

Telangana Growth Analysis

Agenda

- 1 Objective
- 2 Overview of Departments
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- 4 Research Questions
- 5 Insights & Recommendations





Objective

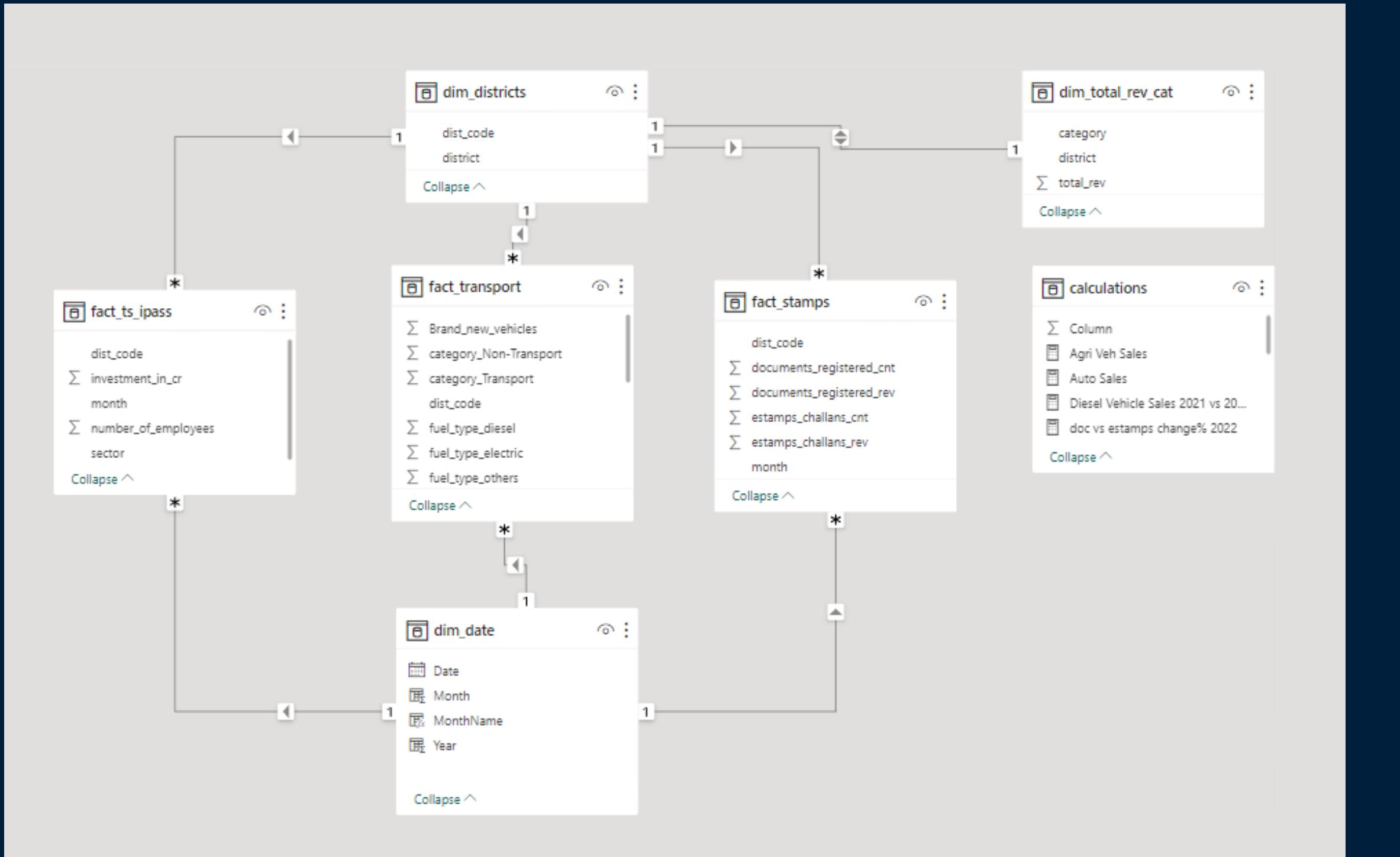
- Exploring the Stamp Registration, Transportation and Ts-Ipass Datasets.
- Analyzing trends and patterns within each department.
- Identifying growth opportunities and areas needing attention.
- Finding correlation among these departments and reporting the overall growth of the state through insights and recommendations.

Overview of Departments:

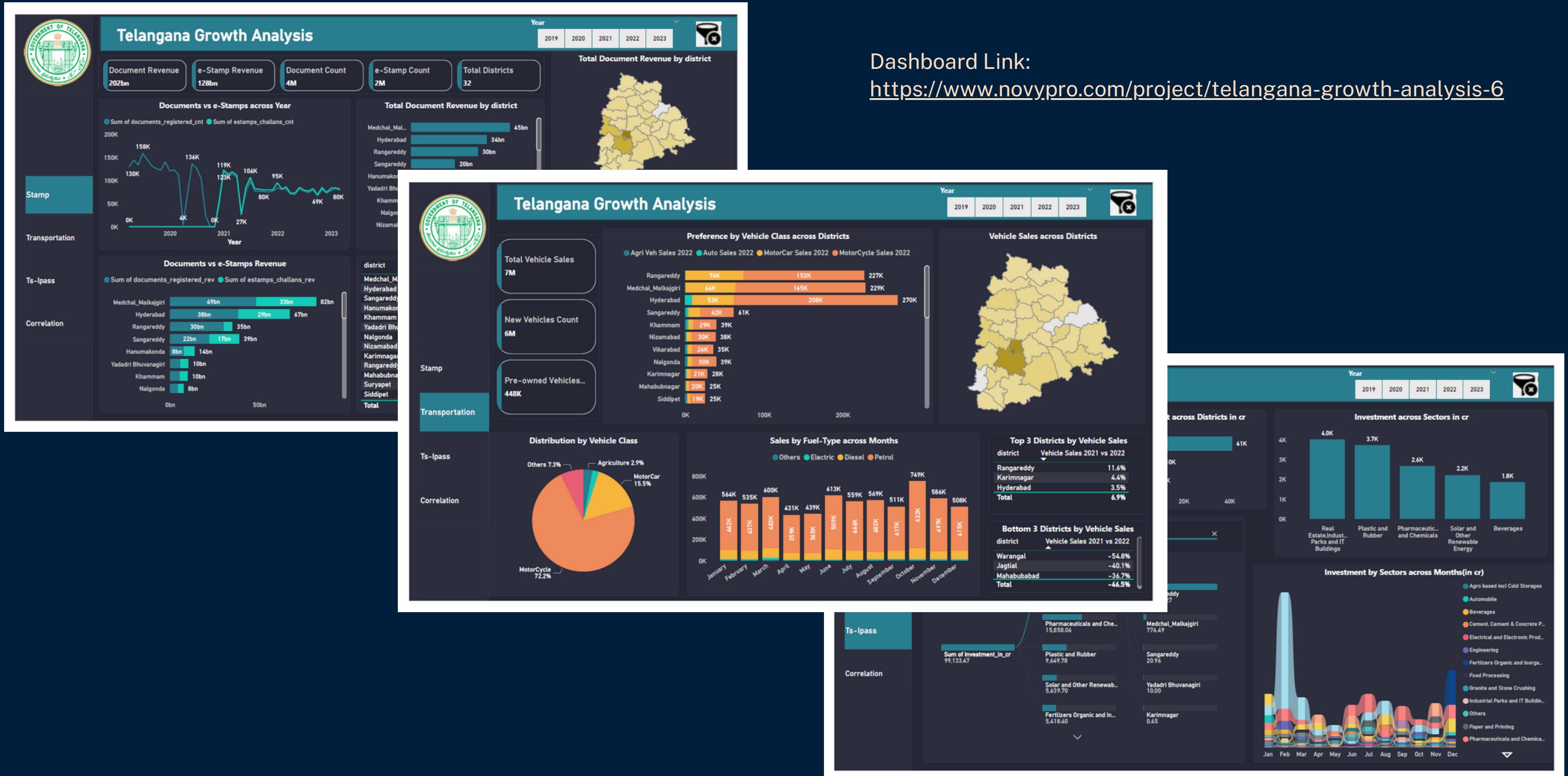
- **Stamp Registration:** Stamp registration revenue serves as a crucial indicator of economic activity and property transactions in Telangana. This dataset provides historical data from April 2019 to March 2023 on stamp duty challan collections, encompassing both document registration and e-Stamps.
- **Transportation:** The growth in vehicle sales within Telangana provides valuable insights into the relationship between economic development, urbanization, and mobility requirements. This dataset offers historical data on vehicle sales across various types and categories, including Agricultural, MotorCar, MotorCycle, and fuel types like Diesel, Petrol, and Electric.
- **TS-iPASS:** The Telangana State Industrial Project Approval and Self-Certification System (TS iPASS) is a significant driver of industrial expansion and investment inflow in Telangana. This dataset presents historical investment data across different industrial sectors in various districts.

