LokSabha Elections 2024

Import necessary Libraries

In [1]:
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

Import Dataset

In [2]:
```
Ed = pd.read_csv("election_results_2024.csv")
```

In [3]:
```
Ed.head(10)
```

Out[3]:

	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin	
0	AJMER	13	BHAGIRATH CHOUDHARY	Bharatiya Janata Party	RAMCHANDRA CHOUDHARY	Indian National Congress	329991	D
1	ALWAR	8	BHUPENDER YADAV	Bharatiya Janata Party	LALIT YADAV	Indian National Congress	48282	D
2	AMBALA	1	VARUN CHAUDHRY	Indian National Congress	BANTO KATARIA	Bharatiya Janata Party	49036	D
3	ANANTNAG-RAJOURI	3	MIAN ALTAF AHMAD	Jammu & Kashmir National Conference	MEHBOOBA MUFTI	Jammu & Kashmir Peoples Democratic Party	281794	D
4	ARAKKONAM	7	S JAGATHRATCHAKAN	Dravida Munnetra Kazhagam	L VIJAYAN	All India Anna Dravida Munnetra Kazhagam	306559	D
5	ARANI	12	THARANIVENTHAN M S	Dravida Munnetra Kazhagam	GAJENDRAN, G.V.	All India Anna Dravida Munnetra Kazhagam	208766	D
6	Adilabad	1	GODAM NAGESH	Bharatiya Janata Party	ATHRAM SUGUNA	Indian National Congress	90652	D
7	Agra	18	PROF S P SINGH BAGHEL	Bharatiya Janata Party	SURESH CHAND KARDAM	Samajwadi Party	271294	D
8	Ahmedabad East	7	HASMUKHBHAI PATEL (H.S.PATEL)	Bharatiya Janata Party	HIMMATSINH PRAHLADSINH PATEL	Indian National Congress	461755	D
9	Ahmedabad West	8	DINESHBHAI MAKWANA (ADVOCATE)	Bharatiya Janata Party	BHARAT YOGENDRA MAKWANA	Indian National Congress	286437	D

In [4]:
```
Ed.sample(10)
```

Out[4]:

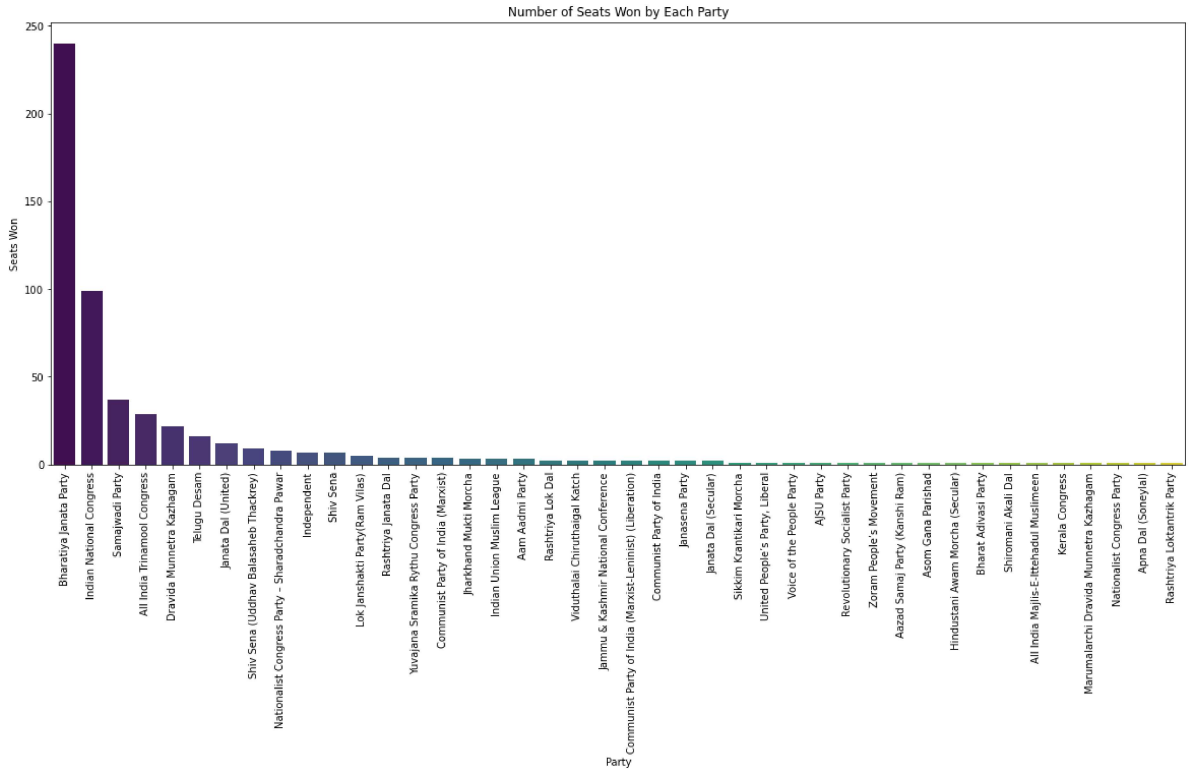
	Constituency	Const. No.	Leading Candidate	Leading Party	Trailing Candidate	Trailing Party	Margin	Sta
221	INDORE	26	SHANKAR LALWANI	Bharatiya Janata Party	SANJAY S/O LAKSHMAN SOLANKI	Bahujan Samaj Party	1175092	Re Decla
361	Murshidabad	11	ABU TAHER KHAN	All India Trinamool Congress	MD SALIM	Communist Party of India (Marxist)	164215	Re Decla
224	JABALPUR	13	ASHISH DUBEY	Bharatiya Janata Party	DINESH YADAV	Indian National Congress	486674	Re Decla
130	Chhota Udaipur	21	JASHUBHAI BHILUBHAI RATHVA	Bharatiya Janata Party	SUKHRAMBHAI HARIYABHAI RATHWA	Indian National Congress	398777	Re Decla
156	Dhenkanal	9	RUDRA NARAYAN PANY	Bharatiya Janata Party	ABINASH SAMAL	Biju Janata Dal	76567	Re Decla
31	Aonla	24	NEERAJ MAURYA	Samajwadi Party	DHARMENDRA KASHYAP	Bharatiya Janata Party	15969	Re Decla
206	Hajipur	21	CHIRAG PASWAN	Lok Janshakti Party(Ram Vilas)	SHIV CHANDRA RAM	Rashtriya Janata Dal	170105	Re Decla
7	Agra	18	PROF S P SINGH BAGHEL	Bharatiya Janata Party	SURESH CHAND KARDAM	Samajwadi Party	271294	Re Decla
231	JHUNJHUNU	4	BRIJENDRA SINGH OLA	Indian National Congress	SHUBHKARAN CHOUDHARY	Bharatiya Janata Party	18235	Re Decla
526	VILUPPURAM	13	RAVIKUMAR. D	Viduthalai Chiruthaigal Katch	BHAGYARAJ. J	All India Anna Dravida Munnetra Kazhagam	70703	Re Decla

