Analyse Growth and Present Insights to the Telangana Government

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CODE BASICS

OPEN DATA TELANGANA

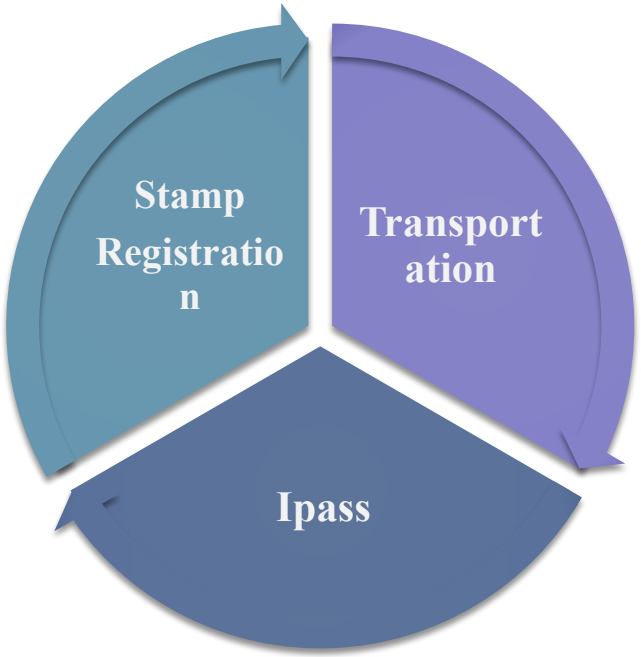
Objectives

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

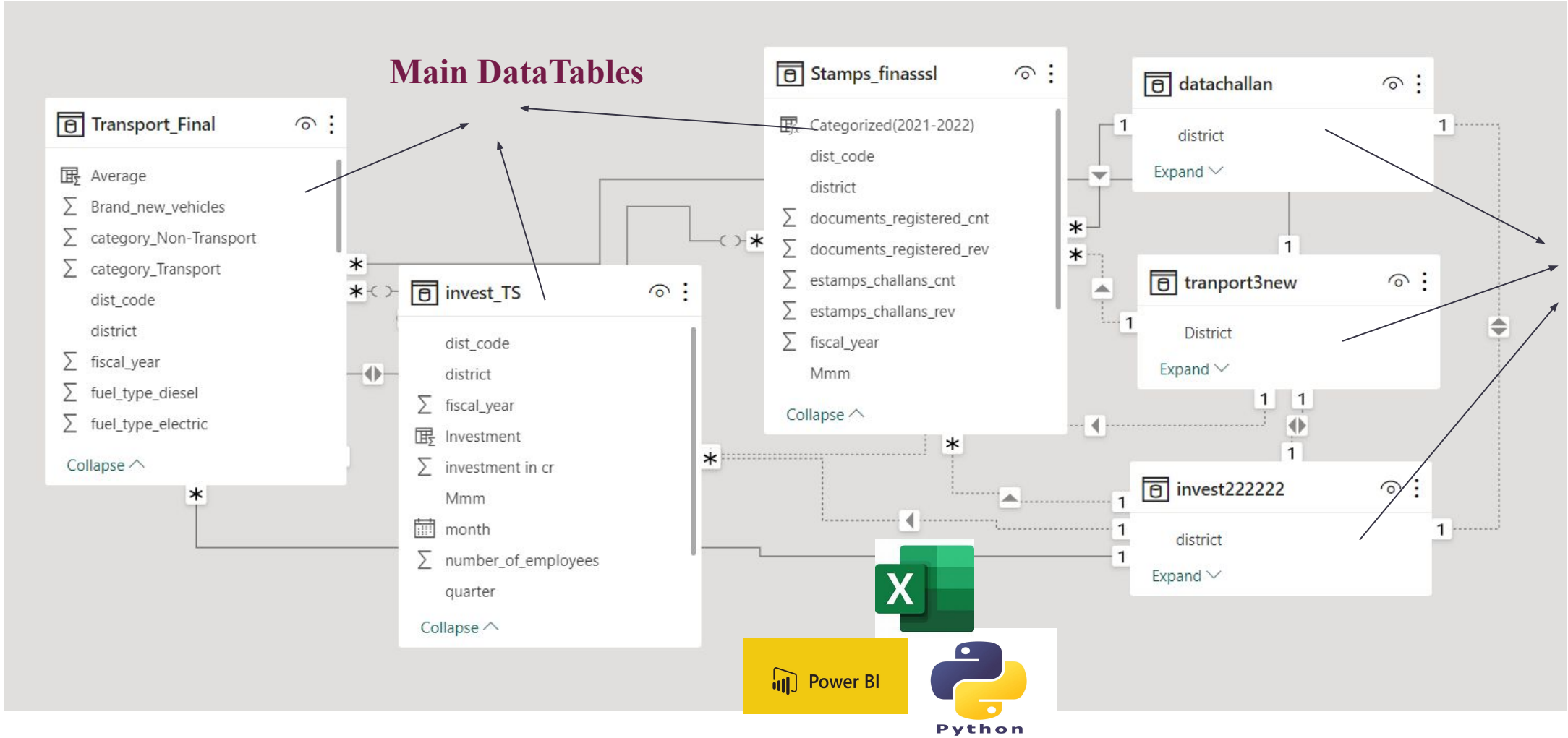
Telangana State Growth Analysis

- Telangana is one of the fast growing state, there are lot of sectors which are taking lead in this growth.
- In this particular project we are mainly focusing on 3 sectors which are:

- Stamp Registration effect on revenue generation
- Transportation
- Ipass (Telangana State Industrial Project Approval and Self Certification System)



Datasets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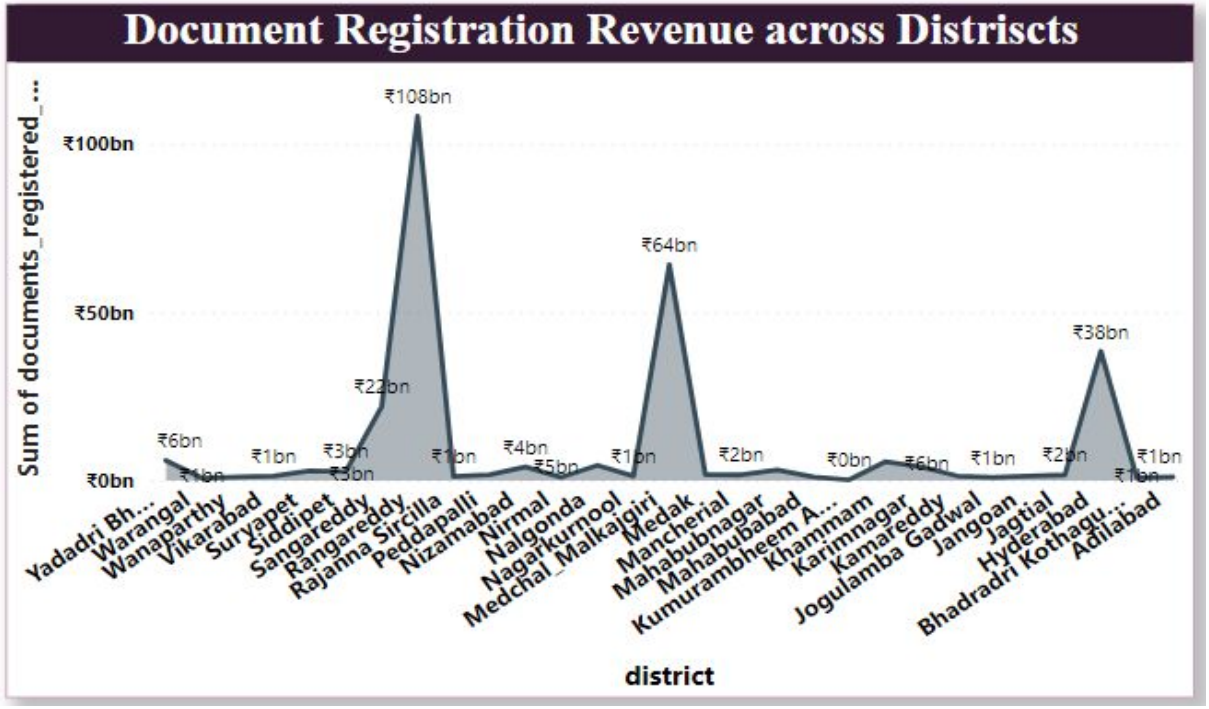
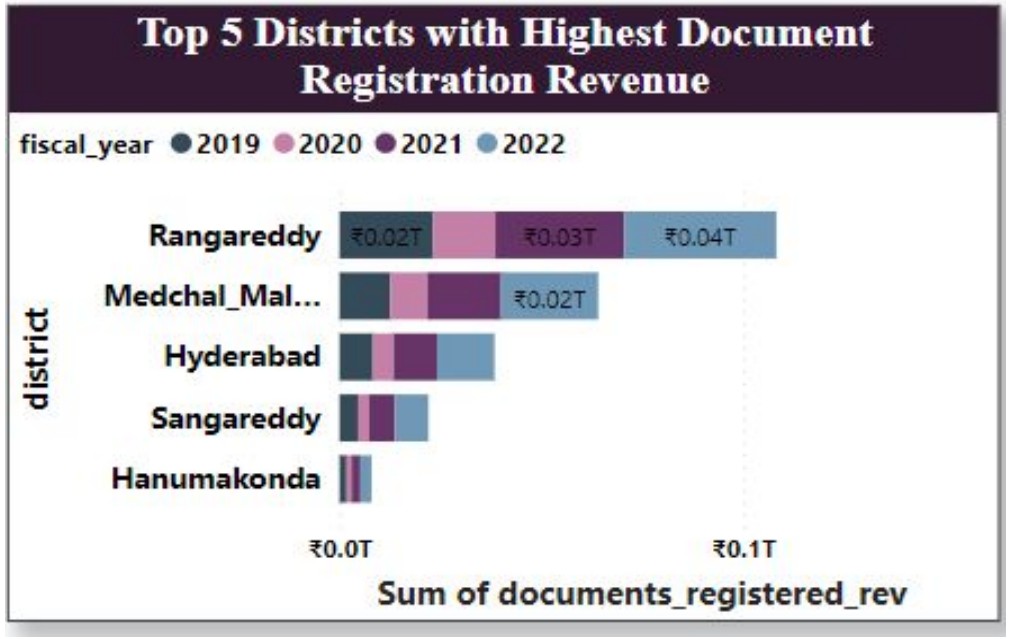
Stamp Registration

