Telangana Growth Analysis

Objective

- Explore **Stamp Registration, Transportation and Ts-Ipass** Datasets. Understand their attributes, categories and time period.
- **Analyze trends and patterns** within each department.
- Identify **growth opportunities and areas** needing attention.
- Find **correlation** among these departments and report the overall growth of the state through **insights and relevant visuals** such as shape maps.

Stamps

Analyze Telangana's **Stamp Registration Revenue, count, E-Stamp Revenue Count,** and the **changes** in E-Stamp Count compared to Stamp Registration across Telangana's diverse districts.

This dynamic dashboard empowers users to uncover **revenue trends**, compare E-Stamp and Stamp Registration counts, and **understand** their implications for Telangana's fiscal landscape.

Transportation

Analyze Telangana's **transportation** datasets and examine **seasonal trends** patterns by vehicle class.

Identify **correlations among specific months** between vehicle sales and create relevant visuals, such as shape maps.

Ts-Ipass

Analyze the **Ts-Ipass** datasets to investigate the **investment trends** for specific sectors across districts.

Examine the **relationship trend** between district investments, vehicle sales, and stamp revenue.

Identify **substantial and cyclicality** in investment trends across multiple districts...

Insights & Recommendations

5 **Insights** & 5 **Recommendations** for Telangana's Future Growth

106.7bn ✓
LY: 84.1bn (+26.9%)
Total Stamp Registration Revenue

107.1bn ✓
LY: 85.7bn (+25.08%)
Total E Stamp Revenue

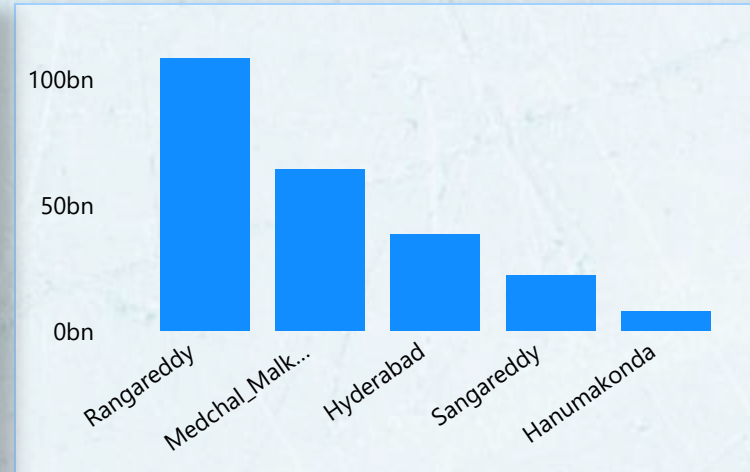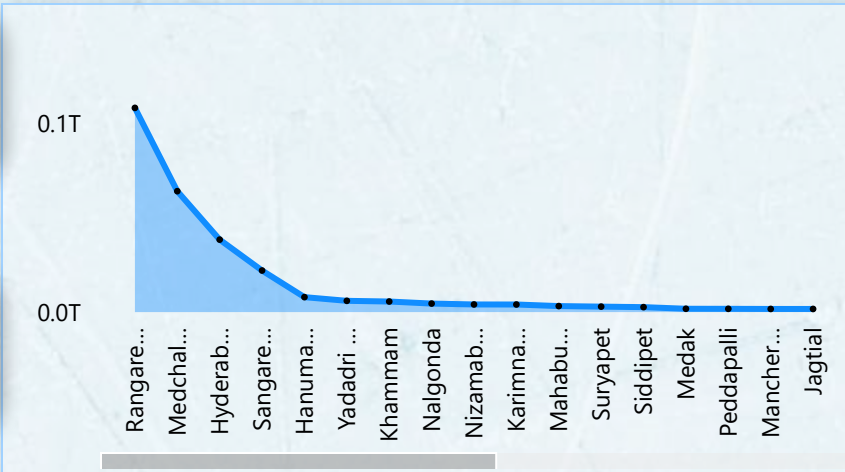## Top 5 highest stamp registration revenue growth Districts across Telangana between FY 2019 to FY 2022

0.1T
0.0T

Rangare... | Medchal... | Hyderab... | Sangare... | Hanuma... | Yadadri... | Khammam | Nalgonda | Nizamab... | Karimna... | Mahabu... | Suryapet | Siddipet | Medak | Peddapalli | Mancher... | Jagtial

100bn
50bn
0bn

Rangareddy | Medchal_Malk... | Hyderabad | Sangareddy | Hanumakonda

Top 5 highest E stamp revenue growth Districts compare to stamp registration revenue in FY 2022

● Total_Estamp_challan_rev ● Total_Stamps_Registration...

