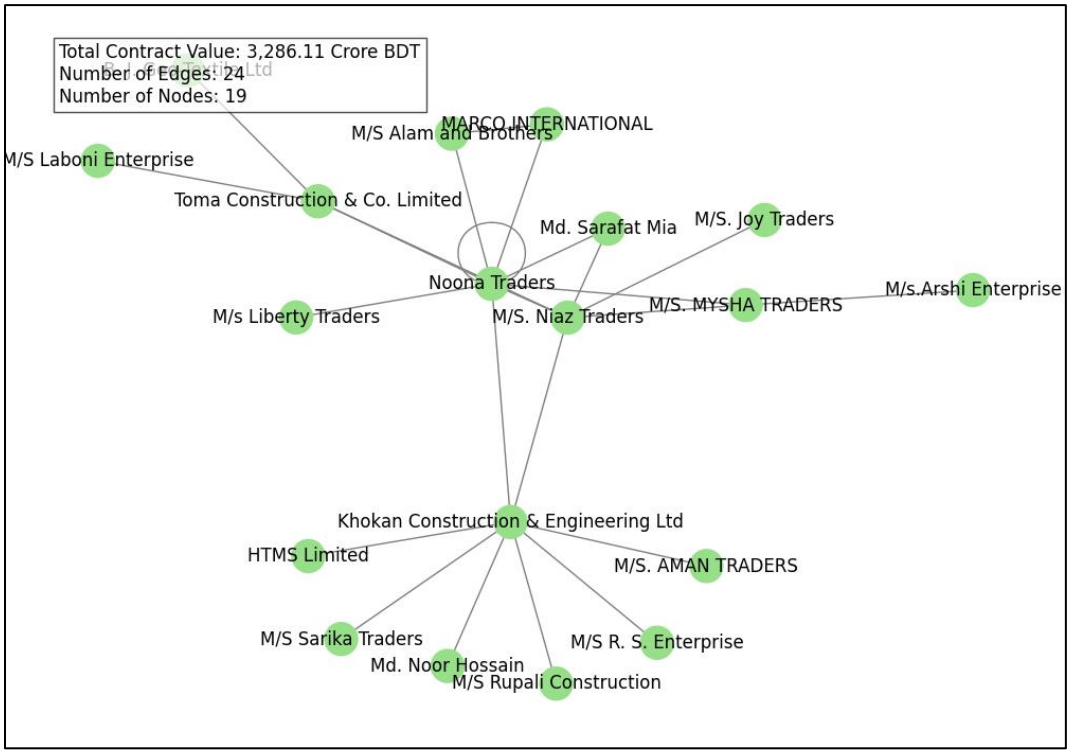


Chart 28: Community_08(MWR)

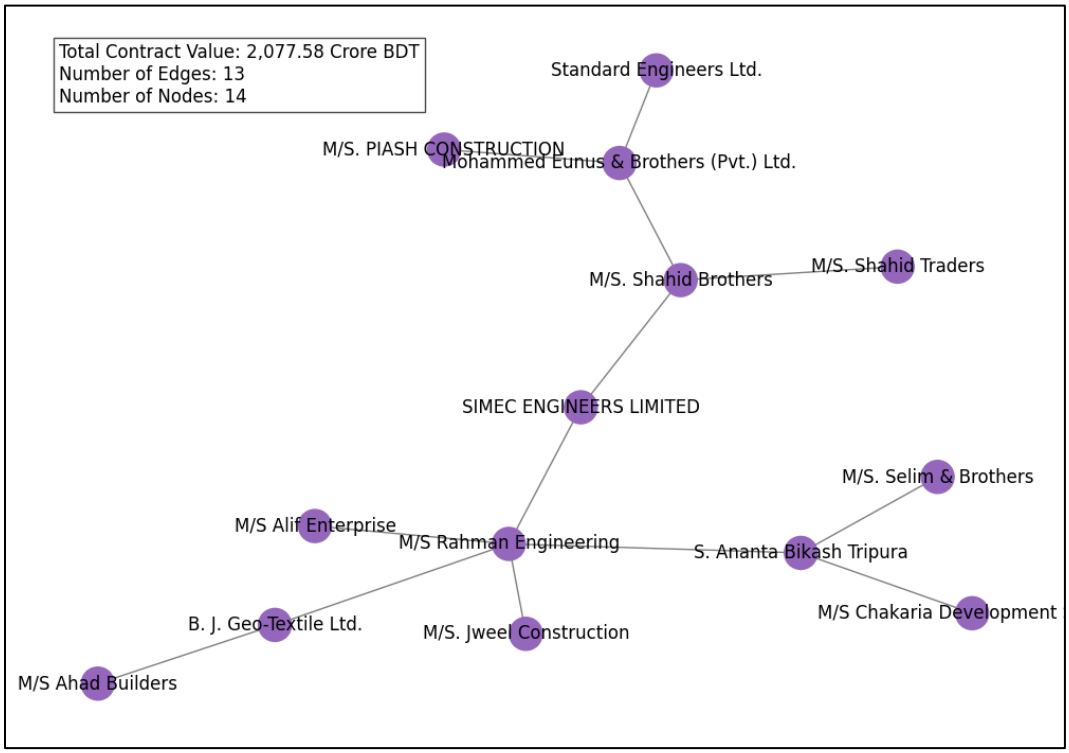


Chart 29: Community_09 (MWR)

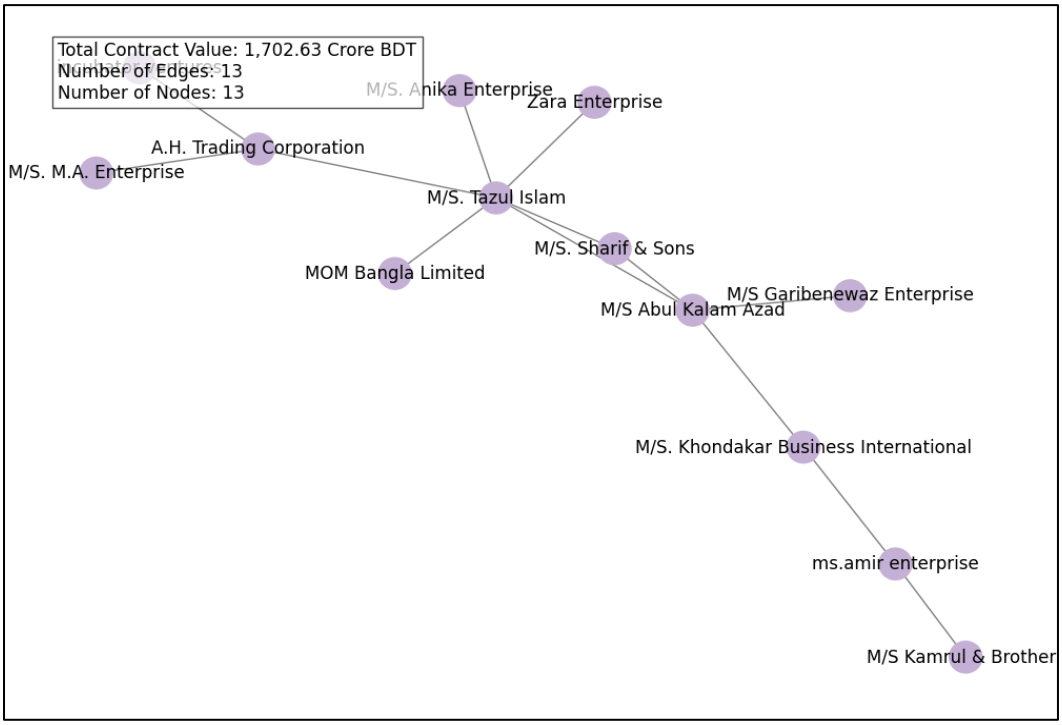


Chart 30: Community_03(MWR)

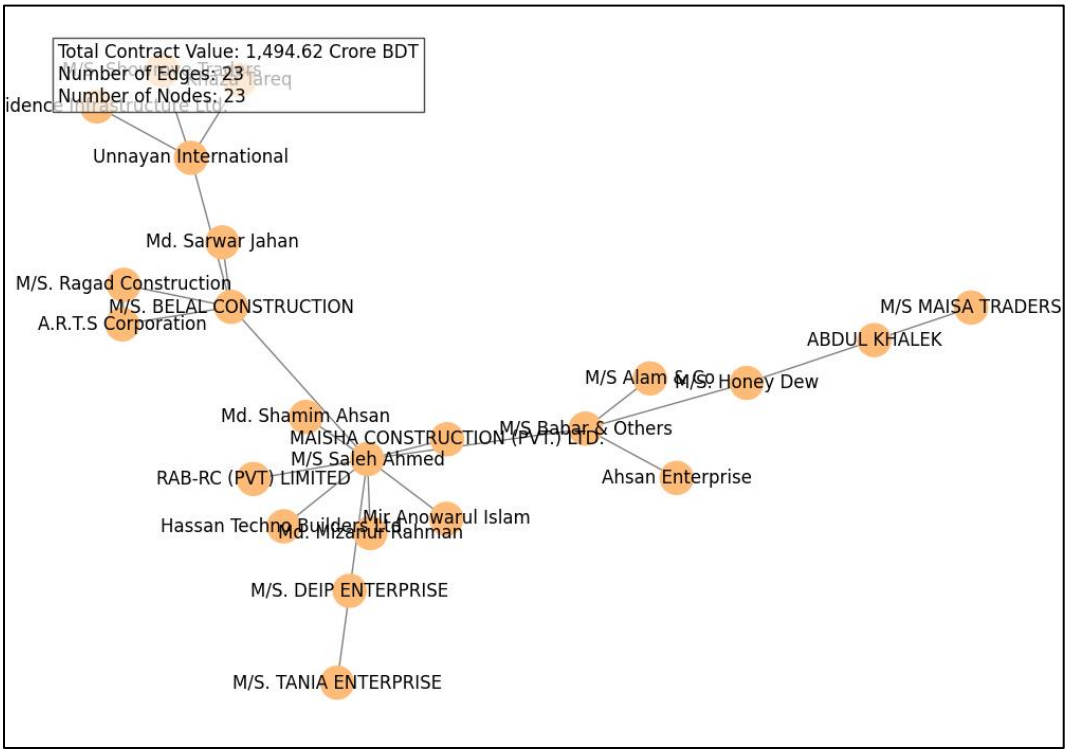


Chart 31: Community_13(MWR)

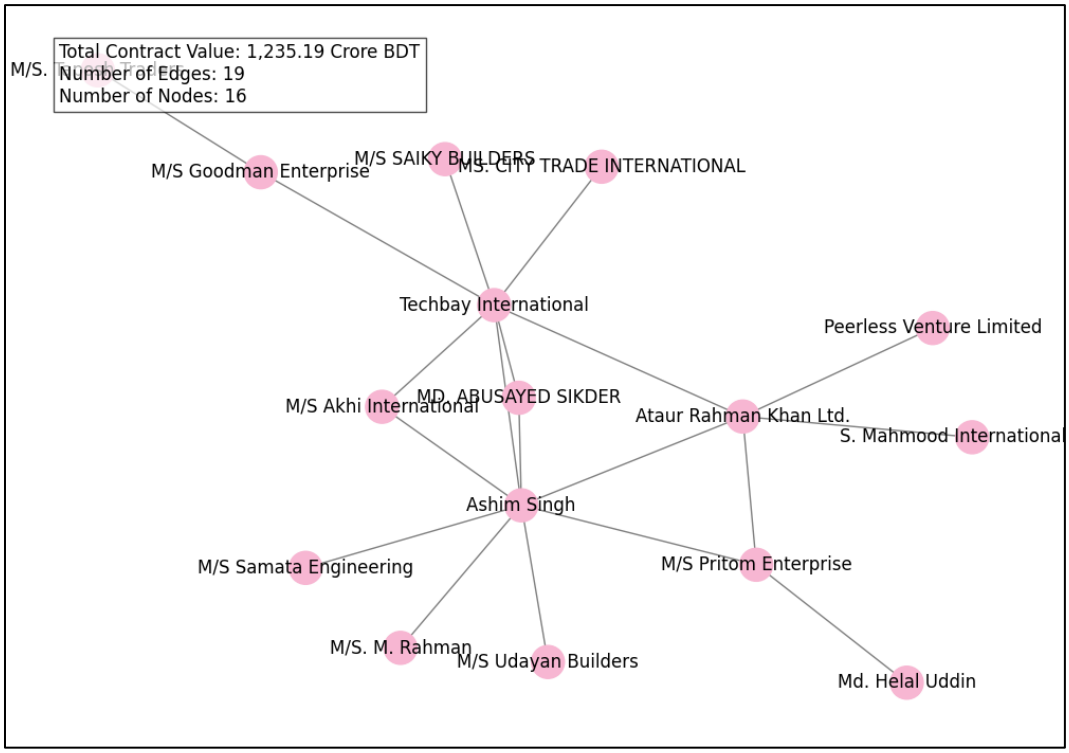
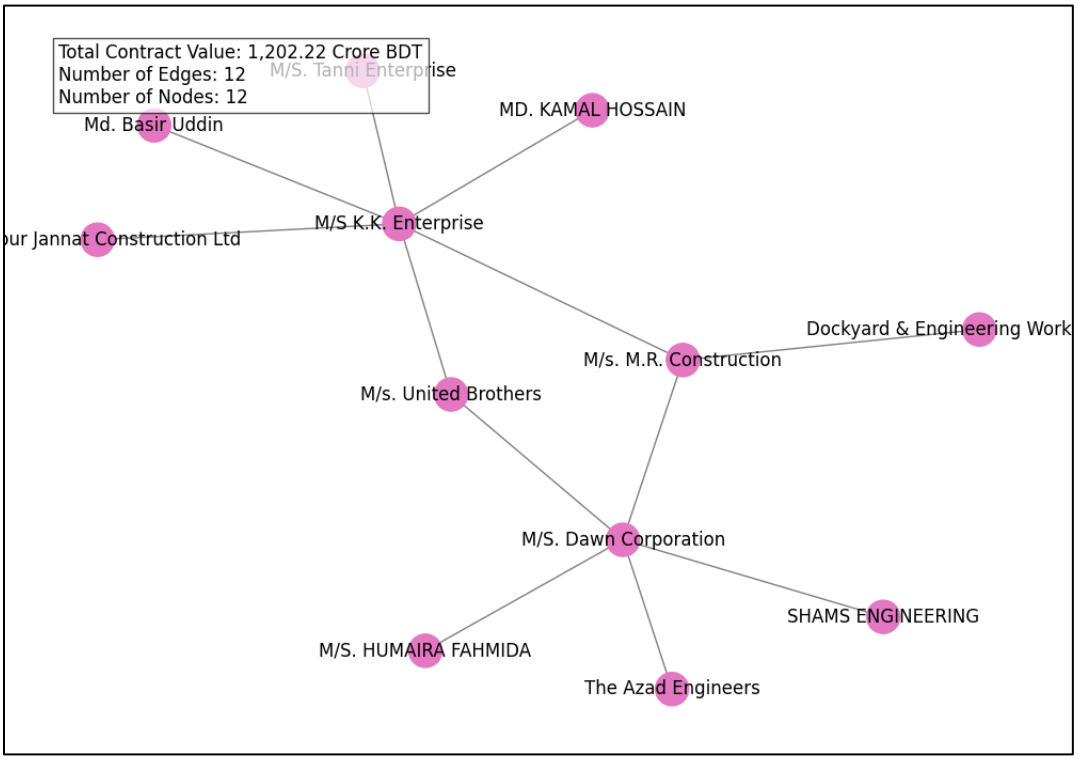


Chart 32: Community_12(MWR)



Ministry of Housing & Public Works

Careful examination of Joint Ventures data of Ministry of Housing & Public Works reveal that JVs secure 28.05% of the contract value (14,425.72 crore BDT) but handle only 1.12% of the total works (1,167 works), indicating that JV contracts are primarily for high-value projects, where as 71.95% of the total contract value (37,009.88 crore BDT) and 98.88% of the total works (102,657 works) handled by individual contractors (Table-12). The average number of bids per contract is significantly lower for JVs (3.05 bids) compared to contracts won by single contractors (11.96 bids), suggesting that JV contracts face less competition, possibly due to pre-arranged agreements or high entry barriers.