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.



- This plot is showing the variation of revenue generated in different districts.

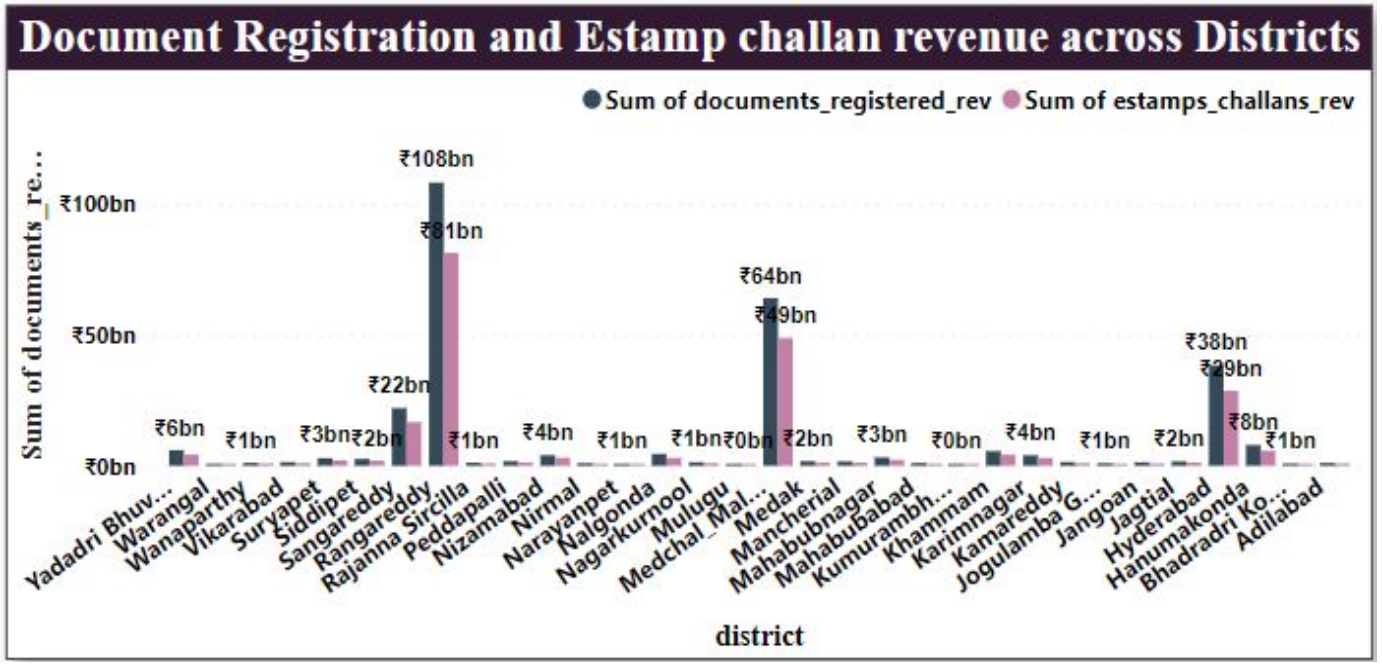


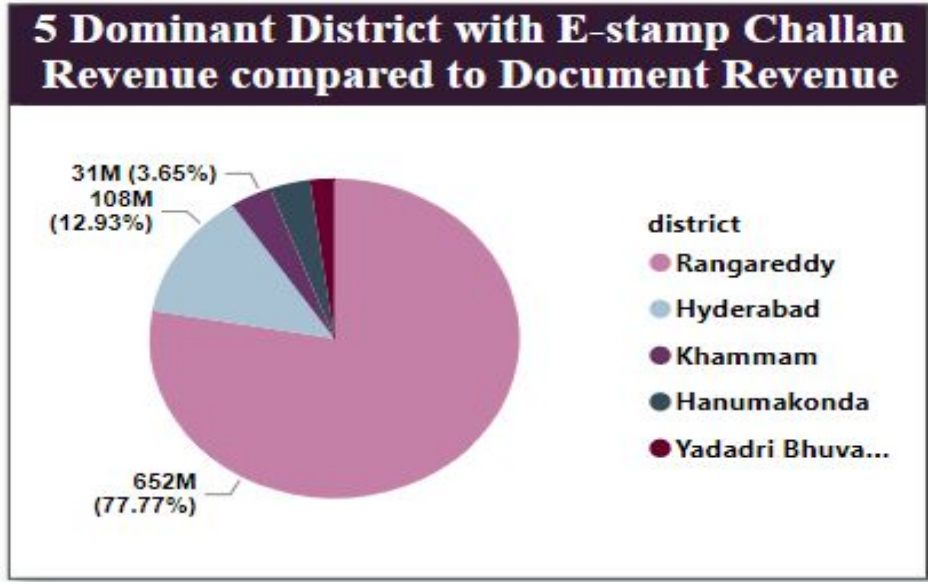
INSIGHT:

Rangareddy, Medchal_Malkaigiri, Hyderabad, Sangareddy and Hanamkonda are the districts showing highest document registration revenue generation.

Stamp Registration

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?





INSIGHT:

In comparison to other districts, Rangareddy, Hyderabad, Khammam, Hanamkonda, and Yadadri Bhuvana have the highest revenue contribution. Rangareddy is the most dominant district here.

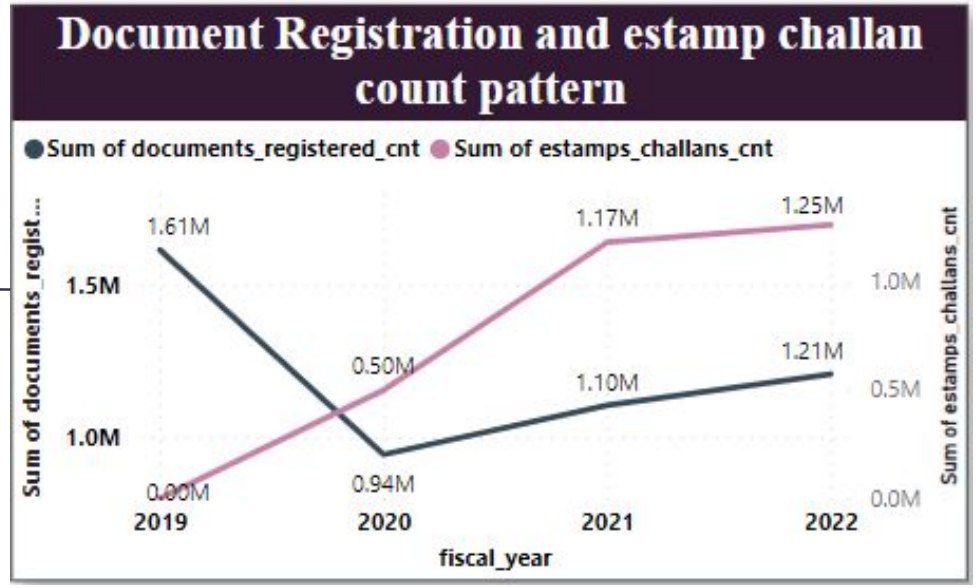
Stamp Registration

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?