Party with highest and lowest margin of victory

In [22]:
```
party_votes = Ed.groupby('Leading Party')['Margin'].sum().sort_values(ascendin
Ed['Margin'] = pd.to_numeric(Ed["Margin"], errors='coerce')

# Party with Lowest and Highest Margin of Victory

HM = Ed.loc[Ed['Margin'].idxmax()] # Highest margin
LM = Ed.loc[Ed['Margin'].idxmin()] # lowest margin

# plt.figure(figsize=(20,8))
# sns.barplot(x=party_votes.index, y=party_votes.values, palette='viridis')
# plt.tittle("Total votes by leading Party")
# plt.xlabel('Party')
# plt.ylabel('Total votes')
# plt.xticks(rotation = 90)
# plt.show()
```

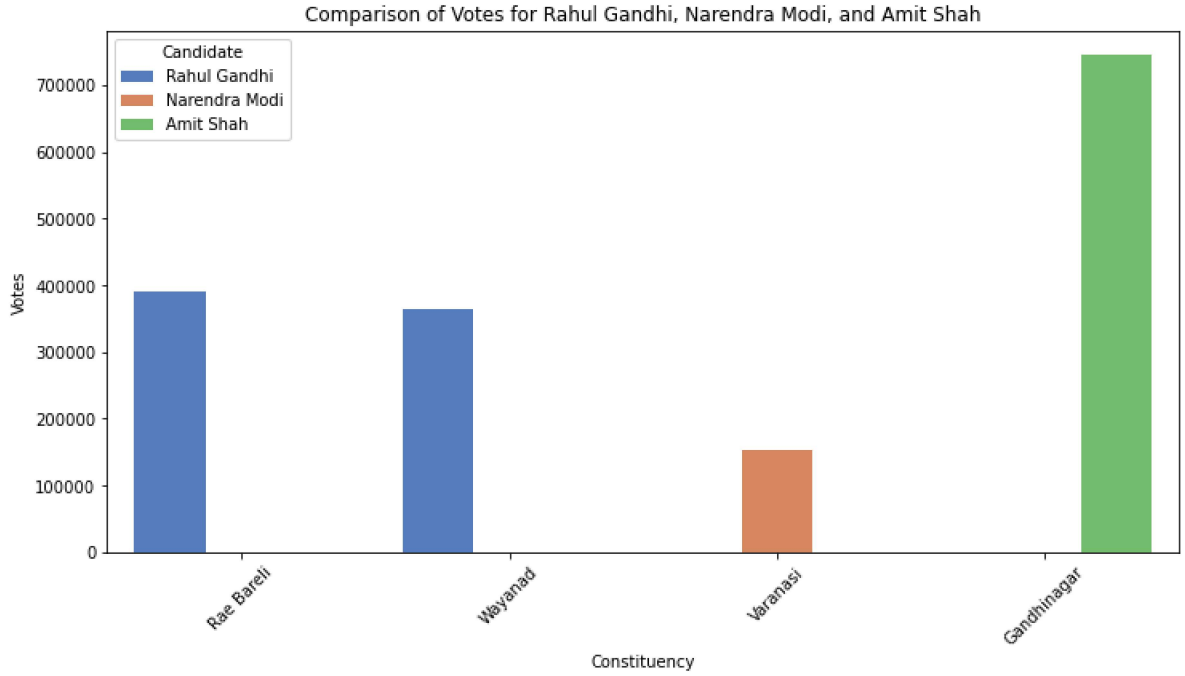
Bar Plot showing number of Seats won by each Party