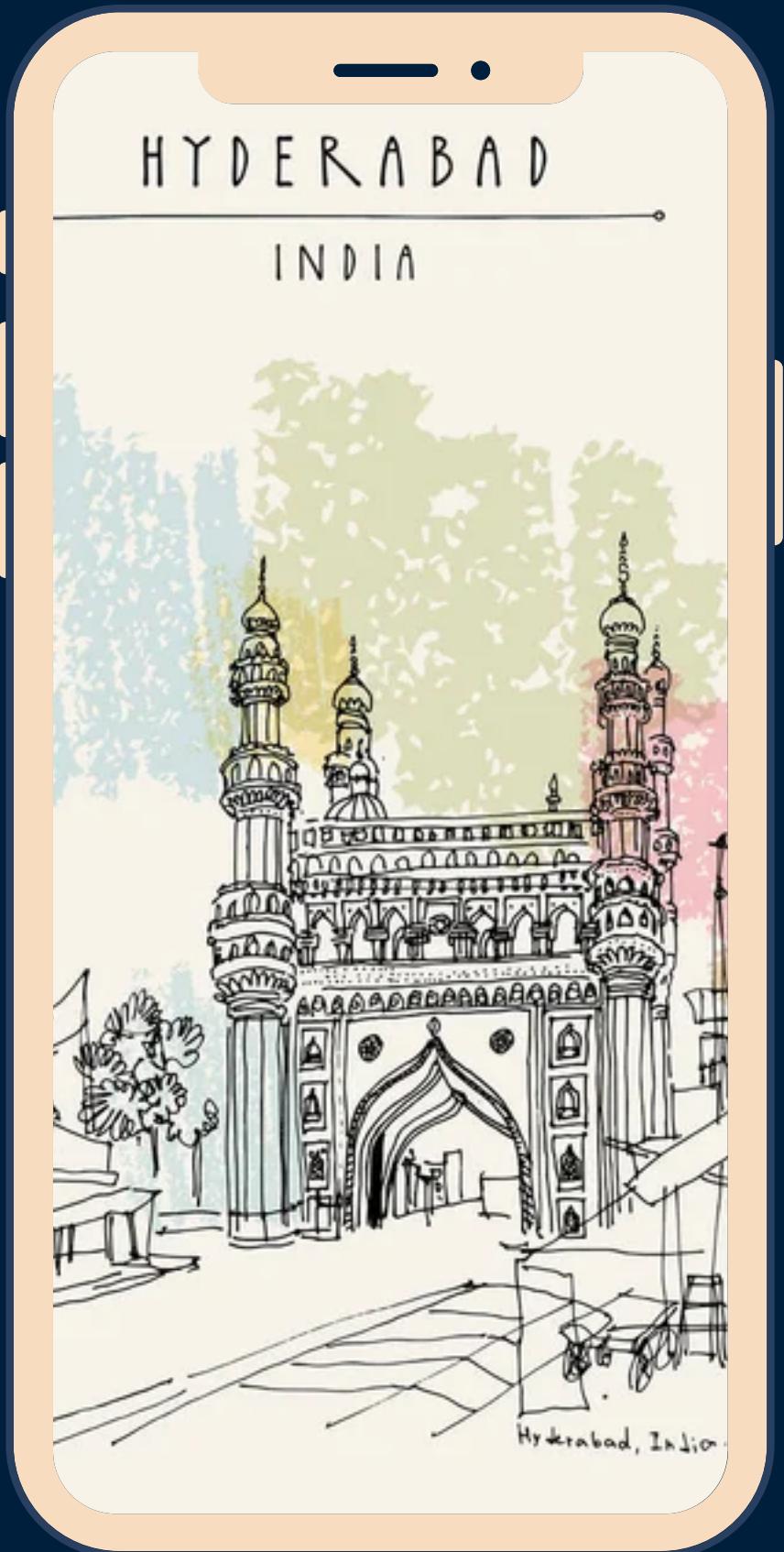


Data Modelling



Dashboard View





Research Questions & Suggestions

Topics:

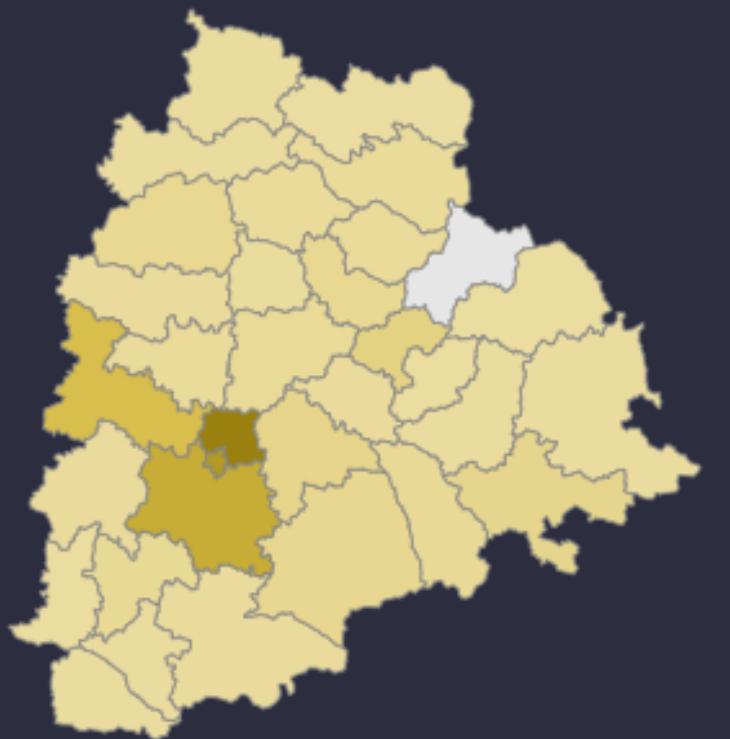
- Stamp Registration
- Transportation
- Ts-Ipass

Question 1

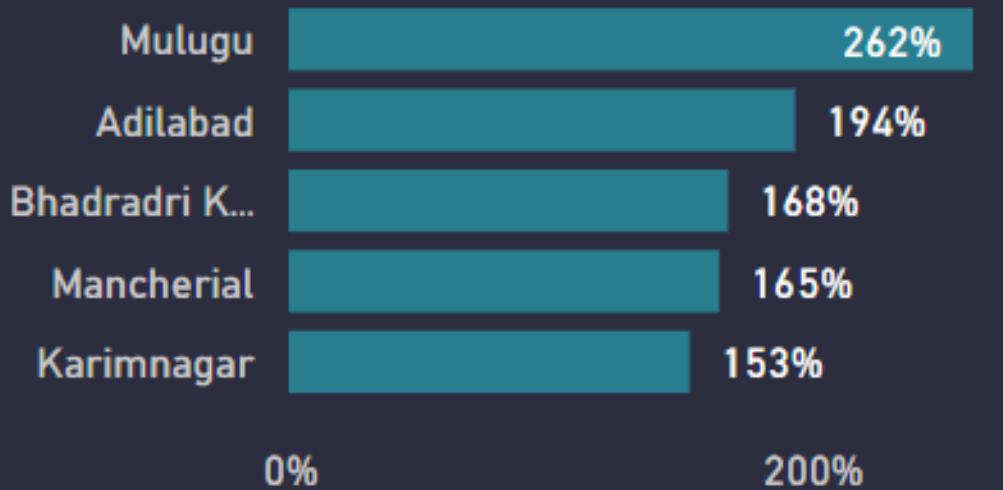
How does the revenue generated from document registration vary across districts in Telangana? List down the top 5 districts that showed the highest document registration revenue growth between FY 2019 and 2022.

- The districts of Mulugu, Adilabad, Bhadrak, Mancherial and Karimnagar were the districts that showed the maximum growth in revenue from document registration between 2019 and 2022.
- It can be seen that the western states of Telangana had more revenue in comparison to other parts.

Total Document Revenue by district



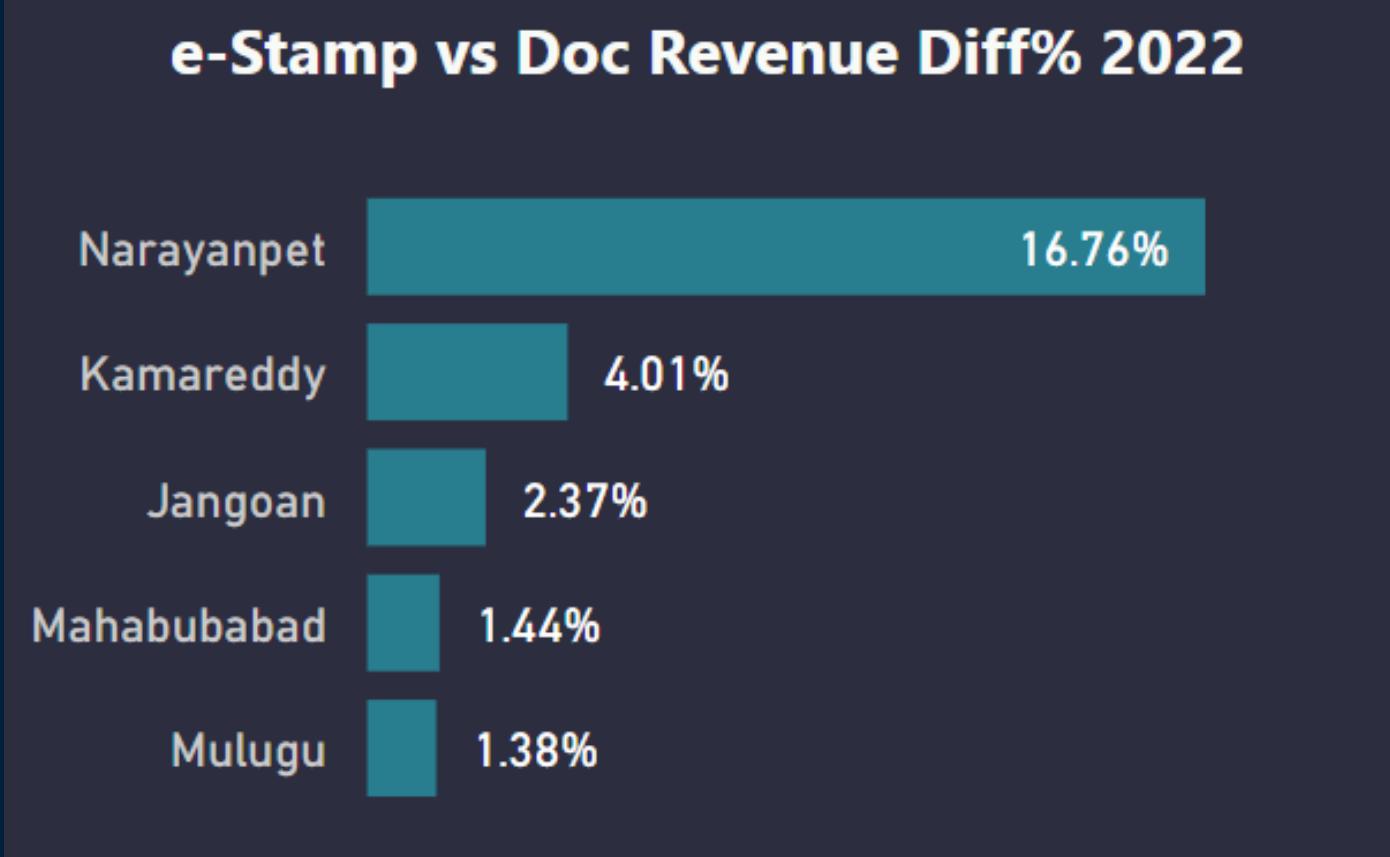
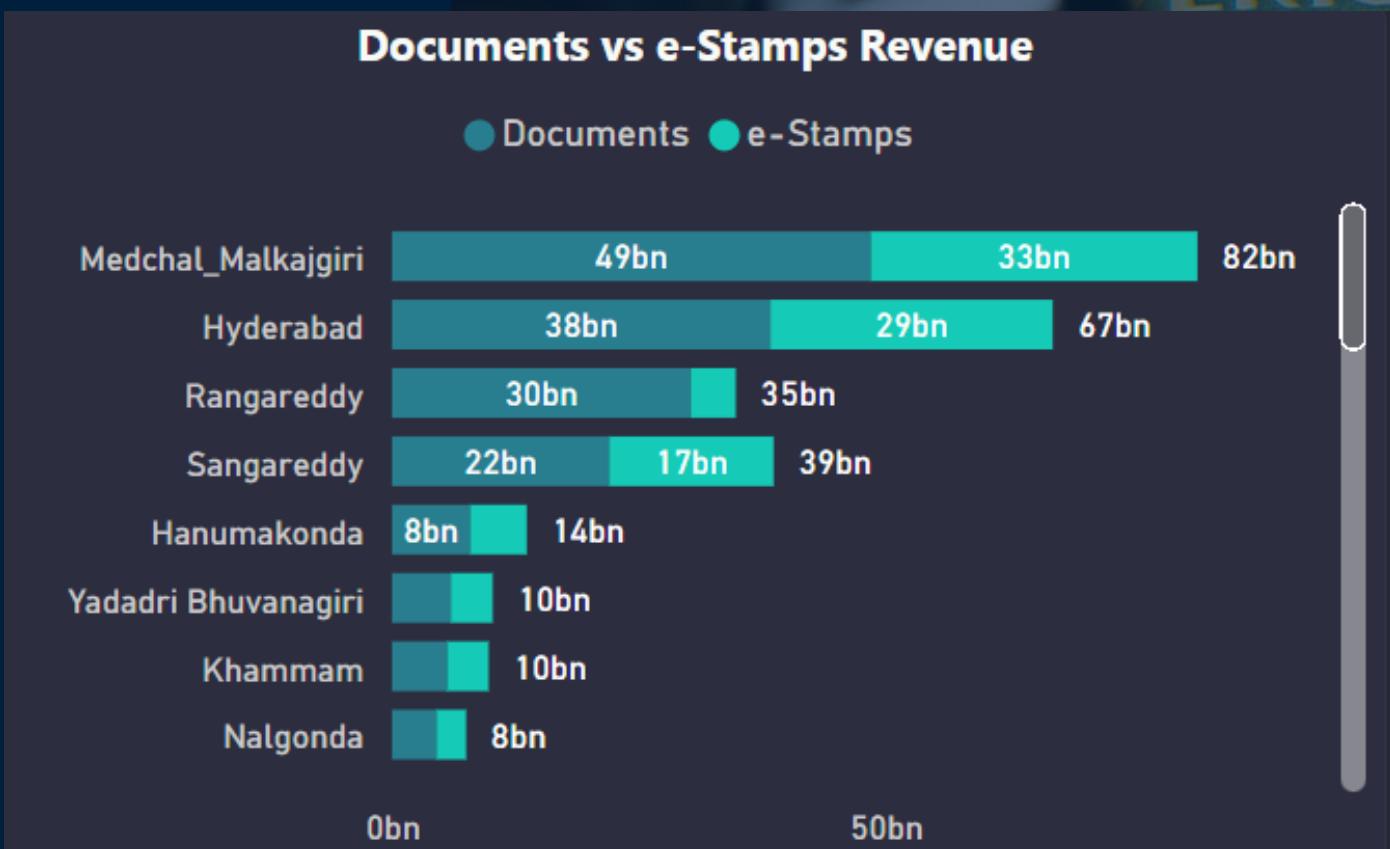
Document Revenue Growth% 2019 to 2022