INSIGHT:

- This chart demonstrates the lower income generating prior to the e-stamp challan count.
- Therefore, after FY2020, revenue generation will increase.

Digitization in stamp and documents is effective in generation of revenue



Stamp Registration

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

District Segmentation Based on estamp Revenue FY2021-Fy2022

Categorized(2021-2022)	district
High Revenue 2021-2022	Hanumakonda
High Revenue 2021-2022	Hyderabad
High Revenue 2021-2022	Medchal_Malkajgiri
High Revenue 2021-2022	Rangareddy
High Revenue 2021-2022	Sangareddy
Low Revenue 2021-2022	Adilabad
Low Revenue 2021-2022	Bhadradri Kothagudem
Low Revenue 2021-2022	Hanumakonda
Low Revenue 2021-2022	Hyderabad
Low Revenue 2021-2022	Jagtial
Low Revenue 2021-2022	Jangoan
Low Revenue 2021-2022	Jogulamba Gadwal
Low Revenue 2021-2022	Kamareddy
Low Revenue 2021-2022	Karimnagar
Low Revenue 2021-2022	Khammam
Low Revenue 2021-2022	Kumurambheem Asifaba
Low Revenue 2021-2022	Mahabubabad
Low Revenue 2021-2022	Mahabubnagar
Low Revenue 2021-2022	Mancherial
Low Revenue 2021-2022	Medak
Low Revenue 2021-2022	Mulugu
Low Revenue 2021-2022	Nagarkurnool
Low Revenue 2021-2022	Nalgonda
Low Revenue 2021-2022	Narayanpet
Low Revenue 2021-2022	Nirmal
Low Revenue 2021-2022	Nizamabad

Categorized Districts for 2021-22

Low Revenue : between **Rs**723798 & 143623558/-

Medium Revenue: between **Rs**143623558 & 286523318/-

High Revenue: greater than **Rs**286523318/-

District Segmentation Based on estamp Revenue FY2021-Fy2022

Categorized(2021-2022)	district
Low Revenue 2021-2022	Nizamabad
Low Revenue 2021-2022	Peddapalli
Low Revenue 2021-2022	Rajanna Sircilla
Low Revenue 2021-2022	Sangareddy
Low Revenue 2021-2022	Siddipet
Low Revenue 2021-2022	Suryapet
Low Revenue 2021-2022	Vikarabad
Low Revenue 2021-2022	Wanaparthy
Low Revenue 2021-2022	Warangal
Low Revenue 2021-2022	Yadadri Bhuvanagiri
Medium Revenue 2021-2022	Hanumakonda
Medium Revenue 2021-2022	Karimnagar
Medium Revenue 2021-2022	Khammam
Medium Revenue 2021-2022	Medchal_Malkajgiri
Medium Revenue 2021-2022	Nalgonda
Medium Revenue 2021-2022	Nizamabad
Medium Revenue 2021-2022	Sangareddy
Medium Revenue 2021-2022	Yadadri Bhuvanagiri
Other	Adilabad
Other	Bhadradri Kothagudem
Other	Hanumakonda
Other	Hyderabad
Other	Jagtial
Other	Jangoan
Other	Jogulamba Gadwal
Other	Kamareddy
Other	Karimnagar
Other	Khammam
Other	Kumurambheem Asifaba

Transportation

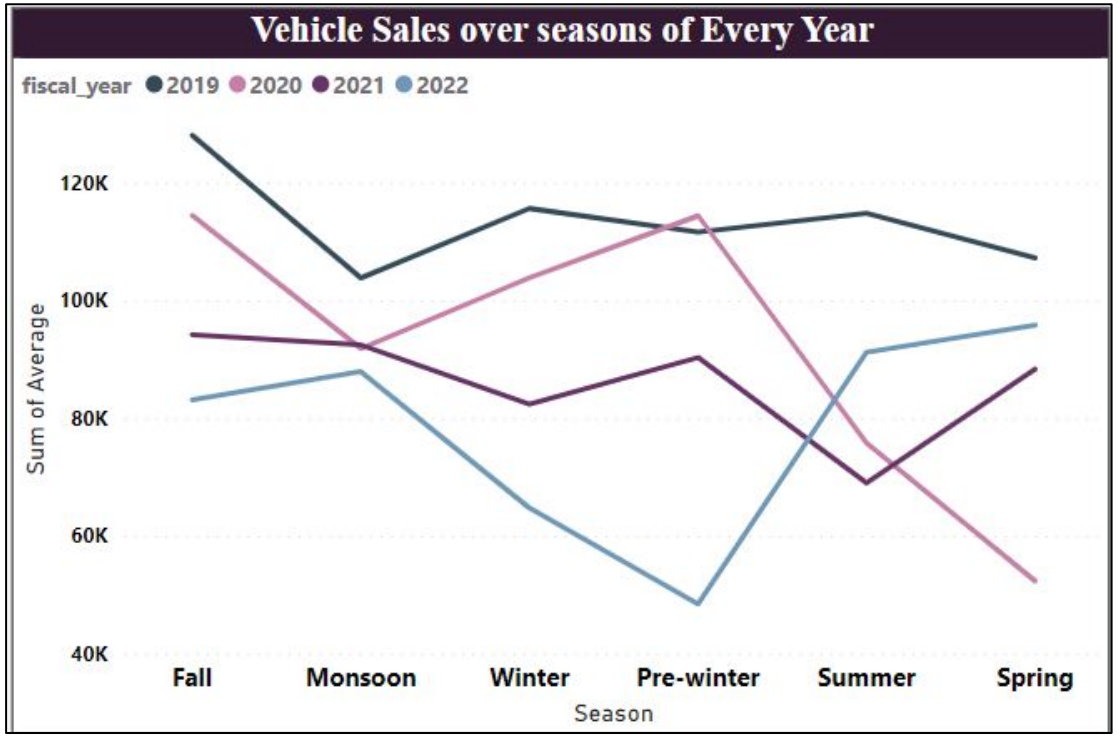
Investigate whether there is any correlation between vehicle sales and specific months or seasons in different districts. Are there any months or seasons that consistently show higher or lower sales rate, and if yes, what could be the driving factors? (Consider Fuel-Type category only)

Correlation between Vehicle sales and Specific Seasons are drawn.

INSIGHTS:

In the season of Fall(Sep,Oct) ,Spring(March,Aug) there is a Consistently of higher Sales ,due to the Dussehra,Bathukamma Festival and Summer season.

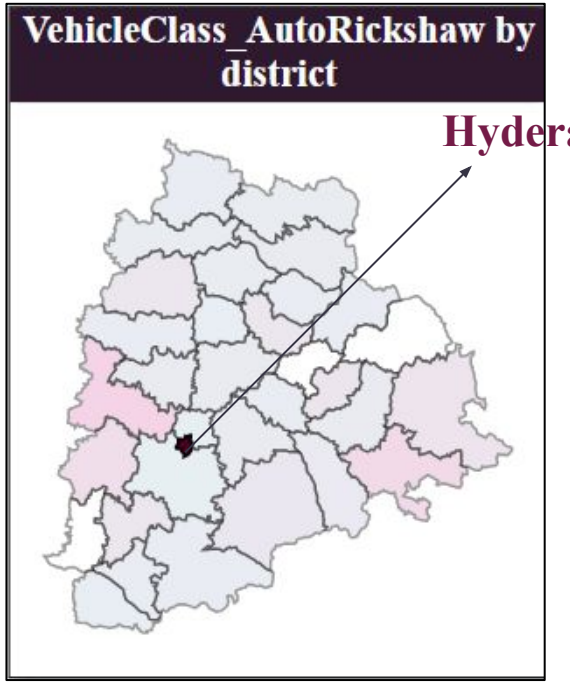
slicer will help to slice the data according to Districts



