WELCOME

CODEBASISC RESUME PROJECT CHALLANGE #7

Project Lead : Saddam Ansari

RESUME PROJECT CHALLANGE #7

Stakeholder from Gov of Telangana, Open Data and Codebasics

Minister of IT, Industries and Municipal Administration
Kalvakuntla Taraka Rama Rao / KTR

Secretary, Information Technology (IT)
Jayesh Ranjan

Director at Government of Telangana
Dileep Konatham

Open Data Telangana
Venu Panjarla

Founder, Codebasics
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Hemanand Vadivel

Telangana Grouth Analysis
Project Lead : Saddam Ansari

OPEN DATA
TELANGANA

CODE
BASICS

1 Goals and Objectives

>> 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.
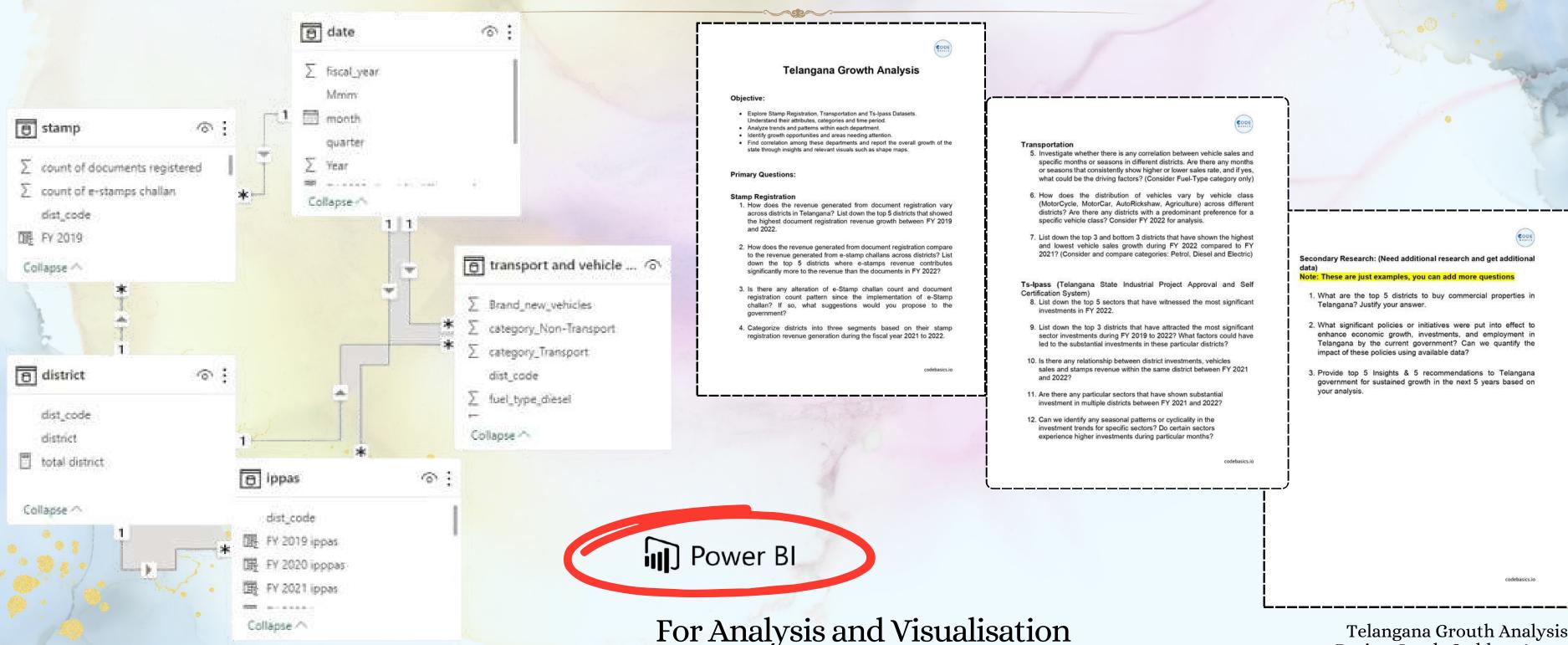
2 About Telangana

>>> **Telangana** is one of the fastest-growing states in India that have a **open data policy**, posing average annual growth rate of **13.90%** over the last five years. Telangana's nominal gross state domestic product for the year 2020-21 stands at **₹13.59 lakh crore** (US$170 billion)

>>> Telangana is the 29th state of India, formed on the **2nd of June 2014**. The state has an area of **1,14,840 Sq Km** and has a population of **3,50,03,674 (2011 Census).**

>>> **Service sector** is the largest contributor to the Telangana's economy with a share of about **65%** in the year 2018-19. Growth in services has largely been fuelled by **IT services**

>>> Telangana GDP rank on all over India state is **9th.**
GDP growth- **11.2%** (2021-22 est.)