Table 12: Joint venture Contract vs Contract won by individual contractors (MHPW)

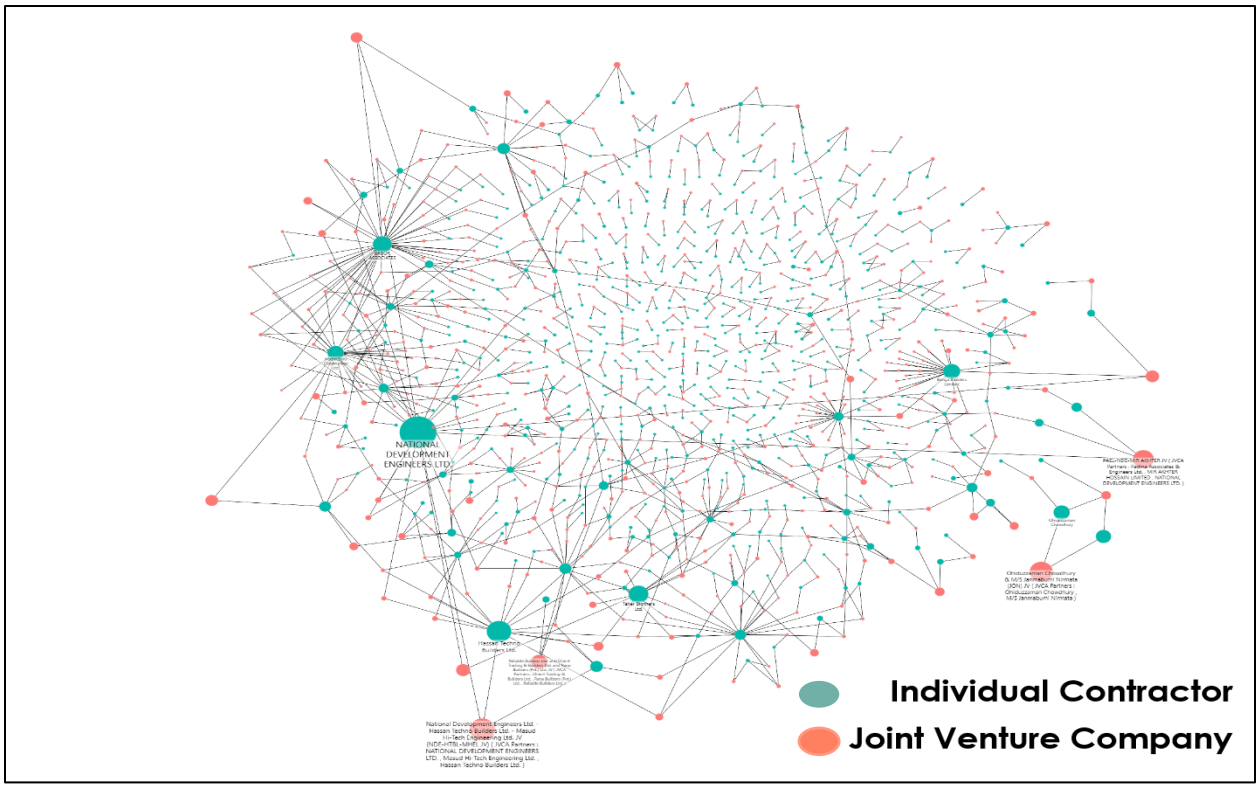
	Single Contract	Joint Venture Contract
Number of Contractors	8,152	833
Total Contract Value	37,009.88	14,425.72
Percentage of Contract Value	71.95%	28.05%
Number of Works	102,657	1,167
Percentage of Number of Works	98.88%	1.12%
Average Bids	11.96	3.05

Further analysis of data reveals that in this ministry BABOR ASSOCIATES has the highest number of JVs (44), leading to 75 contracts, yet it holds 1,209 individual contracts, suggesting it primarily operates as an independent contractor but collaborates strategically in JVs. ABAID MONSUR CONSTRUCTIONS follows a similar trend with 39 JV contracts while maintaining an even larger 1,623 contracts as an individual contractor, reinforcing its strong market presence. NATIONAL DEVELOPMENT ENGINEERS LTD. (18 JVs, 28 Contracts), Hasan Techno Builders Ltd. (JVs 19, 51 Contracts), Dhaly Construction Ltd. (22 JVs, 36 contracts) and Mazid Sons Construction Ltd. (24 JVs, 31 contracts) also exhibit significant JV participation (Table-13).

Table 13: Top 20 Joint Venture Contractors (MHPW)

Contractor Name	Number of Joint Ventures	Number of Contracts	Number of Contracts as Individual Contractor
NATIONAL DEVELOPMENT ENGINEERS LTD.	18	28	130
Hassan Techno Builders Ltd.	19	51	317
Taher Brothers Ltd.	8	16	115
BABOR ASSOCIATES	44	75	1209
Banga Builders Limited	23	32	75
Mazid Sons Construction Ltd.	24	31	138
Ohiduzzaman Chowdhury	3	14	23
M/S Janmabumi Nirmata	2	13	22
Starlite Services Limited	15	39	103
Masud Hi-Tech Engineering Ltd.	4	7	98
Rana Builders (Pvt.) Ltd.	14	21	330
M/S. Md. Jamil Iqbal	6	16	114
ABAID MONSUR CONSTRUCTIONS	23	39	1623
Toma Construction & Co. Limited	6	13	158
MIR AKHTER HOSSAIN LIMITED	2	2	27
M/S Khan Builders	17	47	132
Dhaly Construction Ltd.	22	36	266
Orient Trading & Builders Ltd.	8	14	114
MA Zaher Limited	2	9	17
Padma Associates & Engineers Ltd.	2	2	145

Chart 33: Visualizations of Joint Venture (MHPW)



Further analysis found that a small group of contractors controls a large share of the market, with 607 contractors (7.45%) involved in the 833 JVs holding 71% of the total contract value. Moreover, just 81 contractors (1%) dominate 32.32% of the total contract value (16,622.62 crore BDT), highlighting severe market concentration. This suggests that while numerous contractors participate in the procurement system, a few firms wield disproportionate control over high-value contracts and formed spider networks (Chart 33), raising potential concerns about market competitiveness and fair access to opportunities.

By using Louvain Algorithm there were 11 major communities or network of contractors identified in the Ministry of Housing and Public Works. Total 359 Nodes or individual contractors involve in these communities with 315 edges or contracts. In terms of contract value community_13 (with 15 Nodes and 19 Edges) is in the leading position, secured 2645.98 crore BDT contract (Chart 34). Followed by Community_7(with 30 Nodes and 36 Edges) secured 2061.36 crore BDT contract (Chart 35). Notable communities(Chart 36-40).

Chart 34: Community_13(MHPW)

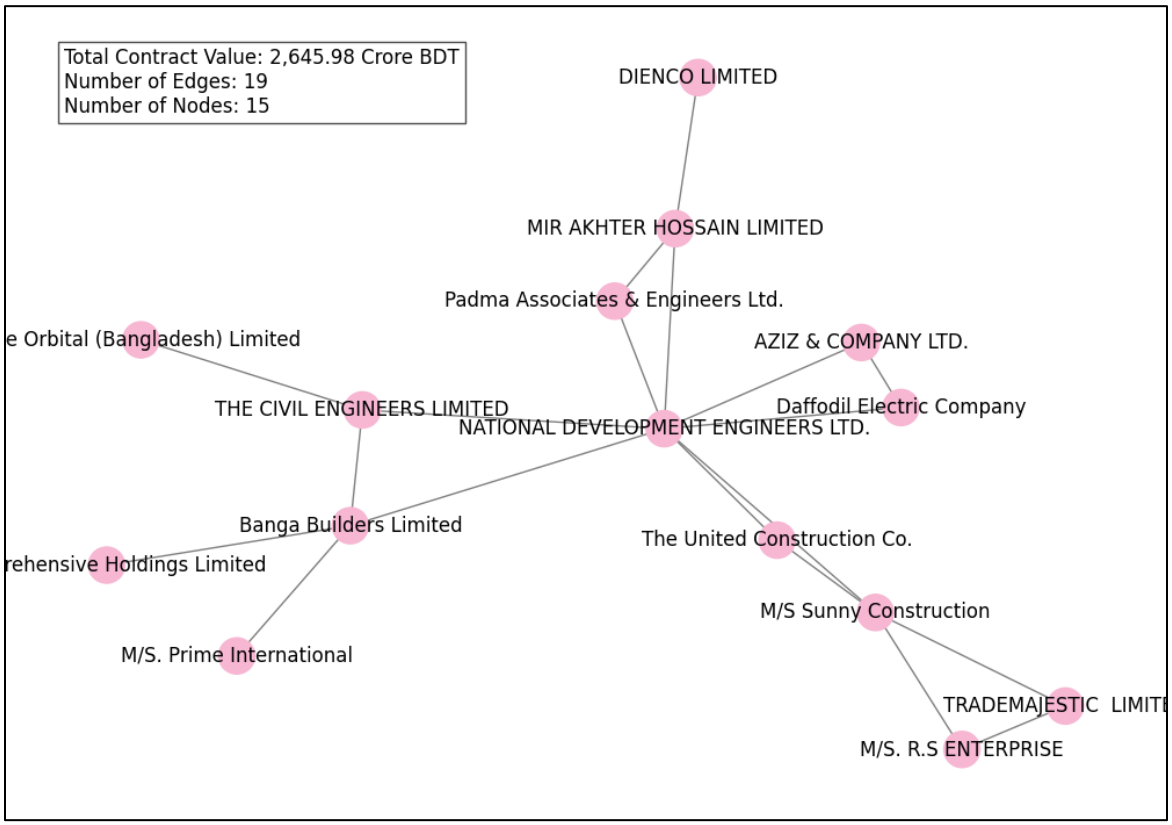


Chart 35: Community_7 (MHPW)

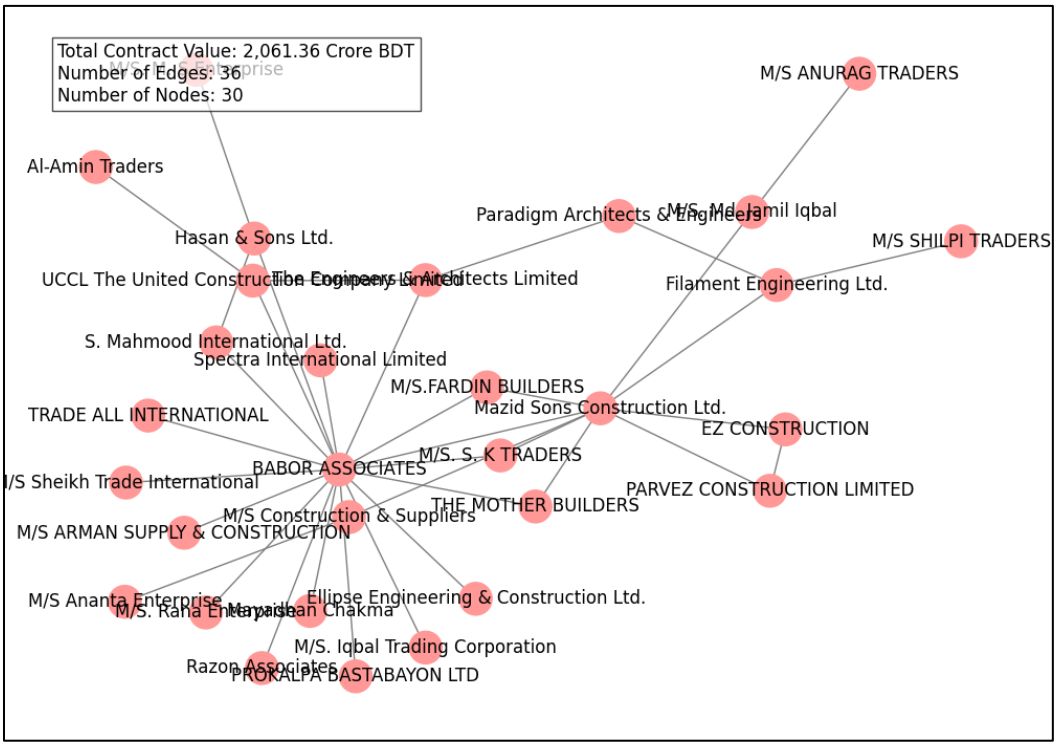


Chart 36: Community_ 15(MHPW)

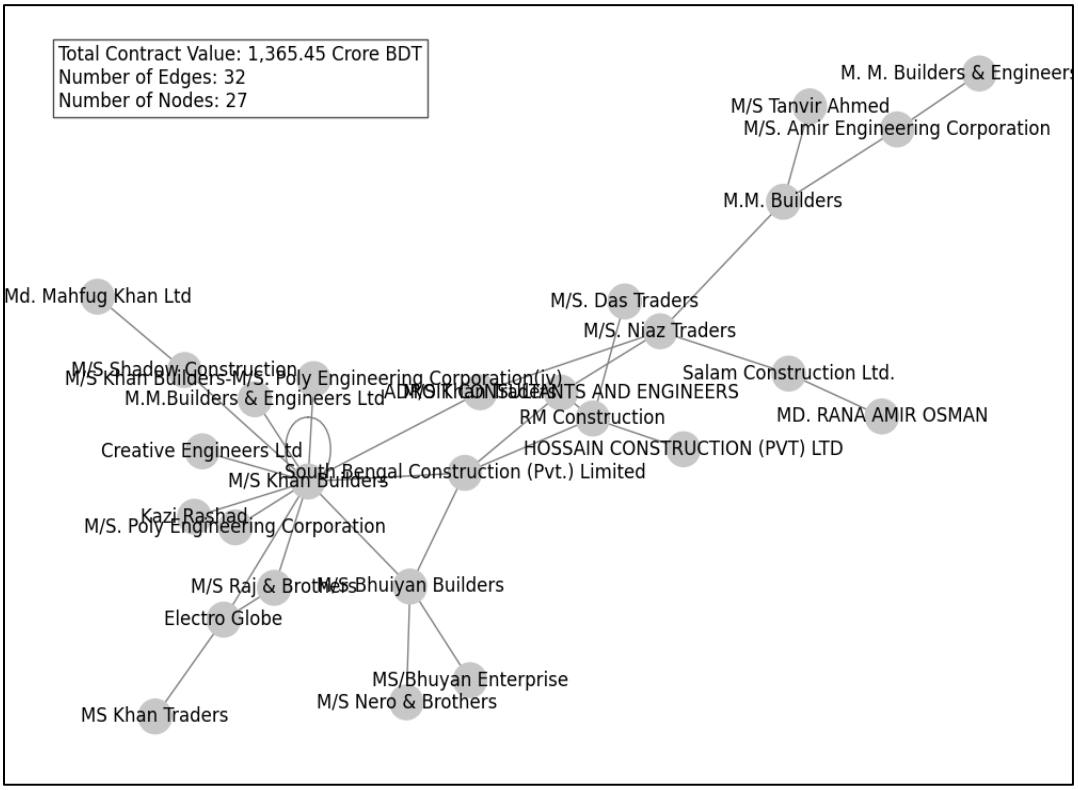


Chart 37: Community_11(MHPW)