Question 2

How does the revenue generated from document registration compare to the revenue generated from e-stamp challans across districts? List down the top 5 districts where e-stamps revenue contributes significantly more to the revenue than the documents in FY 2022?

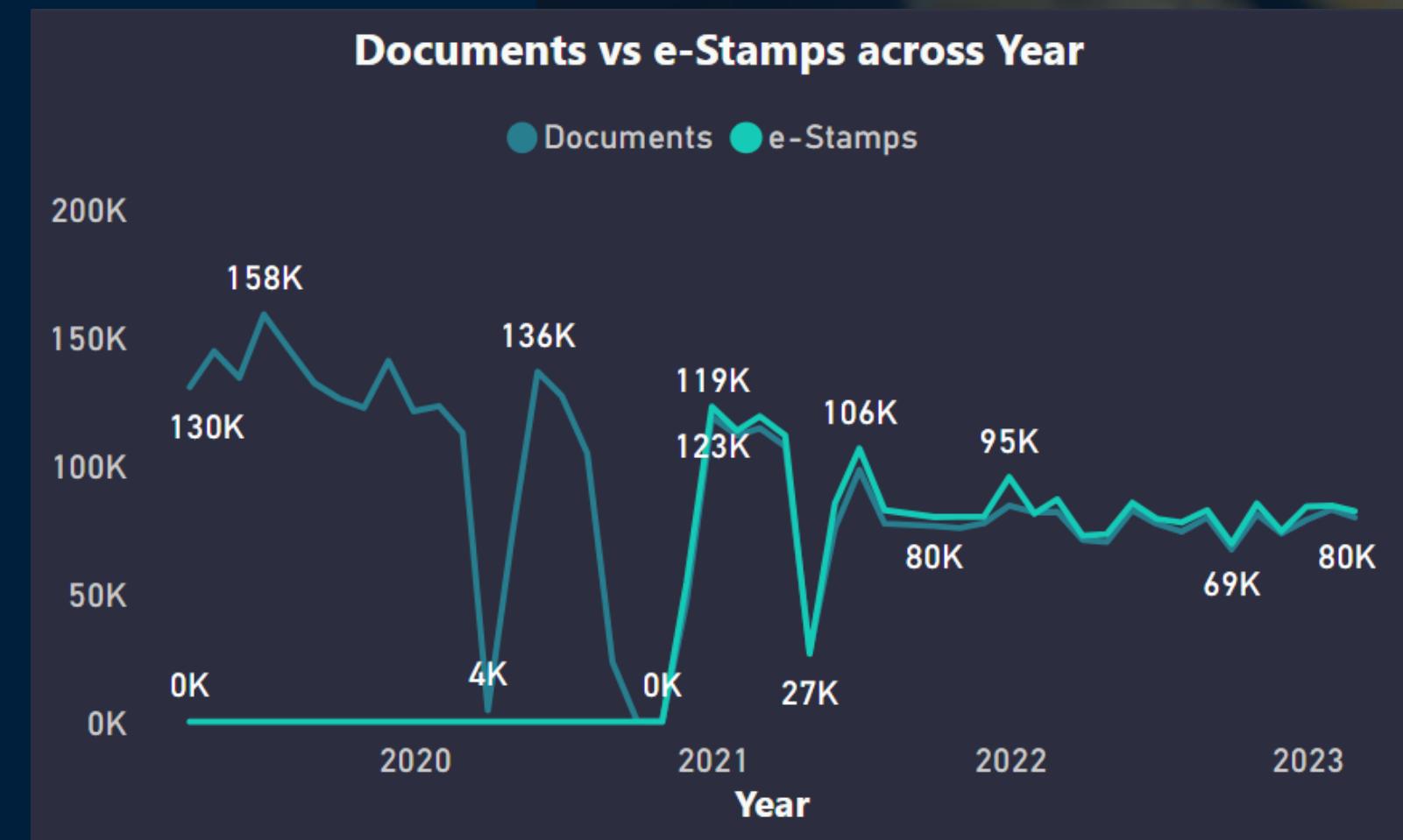
- Although the revenue from traditional documents has historically been slightly higher across districts due to its longstanding presence, the introduction of e-Stamps in Dec 2020 has led to significant growth, and it is anticipated that in the upcoming years, e-Stamps revenue may surpass that of traditional documents.
- Narayanpet district exhibited the most substantial revenue contrast between e-Stamps and traditional documents, with Kamareddy and Jangoan districts following behind in terms of the revenue difference.



Question 3

Is there any alteration of e-Stamp challan count and document registration count pattern since the implementation of e-Stamp challan? If so, what suggestions would you propose to the government?

- Since the introduction of e-Stamps in December 2020, there has been a significant increase in their count, which has now reached parity with the count of traditional documents immediately following implementation. Looking ahead, it is anticipated that the e-Stamp count will continue to grow substantially and eventually surpass that of traditional documents.
- In light of this observed pattern, I would suggest that the government consider focusing on strategies to further promote the adoption of e-Stamps, such as enhancing awareness campaigns, streamlining the e-Stamp process, introduction of Online payments and providing incentives for their use.



Question 4

Categorize districts into three segments based on their stamp registration revenue generation during the fiscal year 2021 to 2022.