>>> GDP per capita rank for Telangana is **6th**
GDP by sector **Agriculture (21%) Industry (17%) Services (61%)** (2021-22)
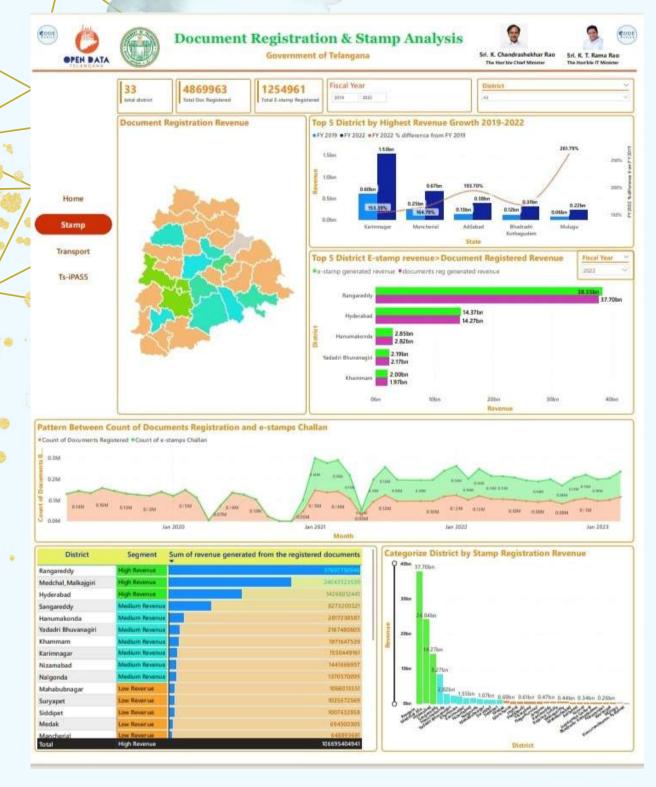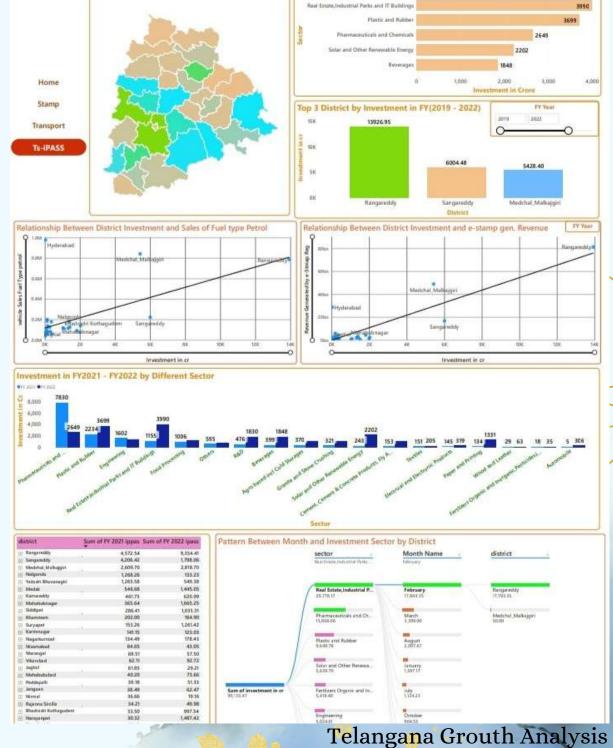
SOURCE - WIKIPEDIA

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RESUME PROJECT CHALLANGE #7

Data, Requests, and Tools

date
- Σ fiscal_year
- Mmm
- month
- quarter
- Σ Year
- Collapse ∧

stamp
- Σ count of documents registered
- Σ count of e-stamps challan
- dist_code
- FY 2019
- Collapse ∧

transport and vehicle ...
- Σ Brand_new_vehicles
- Σ category_Non-Transport
- Σ category_Transport
- dist_code
- Σ fuel_type_diesel
- Collapse ∧

district
- dist_code
- district
- total district
- Collapse ∧

ippas
- dist_code
- FY 2019 ippas
- FY 2020 ipppas
- FY 2021 ippas
- Collapse ∧

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.

Primary Questions:

Stamp Registration
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.

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?

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?

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

Transportation
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)

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.