In [48]:
```
leading_party_highest_votes = party_votes.idxmax()
leading_party_lowest_votes = party_votes.idxmin()
# Number of seats won by each party
seats_won = Ed['Leading Party'].value_counts()
# Plot number of seats won by each party
plt.figure(figsize=(20, 8))
sns.barplot(x=seats_won.index, y=seats_won.values, palette='viridis')
plt.title('Number of Seats Won by Each Party')
plt.xlabel('Party')
plt.ylabel('Seats Won')
plt.xticks(rotation=90)
plt.show()
```



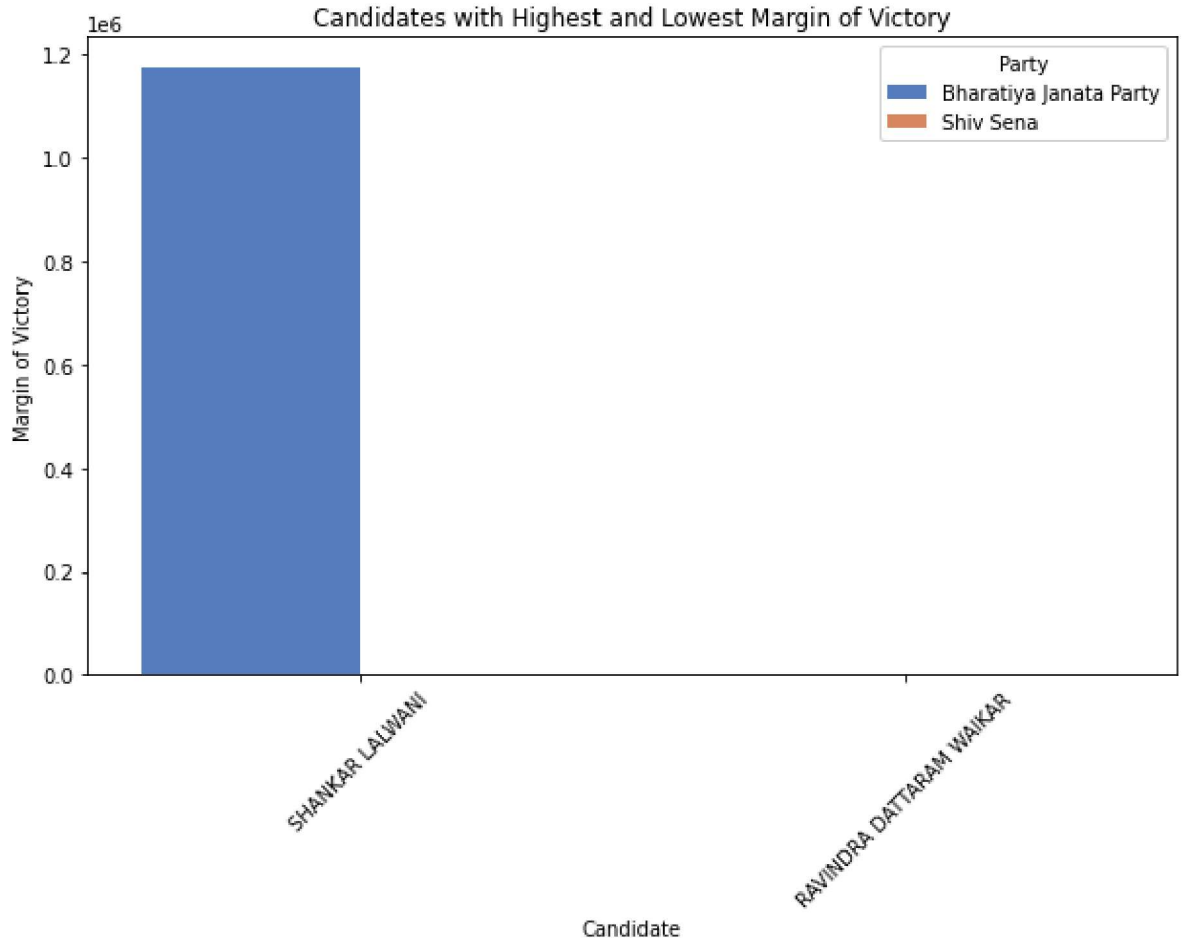
Votes for Rahul Gandhi, Narendra Modi and Amit Shah