0.2T
0.1T
0.0T

Ranga... | Medc... | Hyder... | Sanga... | Hanu... | Yadad... | Kham... | Nizam... | Nalgo... | Karim... | Maha... | Surya... | Siddip... | Pedda... | Medak | Manc... | Jagtial | Vikara...
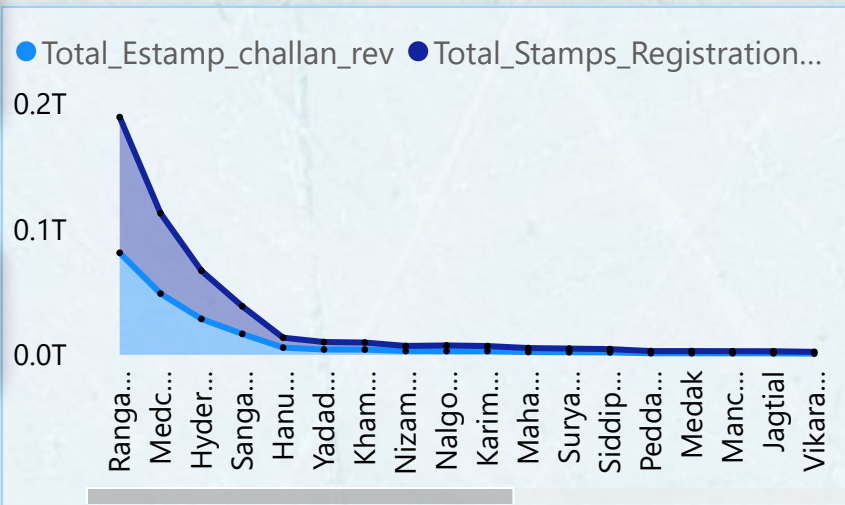
District	E stamp Rev	Stamps Registration Rev
Sangareddy	8.26bn	8.27bn
Rangareddy	38.35bn	37.70bn
Medchal_Malkajgiri	23.60bn	24.04bn
Hyderabad	14.37bn	14.27bn
Hanumakonda	2.85bn	2.82bn
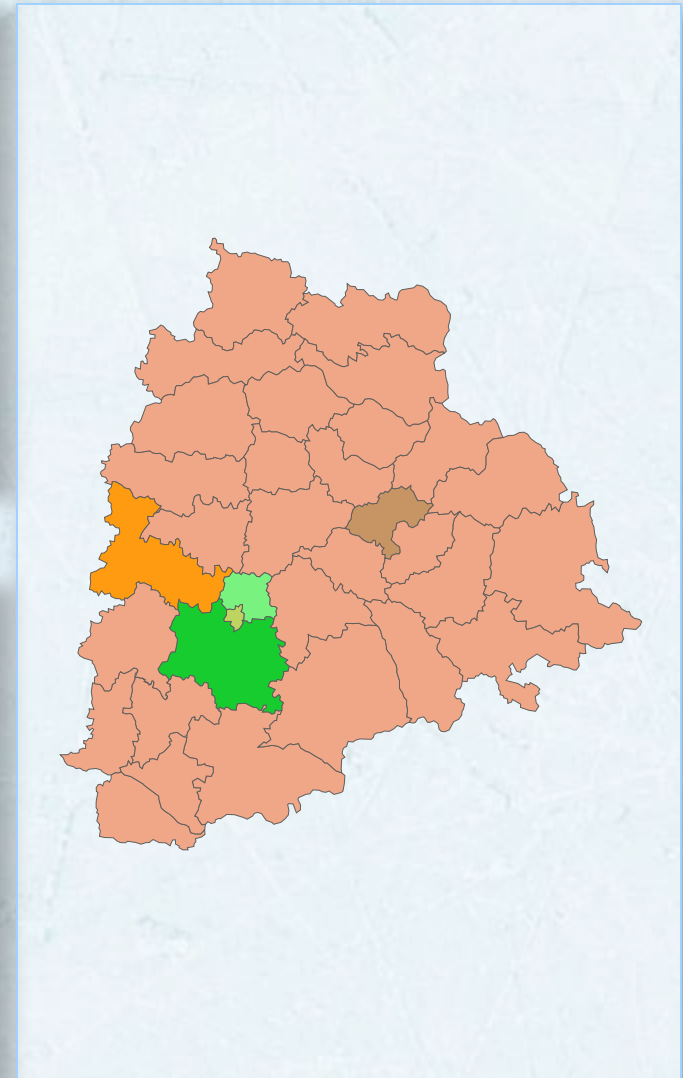
1.21M ✓
LY: 1.10M (+9.28%)
Total Stamp Registration Count

1.25M ✓
LY: 1.17M (+6.9%)
Total E Stamp Count

Alteration of E Stamp challans count and Stamps registration count and Suggestions

● **Total_Estamp_challans_cnt** ● **Total_Stamps_registraion_cnt**

200K

150K

100K

50K

0K

Jan 2020   Jan 2021   Jan 2022   Jan 2023

● **Total_Estamp_challans_cnt** ● **Total_Stamps_registraion_cnt**

2.93M (37.52%)

4.87M (62.48%)
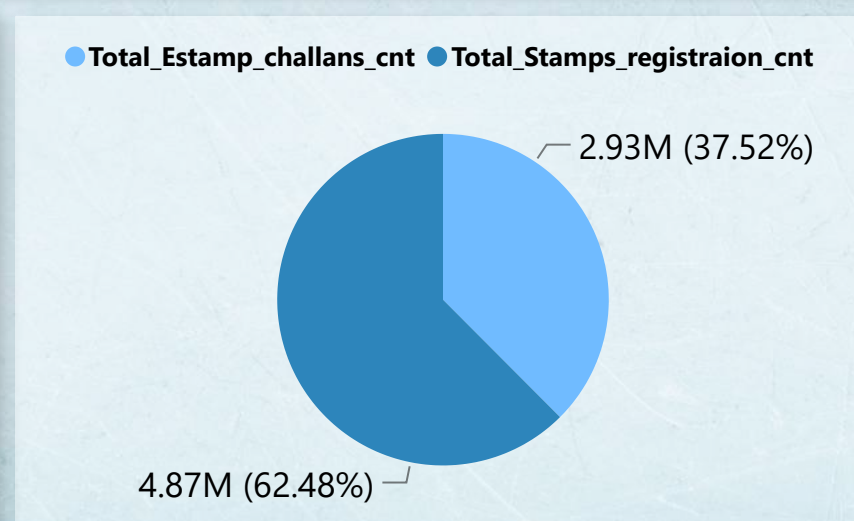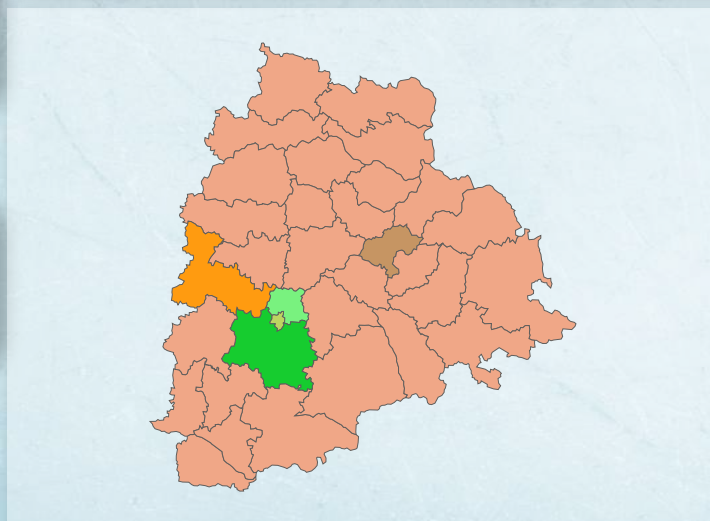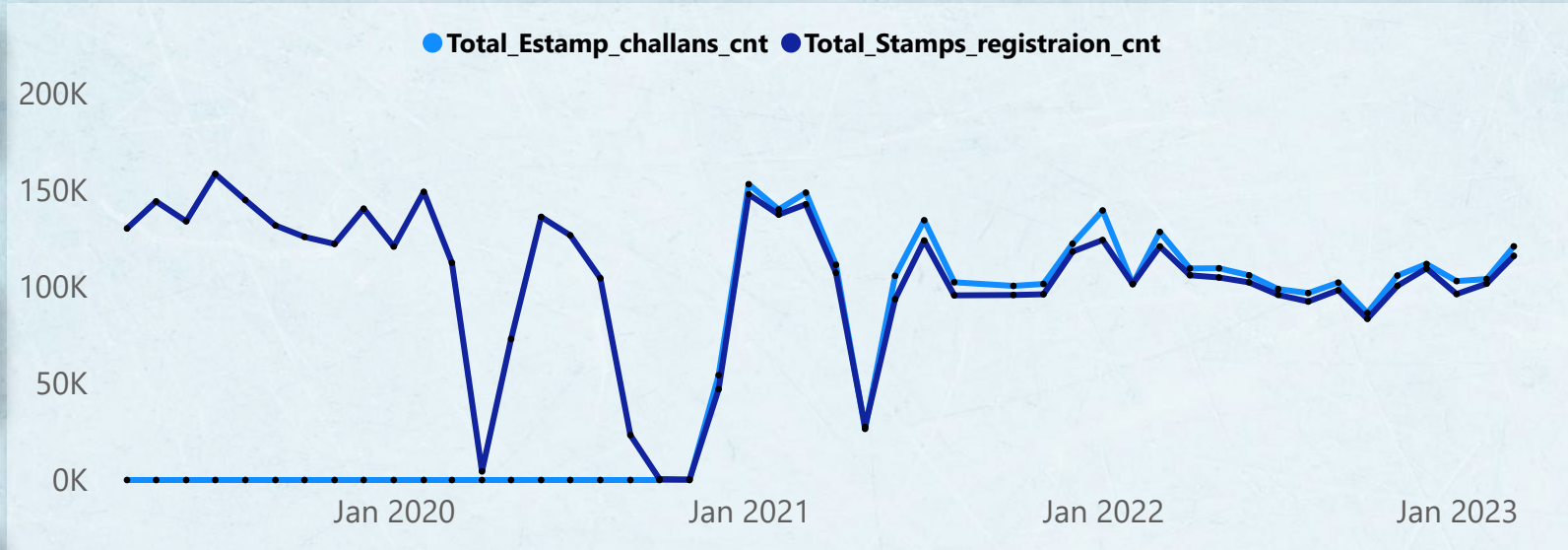
I have **suggestions** to the government regarding **e-Stamp challan and document registration,** here are some general **recommendations** that can apply to many situations:

1. Transparency: Ensure transparency in the process of e-Stamp challan and document registration. Provide clear guidelines and instructions for both citizens and officials involved in the process.

2. Accessibility: Make the system user-friendly and easily accessible to all stakeholders, including citizens, businesses, and government employees. Consider offering online options for e-Stamp challan and document registration to reduce physical paperwork and improve efficiency.

3. Education and Training: Conduct training programs for government officials and

District

All

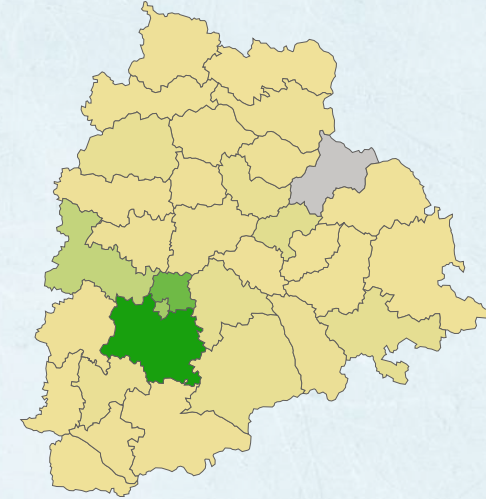## Categorize Districts into 3 segments based on their Stamp registration revenue during FY 2021 to FY 2022

District	Stamps Registration Rev	Revenue Categorize
Rangareddy	69.6bn	Highest
Medchal_Malkajgiri	42.2bn	Highest
Hyderabad	25.0bn	Highest
Sangareddy	14.6bn	Highest
Hanumakonda	4.9bn	Highest
Yadadri Bhuvanagiri	3.8bn	Highest
Khammam	3.6bn	Highest
Karimnagar	2.6bn	Middle
Nizamabad	2.6bn	Middle
Nalgonda	2.6bn	Middle
Mahabubnagar	2.0bn	Middle
Suryapet	1.8bn	Middle
Siddipet	1.7bn	Middle
Medak	1.1bn	Middle
Peddapalli	1.1bn	Middle
Mancherial	1.1bn	Middle
Jagtial	1.1bn	Middle
Vikarabad	0.9bn	Lowest
Nagarkurnool	0.9bn	Lowest
Kamareddy	0.9bn	Lowest

Categorize Districts into 3 segments based on below revenue:

- I have categorized the districts according to the E-stamp revenue. Districts with E-stamp revenues **above 3 billion** have been placed in the **highest category**, those with E-stamp revenues **above 1 billion** are in the **middle-high category**, and those with E-stamp revenues **below 1 billion** are in the **lowest category**.