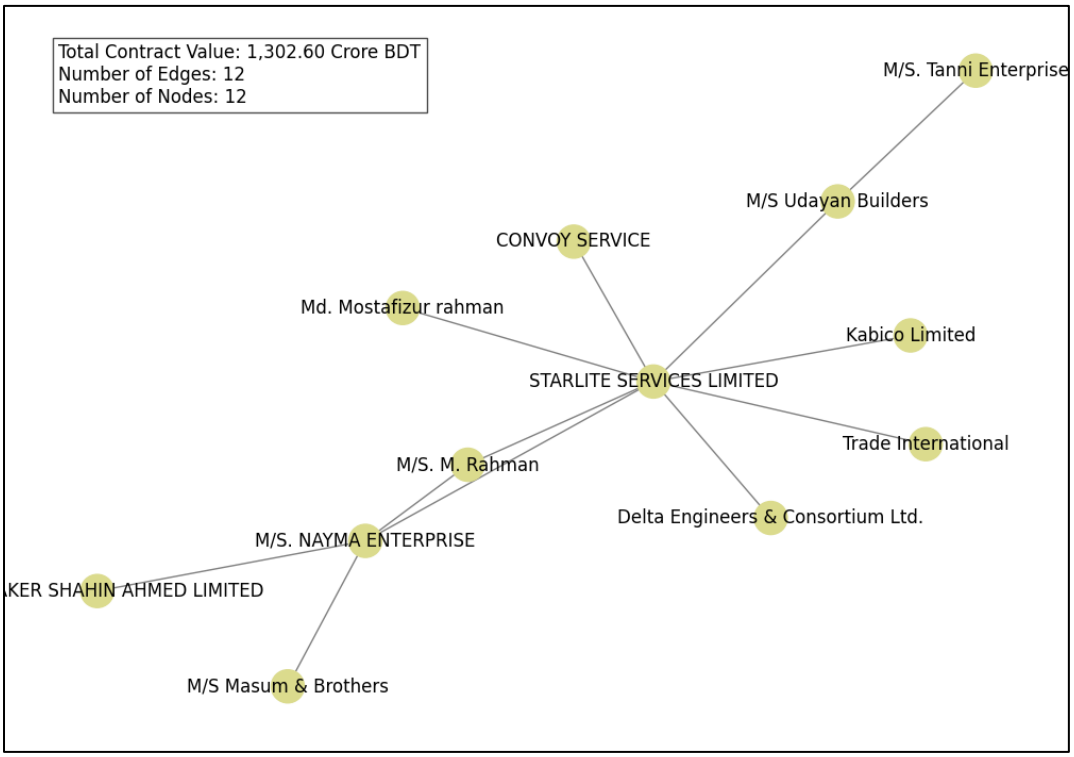


Chart 38: Community_36(MPHW)

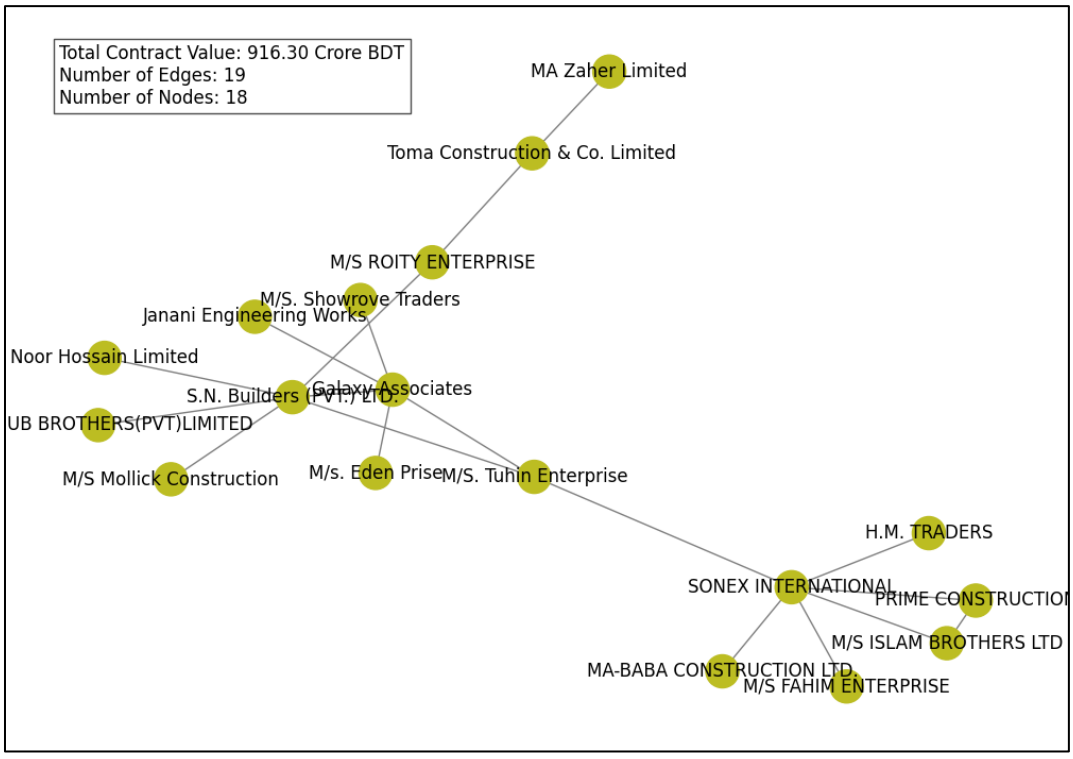


Chart 39: Community_39(MHPW)

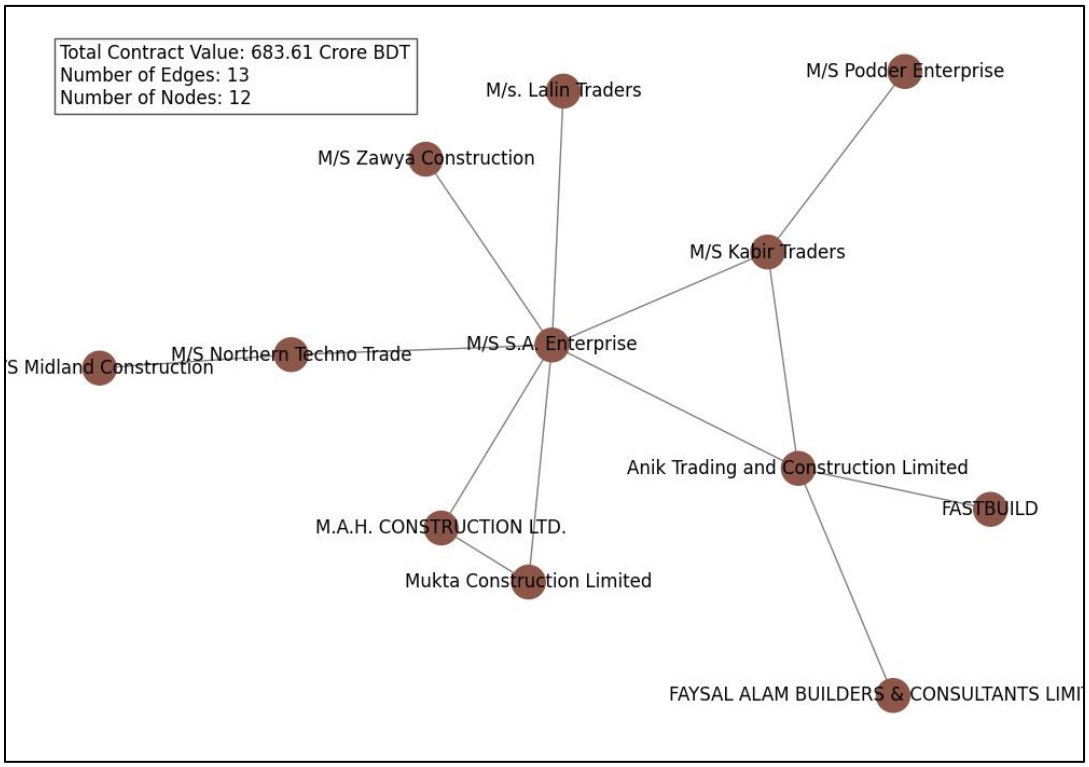
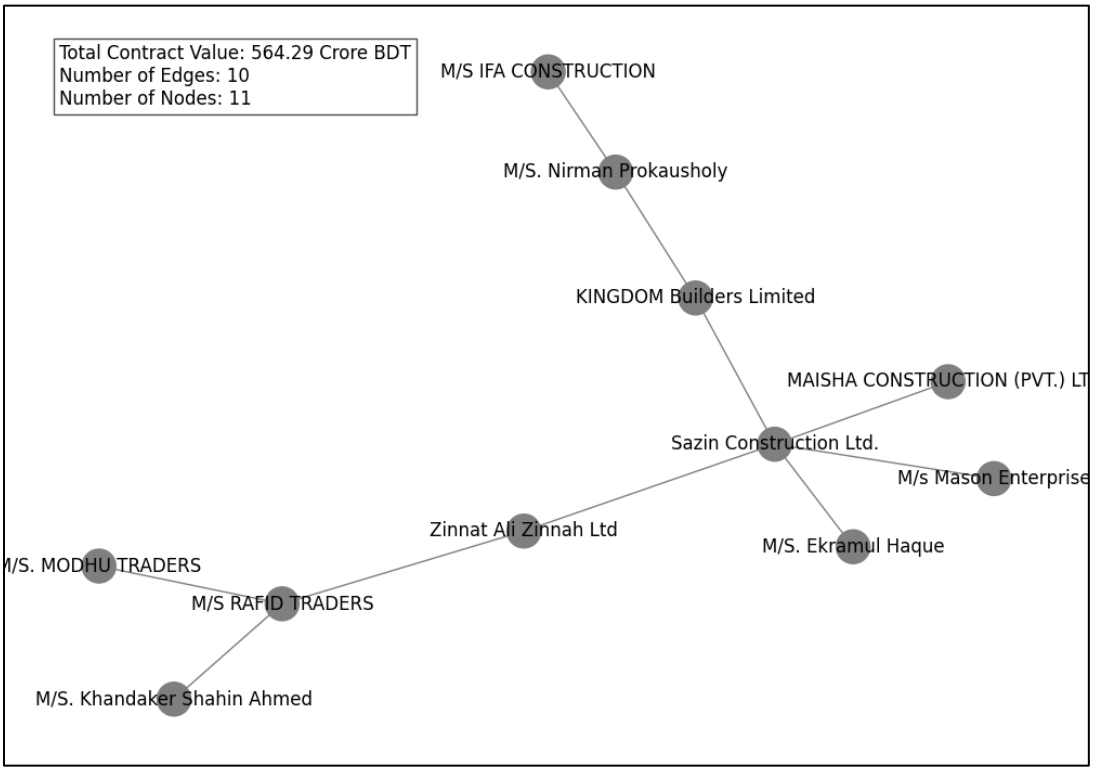


Chart 40: Community_14(MHPW)



Local Government Division (LGD)

Largest public money spender in Bangladesh is LGD where individual contractors dominate the market, with 29,414 contractors securing 78.18% of the total contract value (193,301.37 crore BDT) (Table-14). In contrast only 6,932 JVs, accounting for 21.82% of the total contract value (53,934.86 crore BDT). Similarly, 96.12% of the total works (282,392) are awarded to single contractors, while JVs handle only 3.88% (11,414 works). Despite having fewer contracts, JVs secure high-value projects, aligning with previous observations that JVs are primarily formed for large-scale works. But competition levels vary significantly, as contracts won by individual contractors receive an average of 33.26 bids per project, whereas JV contracts have significantly lower competition, averaging only 3.96 bids per project. This suggests that JVs may operate in a more concentrated and less competitive environment, potentially due to pre-arranged agreements or market entry barriers.

Table 14: Joint venture Contract vs Contract won by individual contractors

Local Government Division

	Single Contract	Joint Venture Contract
Number of Contractors	29,414	6,932
Total Contract Value	193,301.37	53,934.86
Percentage of Contract Value	78.18%	21.82%
Number of Works	282,392	11,414
Percentage of Number of Works	96.12%	3.88%
Average Bids	33.26	3.96

Careful analysis of JV data of LGD reveals that M. M. Builders & Engineers Ltd. leads with 43 JVs and 104 total contracts, suggesting a strong presence in both JV and individual projects (330 individual contracts). M/S. Kohinoor Enterprise (50 JVs, 88 total contracts) and Rana Builders (Pvt.) Ltd. (28 JVs, 59 total contracts) also show significant engagement in JVs, while still being competitive as individual contractors

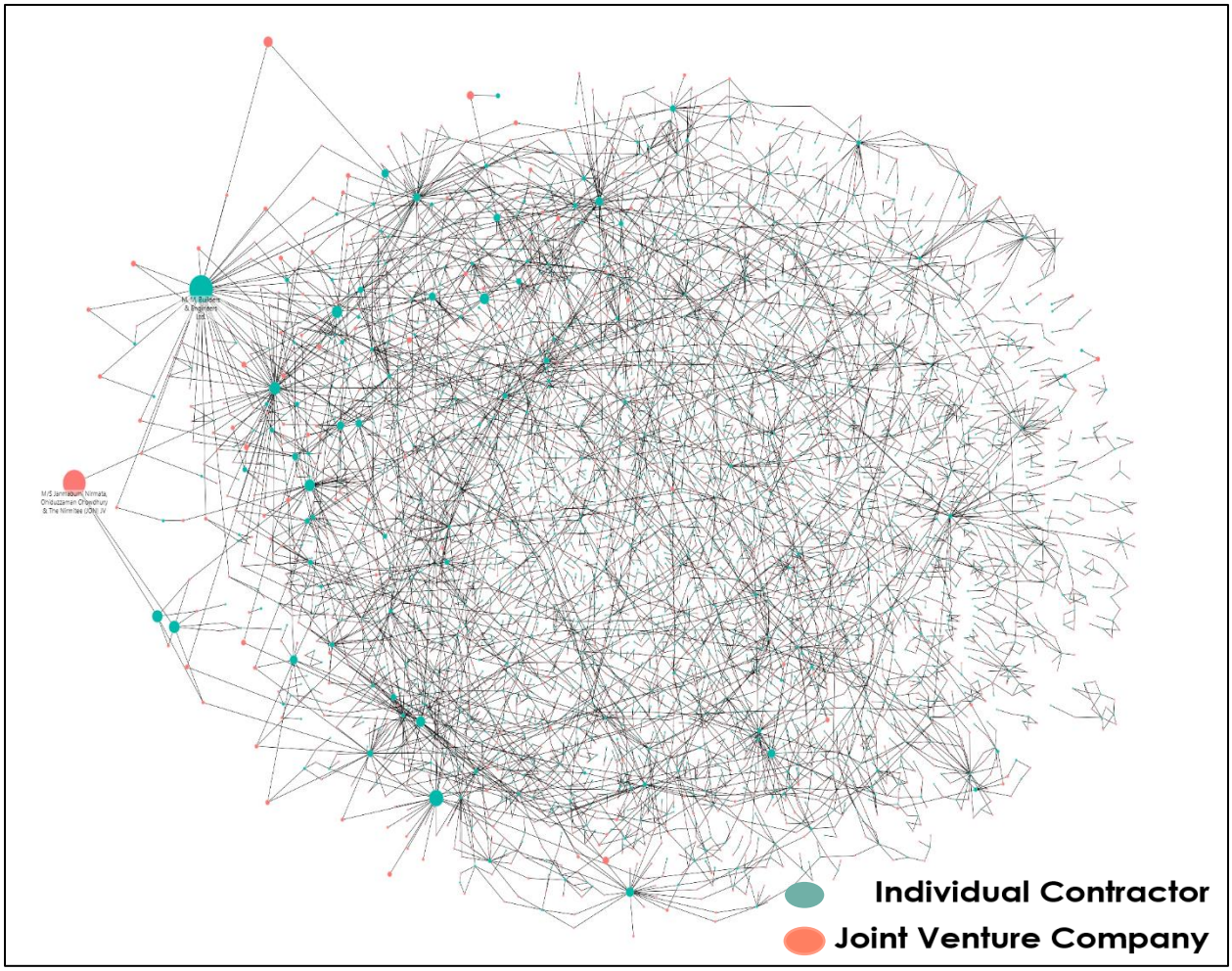
(Table-15). M/S Mominul Hoque (36 JVs, 46 total contracts) MD. MOYENUDDIN (BASHI) LIMITED(26 JVs, 53 Contracts) Hassan Techno Builders Ltd.(25 JVs, 48 contracts) are notable contractor leveraging JVs to expand their reach. Some firms like The Nirmitee (7 JVs, 43 contracts, only 1 individual contract) and Ohiduzzaman Chowdhury (5 JVs, 45 contracts, 23 individual contracts) heavily rely on JV participation rather than individual contracts. Many of these contractors appear frequently in other JV analyses, reinforcing the idea that a select group of firms dominates the JV contract space.