In [14]:
```
rahul_entries = Ed[Ed['Leading Candidate'] == 'RAHUL GANDHI']
modi_entries = Ed[Ed['Leading Candidate'] == 'NARENDRA MODI']
amit_entries = Ed[Ed['Leading Candidate'] == 'AMIT SHAH']

rahul_votes = rahul_entries['Margin'].values
modi_votes = modi_entries['Margin'].values[0] if not modi_entries.empty else 0
amit_votes = amit_entries['Margin'].values[0] if not amit_entries.empty else 0

rahul_constituencies = list(rahul_entries['Constituency'])

modi_constituency = modi_entries['Constituency'].values[0] if not modi_entries

amit_constituency = amit_entries['Constituency'].values[0] if not amit_entries

# Combine the data
data_to_plot = pd.DataFrame({
    'Candidate': ['Rahul Gandhi'] * len(rahul_votes) + ["Narendra Modi", "Amit
    'Constituency': rahul_constituencies + [modi_constituency, amit_constituen
    'Votes': list(rahul_votes) + [modi_votes, amit_votes]
})

plt.figure(figsize=(12, 6))
sns.barplot(data=data_to_plot, x='Constituency', y='Votes', hue='Candidate', p
plt.title("Comparison of Votes for Rahul Gandhi, Narendra Modi, and Amit Shah"
plt.xlabel('Constituency')
plt.ylabel('Votes')
plt.xticks(rotation=45)
plt.show()
```