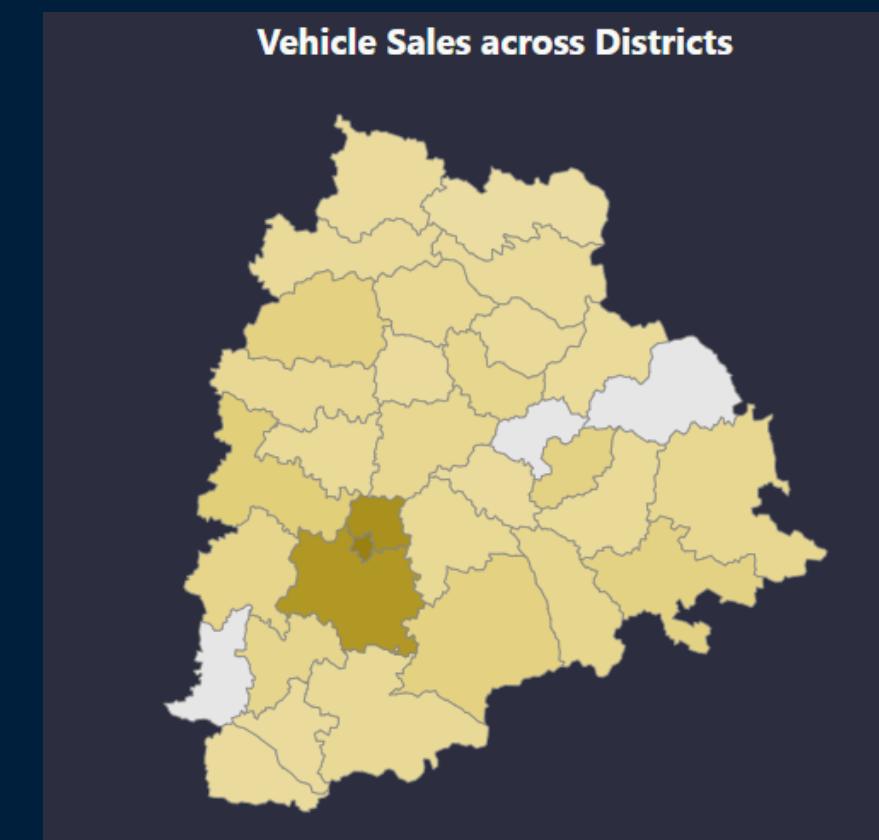
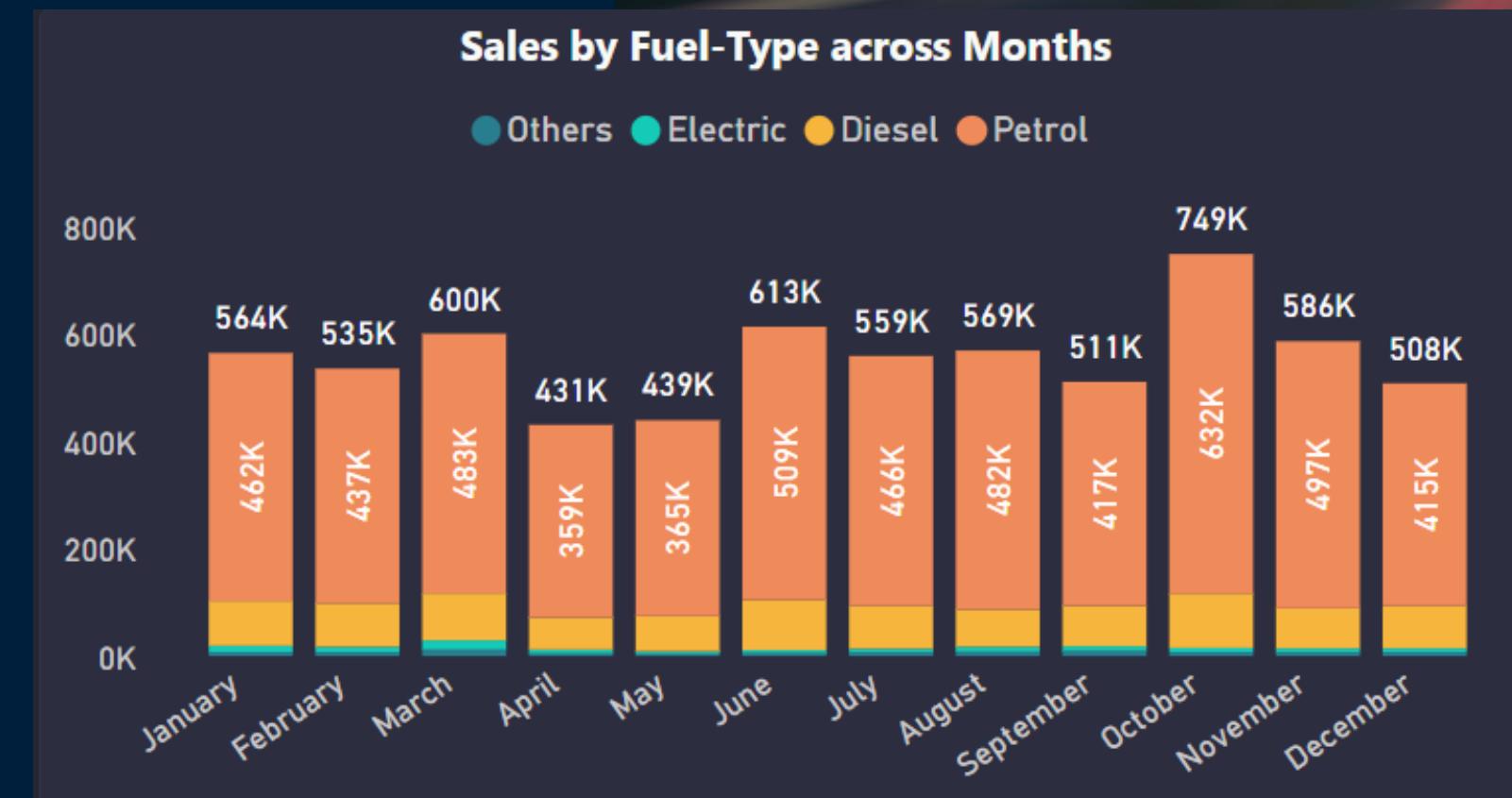
- The three districts Malkajgiri, Hyderabad, and Sangareddy – surpassed a revenue of 10 Billion, while the majority of districts fell within the range of 1 to 10 Billion.
- Conversely, districts like Mulugu, Warangal, and Narayapet reported the lowest revenue figures, with Bhupalpally district recording no revenue at all.

Stamps Revenue by Category (2021-22)		
District	Total Revenue	Category
Medchal_Malkajgiri	56560M	▲ high
Hyderabad	47629M	▲ high
Sangareddy	28411M	▲ high
Hanumakonda	9836M	▬ medium
Khammam	7273M	▬ medium
Yadadri Bhuvanagiri	7069M	▬ medium
Nalgonda	5223M	▬ medium
Nizamabad	5219M	▬ medium
Karimnagar	5071M	▬ medium
Rangareddy	4907M	▬ medium
Mahabubnagar	3898M	▬ medium
Suryapet	3575M	▬ medium
Siddipet	3270M	▬ medium
Peddapalli	2200M	▬ medium
Medak	2131M	▬ medium
Mancherial	2116M	▬ medium
Jagital	2026M	▬ medium
Vikarabad	1708M	▬ medium
Nagarkurnool	1697M	▬ medium
Kamareddy	1667M	▬ medium
Jangoan	1406M	▼ low
Wanaparthy	1392M	▼ low
Rajanna Sircilla	1388M	▼ low
Adilabad	1380M	▼ low
Mahabubabad	1343M	▼ low
Jogulamba Gadwal	1228M	▼ low
Nirmal	1208M	▼ low
Bhadradri Kothagudem	1059M	▼ low
Narayanpet	866M	▼ low
Warangal	830M	▼ low
Mulugu	701M	▼ low
Kumurambheem	253M	▼ low
Asifabad		

Question 5

Investigate whether there is any correlation between vehicle sales and specific months or seasons in different districts. Are there any months or seasons that consistently show higher or lower sales rate, and if yes, what could be the driving factors? (Consider Fuel-Type category only)

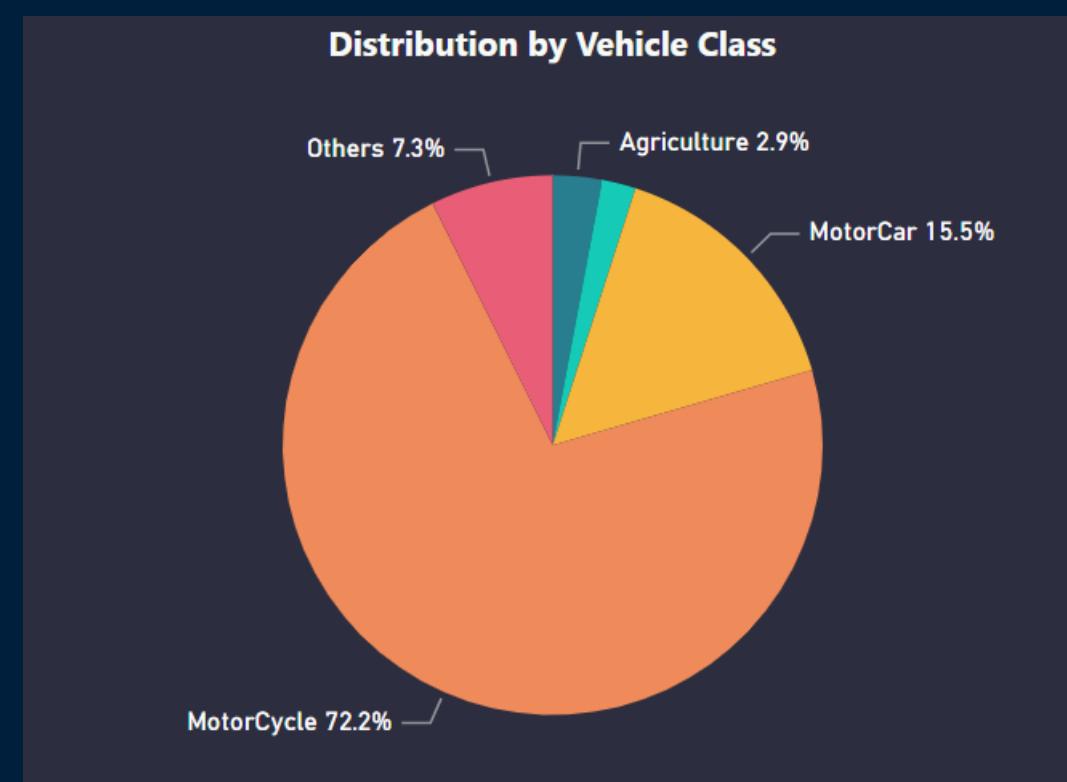
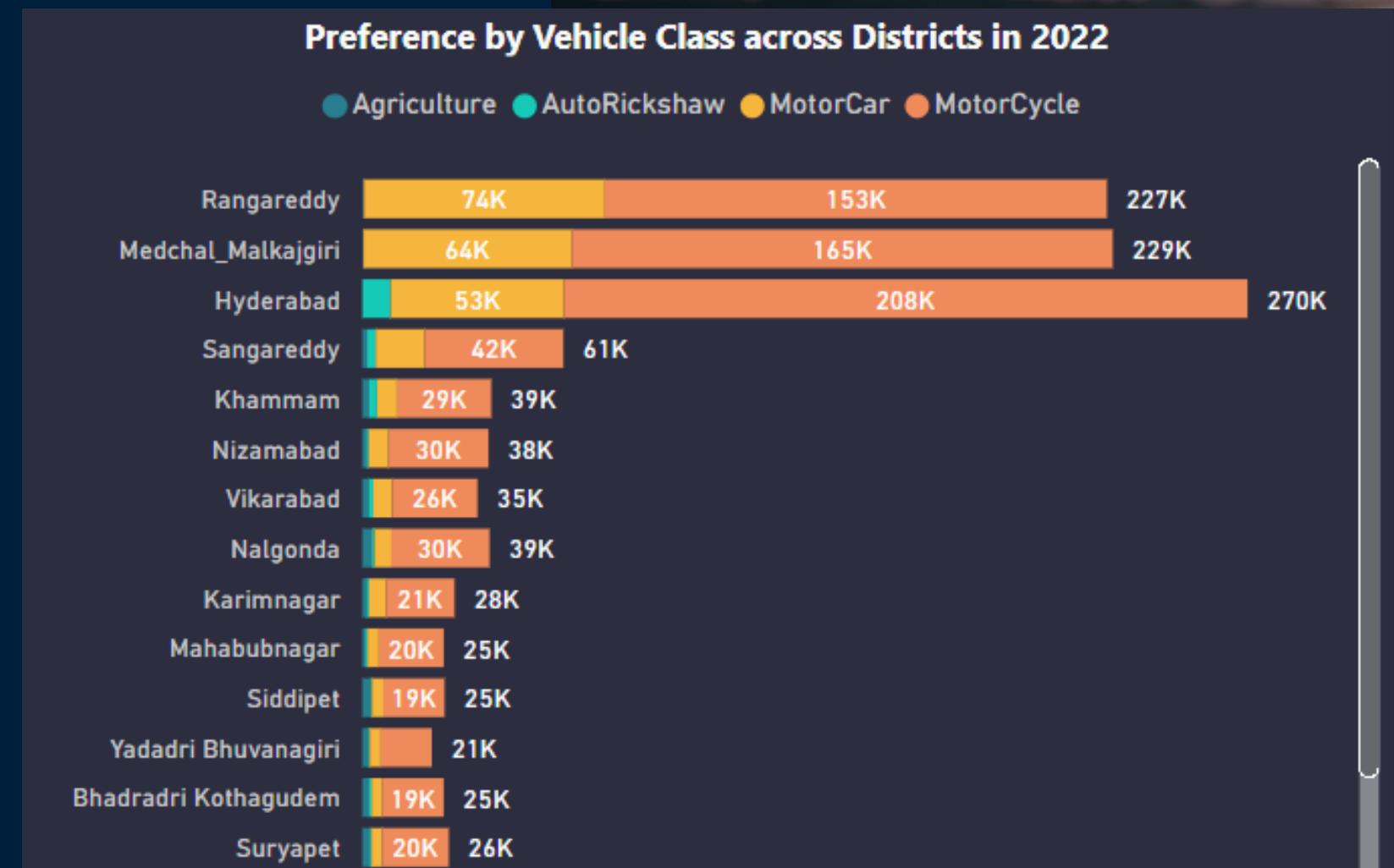
- It can be observed that the highest sales occur in the month of October, while April and May consistently exhibit the lowest sales figures throughout all the years.
- The heightened sales in October may be attributed to the festive season, during which numerous vehicle sales promotions and offers are typically launched, stimulating consumer demand.
- Conversely, the lower sales in April and May could be linked to the commencement of the financial year, potentially affecting consumer purchasing patterns.