District
All

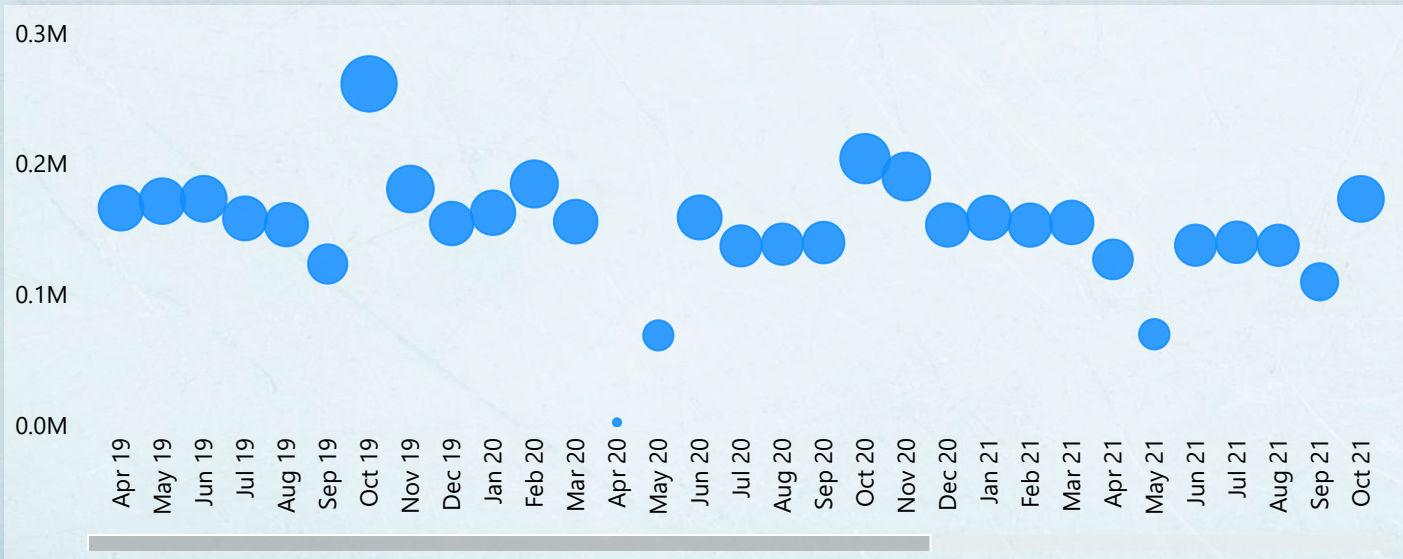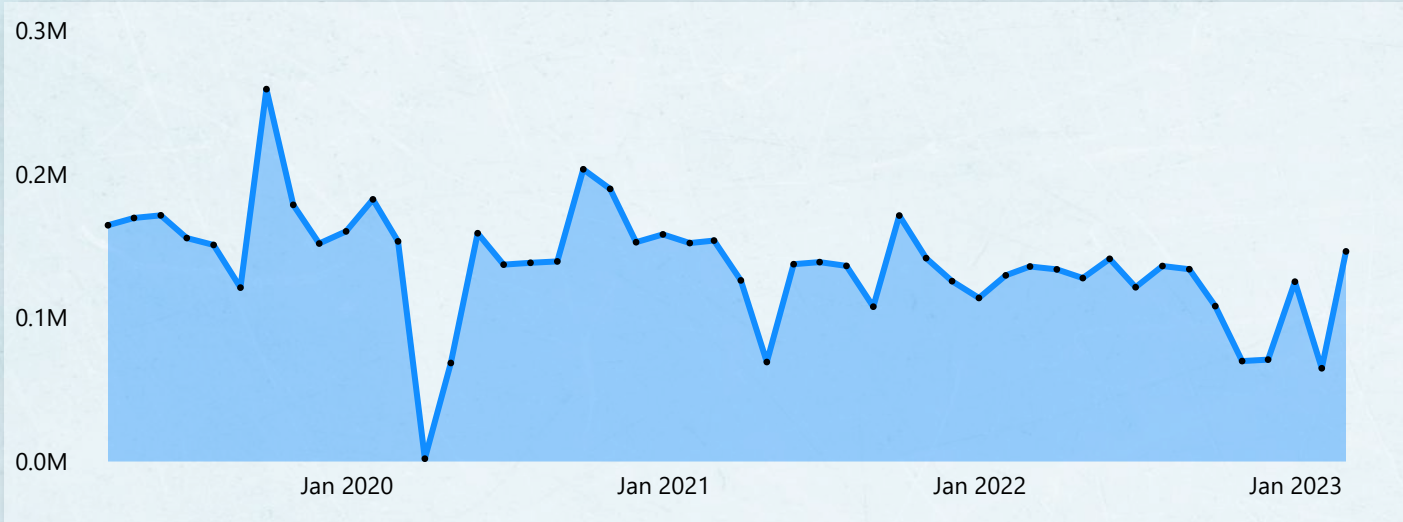| Q1 | Q2 | Q3 | Q4 | | 2019 | 2020 | 2021 | 2022 |

Correlation between vehicle sales & months and Driving Factors for Higher and Lower sales

In the context of **vehicle sales in Telangana State**, India, there are indeed certain **months or seasons** that trend to consistently show **higher or lower sales rates**. These patterns are influenced by a variety of factors, both external and internal to the automotive industry. Here are some general **trends and driving factors** for vehicle sales in Telangana:

Higher Sales Months:

1. **Festive Season (October to December):**
   - The festive season, including festivals **like Diwali, Dussehra, and Christmas,** is a period of increased vehicle sales in Telangana. Many people consider buying new vehicles during this time as it is considered auspicious and there may be **special discounts and promotions** offered by dealers.

   - Higher disposable income during the festive season due to **bonuses and gifts** can also drive vehicle sales.

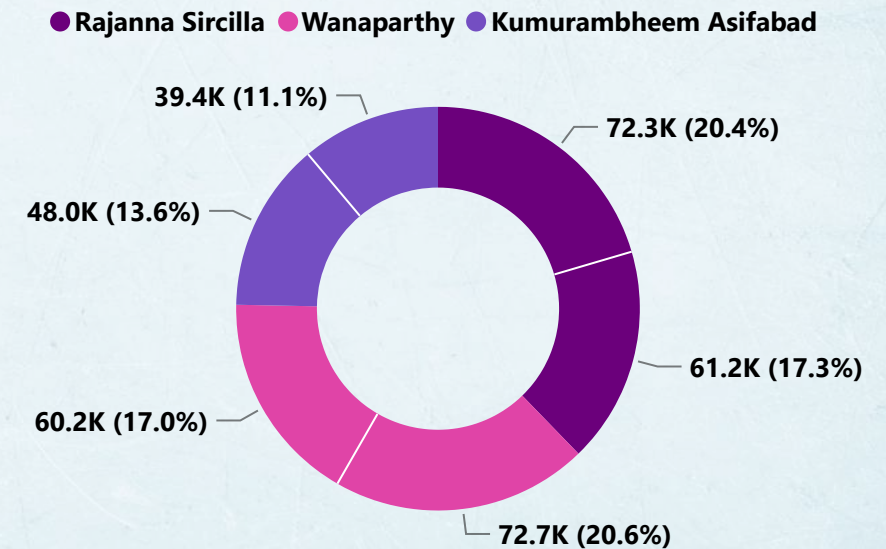2. **Fiscal Year End (January to March):**

Top 3 Highest and Bottom district wise vehicle sales growth compared to FY 2021 to FY 2022