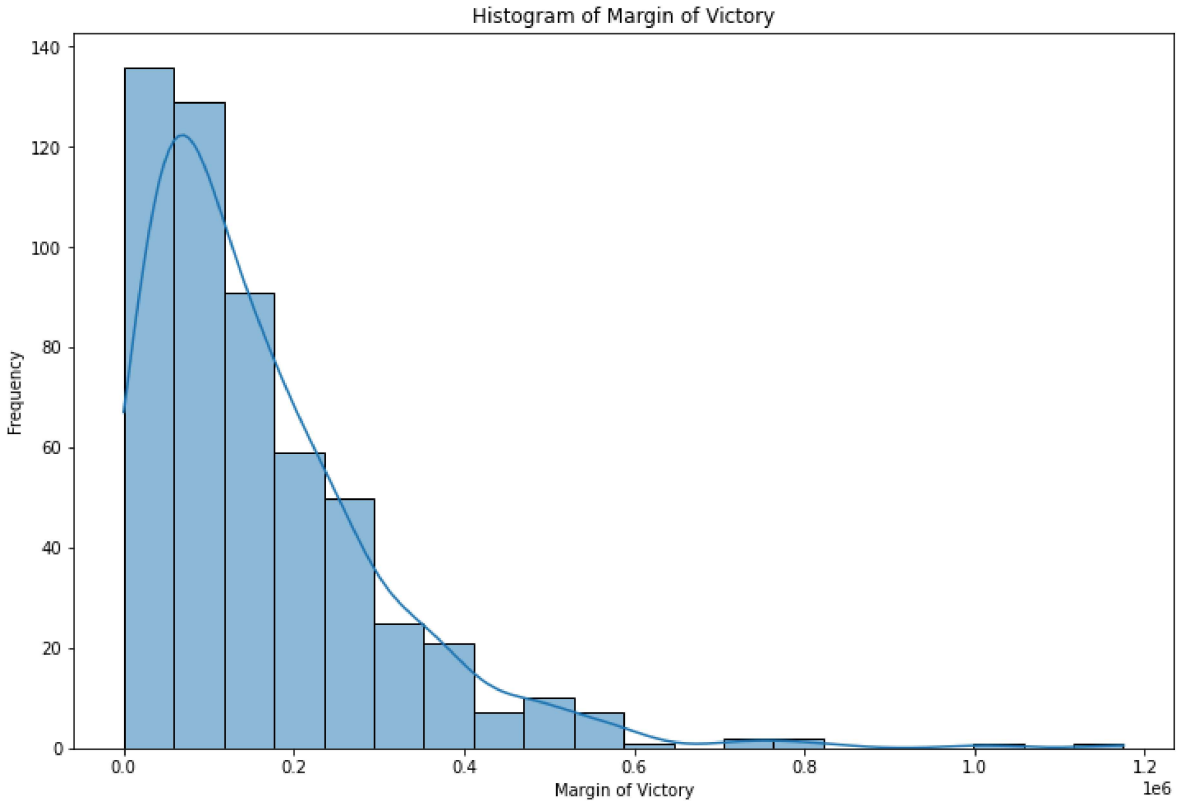


Highest Lowest Victory Candidiate

In [15]:
```
highest_margin_entry = Ed.loc[Ed['Margin'].idxmax()]
lowest_margin_entry = Ed.loc[Ed['Margin'].idxmin()]

# Combine the data
data_to_plot = pd.DataFrame({
    'Candidate': [highest_margin_entry['Leading Candidate'], lowest_margin_ent
    'Party': [highest_margin_entry['Leading Party'], lowest_margin_entry['Lead
    'Margin': [highest_margin_entry['Margin'], lowest_margin_entry['Margin']]
})

# Plot the comparison
plt.figure(figsize=(10, 6))
sns.barplot(data=data_to_plot, x='Candidate', y='Margin', hue='Party', palette
plt.title('Candidates with Highest and Lowest Margin of Victory')
plt.xlabel('Candidate')
plt.ylabel('Margin of Victory')
plt.xticks(rotation=45)
plt.show()
```

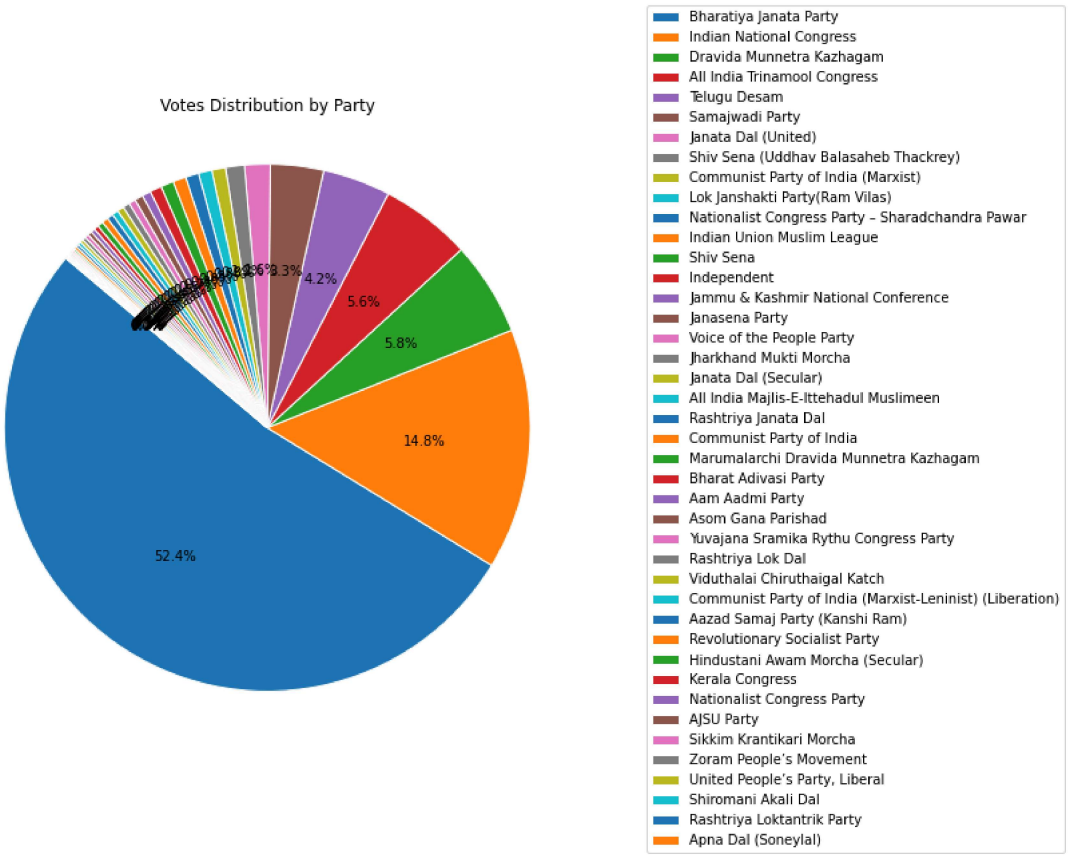


In [16]:
```
plt.figure(figsize=(12,8))
sns.histplot(Ed['Margin'], bins=20, kde=True)
plt.title('Histogram of Margin of Victory')
plt.xlabel('Margin of Victory')
plt.ylabel('Frequency')
plt.show()
```