Transportation

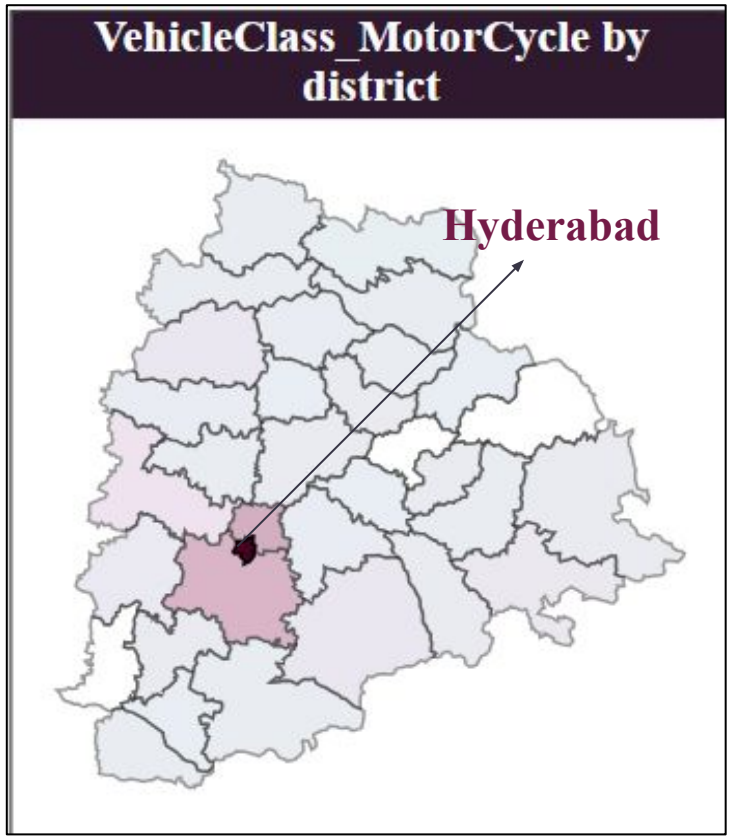
How does the distribution of vehicles vary by vehicle class (Motor Cycle , Motor Car, Auto Rickshaw, Agriculture) across different districts? Are there any districts with a predominant preference for a specific vehicle class? Consider FY 2022 for analysis.

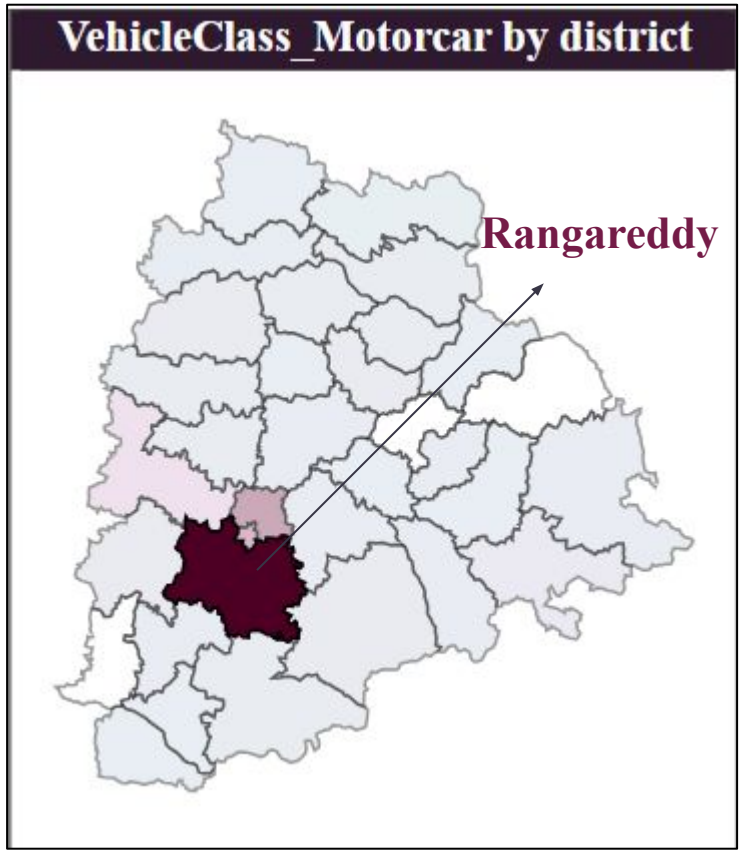
This Matrix Visualization is showing the distribution of Vehicle Class sales across different districts

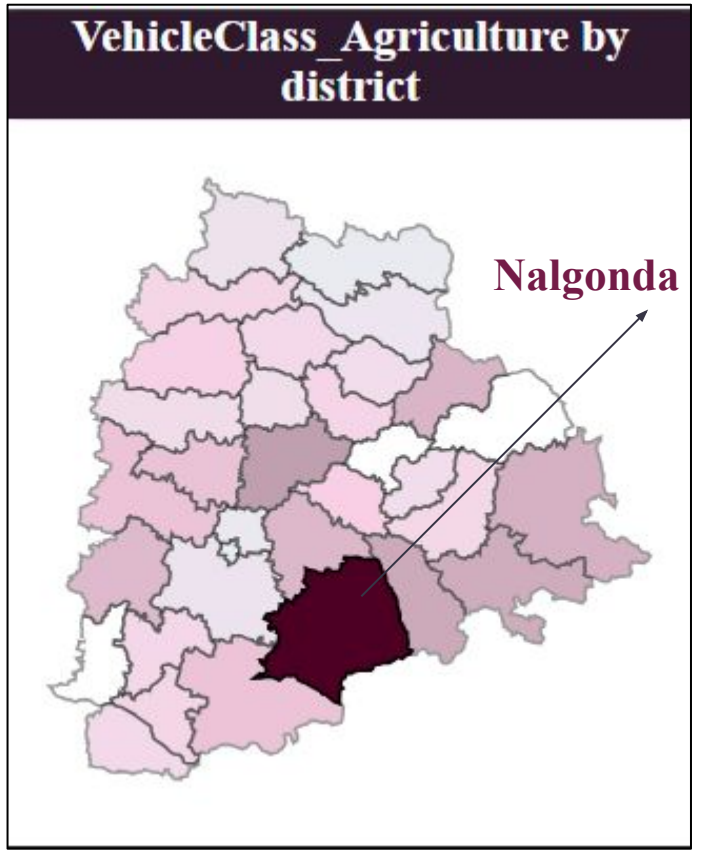


Vehicle Class sales Distribution across Districts

district	leClass_MotorCar	Sum of vehicleClass_MotorCycle
Adilabad	1416	10410
Bhadradri Kothagudem	3157	17022
Hyderabad	51447	206819
Jagtial	2055	13639
Jangoan	1177	8617
Jayashankar Bhupalpally	1343	9225
Jogulamba Gadwal	899	10300
Kamareddy	2153	15184
Karimnagar	4818	19411
Khammam	5880	27385
Kumurambheem Asifabad	479	6433
Mahabubabad	1155	11046
Mahabubnagar	3300	17977
Mancherial	2218	11603
Medak	2347	11663
Medchal_Malkajgiri	61071	164626
Nagarkurnool	2066	12229
Nalgonda	4927	27942
Nirmal	1581	10984
Nizamabad	5824	28105
Total	268141	955109







INSIGHTS:

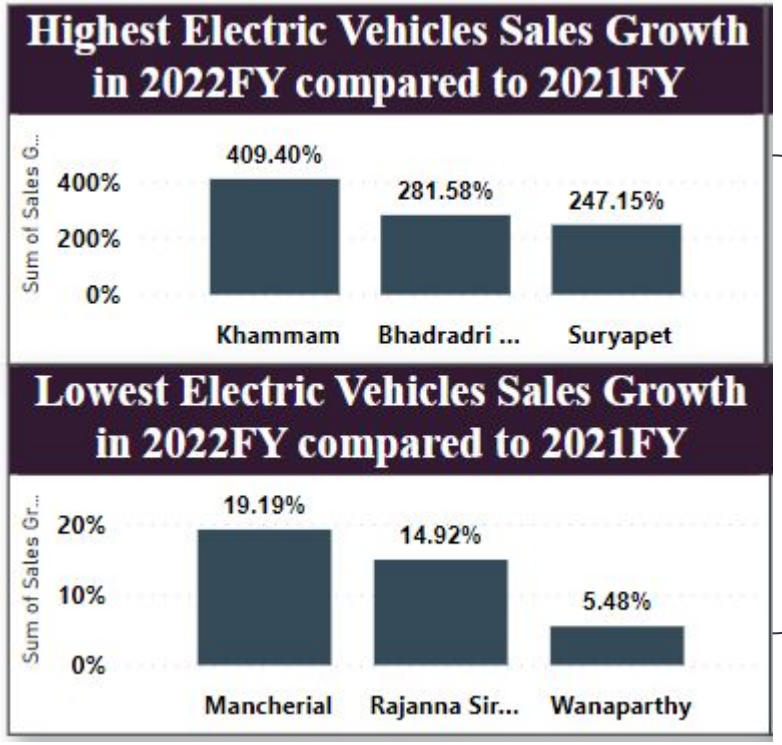
HYDERABAD is having Predominant preference to Motorcycle and AutoRickshaw Sales because it is Metropolitan City with greater Public Transport.