Table 15: Top 20 JV Contractors (LGD)

Contractor Name	Number of Joint Ventures	Number of Contracts	Number of Contracts as Individual Contractor
M. M. Builders & Engineers Ltd.	43	104	330
MD. MOYENUDDIN (BASHI) LIMITED	26	53	481
M/S. Kohinoor Enterprise	50	88	440
Hassan Techno Builders Ltd.	25	48	317
M/S Janmabumi Nirmata	7	48	22
NATIONAL DEVELOPMENT ENGINEERS LTD.	11	24	130
Ohiduzzaman Chowdhury	5	45	23
Rana Builders (Pvt.) Ltd.	28	59	330
The Nirmitee	7	43	1
Mir Habibul Alam	23	63	163
M/S Saleh Ahmed	20	49	294
Taher Brothers Ltd.	11	17	115
M/S. M.A. ENGINEERING	31	55	101
Standard Engineers Ltd.	4	11	15
Starlite Services Limited	16	28	103
M/S Mominul Hoque	36	46	205
UDC Construction Ltd.	13	32	34
Mazid Sons Construction Ltd.	9	22	138
M/S. Amir Engineering Corporation	17	51	265
Orient Trading & Builders Ltd.	11	18	114

Further analysis of data revealed that out of 29,414 total contractors, only 2,865 contractors (9.74%) mostly involve in JVs control 62.88% of the total contract value. This suggests that while there are many contractors in the market, the majority of the contract value is concentrated within a small fraction of them((Chart- 41). The remaining 90.26% of contractors compete for only 37.12% of the contract value, indicating unequal distribution of opportunities. The top 1% of contractors (294 firms) alone control 27.7% of the total contract value, equivalent to 68,496.5 Crore Taka. This extreme concentration means that a tiny elite group is securing over a quarter of the entire market's value, giving them significant influence over the industry.

Chart- 41: Visualization of Joint Venture networks of LGD



By using Louvain Algorithm 12 major communities(at least 10 nodes) or network of contractors has been identified in the local government division. Total 385 Nodes or Individual Contractors form these Communities with 358 Edges. Among them Community_28(Nodes 33, Edges 42) is in the leading position by securing 3901.49 crore BDT contract (Chart-42). Followed by Community_11(Nodes 21, Edges 20) secured 2108.28 crore BDT (Chart-43).

Chart-42: Community_28 (LGD)

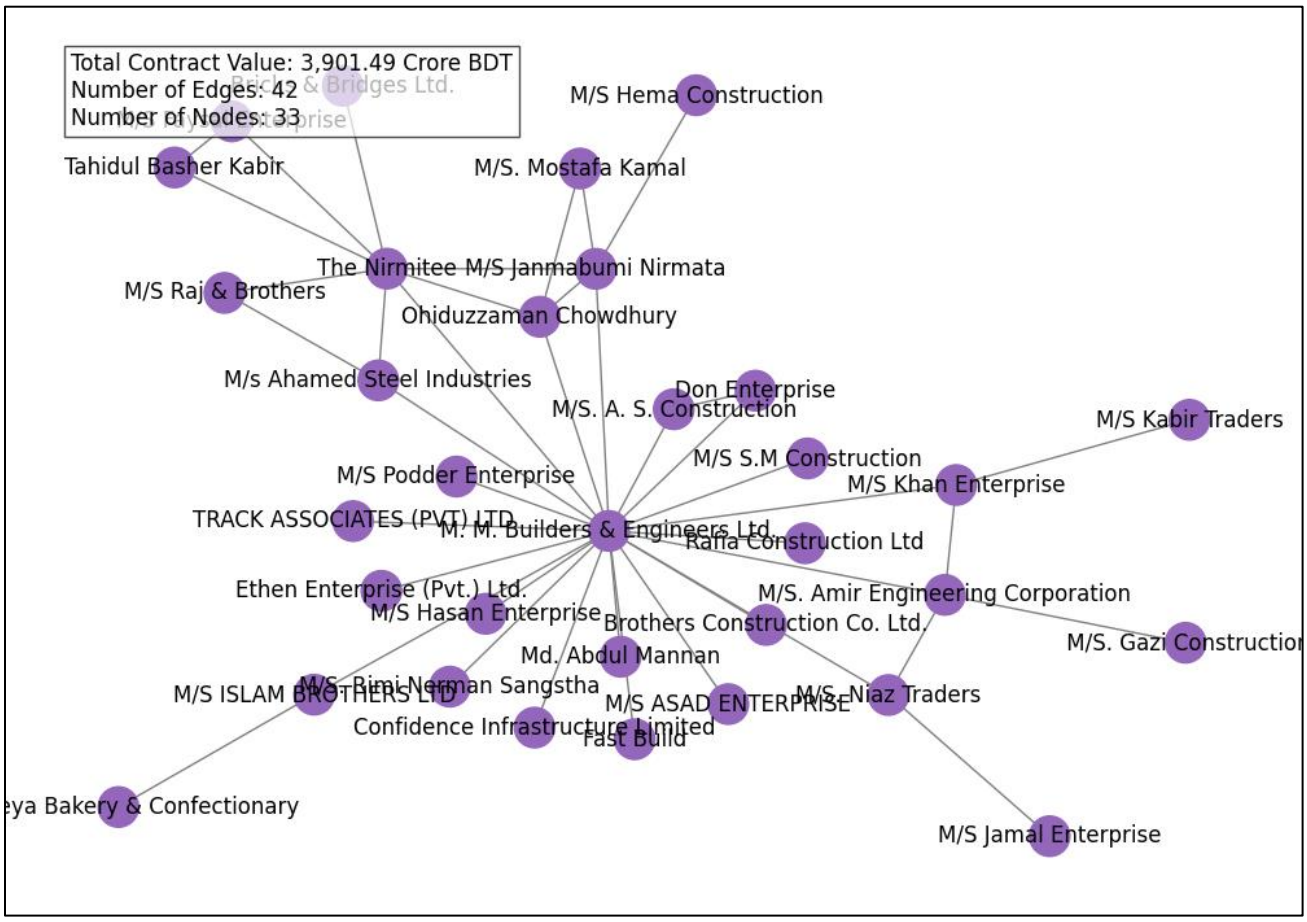


Chart 43: Community_ 11 (LGD)

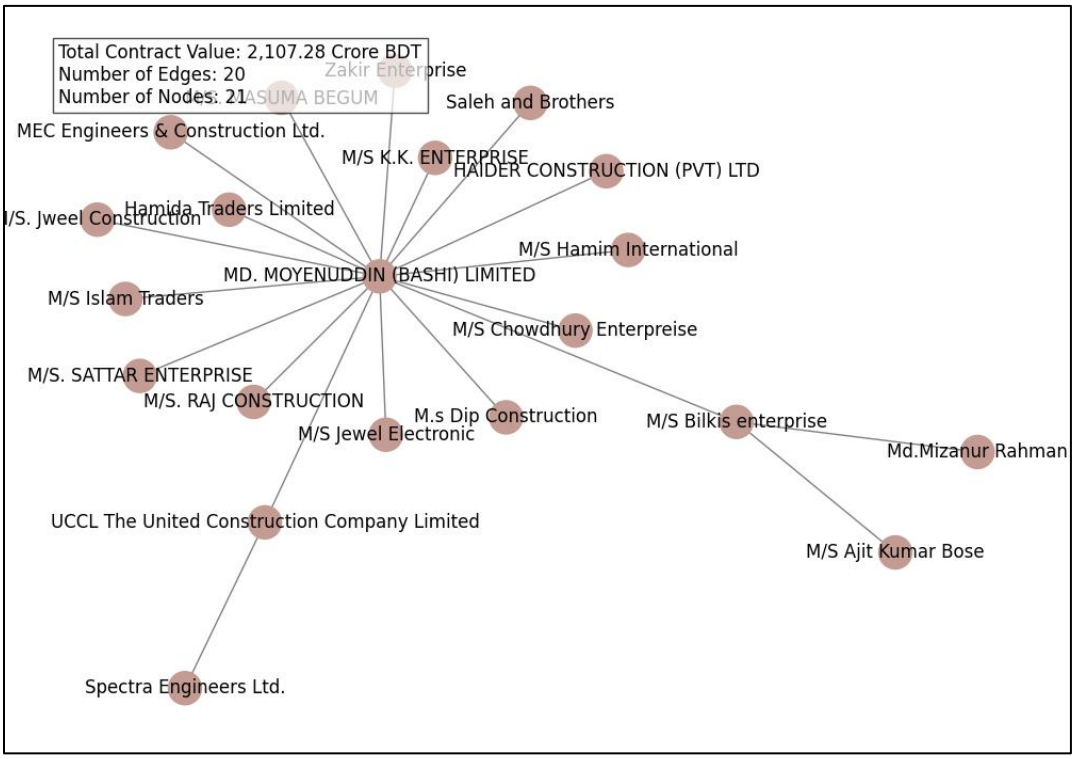


Chart 44: Community_07 (LGD)

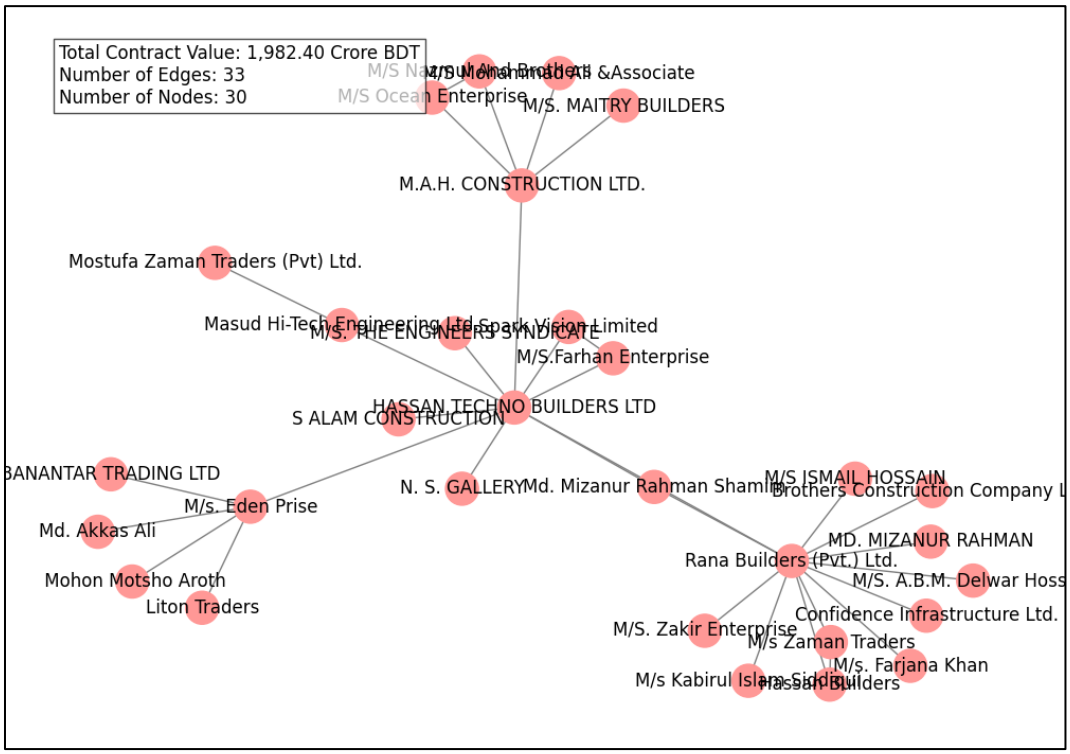


Chart 45: Community_17(LGD)

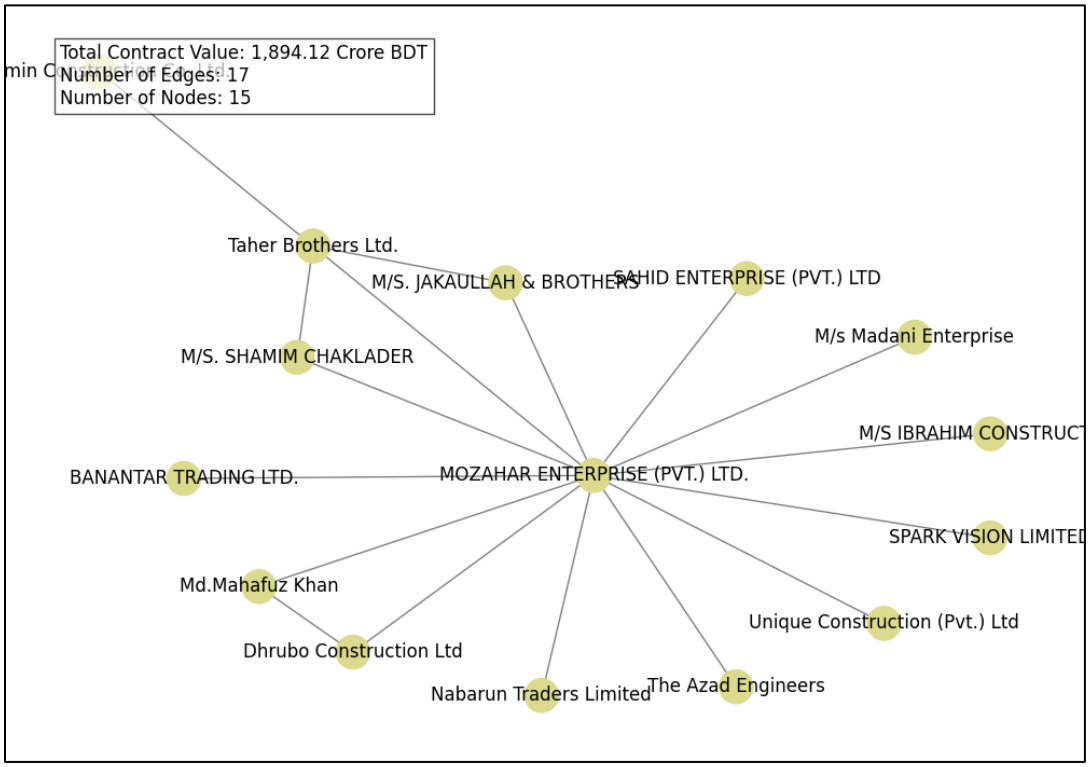


Chart 46: Community_14(LGD)