Votes distribution by different parties

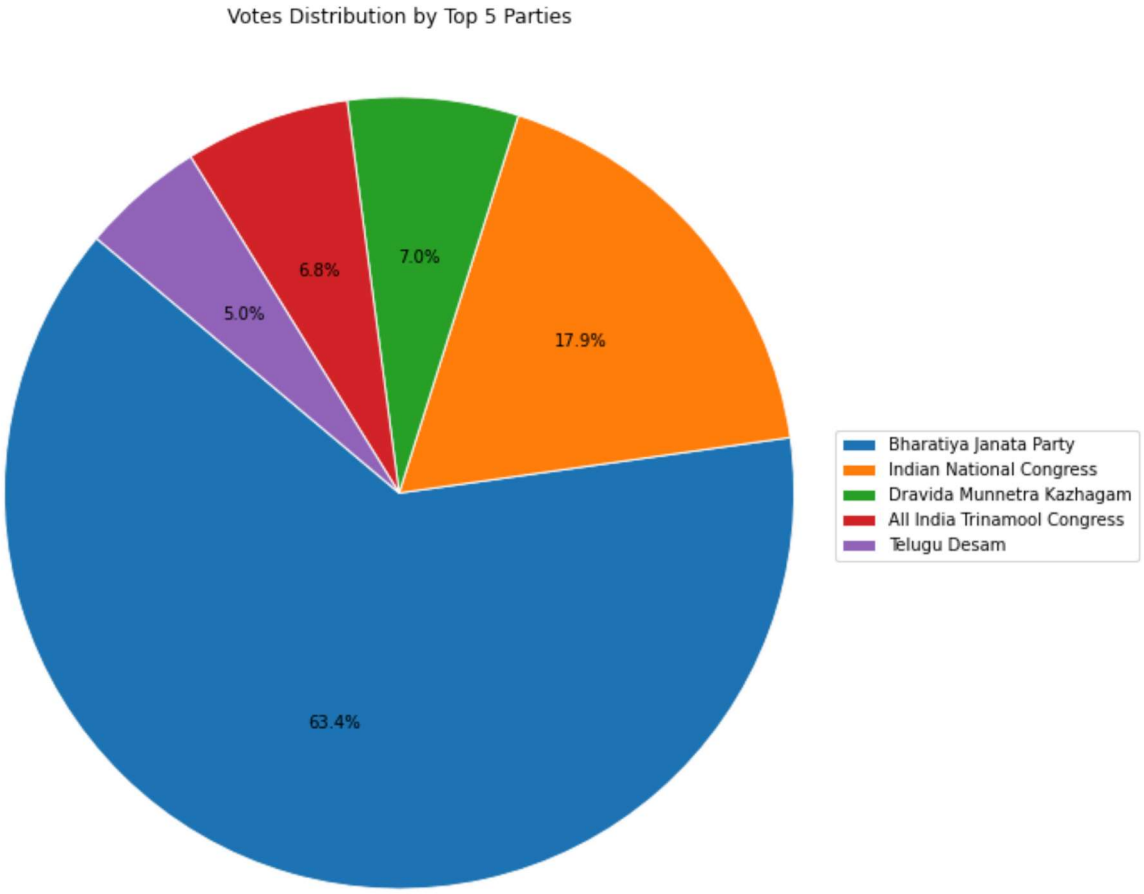
In [43]:
```
party_votes = Ed.groupby('Leading Party')['Margin'].sum().sort_values(ascendin

# Plot pie chart
plt.figure(figsize=(10, 8))
wedges, texts, autotexts = plt.pie(party_votes, labels=None, autopct='%1.1f%%'
plt.title('Votes Distribution by Party', pad=20)
plt.axis('equal')

plt.legend(labels=party_votes.index, loc='center left', bbox_to_anchor=(1, 0.5


plt.show()
```



Votes Distribution for Top 5 parties

In [41]:

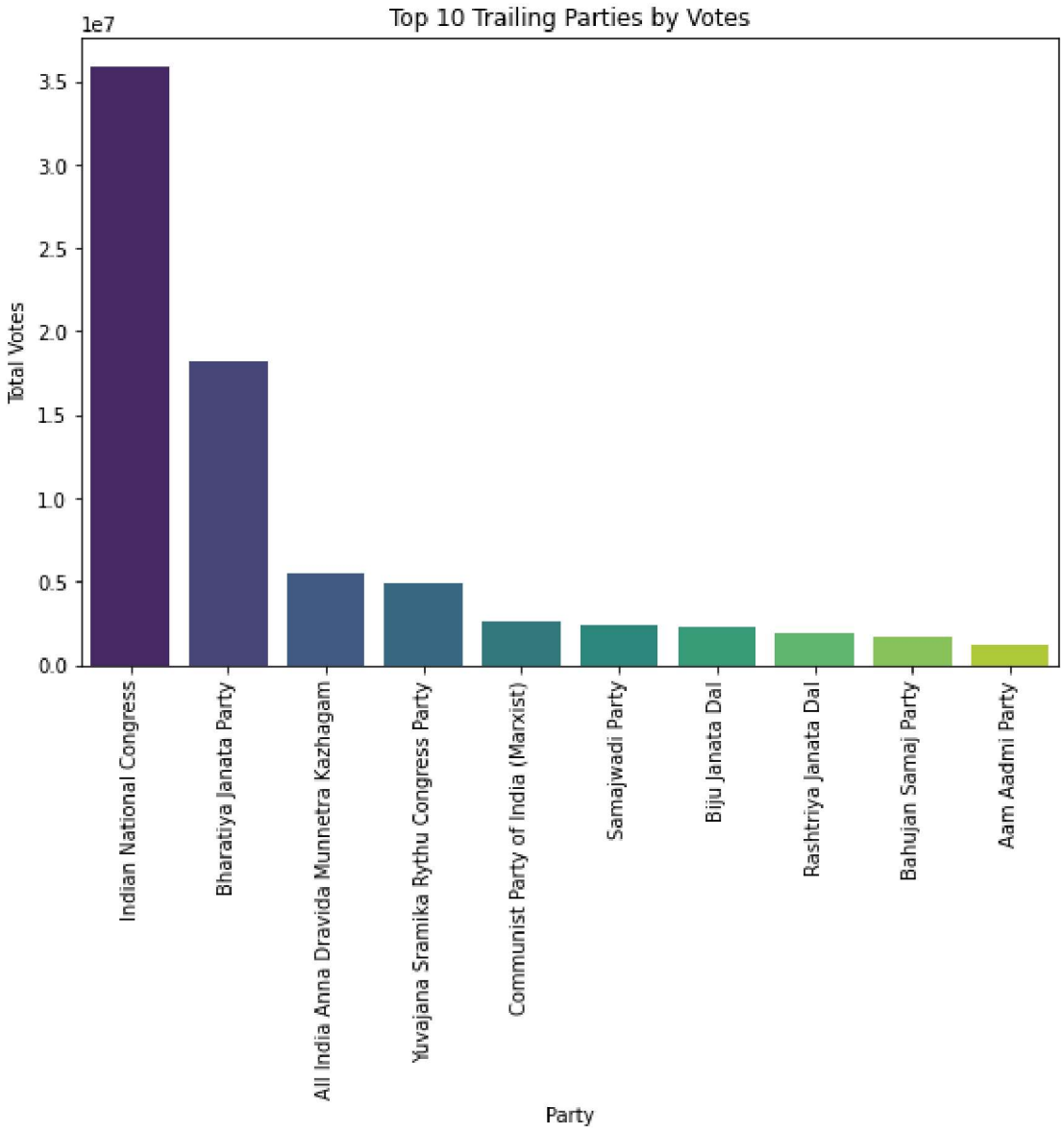
```
party_votes = Ed.groupby('Leading Party')['Margin'].sum().sort_values(ascendin

# Select the top 5 parties
top_5_party_votes = party_votes.head(5)

# Plot pie chart
plt.figure(figsize=(10, 8))
wedges, texts, autotexts = plt.pie(top_5_party_votes, labels=None, autopct='%1
plt.title('Votes Distribution by Top 5 Parties', pad=20)
plt.axis('equal')

plt.legend(wedges, top_5_party_votes.index, loc='center left', bbox_to_anchor=
plt.tight_layout()
plt.show()
```