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)

Ts-Ipass (Telangana State Industrial Project Approval and Self Certification System)
8. List down the top 5 sectors that have witnessed the most significant investments in FY 2022.

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?

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

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

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

Secondary Research: (Need additional research and get additional data)
Note: These are just examples, you can add more questions

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

2. 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?

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

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Power BI

For Analysis and Visualisation

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3 Primary Question

≫ 1 Stamp Registration Analysis

1 Stamp Registration Analysis

>> The data in the **fact_stamp.csv** file can be used to analyze the revenue generated from document registrations and estamp challan payments over time. It can also be used to identify trends and patterns in the data. For example, the data could be used to identify the districts that generate the most revenue, or the months in which the most revenue is generated.

>> **Estamp challan** is an **Electronic Stamp Duty and Registration Fees Challan,** which can be used to pay stamp duty and registration fees online for various transactions, such as property registration, power of attorney, and gift deed. It is a convenient and hassle-free way to make these payments, as it can be done from anywhere, at any time.

>> **Documents registration** is a more traditional process that has been in place for many years. Under documents registration, the legal documents are **physically submitted to the government for registration.** The government then stamps the documents and registers them in its records.
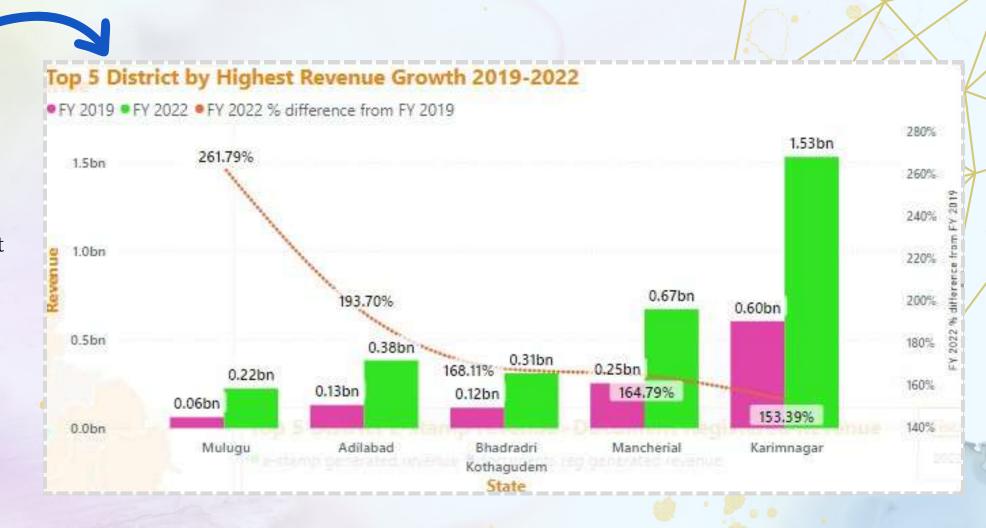
Stamp Registration Analysis

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.

district	FY 2019	FY 2022	FY 2022 % difference from FY 2019
Mulugu	0.06bn	0.22bn	261.79%
Adilabad	0.13bn	0.38bn	193.70%
Bhadradri Kothagudem	0.12bn	0.31bn	168.11%
Mancherial	0.25bn	0.67bn	164.79%
Karimnagar	0.60bn	1.53bn	153.39%

Top 5 District by Highest Revenue Growth 2019-2022

- From FY 2019 - FY 2022 , **Melugu district** in Telangana showed the highest document registration revenue growth is **261.79%** . also **Adilabad 193.70%**, **Bhadradri Kothegudam 168.11%**, **Mancherial 164.79%** and **Karimnagar** shows **153.39%** revenue grouwth between FY 2019-2022.

- The following can be the reason for the high revenue grow:
1. Economic development.
2. Social development.
3. Government Policies.
4. Government investment

- The state government has focused on various development projects in these districts, such as the development of infrastructure for roads, power, and water supply. All these projects can probably be factors for revenue growth.