District	Vehicle Sales	Vehicle Sales LY
Hyderabad	1101.8K	830.6K
Medchal_Malkajgiri	985.3K	743.8K
Rangareddy	918.9K	677.2K
Total	**3006.0K**	**2251.6K**
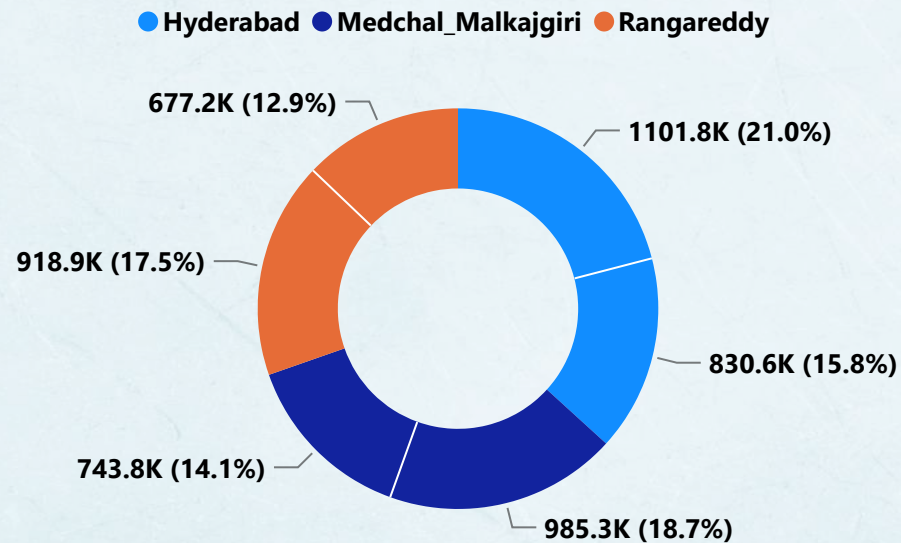
District	Vehicle Sales	Vehicle Sales LY
Wanaparthy	72.7K	60.2K
Rajanna Sircilla	72.3K	61.2K
Kumurambheem Asifabad	48.0K	39.4K
Total	**193.0K**	**160.8K**

● Hyderabad ● Medchal_Malkajgiri ● Rangareddy

677.2K (12.9%)
1101.8K (21.0%)
918.9K (17.5%)
830.6K (15.8%)
743.8K (14.1%)
985.3K (18.7%)

● Rajanna Sircilla ● Wanaparthy ● Kumurambheem Asifabad

39.4K (11.1%)
72.3K (20.4%)
48.0K (13.6%)
61.2K (17.3%)
60.2K (17.0%)
72.7K (20.6%)

Total Class Vehicle Sales
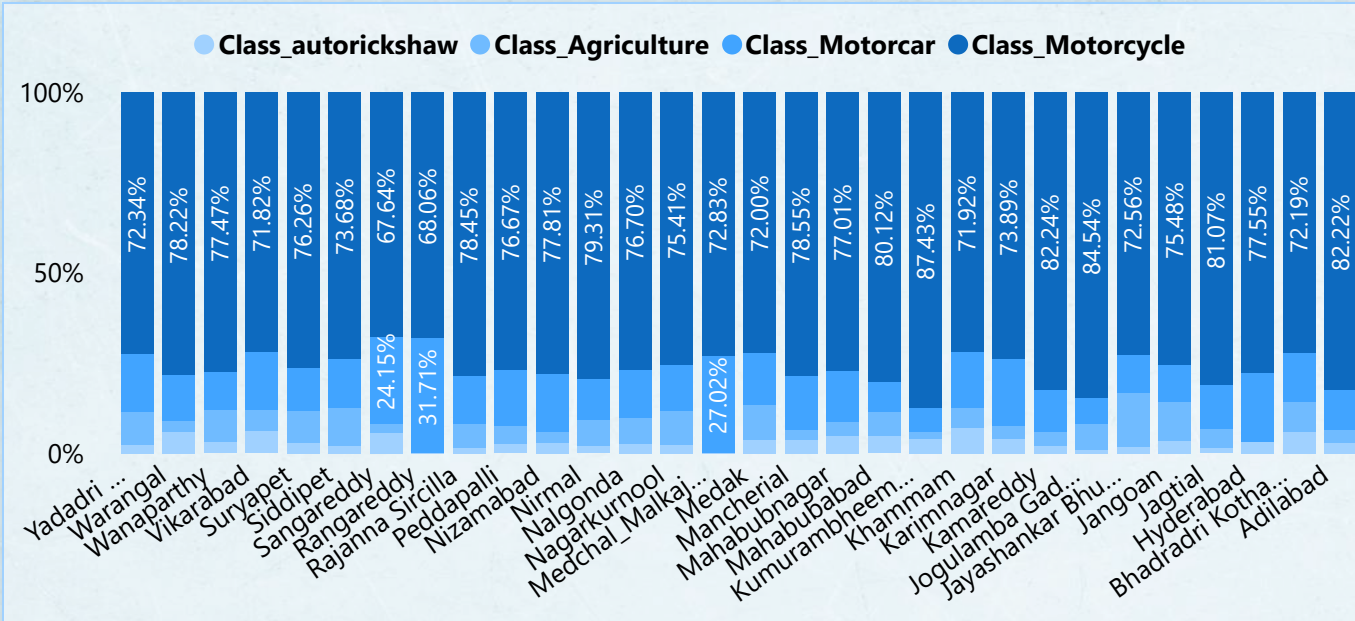
1.3M !
LY: 1.5M (-11.3%)

District: All

Q1 | Q2 | Q3 | Q4 | 2019 | 2020 | 2021 | 2022

Distribution of vehicle class across different districts with a predominant preference in FY 2022.

● Class_autorickshaw ● Class_Agriculture ● Class_Motorcar ● Class_Motorcycle

Bar chart values (Class_Motorcycle %):
- Yadadri ...: 72.34%
- Warangal: 78.22%
- Wanaparthy: 77.47%
- Vikarabad: 71.82%
- Suryapet: 76.26%
- Siddipet: 73.68%
- Sangareddy: 67.64% (24.15%)
- Rangareddy: 68.06% (31.71%)
- Rajanna Sircilla: 78.45%
- Peddapalli: 76.67%
- Nizamabad: 77.81%
- Nirmal: 79.31%
- Nalgonda: 76.70%
- Nagarkurnool: 75.41%
- Medchal_Malkaj...: 72.83% (27.02%)
- Medak: 72.00%
- Mancherial: 78.55%
- Mahabubnagar: 77.01%
- Mahabubabad: 80.12%
- Kumurambheem...: 87.43%
- Khammam: 71.92%
- Karimnagar: 73.89%
- Kamareddy: 82.24%
- Jogulamba Gad...: 84.54%
- Jayashankar Bhu...: 72.56%
- Jangoan: 75.48%
- Jagtial: 81.07%
- Hyderabad: 77.55%
- Bhadradri Kotha...: 72.19%
- Adilabad: 82.22%