Question 6

How does the distribution of vehicles vary by vehicle class (MotorCycle, MotorCar, AutoRickshaw, Agriculture) across different districts? Are there any districts with a predominant preference for a specific vehicle class? Consider FY 2022 for analysis.

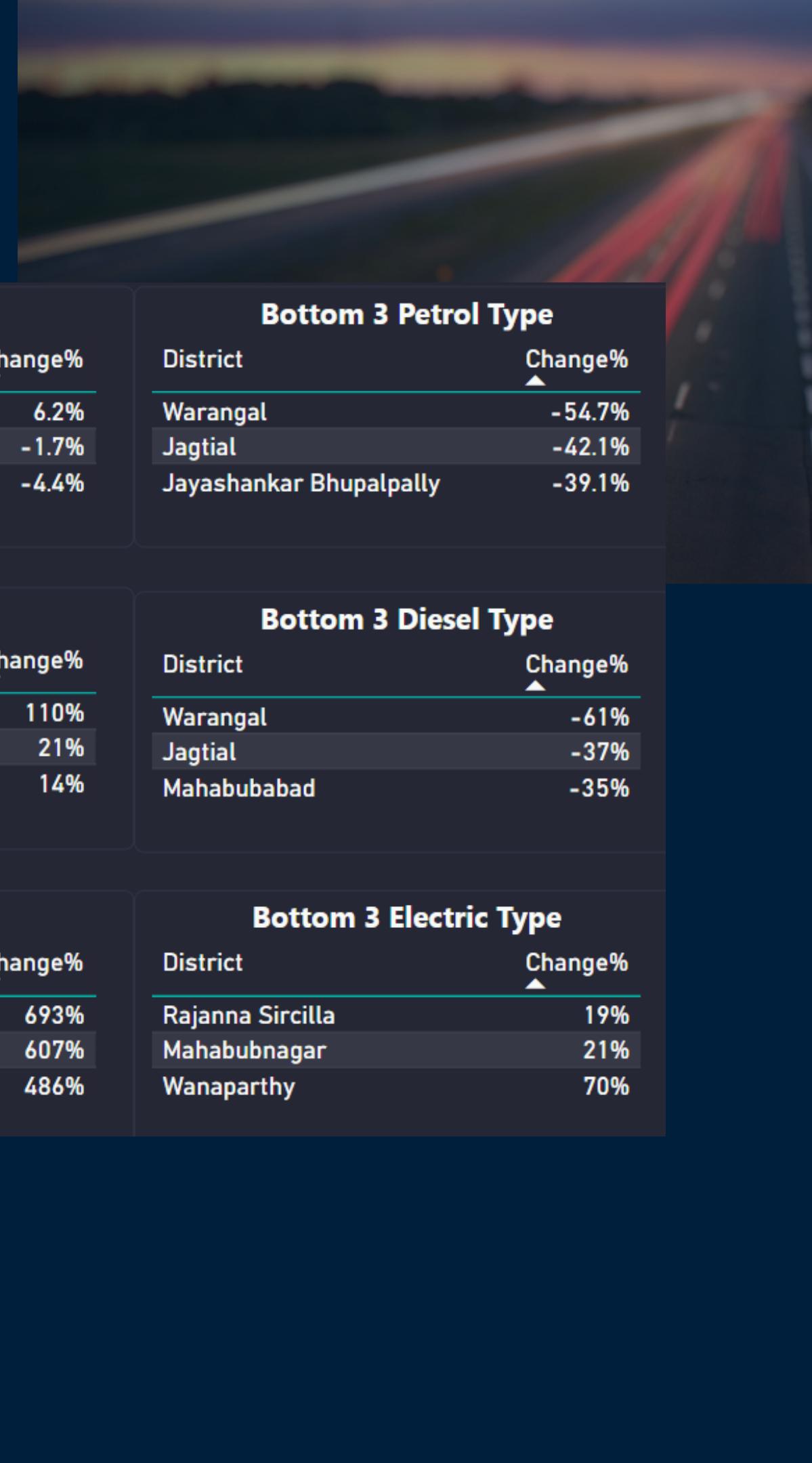
- Firstly, the number of MotorCars is notably higher in the districts of Rangareddy, Malkajgiri, and Hyderabad compared to other districts. Additionally, AutoRickshaws are more prevalent in the district of Hyderabad.
- However, the standout preference across various districts appears to be for Motorcycles, which seem to be the preferred vehicle class among the majority of people.
- On the contrary, the Agricultural vehicle class is considerably low in terms of numbers across the districts, and in specific districts like Rangareddy, Malkajgiri, and Hyderabad, the presence of Agricultural vehicles is extremely limited.



Question 7

List down the top 3 and bottom 3 districts that have shown the highest and lowest vehicle sales growth during FY 2022 compared to FY 2021? (Consider and compare categories: Petrol, Diesel and Electric)

- For the category of Petrol, Rangareddy saw the highest increase in vehicle sales during 2022 compared to 2021, while Warangal experienced a sales decrease of 54%.
- In the Diesel category, Karimnagar recorded a significant growth of 110%, whereas Warangal witnessed a notable decline in sales, with a decrease of 61%.
- Regarding Electric vehicles, all districts demonstrated substantial sales growth, with Bhadradi Kothagudem leading the way with nearly a sevenfold increase.



Top 3 Petrol Type		Bottom 3 Petrol Type	
District	Change%	District	Change%
Rangareddy	6.2%	Warangal	-54.7%
Hyderabad	-1.7%	Jagtial	-42.1%
Medchal_Malkajgiri	-4.4%	Jayashankar Bhupalpally	-39.1%

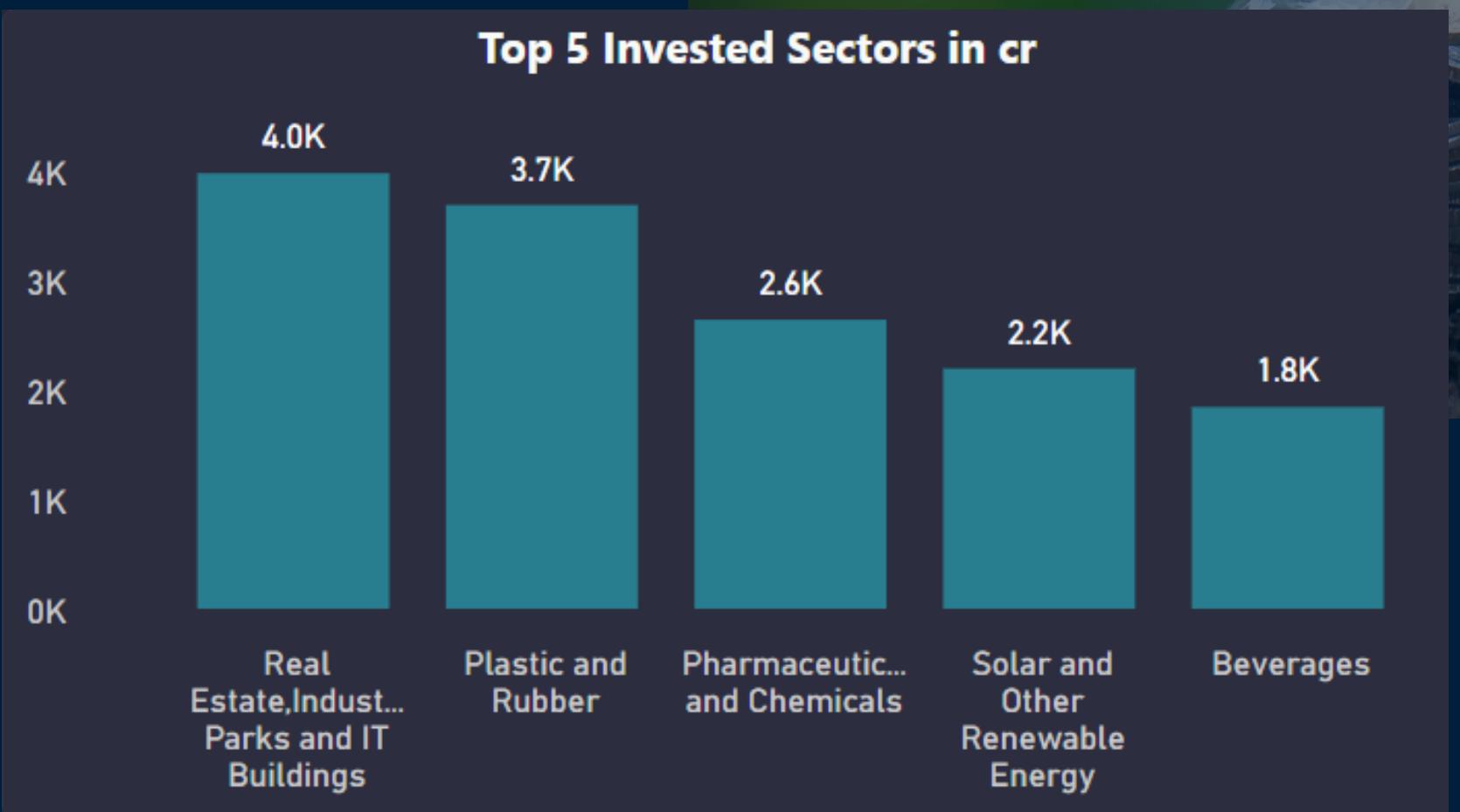
Top 3 Diesel Type		Bottom 3 Diesel Type	
District	Change%	District	Change%
Karimnagar	110%	Warangal	-61%
Rangareddy	21%	Jagtial	-37%
Sangareddy	14%	Mahabubabad	-35%

Top 3 Electric Type		Bottom 3 Electric Type	
District	Change%	District	Change%
Bhadradri Kothagudem	693%	Rajanna Sircilla	19%
Khammam	607%	Mahabubnagar	21%
Mahabubabad	486%	Wanaparthy	70%

Question 8

List down the top 5 sectors that have witnessed the most significant investments in FY 2022.