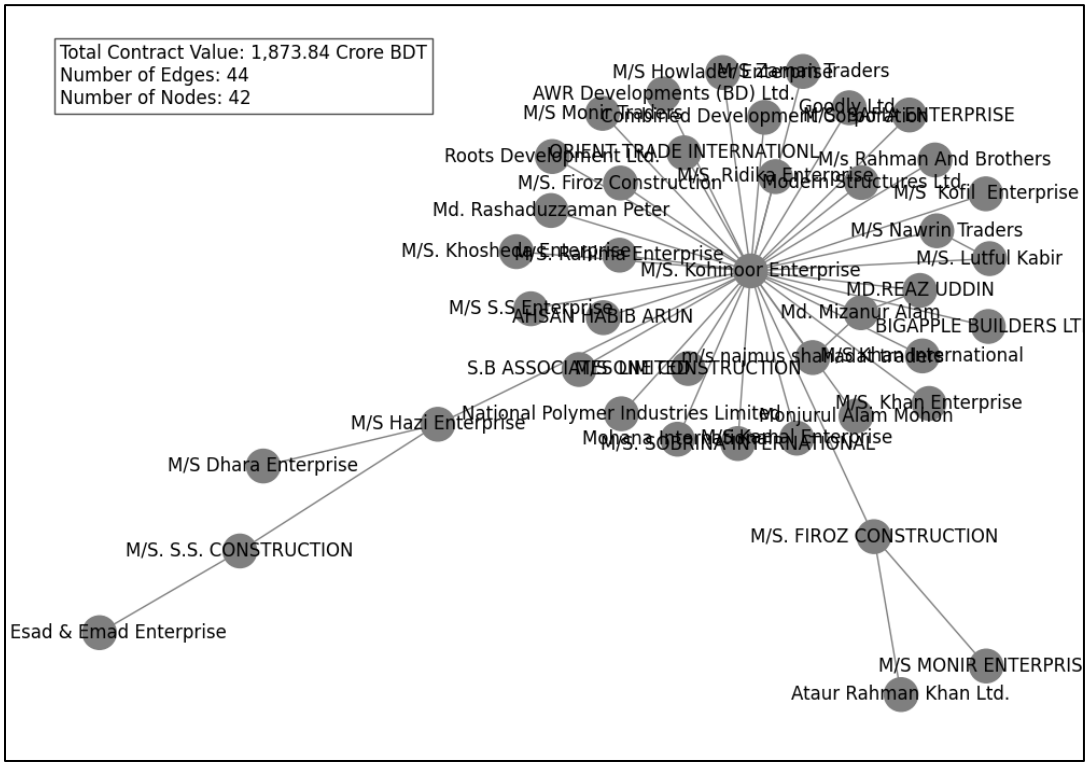


Chart 47: Community_15(LGD)

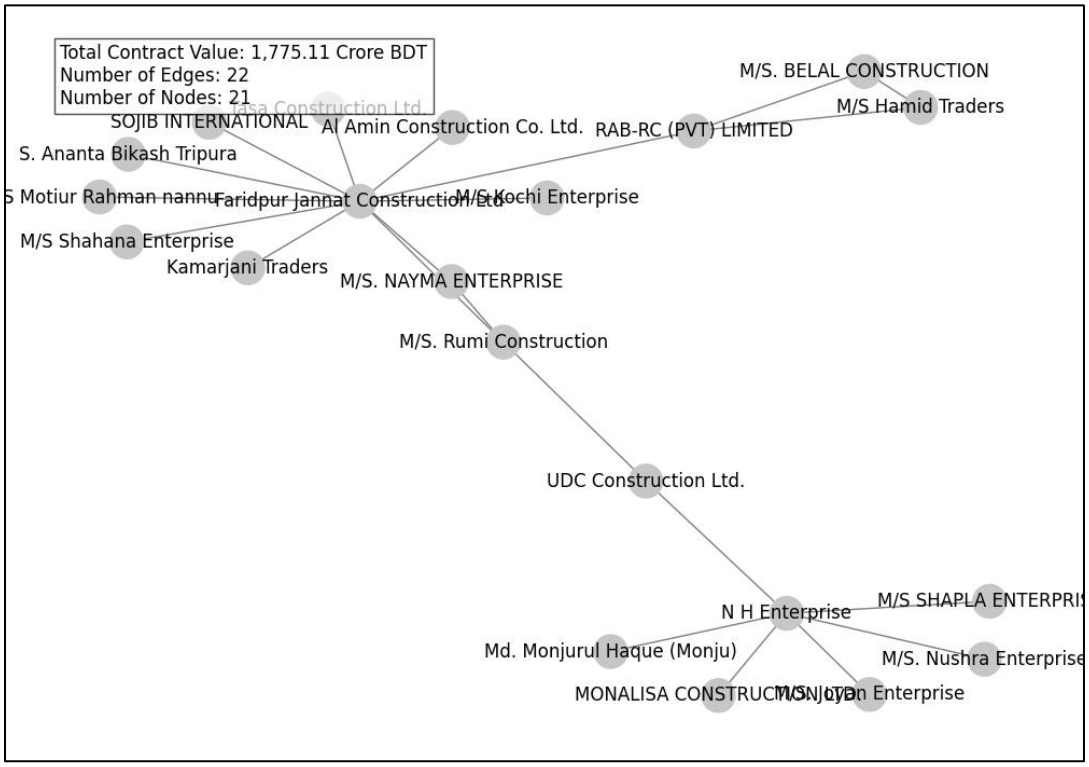


Chart 48: Community_13(LGD)

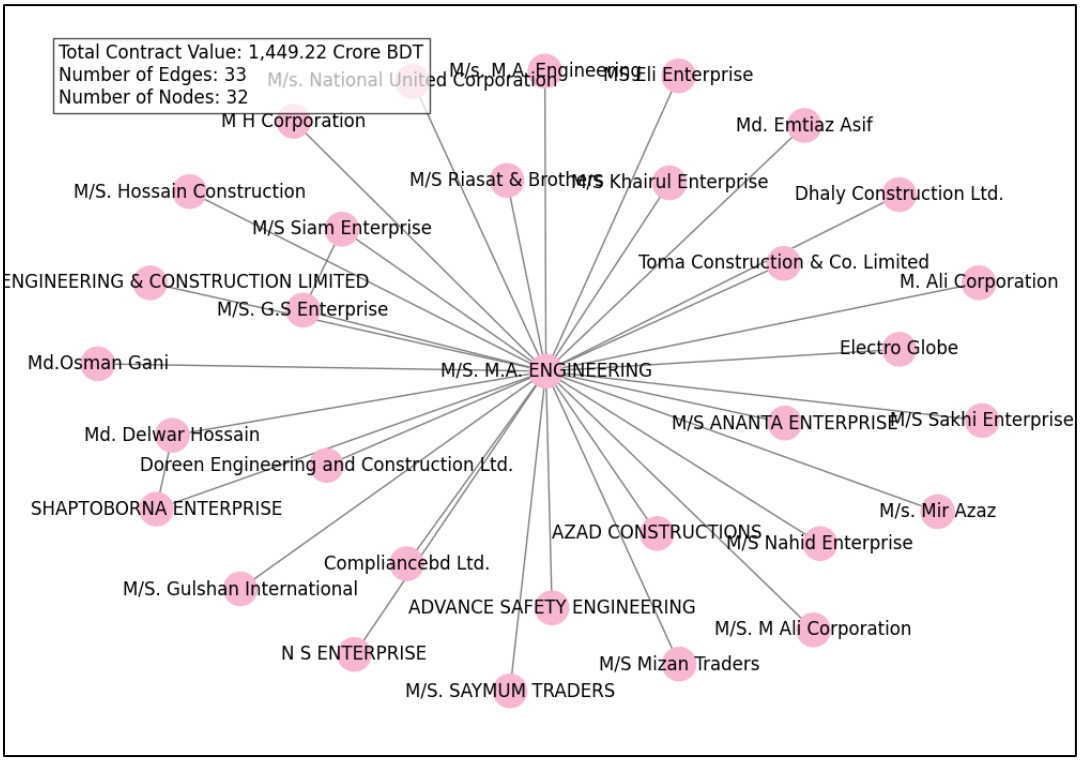
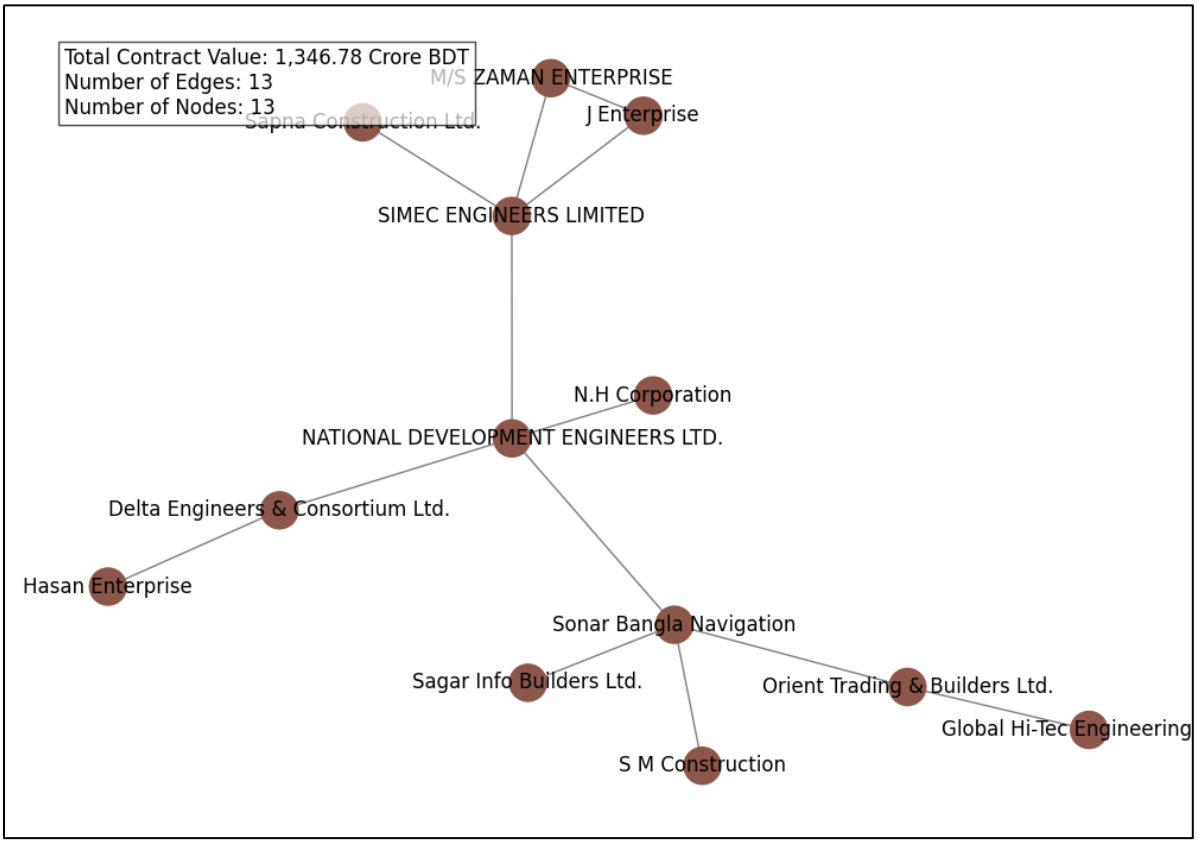


Chart 49: Community_30(LGD)



Ministry of education & Secondary and Higher Education

Out of 29,414 contractors, 11,865 operate independently, while 773 contractor ventured in 1,173 number of JVs. Despite handling only 2.36% of the total works (1,693 contracts), JVs still secure 21.60% of the total contract value (12,285.47 crore BDT), indicating their preference for high-value projects. In contrast, individual contractors dominate with 97.64% of the works (70,169 contracts) but receive 78.40% of the contract value (44,590.57 crore BDT). The average number of bids per contract is significantly lower for JVs (4.00) compared to single contracts (28.59), suggesting either less competition or a more selective bidding process in JV contracts.

Table-16: Table 16: Joint venture Contract vs Contract won by individual contractors

Ministry of education & Secondary and Higher Education

	Single Contract	Joint Venture Contract
Number of Contractors	**11,865**	**1,173**
Total Contract Value	**44,590.57**	**12,285.47**
Percentage of Contract Value	**78.40%**	**21.60%**
Number of Works	**70,169**	**1,693**
Percentage of Number of Works	**97.64%**	**2.36%**
Average Bids	**28.59**	**4.00**

Analysis of JV data shows that while some contractors participate in multiple JV projects, they also secure a significant number of individual contracts. Shaikat Enterprise stands out with 31 joint ventures and 34 JV contracts, while also securing 1,131 individual contracts, indicating a dominant presence in both segments (Table-17). Similarly, M. M. Builders & Engineers Ltd. and Dhaly Construction Ltd. have 14 and 15 joint ventures, respectively, while also handling 330 and 266 individual contracts. Some contractors, such as M/S. Amir Engineering Corporation and Md. Mizanur Alam, have relatively few JV contracts but still manage to secure a large number of individual contracts (265 and 97, respectively). This data suggests that while JVs allow firms to secure high-value projects, many top contractors still maintain a strong foothold in the ministry of Education contract.