District	Vehicle class sales	Vehicle class sales LY
Kumurambheem Asifabad	42310	34952
Rajanna Sircilla	66316	56110
Wanaparthy	67522	56200
Jangoan	68738	57322
Adilabad	72337	59676
Jogulamba Gadwal	73391	61208
Jayashankar Bhupalpally	78542	65828
Peddapalli	85508	71398
Mahabubabad	86338	72551
Mancherial	86401	71630
Nirmal	89144	75295
Medak	89331	73132
Nagarkurnool	93674	77457
Yadadri Bhuvanagiri	107518	87513
Kamareddy	119985	101521
Jagtial	120402	103578
Siddipet	133567	109951
Bhadradri Kothagudem	135342	111762
Karimnagar	139273	113003
Suryapet	145791	120661
Mahabubnagar	155848	132504
Vikarabad	164111	131924

Districts with a **predominant preference for motorcycles** in the vehicle class include **Kumurambheem Asifabad**, which ranks as the top-selling district for motorcycles, followed by **Jogulamba Gadwal, Kamareddy, Jagtial, Adilabad, and Mahabubabad, etc.**

The predominant preference for motorcycles in these areas may be **influenced by several factors:**

1. Economic Factors: Motorcycles are often considered more affordable than cars and require lower maintenance costs. In areas with lower average income levels, motorcycles may be the

99,133.5
Investment in Cr

Top 5 Sector in FY 2022
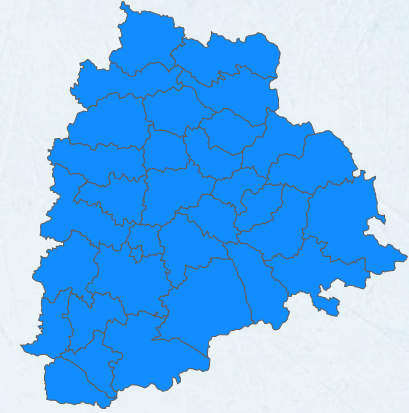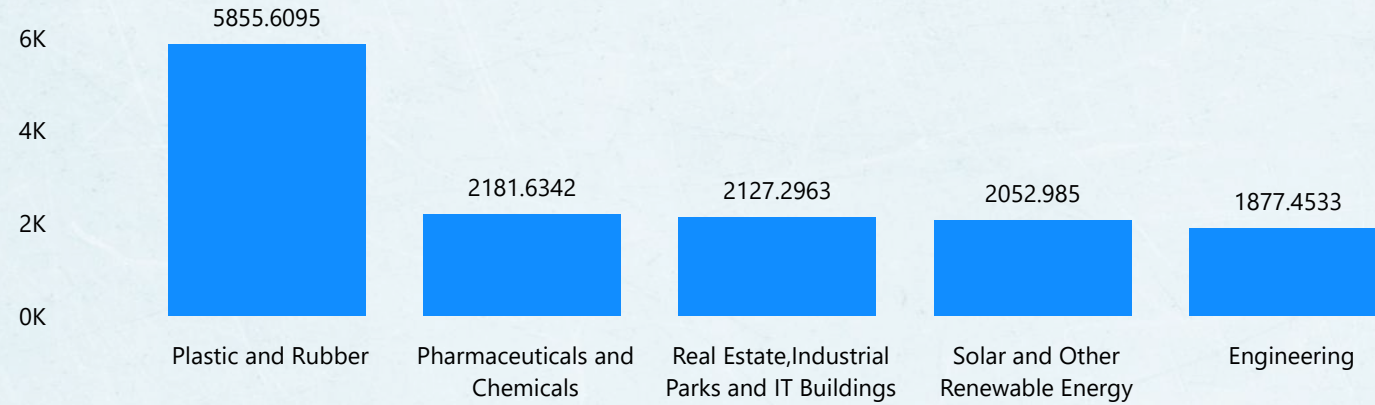
Sector	Value
Plastic and Rubber	5855.6095
Pharmaceuticals and Chemicals	2181.6342
Real Estate,Industrial Parks and IT Buildings	2127.2963
Solar and Other Renewable Energy	2052.985
Engineering	1877.4533

Top 3 Sectors and Factors Driving Substantial Investments Across Districts (FY 2019 - FY 2022)

● **Rangareddy** ● **Sangareddy** ● **Medchal_Malkajgiri**

10394.6 (15.88%)

12366.8 (18.89%)

42706.3 (65.23%)
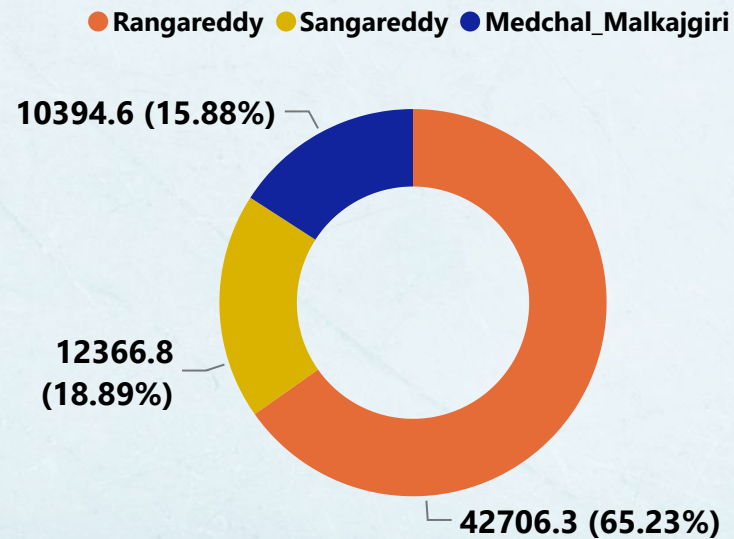
The **substantial investments** in specific **districts** can be attributed to a variety of factors, which may vary depending on the region and the industry involved. Here are some **common factors** that could lead to significant investments in particular districts:

1. Strategic Location : Districts located strategically, such as those near major transportation hubs, ports, or economic centers, tend to attract investments due to their accessibility and logistical advantages.

2. Infrastructure Development: Robust infrastructure, including roads, railways, airports, and utilities, can make a district more attractive for businesses, leading to increased investments.