RANGAREDDY District having preference to Motorcar sales.

NALGONDA district having preference to Agriculture Vehicle class Sales

Transportation

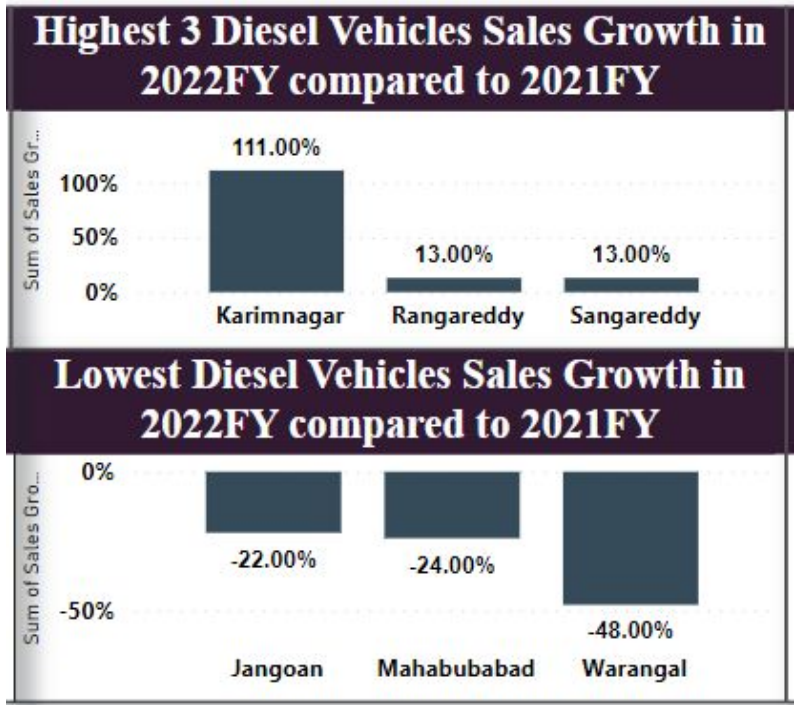
List down the top 3 and bottom 3 districts that have shown the highest and lowest vehicle sales growth during FY 2022 compared to FY 2021? (Consider and compare categories: Petrol, Diesel and Electric)



Insight:

Khammam, Bhadradri Kothagudem,Suryapet are significantly highest Electric vehicle sales growth during FY2022 Compared to FY2021

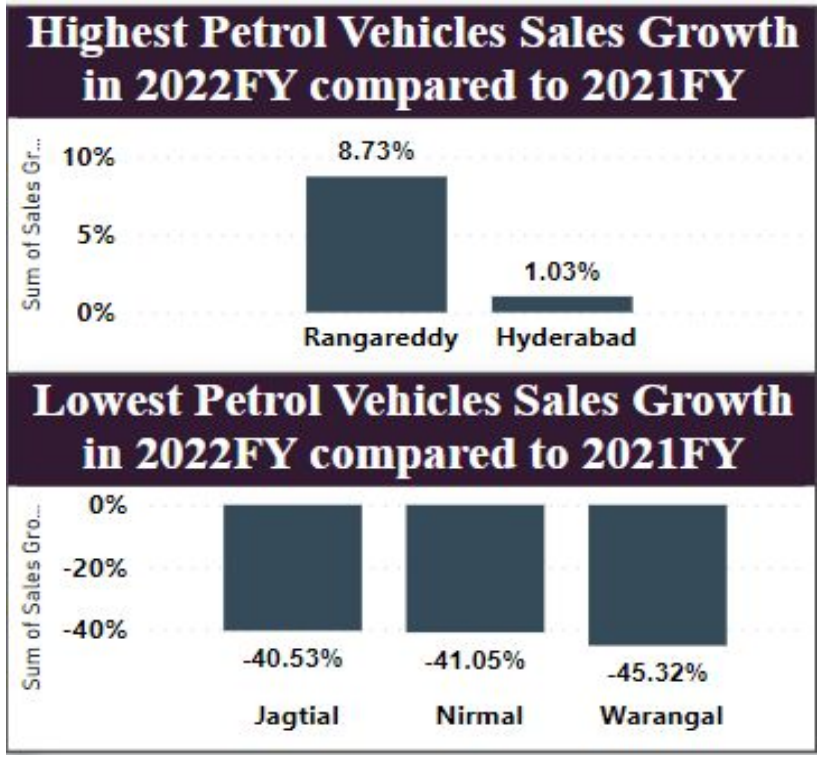
Mancherial,Rajanna sircilla,Wanaparthy are significantly highest Electric vehiclesales growth during FY2022 Compared to FY2021



Insight:

Karimnagar,Rangareddy,Sangareddy are significantly highest Diesel vehicle sales growth during FY2022 Compared to FY2021

Jangaon,Mahabubabad,Warangal are significantly Lowest Diesel vehicle sales growth during FY2022 Compared to FY2021



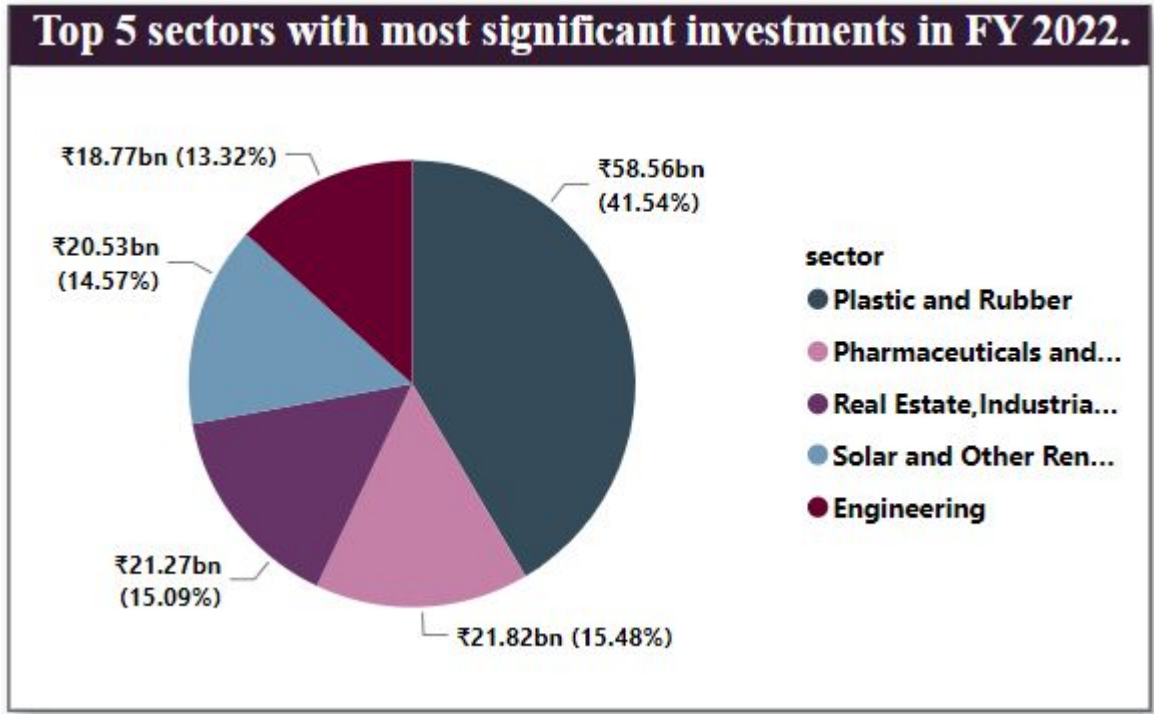
Insight:

Rangareddy,Hyderabad are significantly highest Petrol vehicle sales growth during FY2022 Compared to FY2021

Jagtial,Nirmal,Warangal are significantly Lowest Petrol vehicle sales growth during FY2022 Compared to FY2021

Ts-Ipass

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



Insight:

- Plastic and Rubber(Rs 58.56bn)
- Pharmaceuticals and chemicals(Rs 21.82bn)
- Real Estate,Industrial Parks,IT-Buildings(Rs 21.27bn)
- Solar and other renewable Energy(Rs 20.53bn)
- Engineering(Rs 13.32bn)

are most Significant Investments in FY2022

Ts-Ipass

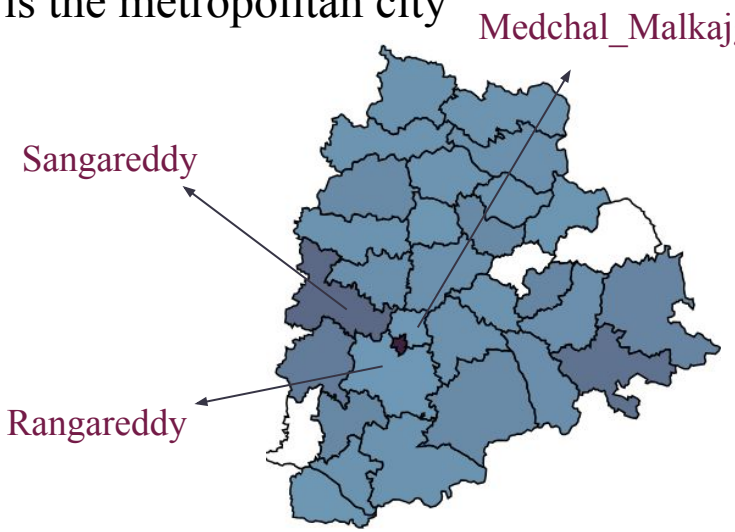
List down the top 3 districts that have attracted the most significant sector investments during FY 2019 to 2022? What factors could have led to the substantial investments in these particular districts?

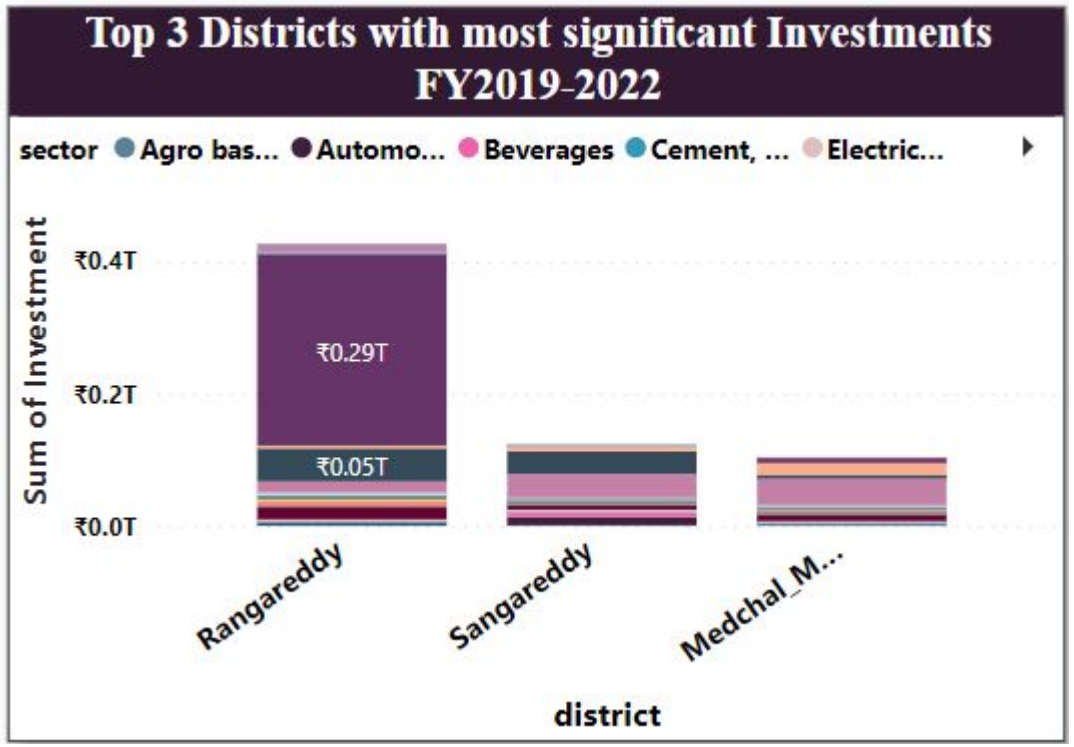
Insight:

Rangareddy ,Sangareddy ,Medchal_Malkajgiri districts have attracted the most significant sector Investments during FY 2019-2022.

Driving Factor is:

- This Districts are surrounding Districts to Hyderabad ,which is the metropolitan city

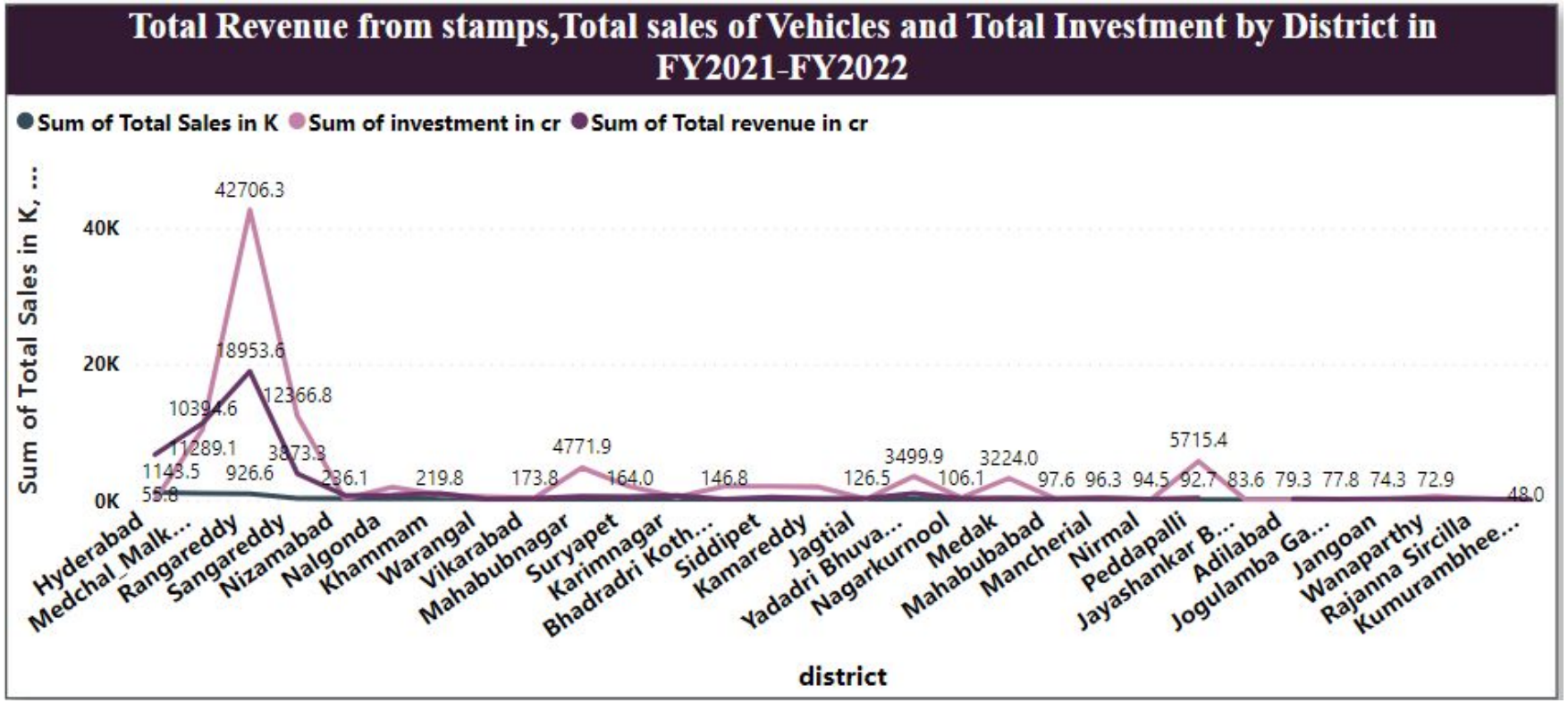




Ts-Ipass

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

This Line Chart visualisation shows Total revenue from stamps and documents in crores,Total Sales of Vehicles in Thousands,and Total investment in Crores across Districts of telangana



Insight:

In whichever district Investment is Significant, there revenue generated from stamps and Vehicles sales also more

Ts-Ipass

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

This visualisation shows the Sector with substantial Investment in each district FY 2021-FY 2022

Insights:

Food Processing(11 districts)
Solar and other Renewable Energy(4 districts)
Plastic and rubber(2 districts)
Pharmaceutical and Chemicals(4 districts)
Paper and Printing(2 districts)
Granite and stone Crushing(2 districts)
Engineering(3 districts)
Beverages(2 districts)
Agro based Cold storage(2 districts)
are the sectors that have shown substantial Investment in Multiple Districts

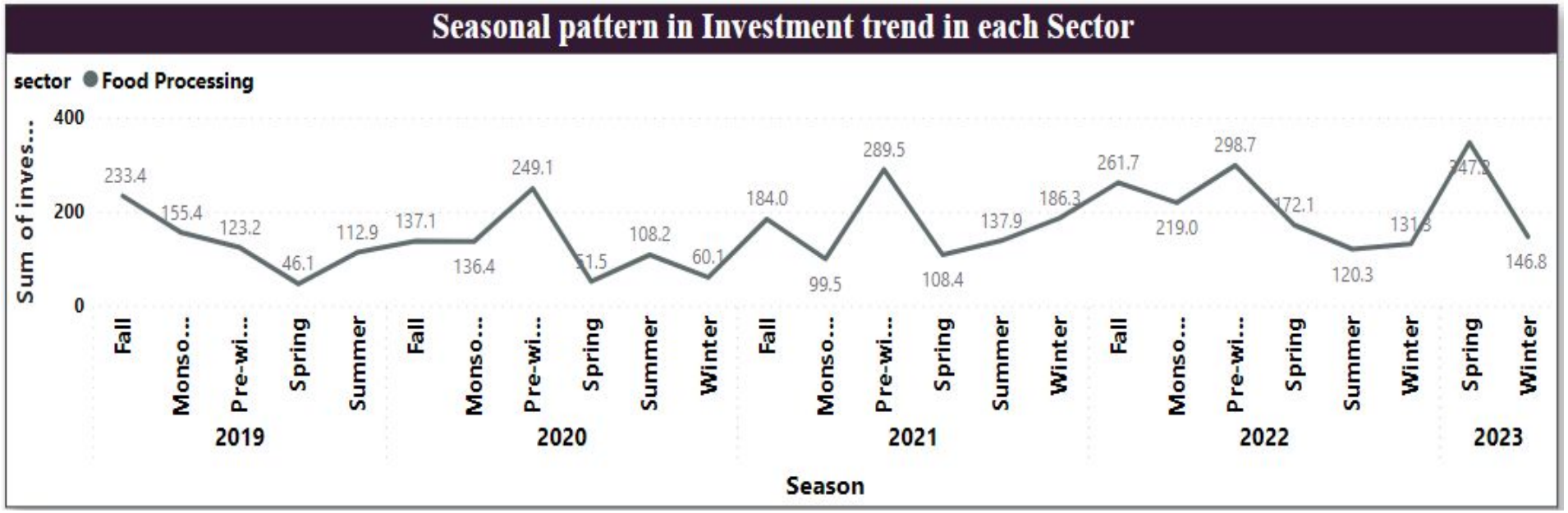
Sector with substantial Investment in each District FY2021-FY2022

district	Sector with Substantial Investment
Hanumakonda	Solar and Other Renewable Energy
Jogulamba Gadwal	Solar and Other Renewable Energy
Mahabubnagar	Solar and Other Renewable Energy
Mancherial	Solar and Other Renewable Energy
Rangareddy	Plastic and Rubber
Sangareddy	Plastic and Rubber
Kamareddy	Pharmaceuticals and Chemicals
Medchal_Malkajgiri	Pharmaceuticals and Chemicals
Nalgonda	Pharmaceuticals and Chemicals
Yadadri Bhuvanagiri	Pharmaceuticals and Chemicals
Bhadradri Kothagudem	Paper and Printing
Peddapalli	Paper and Printing
Adilabad	Granite and Stone Crushing
Karimnagar	Granite and Stone Crushing
Jagtial	Food Processing
Jangoan	Food Processing
Jayashankar Bhupalpally	Food Processing
Kumurambheem Asifabad	Food Processing
Mahabubabad	Food Processing
Mulugu	Food Processing
Nagarkurnool	Food Processing
Nirmal	Food Processing
Nizamabad	Food Processing
Rajanna Sircilla	Food Processing
Warangal	Food Processing

Ts-Ipass

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

This sector slicer will slice the data according to sector



Insight:

Food Processing sector having seasonal Pattern in the investment trend.

Food processing sector is having dominant investments in Pre-winter Season (Nov,Dec months)

Beverage sector having dominant investments in Pre-winter Season (Nov,Dec months)

Secondary Research

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

Insights

- Based on the data provided, it appears that the sectors of Real Estate Parks and IT Buildings are receiving more investment ,the increased investment can contribute to growth in these areas.
- Additionally, five districts are registering more documents compared to other cities, indicating potentially higher revenue generation.

Top 5 Districts to buy commercial properties in Telangana

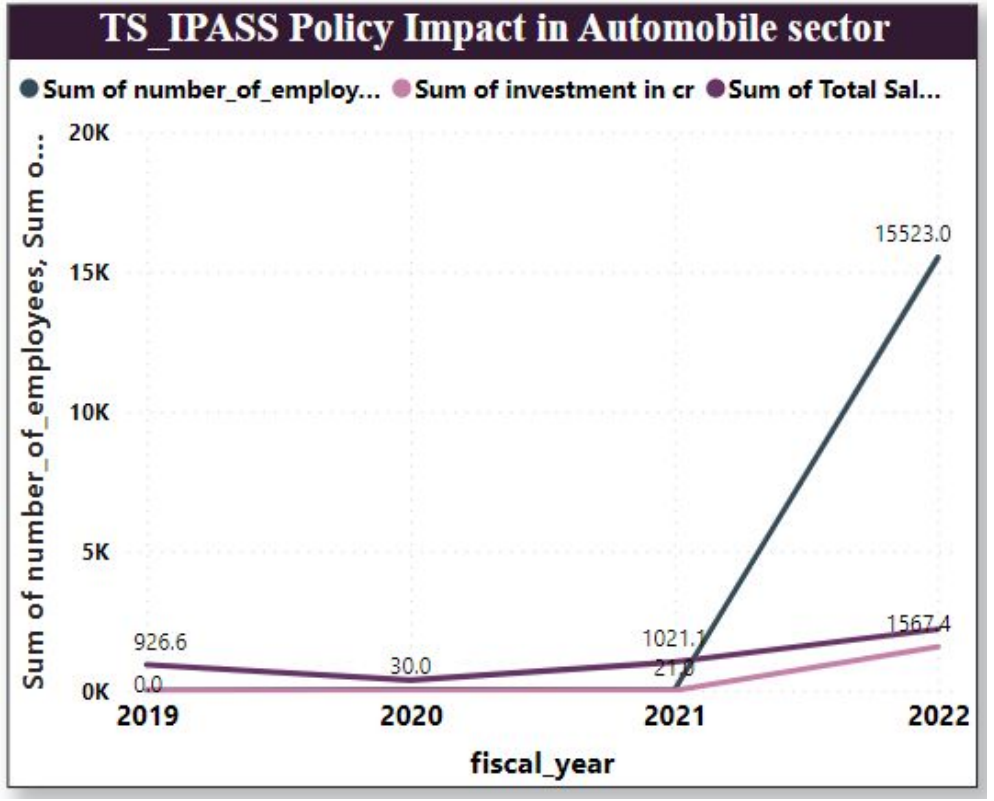
district	Sum of documents_registered_cnt	Sum of estamps_challans_cnt	Sum of Investment	Sum of Total Sales
Karimnagar	64246	66184	₹4,522,000.00	158824
Yadadri Bhuvanagiri	121063	126343	₹100,000,000.00	118597
Sangareddy	135482	143852	₹209,600,000.00	275327
Medchal_Malkajgiri	310733	328450	₹7,764,890,000.00	992377
Rangareddy	454114	480931	₹289,702,729,000.00	926633

Therefore, for *buying commercial property, Karimnagar,Yadadri Bhuvanagiri ,Sangareddy,Medchal_Malkajgiri,Rangareddy may indeed be favorable options based on the information you've analyzed.*