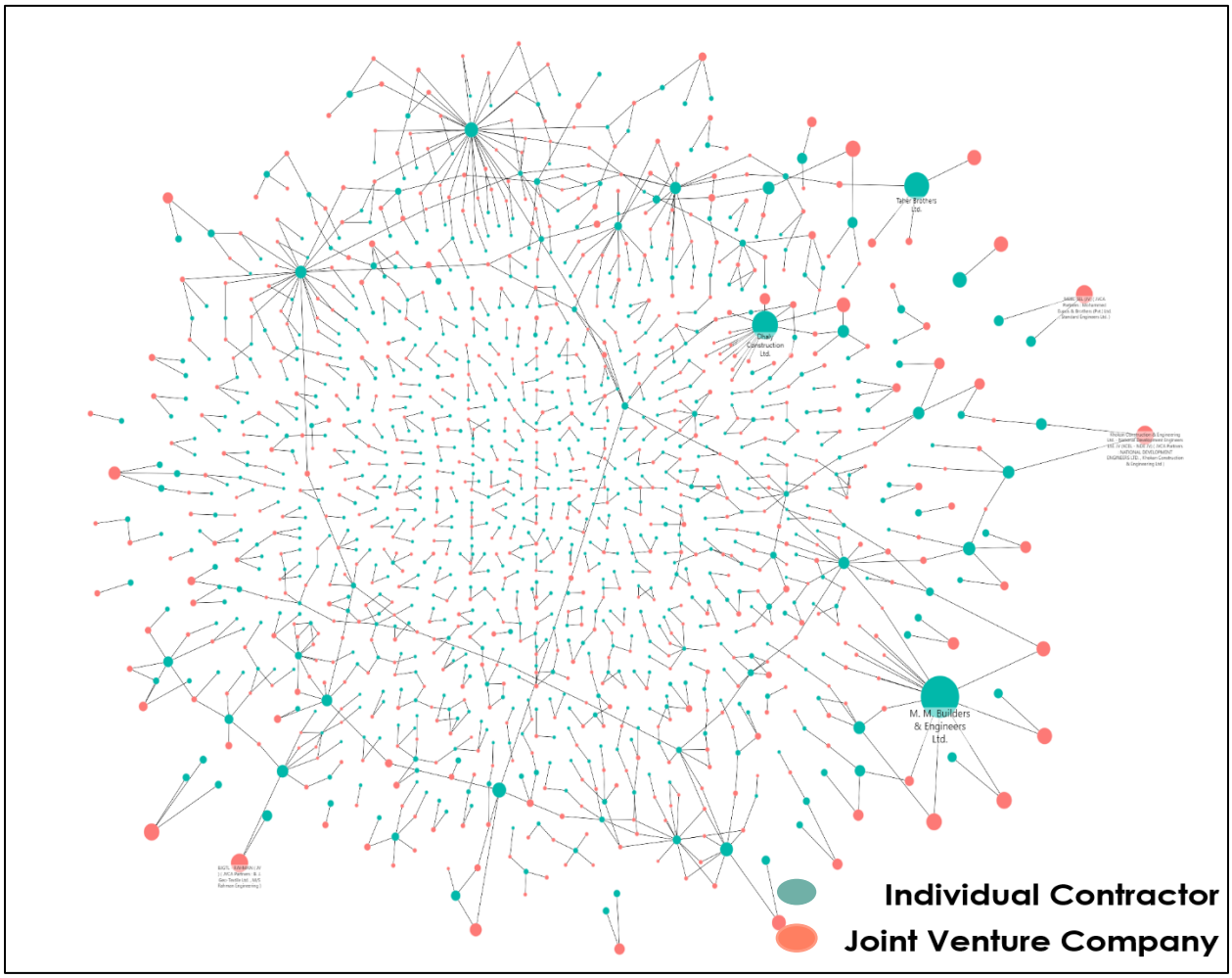
Table 17: Top 20 JV Contractors

(Ministry of Education & education & Secondary and Higher Education)

Contractor Name	Number of Joint Ventures	Number of Contracts	Number of Contracts as Individual Contractor
M. M. Builders & Engineers Ltd.	14	32	330
Dhaly Construction Ltd.	15	33	266
Taher Brothers Ltd.	4	9	115
M/S. Amir Engineering Corporation	1	12	265
Shaikat Enterprise	31	34	1131
The Builders Engineers Associates Ltd	5	6	61
M/S. Niaz Traders	9	19	456
Md. Mizanur Alam	5	11	97
M/S MA Zaher	3	19	68
Khokan Construction & Engineering Ltd	4	7	50
M/S. Royal Associates	5	11	61
Banga Builders Limited	4	8	75
M/S Rahman Engineering	7	12	114
M/S MERON ENTERPRISE	22	25	23
Starlite Services Limited	4	13	103
M/S RAFID TRADERS	15	24	200
M/S. Kohinoor Enterprise	12	33	440
Electro Globe	7	11	66
NATIONAL DEVELOPMENT ENGINEERS LTD.	2	5	130
M/S. BHAWAL CONSTRUCTION	3	19	89

Additionally, the market is highly concentrated, with 773 contractors' of 1173 JVs (6.5%) controlling 43.7% of the total contract value, while the top 119 contractors (1%) dominate 15.15% (8,619.44 crore BDT), underscoring the influence of a small group of firms in the market. This analysis suggests that while single contractors handle most of the projects, JVs secure a significant share of high-value contracts, and the market remains highly concentrated among a few dominant players.

Chart- 50: Visualizations of Joint Venture Networks (ME&SHE)



Using the Louvain Algorithm, 12 major communities consisting of at least 10 nodes each have been identified. In total, 575 individual contractors (nodes) are part of these communities, interconnected through 497 edges (partnerships or collaborations). This structure highlights the dominance of specific contractor networks in shaping the market landscape. (See Charts below)

Chart 51: Community_42(ME&SHE)

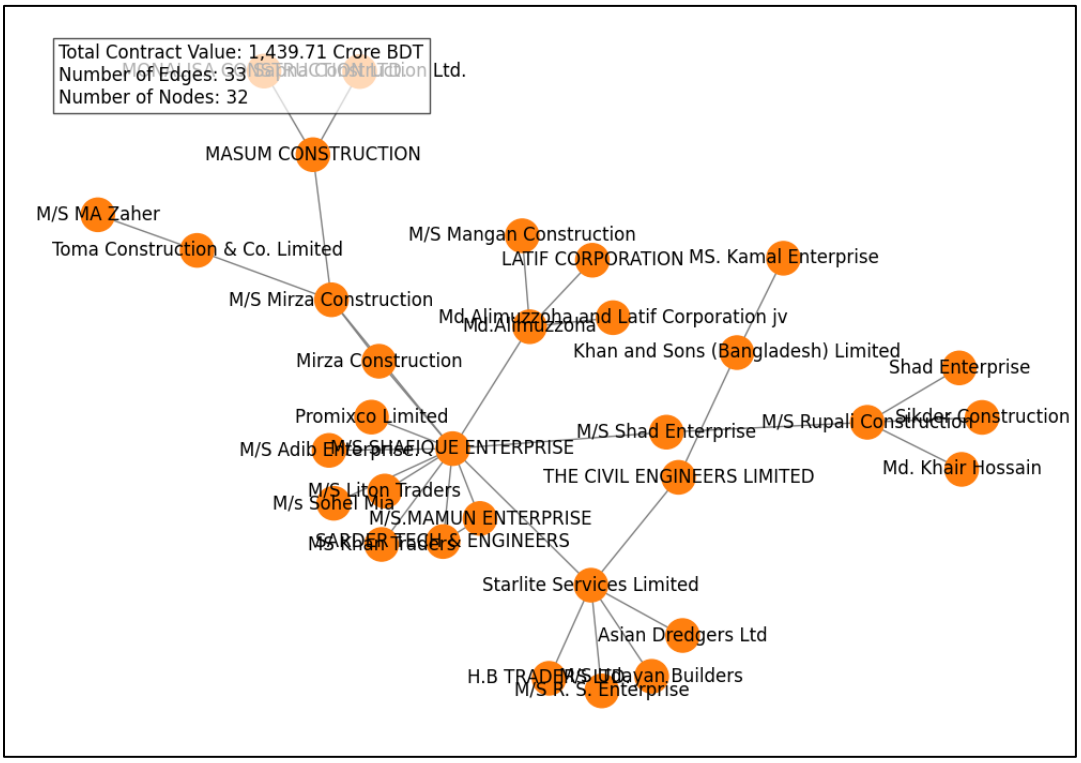


Chart 52: Community_12(ME&SHE)

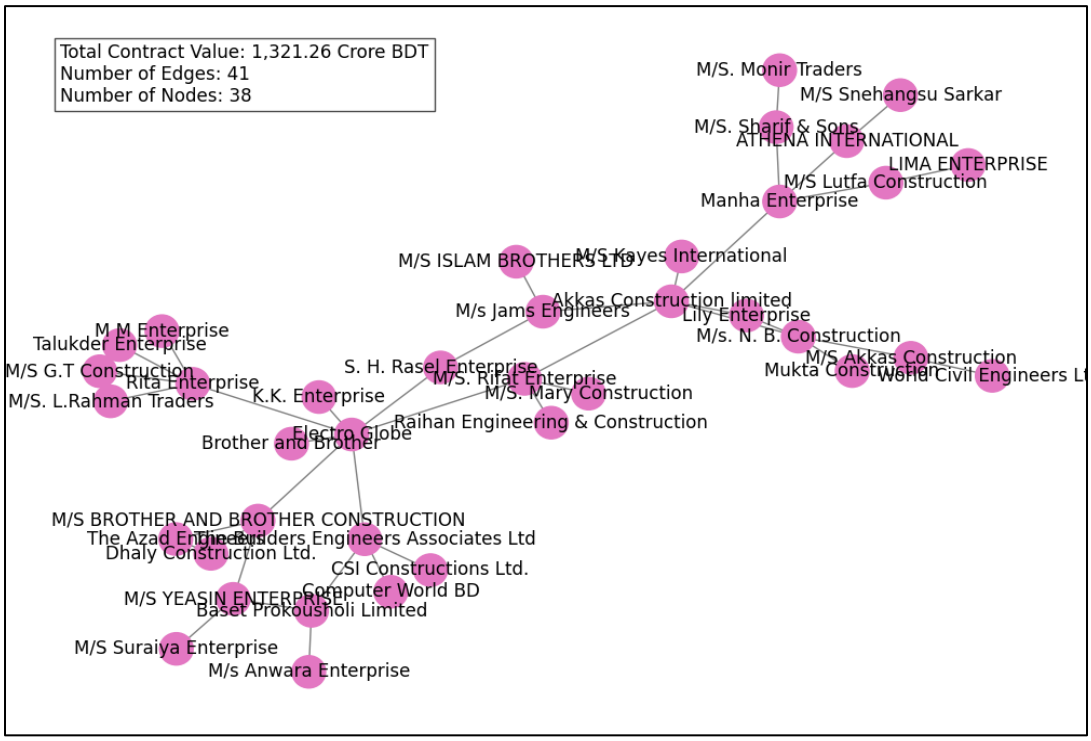


Chart 54: Community_ 25(ME&SHE)

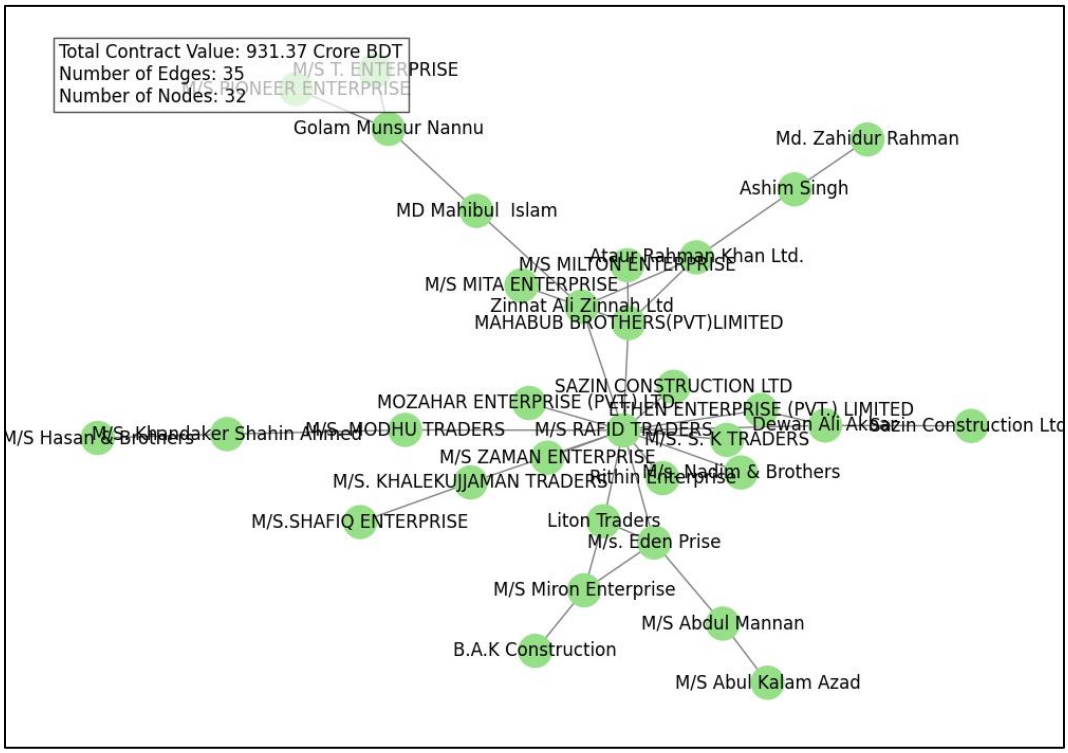


Chart 55: Community_55(ME&SHE)

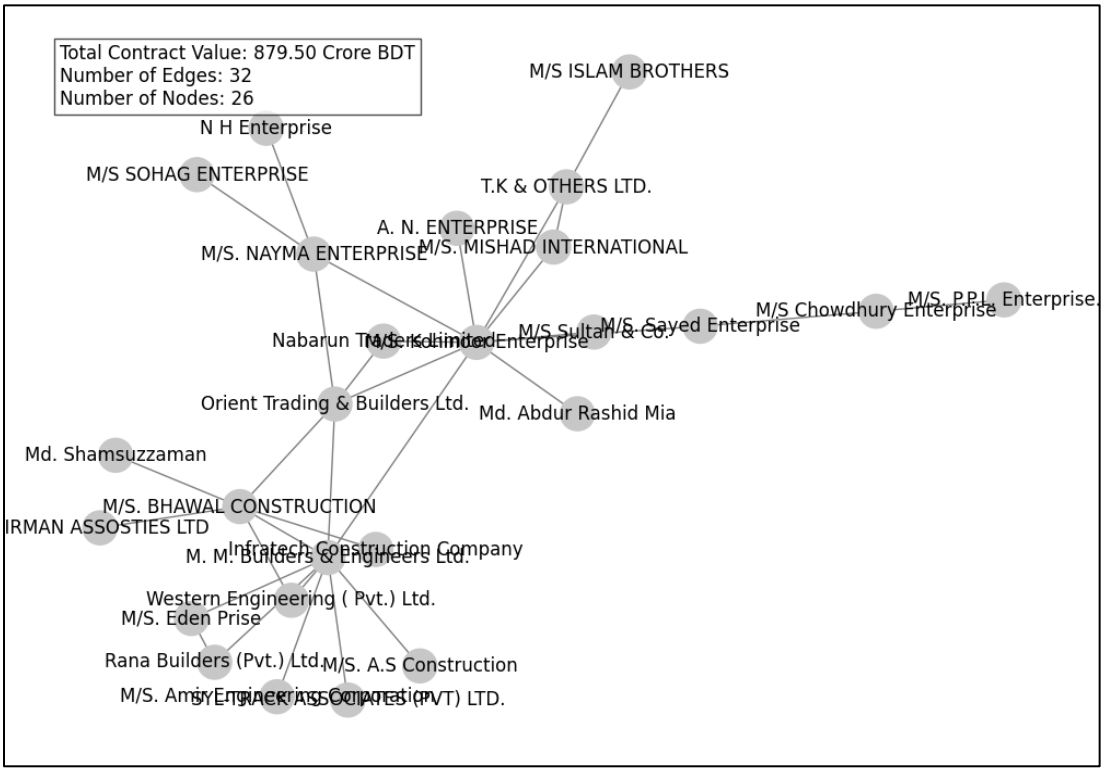


Chart 56: Community16(ME&SHE)