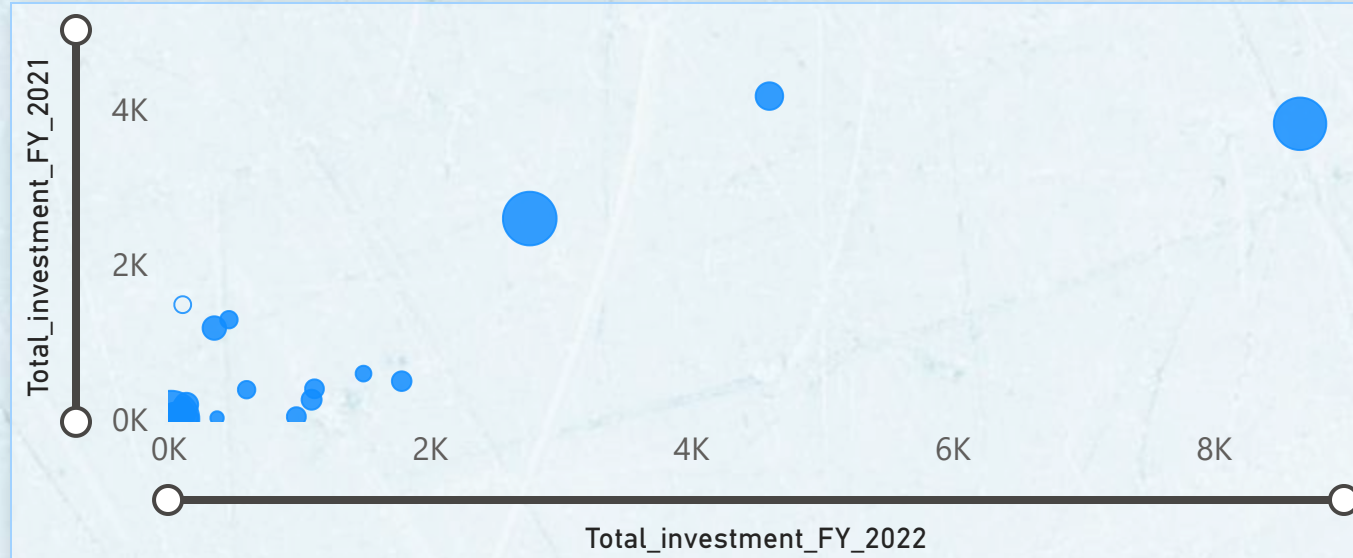## Relationships and Discrepancies in Investments, Vehicle Sales, and Stamp Revenue within Districts (FY 2021 - FY 2022)

Narayanpet, Hanamkonda, Mulugu, and Jayashankar Bhupalpally are districts with notable **discrepancies or anomalies** in the relationships between investments, vehicle sales, and stamp revenue. In these four districts, **no vehicle sales** were found between FY 2021 and FY 2022.

In comparison to FY 2021, **Rangareddy, Hyderabad, Medchal Malkajgiri, Mahabubnagar, and Medak** districts **experienced higher investments in FY 2022.**
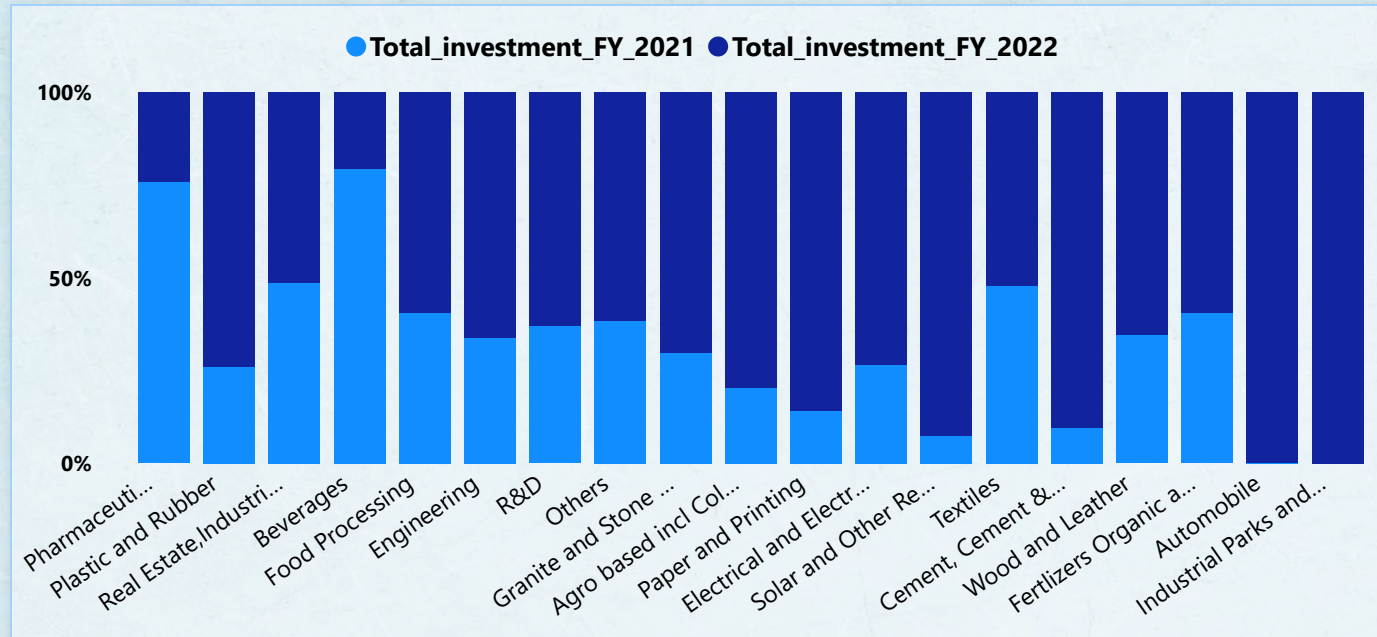
- ● Total investment ● Total stamps registration rev ● Total vehicle sales
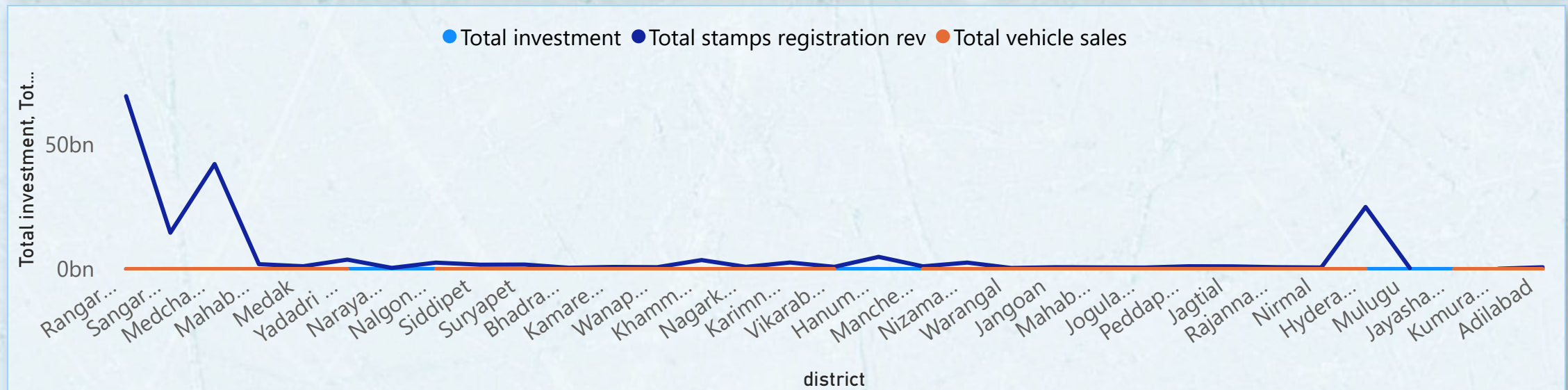
Sector-Wise Investments in multiple Districts (FY 2021 - 2022)