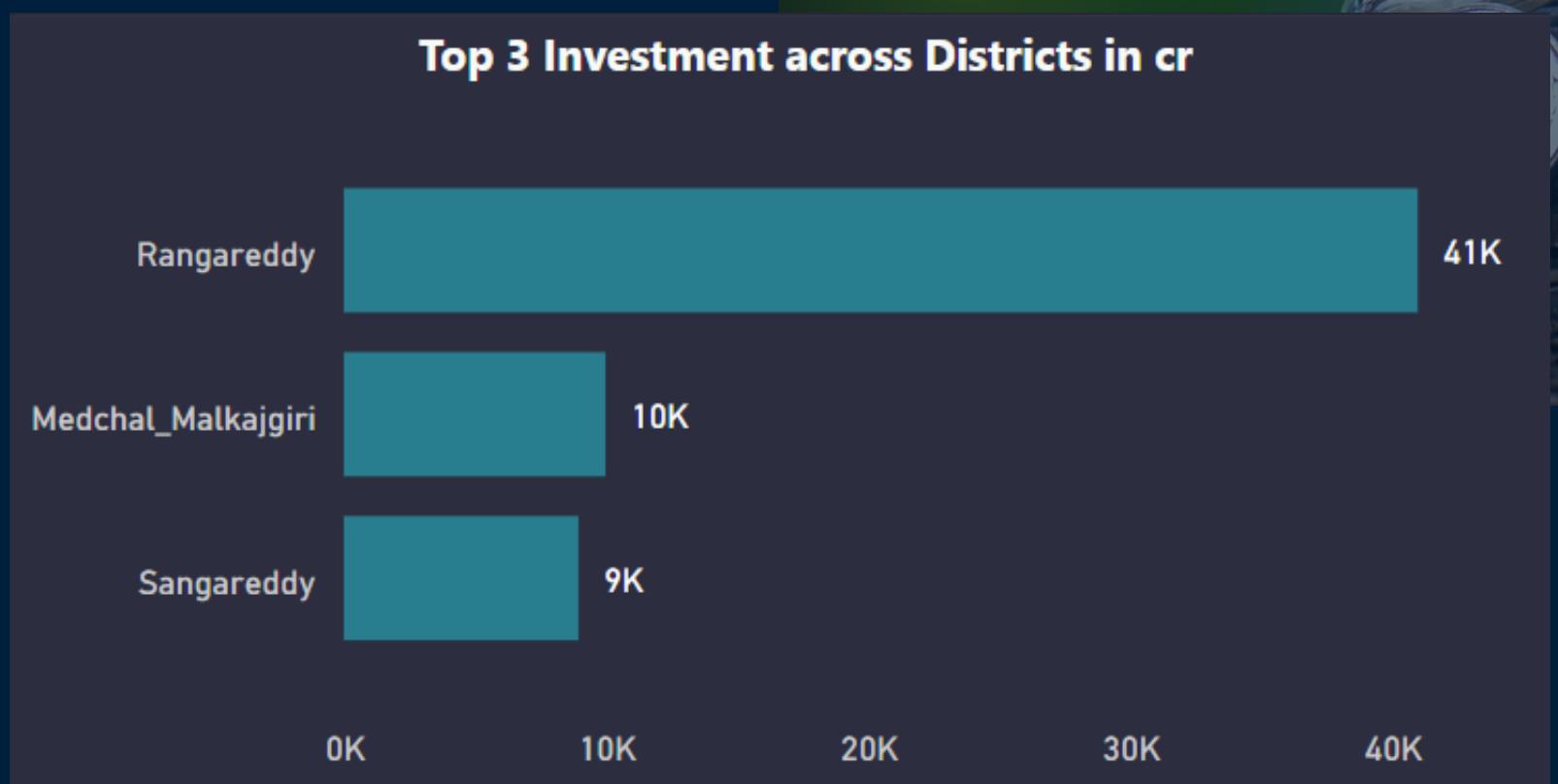
- In 2022, the Real Estate, Industrial Parks, and IT Buildings sector secured the most significant investments, followed by the Plastic & Rubber Sector and the Pharma & Chemicals Sector.
- The Solar and Renewable sector, along with the Beverages sector, also attracted noteworthy investments during the year.



Question 9

List down the top 3 districts that have attracted the most significant sector investments during FY 2019 to 2022? What factors could have led to the substantial investments in these particular districts?

- The districts that have attracted the most significant sector investments during FY 2019 to 2022 are Rangareddy, Medchal Malkajgiri, and Sangareddy.
- These substantial investments can be attributed to:
 1. **Proximity to Hyderabad:** These districts' close proximity to Hyderabad, a major hub for various industries, offers businesses access to resources and infrastructure.
 2. **Infrastructure:** Well-developed road connectivity, industrial parks, and educational institutions in these districts make them attractive for investment.
 3. **Government Policies:** Investor-friendly policies in Telangana, including incentives and single-window clearance, simplify the investment process.
 4. **Special Economic Zones (SEZs):** Hosting SEZs that provide tax benefits and incentives for companies encourages investment.



Question 10

Is there any relationship between district investments, vehicles sales and stamps revenue within the same district between FY 2021 and 2022?

- By examining the data, it becomes evident that there is a relationship between investments, vehicle sales, and stamps revenue within the same district. Typically, districts with higher stamps and vehicle sales revenue tend to attract more significant investments.
- However, there are notable exceptions, particularly in the cases of Hyderabad and Rangareddy. Despite having higher stamps and vehicle sales revenue, Hyderabad received comparatively low investments. Conversely, Rangareddy, with substantial vehicle sales revenue and limited stamps revenue, secured the highest investments.
- This observation suggests that while there is a general correlation between revenue streams and investments within districts, other factors or dynamics may influence the investment patterns in specific regions, leading to exceptions like those seen in Hyderabad and Rangareddy.

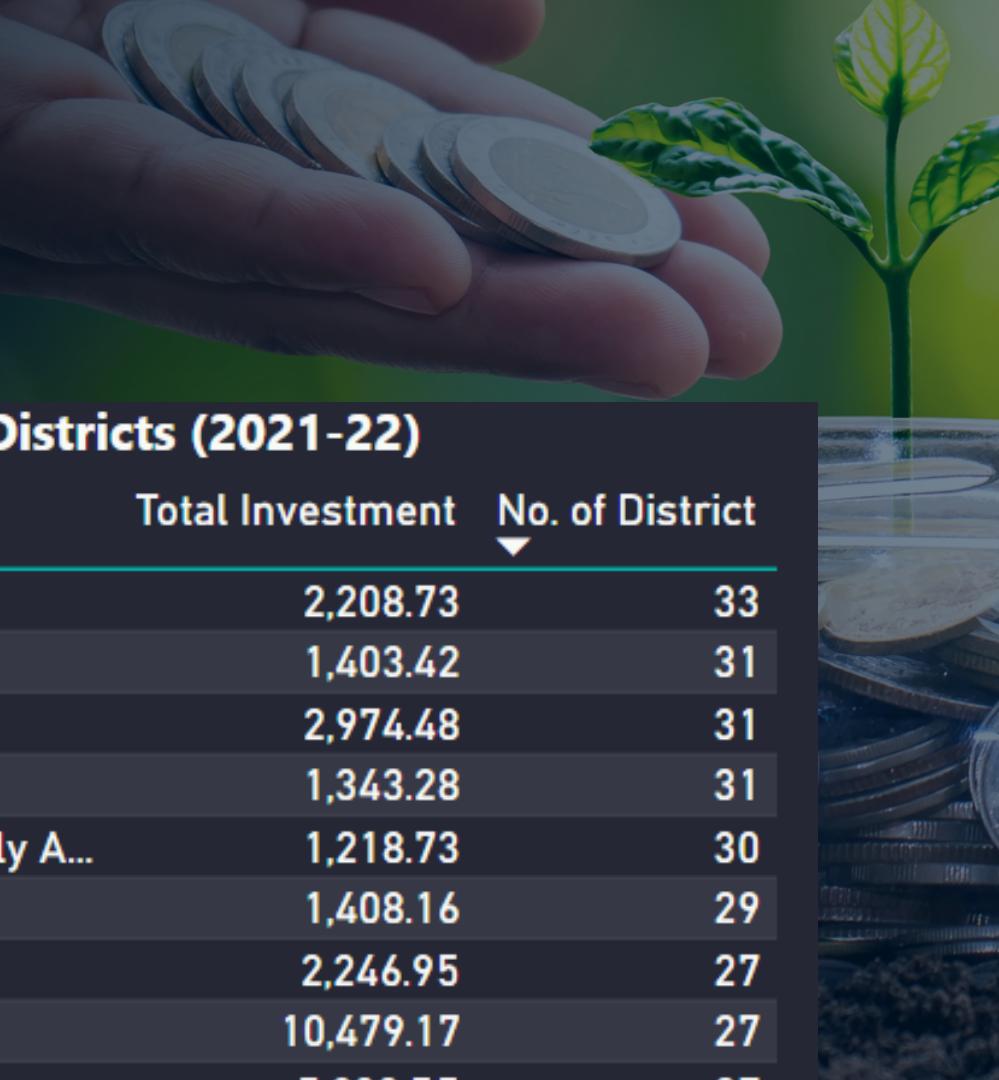
district	Stamps vs Vehicles vs Investments 2021-22		
	Total Stamps Revenue	Total Vehicle Revenue	Total Investment in cr
Medchal_Malkajgiri	56560334541	492154	5,428.40
Hyderabad	47628666253	556775	34.81
Sangareddy	28410909297	132961	6,004.48
Hanumakonda	9836265797		183.82
Khammam	7273247973	99888	366.90
Yadadri Bhuvanagiri	7069318592	53377	1,814.97
Nalgonda	5222972771	99686	1,401.48
Nizamabad	5218541203	101710	127.70
Karimnagar	5070954538	75976	264.19
Rangareddy	4906912252	463694	13,926.95
Mahabubnagar	3897790508	70096	2,030.88
Suryapet	3575170837	70824	1,414.69
Siddipet	3270051056	62351	1,321.72
Peddapalli	2200222035	39304	90.52
Medak	2131038168	43275	1,991.73
Mancherial	2116279667	41233	192.64
Jagtial	2026261310	51535	91.06
Vikarabad	1707906139	81248	154.83
Nagarkurnool	1697009409	47945	312.91
Kamareddy	1666771871	54083	1,082.73
Jangoan	1405623403	31839	100.96
Wanaparthy	1391965620	30706	396.87
Rajanna Sircilla	1387948696	30618	84.19
Adilabad	1379583551	35869	10.85
Mahabubabad	1343312841	42302	113.87
Jogulamba Gadwal	1227560674	31735	112.26
Nirmal	1207987315	41357	55.82
Bhadradri Kothagudem	1059191168	64405	1,031.04
Narayanpet	866120127		1,517.74
Warangal	830373240	80101	127.02
Mulugu	701408132		26.27
Kumurambheem Asifabad	252588959	21988	20.14
Jayashankar Bhupalpally		36077	18.79
Total	214540287943	3085112	41,853.20

Question 11

Are there any particular sectors that have shown substantial investment in multiple districts between FY 2021 and 2022?