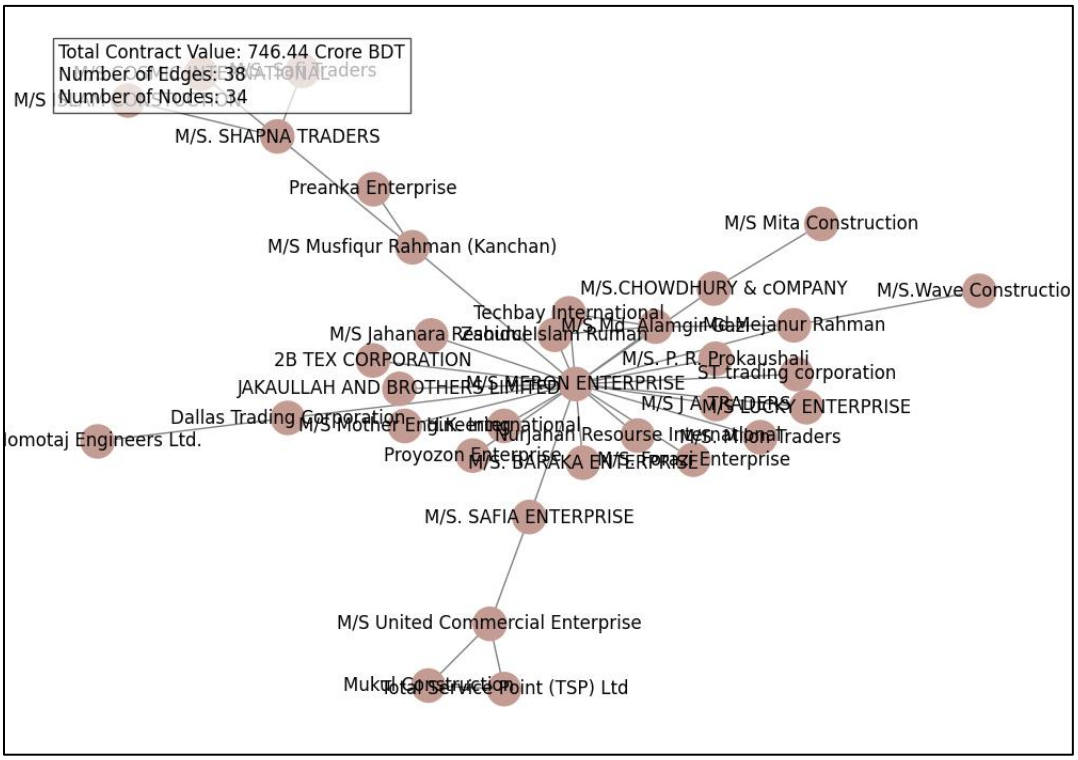
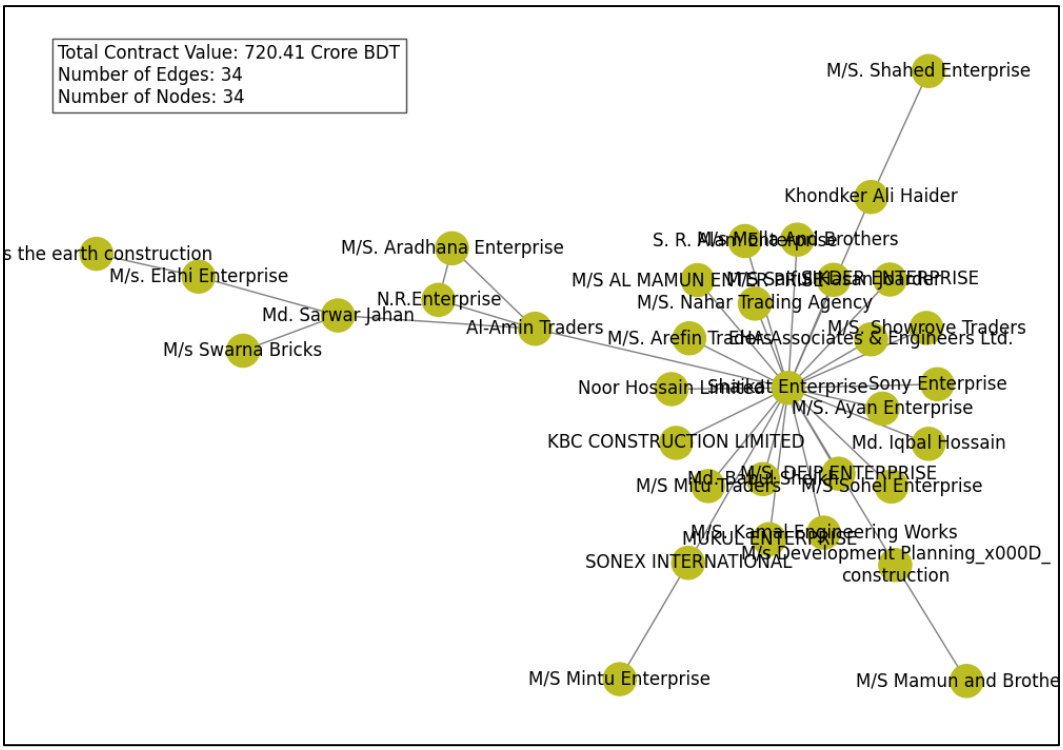


Chart 57: Community_11



Leading Contractors market share:

A comparison of the leading contractors' work numbers between Joint Ventures (JVs) and individual contracts reveals that JVs are a dominant strategy for controlling a significant market share. Hassan Techno Builders Ltd. secured the highest 320 JV contracts, valued at 9,897.82 crore BDT, which is almost five times larger than its 317 individual contracts worth 1,816.36 crore BDT, demonstrating a strong reliance on JVs to dominate the market. Similarly, Rana Builders (Pvt.) Ltd. secured 310 JV contracts worth 9,864.47 crore BDT, which is also five times larger than its 330 individual contracts, which amount to just 1,876.03 crore BDT. National Development Engineers Ltd. also exhibits strong market control through JVs, with 155 contracts totaling 9,231.96 crore BDT, compared to 130 individual contracts worth 5,294.97 crore BDT. M. M. Builders & Engineers Ltd. further strengthens this trend, securing 301 JV contracts worth 8,410.42 crore BDT, which is three times larger than its 330 individual contracts valued at 2,800.91 crore BDT. Even MD. Moyenuddin (Bashi) Limited, with a lower number of 183 JV contracts worth 5,770.3 crore BDT, has twice the market value in JVs compared to its 481 individual contracts, worth 2,479.91 crore BDT (Table-18). These figures clearly highlight that JVs are a key tool for controlling the highest-value contracts and securing a dominant market position.

Table 18: Joint Venture Analysis of leading Contractors

Contractor Name	Number of Joint Ventures	Number of Contractors Connected with	As a Joint Venture		As Individual Contractor	
			Number of Contracts	Total Contract Value	Number of Contracts	Total Contract Value
Hassan Techno Builders Ltd.	145	46	320	9897.82	317	1816.364
Rana Builders (Pvt.) Ltd.	159	59	310	9864.47	330	1876.034
NATIONAL DEVELOPMENT ENGINEERS LTD.	91	45	155	9231.96	130	5294.975
M. M. Builders & Engineers Ltd.	142	66	301	8410.42	330	2800.907

MD. MOYENUDDIN (BASHI) LIMITED	94	45	183	5770.3	481	2479.908

Acute market Concentration

Data highlights the acute market concentration across various ministries, showing how a small percentage of contractors dominate a significant portion of contract value, particularly through Joint Ventures (JVs) and hidden communities or networks of contractors (Table-19).

Table-19: Market control scenario across the selected ministries

Ministry	Number of Contractors	Top 1% Contractor's Control			Network Detected
		Number of 1% Contractor	Percentage of Total Contractor Value	Contract Value Crore BDT	
Road Transport And Highway Division	3488	35	72.9%	60237.67	9
Ministry Of Water Resources	3737	38	30.9%	18,110.76	9
Ministry Of Housing & Public Works	8152	81	32.32%	16,622.62	11
Local Government	29,414	294	27.7%	68,296.5	12
Ministry of Education & Secondary And Higher Education	11,865	119	15.15%	8,619.44	12

The Road Transport and Highway Division exhibits the highest concentration, where just 35 contractors (1%) control 72.90% of the total contract value, amounting to 60,237.67 crore BDT, with 9 major networks or cluster of contractors detected, indicating a highly centralized contracting structure. Similarly, in the Ministry of Water Resources, 3,737 contractors exist, but only 38 (1%) hold 30.90% of contracts

worth 18,110.76 crore BDT, with 9 key networks or cluster of contractors influencing the sector. The Ministry of Housing & Public Works follows the same trend, where 81 contractors (1%) dominate 32.32% of the contract value (16,622.62 crore BDT) through 11 major networks, reinforcing the strong influence of specific players. Local Government projects also reflect significant concentration, with 294 contractors (1%) securing 27.70% of total contracts, worth 68,296.50 crore BDT, spread across 12 detected networks, showcasing a competitive yet consolidated environment. Even in the Ministry of Education & Secondary and Higher Education, 119 contractors (1%) control 15.15% of the contract value (8,619.44 crore BDT), distributed among 12 networks. These figures underscore the dominance of a small group of contractors leveraging networks and JVs to control substantial portions of public contracts, shaping a concentrated market where access to high-value contracts is limited to a select few.

Part-3: Political influence in Public Procurement

Despite the introduction of the e-Government Procurement (e-GP) system 12 years back to streamline and simplify the public procurement process, political influence, collusion among influential figures, and syndication continue to play a dominant role in securing contracts from four key government institutions[12]. It is widely believed that both local and national political powers engage in extortion, but a deeper analysis reveals a well-established nexus among civil bureaucracy, contractors, and politicians. This alliance facilitates the misappropriation of public funds for personal gain and serves as a key driver of corruption in the procurement system[13].

Another TIB report highlights that in road sector and infrastructure projects, nearly 10-20% of the contract value is allegedly paid to local politicians, competing contractors, and senior officials to sustain a collusive bidding process[14]. This systemic corruption ensures that only a select group of politically connected contractors benefit, undermining transparency and fairness in public procurement. Several media reports[15] highlight how political connections enable contractors to secure large projects and dominate the market. Additionally, politicians who remain in power for extended periods can consolidate their influence, fostering political-business networks that, in turn, create strong incentives for collusion between the political and business spheres[16].

To understand the nexus between political office bearers and public procurement contractors, we examine how changes in political leadership impact the dominance

[12] TIB (2020), Governance in Public Procurement: Effectiveness of E-GP in Bangladesh; https://www.ti-bangladesh.org/articles/research/6137

[13] White Paper on State of the Bangladesh Economy (2024)

[14] TIB (2024), Governance Challenges in the Implementation of Roads and Highways' Development Projects; https://www.ti-bangladesh.org/images/2024/report/RHD/Executive-Summary-RHD-Governance-Challenges-en.pdf?v=1.1

[15] সড়কে ১৫ ঠিকাদারের রাজত্ব, পেছনে ওবায়দুল কাদের, শেখ হেলাল, তারিক সিদ্দিক, Prothom Alo, 05 October 2025; https://www.prothomalo.com/bangladesh/mrz00m97z8

[16] Broms et al, Political Competition and Public Procurement Outcomes; https://www.govtransparency.eu/wp-content/uploads/2019/02/Political-Competition-and-Procurement-Outcomes.pdf

of certain top contractors in securing government projects. This analysis helps reveal the extent to which political influence shapes market control in public procurement.

For this analysis, we focus on major City Corporations where political leadership (Mayor) has changed at least once in the last ten years. Additionally, we include the Ministry of Industries, which experienced a ministerial change once, and Local Government, where the minister changed twice between 2012 and 2024. After identifying these entities and the timing of political transitions, we compile two sets of Top 10 contractors lists—one from the earlier period and another from the later period. By comparing these lists, we assess how many contractors retained their positions across both periods and what changes occurred in market dominance. Results are given below.

Dhaka North City Corporations: Between 2015 to 2024 Dhaka City Corporation got two elected and two panel mayors. Anisul Huq was elected as the Mayor and served from May 7, 2015, to November 30, 2017, for a tenure of 2 years and 207 days before his untimely passing. Following his death, Osman Goni took over as Panel Mayor on December 1, 2017, and served for 295 days until September 22, 2018. Subsequently, Md. Jamal Mostafa was appointed as the next Panel Mayor, holding office from September 22, 2018, to March 6, 2019, for 165 days. After that Atiqul Islam elected as a Mayor and served more than five years. As two panel mayor served for short period of time we have decided to develop two set of TOP10 list of contractors for the time period of 2015-2019 and 2020-2024(Table 20). We found that only two contractors (Maisha Construction (PVT) LTD. And S.M Rahman International) are common in two periods.

Table-20: Dhaka North City Corporation
Top10 Contractors list comparison between (2015-2019) and (2020-2024)

2015-2019			2020-2024	
Name of the Contractor	Total Contract Value (Crore BDT)		Name of the Contractor	Total Contract Value (Crore BDT)
M/S. G. K. Enterprise	178.02		MAISHA CONSTRUCTION (PVT.) LTD.	337.82
M/S Joney Enterprise	171.01		ASIF INFRASTRUCTURE LIMITED	293.42
M/S ASIF TRADERS	110.67		S.M Rahman International	153.68
Banga Builders Limited	98.97		Sohel Engineering & Construction Ltd.	134.21
MAISHA CONSTRUCTION (PVT.) LTD.	84.18		JONEY ENTERPRISE LTD	100.02
M. M. Builders & Engineers Ltd.	80.16		Marshal Agrovet Chemical Industries Ltd	82.56
M/S. AT-SA (JV)	75.95		MULTI WASTE MANAGEMENT AND ENGINEERING LTD	76.16
Asif-M Jamal & Co. Ltd. (JV)	72.22		ZAMAN CONSORTIUM LIMITED	73.92
M/S.AT-MT-JVCA	70.20		H M Helal & Co Limited	63.37
S.M Rahman International	68.74		HCPL-MCPL- (JV) (JVCA Partners : HOSSAIN CONSTRUCTION (PVT) LTD , MAISHA CONSTRUCTION (PVT.) LTD.)	60.68
Grand Total	1010.13		Grand Total	1375.85

Change of Mayor

Dhaka South City Corporation: Between 2015 to 2024 two Mayors served the Dhaka south city Corporation. Sayeed Khokon served as Mayor from May 5, 2015, to May 16, 2020, completing a tenure of 5 years and 11 days. He was succeeded by Sheikh Fazle Noor Taposh on May 16, 2020, who remained in office until August 19, 2024, serving for 4 years and 95 days. Here we divided the ten year time into two periods, one is 2015-2019 and other 2020-2024 and develop the Top10 list for two period. We have found that only one contractor survived or common (M/S. G. K. Enterprise) in two lists (Table 21).