● Total_investment_FY_2021   ● Total_investment_FY_2022

These are some **sectors** that have shown substantial investment in multiple districts between FY 2021 and 2022. **Pharmaceuticals and Chemicals, Plastic and Rubber, Beverages, Food Processing, Engineering, Others, Granite and Stone Crushing, Agro-based including Cold Storages, Paper and Printing, Textiles, Cement, Cement & Concrete Products, Fly Ash Bricks, Wood & Leather.**

District	Investment FY 2021 ▼	Investment FY 2022
Sangareddy	4,173.80	4,602.71
Rangareddy	3,816.83	8,663.79
Medchal_Malkajgiri	2,595.63	2,768.52
Narayanpet	1,486.09	112.61
Yadadri Bhuvanagiri	1,292.73	466.48
Nalgonda	1,184.71	354.66
Medak	597.69	1,496.27
Mahabubnagar	500.33	1,788.40
Siddipet	401.95	1,121.06
Kamareddy	390.47	601.63
Suryapet	261.35	1,099.04
Khammam	199.28	141.23
Nagarkurnool	188.26	105.07
Karimnagar	105.57	115.03
Warangal	86.88	35.03
Vikarabad	81.57	125.43
Nizamabad	71.32	56.01
Peddapalli	67.18	26.88
Mahabubabad	49.44	68.59
Jagtial	48.48	35.66
Bhadradri Kothagudem	42.32	982.27
Rajanna Sircilla	41.66	37.42
Jangoan	41.39	80.47
Hanumakonda	31.60	165.07

Exploring Seasonal Investment Trends and Sector-Specific Cyclicality
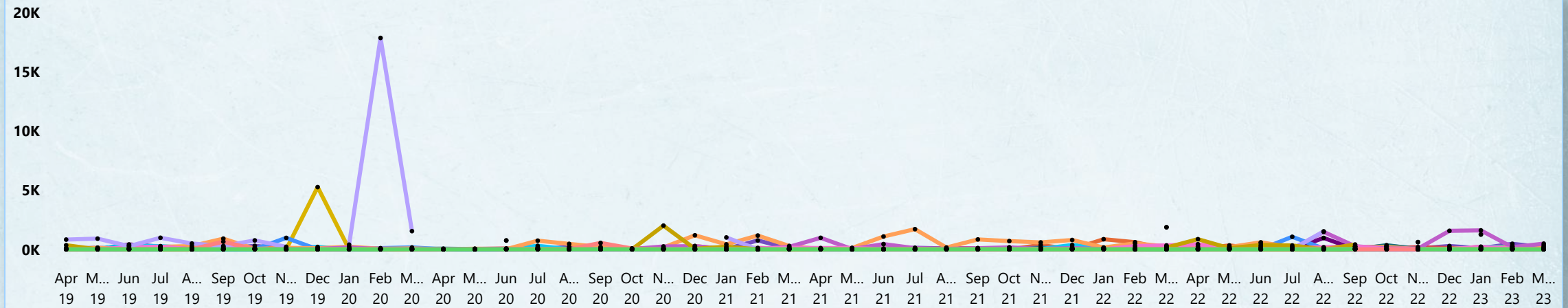
Sector	Total Investment
R&D	3,320.91
Others	3,229.48
Paper and Printing	2,946.24
Beverages	2,809.80
Cement, Cement & Concrete Products, Fly Ash Bricks	2,238.63
Agro based incl Cold Storages	2,100.47
Granite and Stone Crushing	1,922.38
Textiles	1,844.27
Automobile	1,575.21
Electrical and Electronic Products	941.63
Industrial Parks and IT Buildings	280.41
Wood and Leather	152.40
Thermal Power Plant	87.00

I conducted an **investigation into the seasonal patterns** and, based on the observed trends, the cyclicality in investment trends for specific sectors. Notably, the **Real Estate, Industrial Parks, and IT Building** sector experienced significantly higher investments compared to others. This sector received approximately **17,843 crores in investment in February 2020.** Following that, the **Fertilizers (Organic and Inorganic), Pesticides, Insecticides, and related** sectors saw the highest investment, totaling around **5,255 crores in December 2019**.

The **Solar and other Renewable Energy** sector ranked third, receiving approximately **2,000 crores in investment in**

5 Insights & 5 Recommendations for Telangana's Future Growth:

1. Encourage Document Registration in Low-Revenue Districts:
- Insight: Some districts have low document registration revenue, while others have high growth.
- Recommendation: Run awareness campaigns and offer incentives like rewards, discounts, and perks to encourage document registration in low-revenue districts.

2. Address Declining Growth in E-Stamp Challan Revenue:
- Insight: E-Stamp Challan revenue growth has slowed, especially in 2022, but the reasons are unclear.
- Recommendation: Investigate the causes of the decline, considering economic conditions and awareness levels. Adjust policies and launch campaigns to promote E-Stamp Challans if necessary.

3. Boost Sales of Electric Vehicles:
- Insight: Electric vehicle sales vary across districts, with potential in some areas.
- Recommendation: Offer incentives and subsidies to make electric vehicles attractive. Simplify the purchase and charging processes. Focus efforts on districts like Khammam, Bhadradri Kothagudem, and Suryapet where there is electric vehicle sales potential.

4. Focus on Sectors with High Investment:
- Insight: Sectors like Plastic & Rubber, Pharmaceuticals & Chemicals, Real Estate, and Solar & Renewable Energy attract significant investments.
- Recommendation: Develop policies and infrastructure to support the growth of these sectors, which can attract more investments and boost economic development.

5. Align Government Initiatives with Seasonal Investment Trends:
- Insight: Different sectors have seasonal investment patterns.
- Recommendation: Align government initiatives with these trends. For example, focus on Industrial Parks & IT Buildings in February and Thermal Power Plants in August to optimize the impact of government actions.