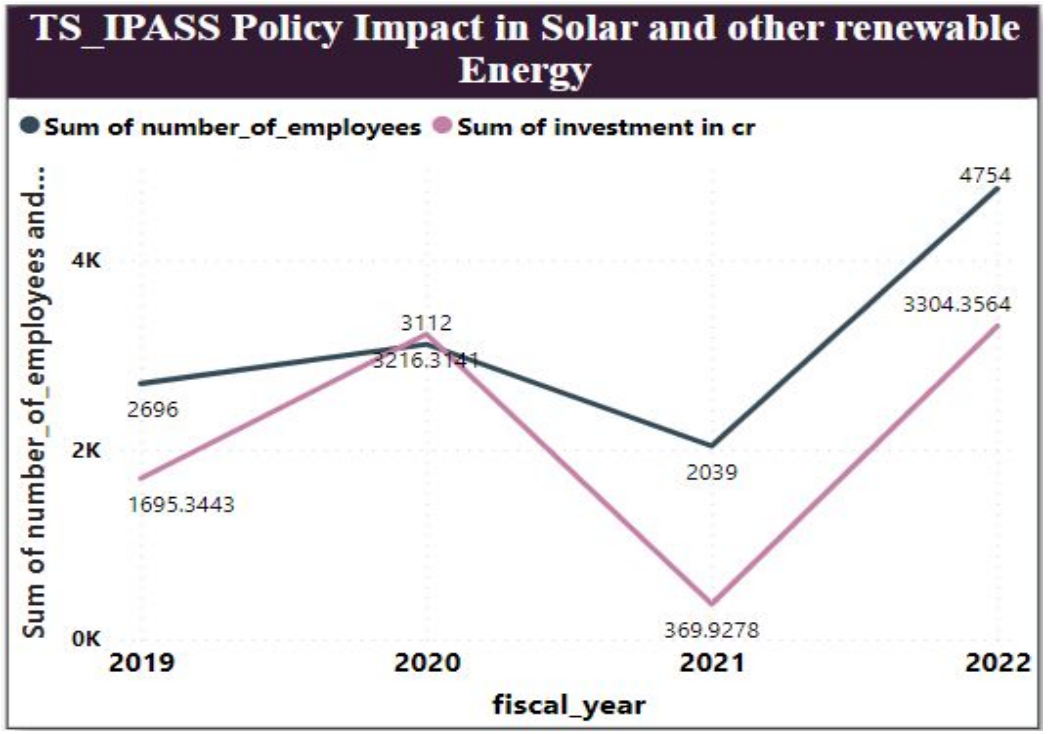
What significant policies or initiatives were put into effect to enhance economic growth, investments, and employment in Telangana by the current government? Can we quantify the impact of these policies using available data?

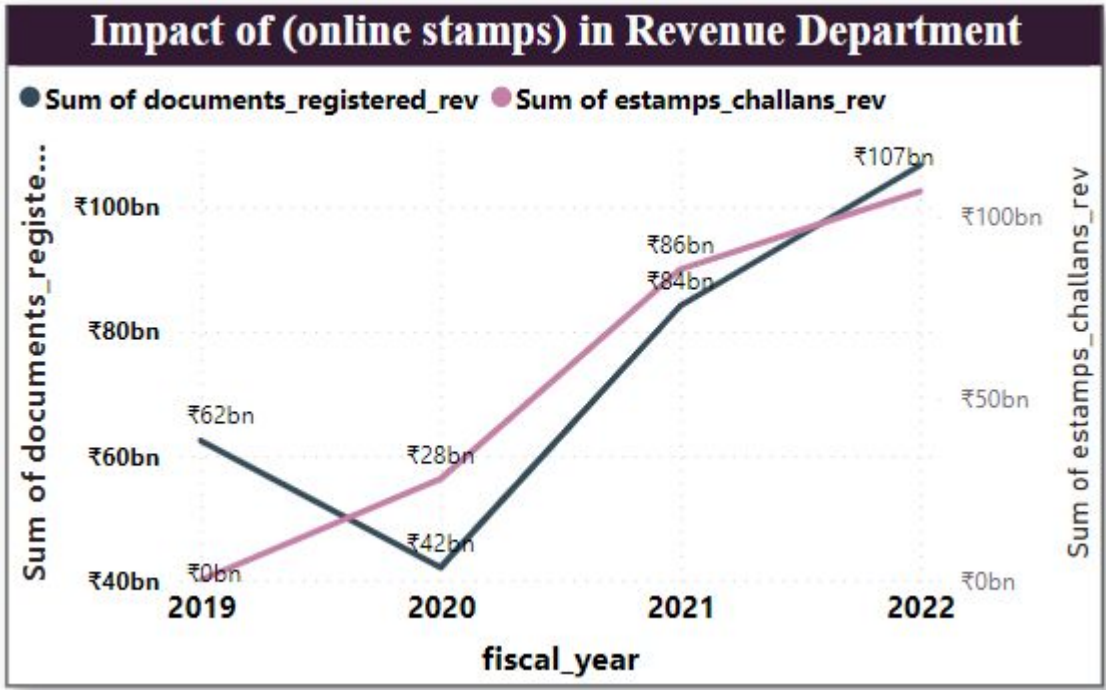
- Ts-Ipass(Telangana State Industrial Project Approval and Self Certification System) and Digitalisation (online stamp registration) under stamps and documents department are the significant policy and Initiative ,which enhanced the Economic growth, investments, and employment in Telangana by the current government.

Insight 1:
Ts-Ipass policy Impact in Automobile sector is shown in this visual as the Investment is increased under this Act ,Employment in sector and sales of Automobiles increased.



Insight 2:
Under the Act of Ts-Ipass ,as the Investment in Solar and other renewable Energy increases, Employment also increased.





Insight 3:
Under the Digitization Initiative there is a significant growth in stamps and Documents Revenue in Revenue Department.

Provide top 5 Insights & 5 recommendations to Telangana government for sustained growth in the next 5 years based on your analysis?

INSIGHTS:

- **Economic Growth through Policies and Initiatives**: The government has implemented policies and initiatives aimed at boosting economic growth, particularly in the areas of stamp revenue and transportation. These efforts have likely contributed to increased revenue generation and improved transportation infrastructure within the region.
- **Ts-Ipass Act Promotes Small Sector Investment:** The Ts-Ipass Act has played a crucial role in promoting investment in small sectors. This investment has not only stimulated economic growth but has also led to increased employment opportunities, benefiting the local workforce.
- **Rapid Growth in Electric Vehicle Sales:** Over the past two fiscal years, there has been a significant increase in the sales of electric vehicles compared to other vehicle categories. This shift toward electric vehicles reflects a growing emphasis on sustainable and environmentally friendly transportation options.
- **Major Investments in Real Estate, Industrial Parks, and IT Buildings:** The Ts-Ipass initiative has attracted substantial investments in key sectors, including real estate, industrial parks, and IT buildings, with a total investment of Rs 29,000 crores. These investments are likely to drive economic development, create jobs, and enhance the region's infrastructure.
- **Urbanization in Key Districts**: The urbanization growth in districts such as Rangareddy, Sangareddy, and Hanamkonda has been noteworthy. This urban expansion indicates increased economic activity and development in these areas, potentially leading to improved living standards and job opportunities for residents.

RECOMMENDATIONS

- **Education Sector Needs Increased Investment:** The analysis reveals that investments in the education sector are insufficient. To improve the quality of education and provide better opportunities for students, the government should consider increasing its attention and investments in this critical area.

- **Reevaluate Investments in Plastic and Rubber Sector:** While there have been significant investments in the plastic and rubber sector under Ts-Ipass, it's crucial for sustainable and environmentally friendly development to reevaluate and potentially reduce investments in this sector. This adjustment aligns with global sustainability goals and mitigates environmental concerns.

- **Leverage Digitalization for Revenue Growth:** The adoption of digitalization in the stamps and document departments has shown promising results, leading to exponential growth in revenue. The government should continue to embrace digital technologies to streamline processes and further boost revenue in these departments.

- **Reconsider Real Estate Investments:** Despite significant investments in the real estate sector, employment growth has been limited, leading to unsustainable development. The government should consider reducing its investments in this sector and explore alternative strategies for achieving balanced economic growth and job creation.

code basics

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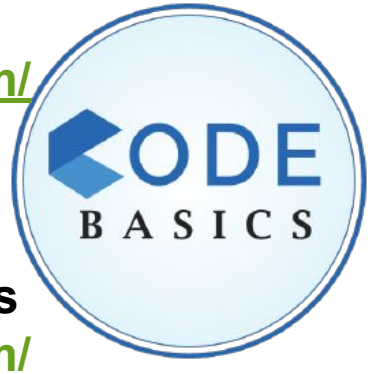

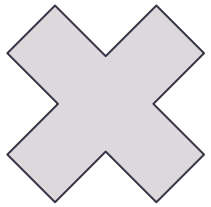

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Thank you