Top 10 trailing party by VOTE

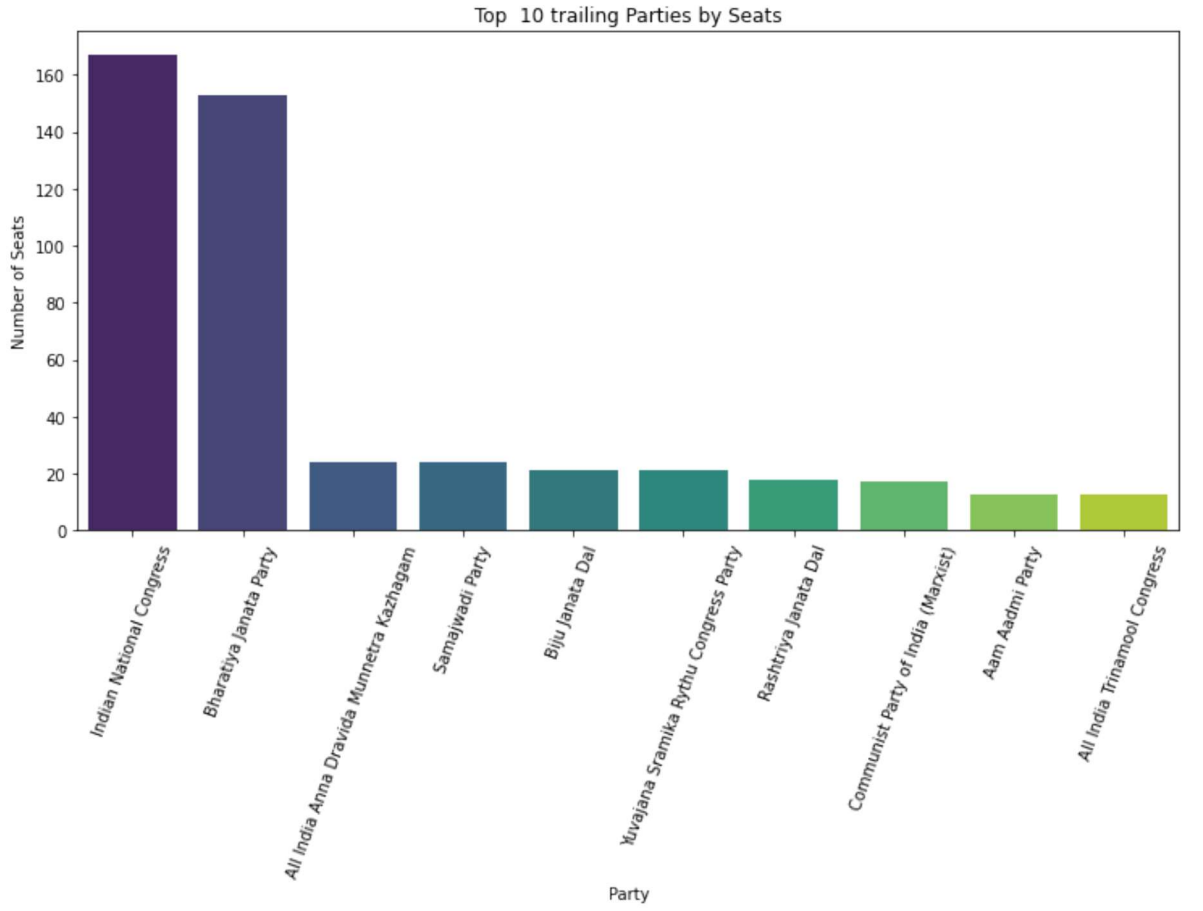
In [39]:
```
trailing_party_votes = Ed.groupby('Trailing Party')['Margin'].sum().sort_value
trailing_party_seats = Ed['Trailing Party'].value_counts()

plt.figure(figsize=(20,6))

plt.subplot(1,2,1)
sns.barplot(x=trailing_party_votes.index[:10], y=trailing_party_votes.values[:
plt.title('Top 10 Trailing Parties by Votes')
plt.xlabel('Party')
plt.ylabel('Total Votes')
plt.xticks(rotation=90)
```

Out[39]:
```
(array([0, 1, 2, 3, 4, 5, 6, 7, 8, 9]),
 [Text(0, 0, 'Indian National Congress'),
  Text(1, 0, 'Bharatiya Janata Party'),
  Text(2, 0, 'All India Anna Dravida Munnetra Kazhagam'),
  Text(3, 0, 'Yuvajana Sramika Rythu Congress Party'),
  Text(4, 0, 'Communist Party of India (Marxist)'),
  Text(5, 0, 'Samajwadi Party'),
  Text(6, 0, 'Biju Janata Dal'),
  Text(7, 0, 'Rashtriya Janata Dal'),
  Text(8, 0, 'Bahujan Samaj Party'),
  Text(9, 0, 'Aam Aadmi Party')])
```



Top 10 trailing party by SEAT

In [40]:
```
plt.figure(figsize=(20,8))
plt.subplot(1,2,2)
sns.barplot(x=trailing_party_seats.index[:10], y=trailing_party_seats.values[:
plt.title('Top  10 trailing Parties by Seats')
plt.xlabel('Party')
plt.ylabel('Number of Seats')
plt.xticks(rotation=70)
plt.tight_layout()
plt.show()
```



The End