- Between 2021 and 2022, certain sectors have exhibited substantial investments across multiple districts.
- Notably, the Food Processing, Agro based Cold Storages, and Engineering sectors have attracted significant investments in more than 30 districts out of the total 33.
- In contrast, the Real Estate, Industrial Parks, and IT Buildings sector has concentrated its high investments primarily in 4 specific districts.

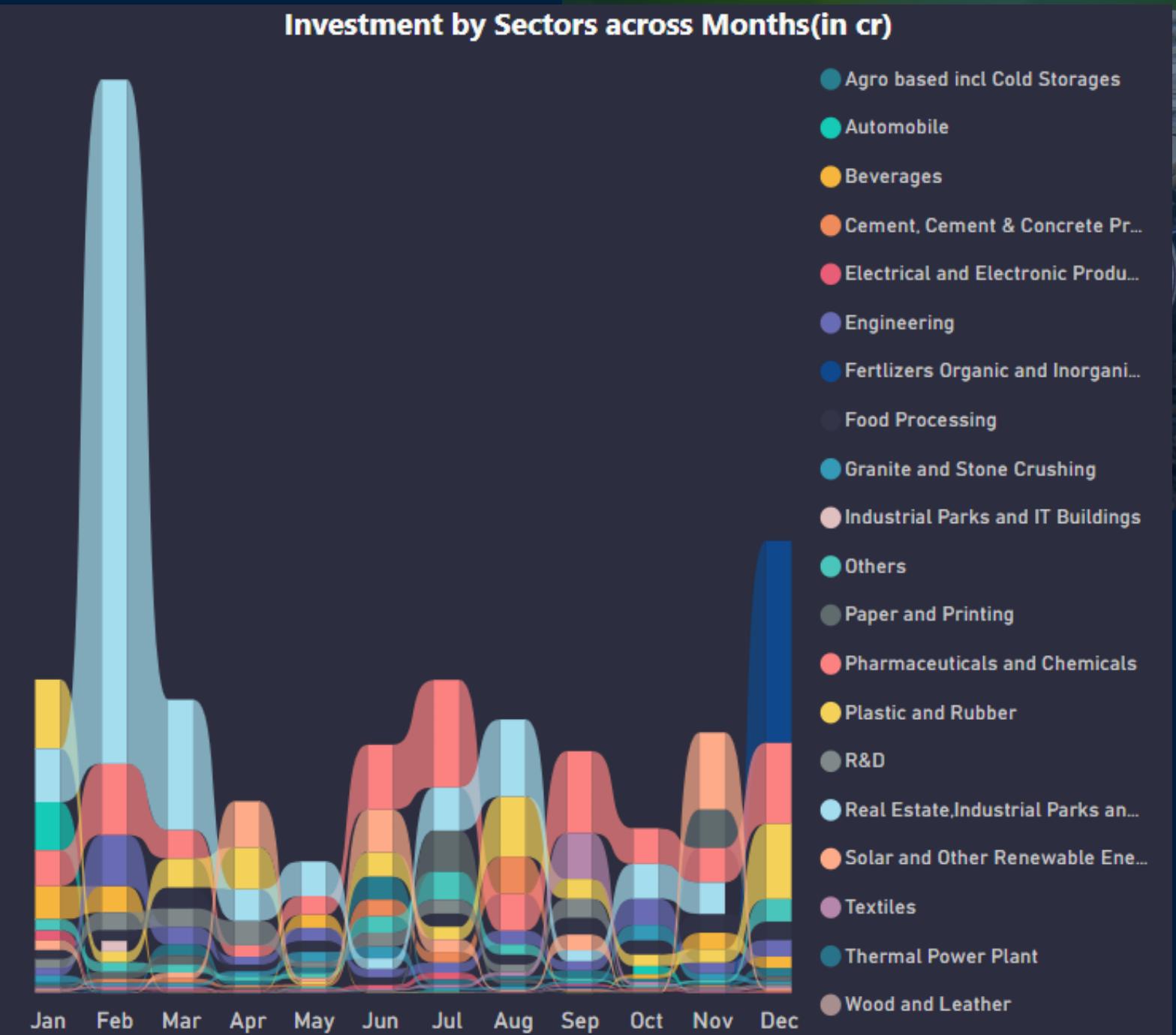
Investments in Districts (2021-22)		
Sector	Total Investment	No. of District
Food Processing	2,208.73	33
Agro based incl Cold Storages	1,403.42	31
Engineering	2,974.48	31
Others	1,343.28	31
Cement, Cement & Concrete Products, Fly A...	1,218.73	30
Granite and Stone Crushing	1,408.16	29
Beverages	2,246.95	27
Pharmaceuticals and Chemicals	10,479.17	27
Plastic and Rubber	5,933.55	27
Textiles	356.25	22
Wood and Leather	92.22	22
Paper and Printing	1,464.78	21
Fertilizers Organic and Inorganic,Pesticides,I...	53.11	16
Electrical and Electronic Products	463.61	13
Solar and Other Renewable Energy	2,444.35	13
R&D	2,305.73	7
Automobile	310.95	4
Real Estate,Industrial Parks and IT Buildings	5,145.73	4
Total	41,853.20	33



Question 12

Can we identify any seasonal patterns or cyclical trends in the investment trends for specific sectors? Do certain sectors experience higher investments during particular months?

- The Real Estate & Industry Parks sector consistently attracts significant investments, particularly in February.
 - The Pharma and Chemicals sector experiences higher investments spanning June and July, with a consistent presence throughout the year.
 - In contrast, the Fertilizers sector witnesses a surge in investment during December but remains low during other months.
 - The Solar and Renewable Energy sector garners substantial investments during November.

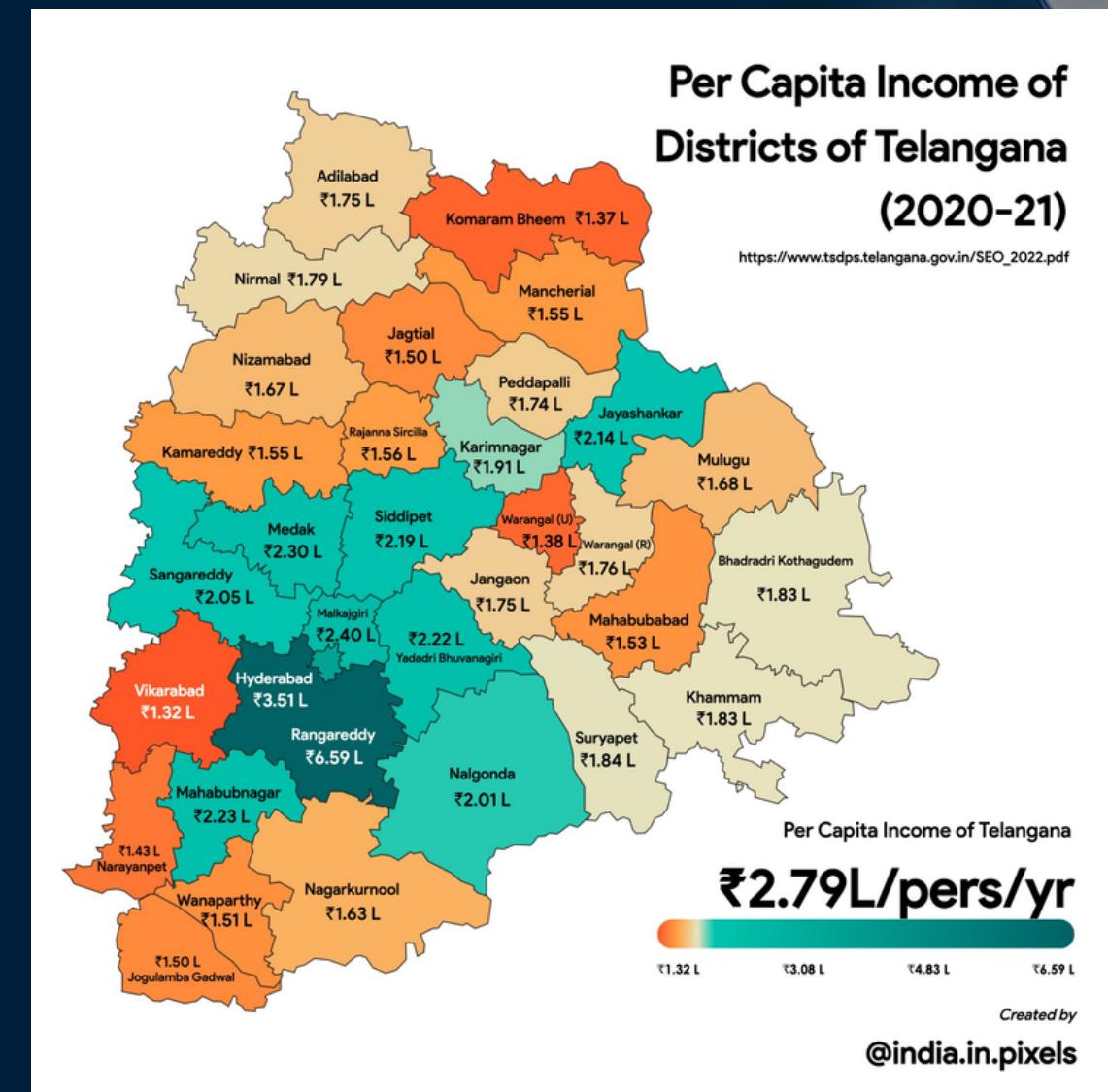


Secondary Research

What are the top 5 districts to buy commercial properties in Telangana? Justify your answer.