Table-21: Dhaka South City Corporation
Top10 Contractors list comparison between (2015-2019) and (2020-2024)

2015-2019			2020-2024	
Name of the Contractor	Total Contract Value (Crore BDT)		Name of the Contractor	Total Contract Value (Crore BDT)
Mamico Limited	331.24		NATIONAL DEVELOPMENT ENGINEERS LTD.	890.52
M/S. G. K. Enterprise	184.66		NDE-SBN JV (JVCA Partners : NATIONAL DEVELOPMENT ENGINEERS LTD. , Sonar Bangla Navigation)	135.69
Orpi Engineering Ltd.	168.34		UCCL The United Construction Company Limited	96.20
M/S. Bhuiyan & Co.	132.76		M/S. G. K. Enterprise	82.33
The Builders Engineers Associates Ltd	117.06		UDC Construction Ltd.	80.68
MT-NE-B&C(JV)	96.83		STR Trade International Ltd	79.74
OPAL INTERNATIONAL	86.38		Marshal Agrovet Chemical Industries Ltd	63.84
Sajeeb Corporation	73.78		M/S. M N Huda Construction Limited	58.38
M/S Maisha Trading	60.44		InGen Technology Limited	57.12
S. S. Engineering & Construction Ltd.-Opal International JV	57.57		Khokan Construction & Engineering Ltd	53.88
Grand Total	1309.10		Grand Total	1,598.38

Change of Mayor

Chittagong City Corporation: A. J. M. Nasir Uddin served as the Mayor from May 7, 2015, to August 4, 2020, completing a tenure of 5 years and 89 days. Following his term, Mohammed Khorshed Alam Sujon was appointed as an Administrator on August 5, 2020, and held office for 185 days until February 6, 2021. Subsequently, Rezaul Karim Chowdhury took over as Mayor on February 15, 2021, and remained in office until August 19, 2024, serving for 3 years and 217 days. So we dcided to divided the time period between 2016-2020 and 2021-2024. Develop the TOP 10 contractor lists accordingly. We found that No Contractor is common in two periods. (Table-22)

Table-22: Chittagong City Corporation
Top10 Contractors list comparison between (2016-2020) and (2021-2024)

2016-2020			2021-2024	
Name of the Contractor	Total Contract Value (Crore BDT)		Name of the Contractor	Total Contract Value (Crore BDT)
HOSSAIN CONSTRUCTION (PVT) LTD-AWR Developments (BD) Ltd.	89.04		RN Yakub & Brothers Private Limited.	53.64
KABIRS-QC-JJT (JV)	38.69		The Construction Trade	46.85
The Builder's Engineer's Associate Ltd & Royal Associates JV	30.70		M/s. Quashem Construction - Iqbal & Brothers (JV) (JVCA Partners : M/S Quashem Construction , M/S IQBAL & BROTHERS)	35.38
AS - RS - HM (JV)	23.17		M/S Quashem Construction	29.29
DH-ST JV	21.94		E-ENGINEERING LIMITED	14.40
SIGMA ENGINEERS LTD.	20.18		HB - QC (JV) (JVCA Partners : M/S. Hossan & Brothers , M/S Quashem Construction)	13.77
Green Grain International	19.60		M/S. Mizan Brothers	13.74
M/s. Amin International	19.21		MIB - MQC (JV) (JVCA Partners : M/S Quashem Construction , M/S IQBAL & BROTHERS)	13.27
AI - Trading (JV)	18.42		MAS - RST (JV) (JVCA Partners : M/S. Abdus Salam , M/S RASHIA&SONS TRADING)	13.12
M/S. S & Y (JV)	17.96		E & P (JV) (JVCA Partners : M/S. Elias Brothres , M/S. Popular Construction)	13.02
Grand Total	298.89		Grand Total	246.48

Change of Mayor

Gazipur City Corporations: Jahangir Alam served as Mayor from July 27, 2018, to November 25, 2021, for 3 years and 121 days, before being suspended in 2021. Following his suspension, Asadur Rahman Kiron took over on November 26, 2021, and remained in office for 1 year and 180 days, until May 25, 2023. He was succeeded by Jayeda Khatun, who served from May 26, 2023, to August 19, 2024, for 1 year and 85 days. After her tenure, Md. Sabirul Islam was appointed as Administrator on August 19, 2024, and is currently incumbent, set to serve for 185 days as an administrator. Here we divide the time period between before the suspension (2018-2021) and after (2022-2024). We found only one contractor common in two periods when TOP 10 contractor list observed. Moreover, contract value between two periods decreased drastically. (Table-23)

Table-23: Gazipur City Corporation
Top10 Contractors list comparison between (2018-2021) and (2022-2024)

2018-2021		Suspension of Mayor	2022-2024	
Name of the Contractor	**Total Contract Value (Crore BDT)**		**Name of the Contractor**	**Total Contract Value (Crore BDT)**
Ataur Rahman Khan Ltd.	**219.26**		**M/S. DOYA ENGINEERING**	**64.10**
M. M. Builders & Engineers Ltd. & Brothers Construction Co. Ltd. (JV)	**166.50**		**RCCL & IE JV**	**47.05**
Rana Builders (Pvt.) Ltd. & Brothers Construction Company Ltd. (JV)	**95.45**		**MAE-AZAD JV (JVCA Partners : M/S. M.A. ENGINEERING , AZAD CONSTRUCTIONS)**	**37.12**
Yakub - Mithu (JV)	**82.78**		**M M ENTERPRISE**	**34.85**
UDC Construction Ltd.	**71.81**		**Akkas Construction limited**	**30.87**
The Builders Engineers Associates Ltd	**69.25**		**M/S M.A Engineering-NS Enterprise (JV) (JVCA Partners : M/S. M.A. ENGINEERING , N S ENTERPRISE)**	**29.87**
M/S. Dawn Corporation	**65.60**		**M/S. Dawn Corporation**	**25.69**
M/S. Bhuiyan & Co.	**63.94**		**M/S. Bhuiyan & Co.**	**22.89**
M/S ARNIF ENTERPRISE	**63.80**		**M/S MONALISA**	**21.96**
Chowdhury Amin (JV)	**58.49**		**Purbachal Drillers Limited**	**21.26**
Grand Total	**956.88**		**Grand Total**	**1,598.38**

Comilla City Corporation: Monirul Haque Sakku served as Mayor of the city for an extensive period, from January 5, 2012, to May 16, 2022, completing 10 years and 131 days in office. Following his tenure, Dr. Safiqul Islam was appointed as an Administrator on May 17, 2022, but served only 49 days until July 5, 2022. Subsequently, Arfanul Haque Rifat took over as Mayor on July 5, 2022, and remained in office for 1 year and 161 days, until December 13, 2023. In 2024, Dr. Tahseen Bahar Shuchona elected and assumed the role on April 4, 2024, but had a short tenure of 137 days, ending on August 19, 2024. After her suspension, Saif Uddin Ahmed was appointed as an Administrator on August 19, 2024, and is currently incumbent, set to serve for 185 days as an independent administrator. Due to availability of data we have divided the time period 2016-2021 (six years of Sakku) and 2022-2024. We found that only two contractors are common in two periods. (Table-24)

Table-24: Comilla City Corporation
Top10 Contractors list comparison between (2016-2021) and (2022-2024)

2016-2021			2022-2024	
Name of the Contractor	Total Contract Value (Crore BDT)	Change of Mayor	Name of the Contractor	Total Contract Value (Crore BDT)
M/S. Hoque Enterprise	79.22		N. S. GALLERY	159.84
M/S Hassan Builders	25.79		M/S. Hoque Enterprise	119.41
M/s. Selim & Brothers-M/S Bithi Enterprise (JV)	22.98		Master Enterprise	69.29
M/S Bithi Enterprise	14.91		M/S. Hoque Enterprise-M/S. Construction & Suppliers (JV) (JVCA Partners : M/S. Hoque Enterprise , M/S Construction & Suppliers)	39.92
MBB-MCI-MAR (JV)	11.53		Hassan Techno Builders Ltd. - M/S Construction & Suppliers JV (JVCA Partners : M/S Construction & Suppliers , Hassan Techno Builders Ltd.)	21.77
MAM CONSTRUCTION LTD.	9.75		M/S P. L Construction	20.87
HE-SB (JV)	9.13		Hassan Techno Builders Ltd.	20.40
Rana Builders (Pvt.) Ltd.	7.69		Hassan Techno Builders Ltd.-M/s Bithi Enterprise	20.20
Hassan Techno Builders Ltd - M/S AH Construction JV	7.50		M/S Bithi Enterprise	17.69
M/S Zaman Traders	6.69		Hassan Techno Builders Ltd.-N. S. GALLERY (JV) (JVCA Partners : N. S. GALLERY , Hassan Techno Builders Ltd.)	11.74
Grand Total	195.20		Grand Total	501.13

Ministry of Industries: From 2015 two ministers and one advisor served ministry of industries. Amir Hossain Amu served as the Minister of Industries from January 14, 2014, to December 2019, overseeing industrial policies and development for nearly six years. He was succeeded by Nurul Majid Mahmud Humayun on January 7, 2019, who remained in office until August 6, 2024, for a tenure of over five and a half years. Following his term, Adilur Rahman Khan was appointed as Adviser on August 9, 2024, and is currently serving in this role. For our test we have divided the time period between 2015-2019 and 2020-2024, subsequently made the TOP 10 list of contractors for two periods. No contractors repeated between two periods. (Table- 25)

Table-25: Ministry of Industies
Top10 Contractors list comparison between (2015-2019) and (2020-2024)

2015-2019			2020-2024	
Name of the Contractor	**Total Contract Value (Crore BDT)**		**Name of the Contractor**	**Total Contract Value (Crore BDT)**
Mohammed Eunus & Brothers (Pvt.) Ltd.	**23.66**	**Change of Minister**	Toma Construction & Co. Limited	**125.20**
M/S ISLAM BROTHERS	**15.87**		M Jamal & Company Limited	**123.57**
NN BUILDERS LTD.	**14.50**		NDE - NNBL - AC JV (JVCA Partners : NATIONAL DEVELOPMENT ENGINEERS LTD. , NN BUILDERS LTD. , Arafat Construction)	**102.40**
Mark Builders Ltd	**14.14**		NDE-BDEL-MNT JV (JVCA Partners : M/S. Niaz Traders , NATIONAL DEVELOPMENT ENGINEERS LTD. , BDE LIMITED)	**95.65**
M/S ISLAM BROTHERS LTD	**10.78**		Masud Hi-Tech Engineering Ltd. - Mazid Sons Construction Ltd. JV	**88.54**
I-MART ENGINEERING LIMITED	**9.52**		Ataur Rahman Khan Ltd.	**83.45**
M/S Khokan Trading Agency-M/S Contemporary (JV)	**8.12**		BDE LIMITED & M.A. ENGINEERING JV (JVCA Partners : M/S. M.A. ENGINEERING , BDE LIMITED)	**73.70**

MD. MOYENUDDIN (BASHI) LIMITED	**6.40**		Arafat Construction	**71.96**
M/s. M.R. Construction	**6.31**		Mazid Sons Construction Ltd.	**60.77**
MAX_BLC JV	**6.29**		Khokan Construction & Engineering Ltd	**59.21**
Grand Total	**115.59**		**Grand Total**	**884.45**

Local Government Division: Since 2012 to 2024 three minister served the local government minisitry. Sayed Ashraful Islam served as the Minister of Local Government from January 6, 2009, to July, 2015, completing a tenure of 6 years and 184 days. He was succeeded by Khandaker Mosharraf Hossain, who held office from July 9, 2015, to January 7, 2019, serving for 3 years and 182 days. Following him, Md. Tazul Islam took over on January 7, 2019, and remained in office until January 10, 2024. Corresponding the change of minister we prepared the list of Top10 between three periods (2012-2015), (2016-2019) and (2020-2024) and found that only two companies survived in the top10 list three consecutive period. And Khairul Kabir Rana ltd. Common in the last two period. (Table 26)

Table-26: Gazipur City Corporation
Top10 Contractors list comparison between (2012-2015),(2016-2019) and (2020-2024)

2012-2015			2016-2019			2020-2024	
Name of the Contractor	Total Contract Value (Crore BDT)	Change of minister	Name of the Contractor	Total Contract Value (Crore BDT)	Change of minister	Name of the Contractor	Total Contract Value (Crore BDT)
Mohammed Eunus & Brothers (Pvt.) Ltd.	89.92		Mohammed Eunus & Brothers (Pvt.) Ltd.	468.38		Mohammed Eunus & Brothers (Pvt.) Ltd.	1815.95
M/S Hamim International	59.34		Ataur Rahman Khan Ltd.	414.74		NATIONAL DEVELOPMENT ENGINEERS LTD.	1793.62
Md Mahafuz Khan	58.36		M/S Hamim International	403.13		EFTE.ETCL (PVT.) LIMITED	1389.92
Taher Brothers Ltd.	55.12		M/S. G. K. Enterprise	368.23		Barendra Construction Ltd.	1342.42
M/S MD MAHMUDUR RAHMAN	48.47		Dhaly Construction Ltd.	344.04		M/S Hamim International	1098.37
M/S Mohiuddin Ahmed	45.79		Md. Khairul Kabir Rana	342.05		Md. Khairul Kabir Rana	834.49
M/S Mominul Hoque	45.50		Mamico Limited	331.24		Monir Engineering And Construction Ltd.	780.69
M/S Kohinoor Enterprise and Orient Trading and Builders ltd.	44.88		Toma Construction & Co. Limited	251.70		JAKAULLAH AND BROTHERS LIMITED	735.47
Rana Builders (Pvt.) Ltd.	44.83		S. Ananta Bikash Tripura	235.23		M/S. Kohinoor Enterprise	716.93
M/S SHAHIL Enterprise	44.61		The Builders Engineers Associates Ltd	228.44		Shaikat Enterprise	586.46
Grand Total	536.81		Grand Total	3,387.10		Grand Total	10,383.27

Overall observations

- Since its introduction in 2011, Bangladesh has spent 596,921 crore BDT through the e-GP platform. The highest recorded contract value awarded via this system stands at 881 crore BDT. However, all contracts exceeding this value remain excluded from the platform.
- Top 10 ministry's Top 5% Contractor awarded 61.31% of contract value. Bottom 10%'s market share is less than 1% for All Ministries.
- Ministry Of Housing and Public works' Top 5% Contractor awarded 74.96% of total contract value.
- Across most ministries, the top 5% of bidders increased their market share in a decade. Ministry of Housing and Public Works saw one of the largest increases in concentration (15%), followed by the Road Transport and Highways Division and ministry of education also saw 10% increase respectively.
- Top contractors consistently secure contracts through JV formations, and their actual market influence is even greater than it appears.
- In the Roads transport and Highway division (RTHD) 11% contractors controls 93.55% of total contract value, whereas 35 (1%) contractors control 72,9% market share.
- There are 9 major networks of contractors active in the RTHD division.
- Out of 3737 contractors 9% controls 91.5% of total contract value in the ministry of water resources, whereas 38 contractors control 30.9%.
- 9 Cluster of contractors active in the ministry of water resources.
- In the ministry of housing & Public works 7.45% contractors controls 71% market share. 81 contractors control 32.32% market.
- 11 communities of contractors active in the ministry of housing & Public works procurement.
- 9.74% contractors control 62.88% market share of local government division procurement, whereas 294 contractors (1%) controls 27.7% market share.
- 12 major contractor communities detected in the LGD and education procurement
- Leading contractors' capture bigger market share through JVs, in some cases it is five times bigger than it appears.

- Political leadership change impact the dominance of certain top contractors in securing government projects.
- Chittagong city corporations see a complete change of TOP10 contractors when Mayor changes. Similar thing happened in ministry of industries when minister changes.

Recommendations:

Bangladesh Public Procurement Authority (BPPA) should take several strategic steps.

- First, BPPA must apply rigorous scrutiny to joint venture (JV) firms through independent review committee to prevent collusive practices and market domination.
- Second, to dismantle the control of a few contractors, BPPA should enforce competition laws and restrict JVs where individual partners are independently capable of handling specific projects.
- Third, BPPA can introduce a market share cap for individual contractors and joint ventures, regularly monitoring their share to prevent monopolization and ensure a fair distribution of opportunities.
- Fourth, both BPPA and procuring entities should prioritize the adoption of international best practices and enforcement of procedural measures designed to enhance market competition.
- Fifth, Public Procurement Rules should be amended to make the beneficial ownership information of companies and joint ventures available for public information.
- Sixth, all high-value contracts not yet covered under the e-GP system should be swiftly brought into the e-tendering process to ensure greater transparency and accessibility.