Based on factors such as GDP rate, Per Capita Income, investment amount and location, the top 5 districts are:

1. Rangareddy: It emerges as the top preference due to its remarkable performance in GDP growth, Per Capita Income, and investment figures. Its adjacency to the state capital also adds to its attractiveness.
2. Hyderabad: As the capital city, Hyderabad naturally ranks second. It boasts the second-highest Per Capita Income and GDP, making it a lucrative choice for commercial property investment.
3. Malkajgiri: Malkajgiri, with its robust GDP, Per Capita Income, and investment levels, offers an attractive proposition for commercial property buyers. Its connectivity to the state capital further enhances its appeal.
4. Sangareddy: Sangareddy, like Malkajgiri, presents a healthy combination of GDP, Per Capita Income, and investments. Its proximity to Hyderabad makes it a promising district for commercial property investment.
- Mahabubnagar: Mahabubnagar secures the fifth position based on available data. While its metrics may be slightly lower than the top four districts, it still offers potential for commercial property buyers considering its overall performance.

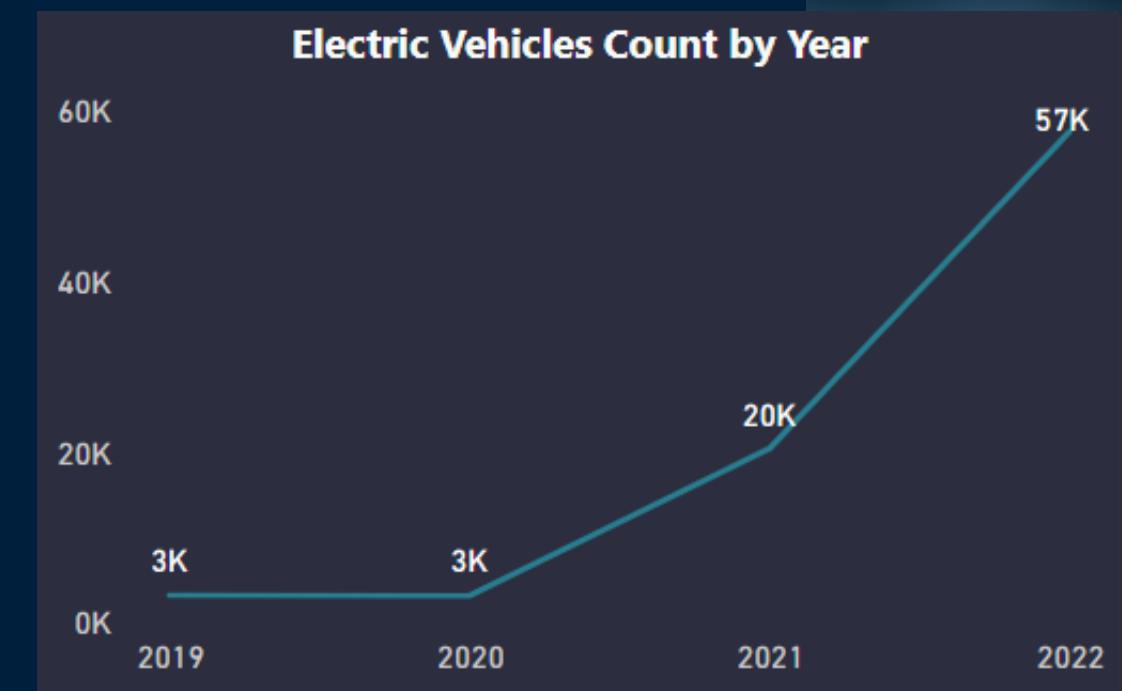


District	GDP 2018-19	GDP 2019-20	GDP 2020-21
Ranga Reddy	1,71,136	1,83,299	1,98,997
Hyderabad	1,61,759	1,66,039	1,62,564
Medchal-Malkajgiri	61,768	67,559	62,506
Sangareddy	41,285	46,438	45,626
Nalgonda	29,891	37,269	38,927

Secondary Research

What significant policies or initiatives were put into effect to enhance economic growth, investments, and employment in Telangana by the current government? Can we quantify the impact of these policies using available data?

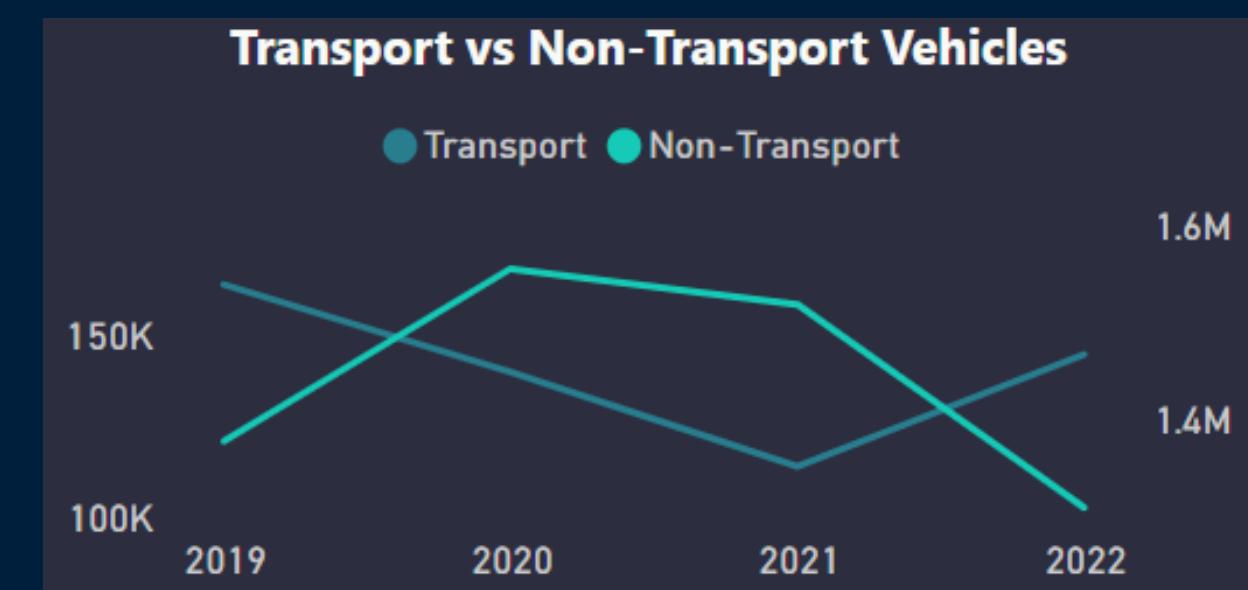
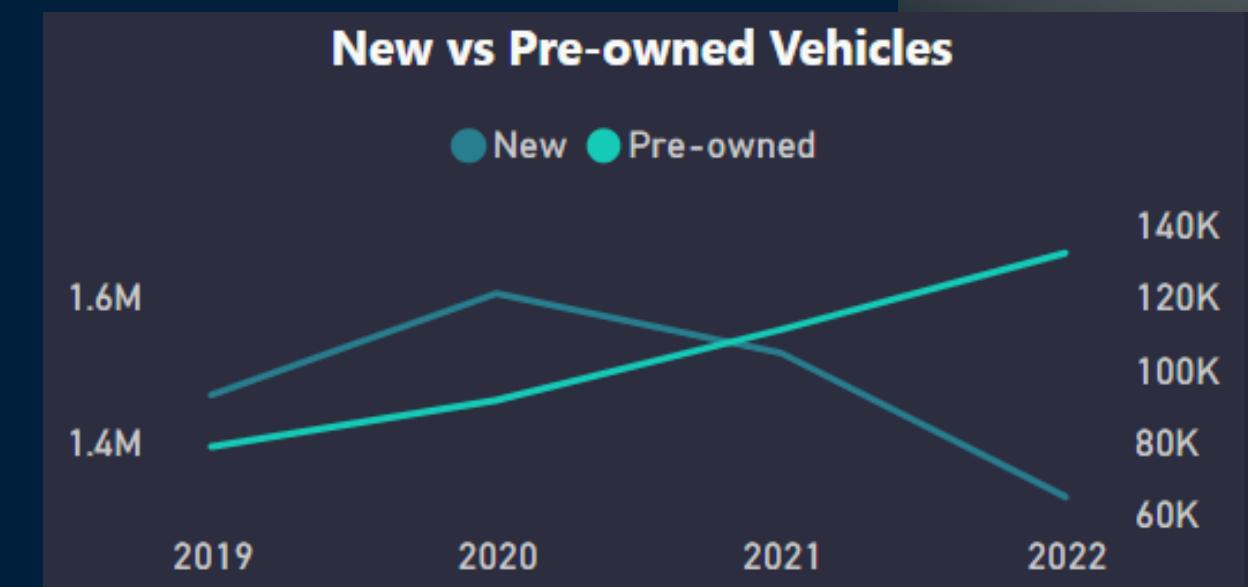
- **Electric Vehicle & Energy Storage Policy 2020-2030:** The policy offered financial incentives for electric vehicle manufacturing and encouraged charging infrastructure development. It also supported by providing exemption of road tax and registration fees. The policy's impact on economic growth and investments can be observed through increased EV adoption after the implementation.
- **TS-iPASS (Telangana State Industrial Project Approval and Self-Certification System):** This initiative simplifies and speeds up industrial project approvals by streamlining clearance and permit acquisition. The TS-IPASS Mobile App complements this by offering these benefits on investors' smartphones for easy application and status tracking. These efforts have led to a substantial year-on-year increase in investments, attracting diverse sectors and fostering economic development in Telangana. While there was a notable decline in 2021 attributed to the COVID-19 impact, the upward trajectory has resumed, and investments have been steadily growing since then.



Note: Excluded 2023 data due to incomplete availability.

Top Insights and Recommendations:

- Following the COVID impact in 2021, while investments have been on the rise across sectors, employment has been steadily declining. To enhance employment opportunities, the government can implement skill development initiatives, promote Entrepreneurship, leverage technology and support SMEs.
- There is a notable shift towards purchasing pre-owned vehicles over new ones, indicating a growing trend of resource reuse and a preference for used cars. This shift could contribute to reducing the number of new vehicles on the streets. We recommend that the government enhance and expand certified pre-owned vehicle programs to ensure the quality and reliability of used cars. Furthermore, offering financial incentives, such as reduced taxes or registration fees, for purchasers of pre-owned vehicles would encourage this eco-friendly choice and contribute to environmental sustainability.
- There is an observable trend where the count of transport vehicles is on the rise, while non-transport vehicles are showing a decline. This suggests a thriving economy with growing logistics and transportation sectors, potentially generating more job opportunities and boosting local economies. To further promote the rise of transport vehicles and decrease non-transport vehicles, the government can invest in robust public transportation systems, offer incentives for eco-friendly vehicles, encourage carpooling and cycling, and engage in smart urban planning.



Thank you for
giving us the
opportunity to
share our
insights with
you!

By Soumyaranjan Behera