Stamp Registration Analysis

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?**

District	documents reg generated revenue	e-stamp generated revenue
Rangareddy	37.70bn	38.35bn
Hyderabad	14.27bn	14.37bn
Hanumakonda	2.82bn	2.85bn
Yadadri Bhuvanagiri	2.17bn	2.19bn
Khammam	1.97bn	2.00bn
Jangoan	0.47bn	0.49bn

Top 5 District E-stamp revenue>Document Registered Revenue

Fiscal Year: 2022

● e-stamp generated revenue ● documents reg generated revenue

Rangareddy: 38.35bn / 37.70bn
Hyderabad: 14.37bn / 14.27bn
Hanumakonda: 2.85bn / 2.82bn
Yadadri Bhuvanagiri: 2.19bn / 2.17bn
Khammam: 2.00bn / 1.97bn

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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?**

In the fiscal year 2022, the top 5 districts where e-stamps revenue contributed significantly more to the revenue than the documents were:

District	documents reg generated revenue	e-stamp generated revenue
Rangareddy	37.70bn	38.35bn
Hyderabad	14.27bn	14.37bn
Hanumakonda	2.82bn	2.85bn
Yadadri Bhuvanagiri	2.17bn	2.19bn
Khammam	1.97bn	2.00bn
Jangoan	0.47bn	0.49bn

- **Ranga Reddy:** The revenue generated from e-stamp challans in Ranga Reddy district was **38.35 billion rupees**, which was significantly more than the revenue generated from document registration, which was **37.70 billion rupees**. This is likely due to the fact that Ranga Reddy district is a major industrial and commercial district, and there is a lot of property transactions happening in the district.
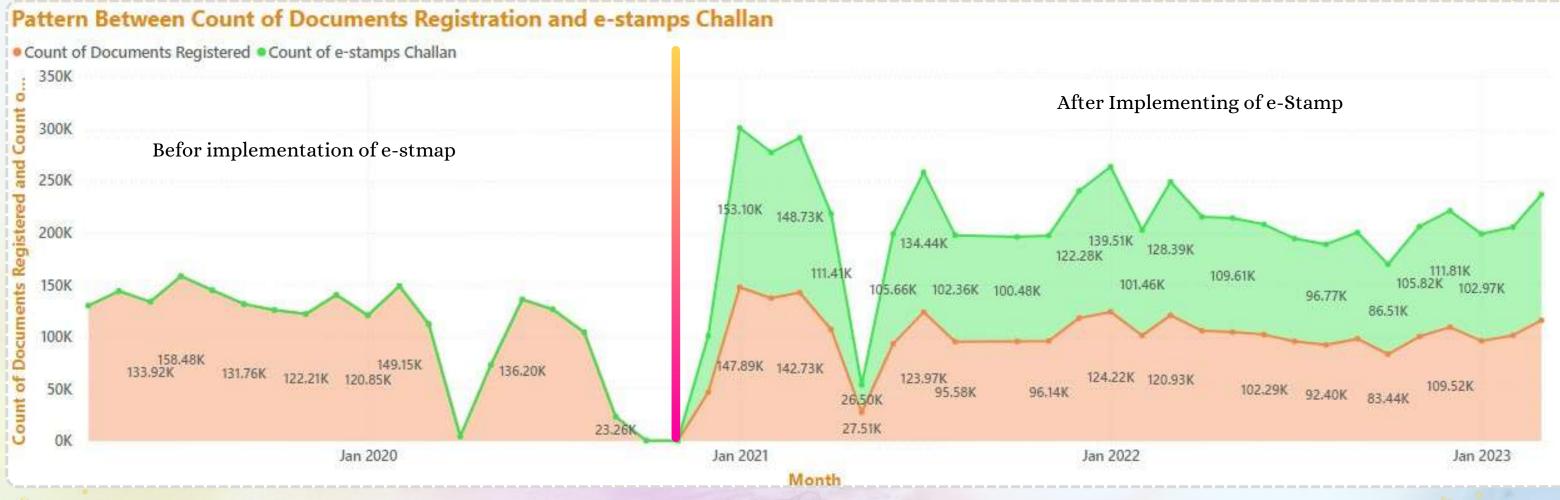
- **Hyderabad:** The revenue generated from e-stamp challans in Hyderabad district was **14.37 billion rupees**, which was significantly more than the revenue generated from document registration, which was **14.27 billion** rupees. This is likely due to the fact that Hyderabad is the capital city of Telangana and is a major commercial and financial center.

- **Hanumankonda: The** revenue generated from e-stamp challans in Hanumankonda district was **2.85 billion** rupees, which was significantly more than the revenue generated from document registration, which was **0.95 billion** rupees. This is likely due to the fact that Hanumankonda district is a major agricultural district, and there is a lot of land transactions happening in the district.

- **Yadagiri Bhuvanagiri:** The revenue generated from e-stamp challans in Yadagiri Bhuvanagiri district was **2.19 billion** rupees, which was significantly more than the revenue generated from document registration, which was **2.17 billion** rupees. This is likely due to the fact that Yadagiri Bhuvanagiri district is a major mining district, and there is a lot of property transactions happening in the district.

- **Khammam:** The revenue generated from e-stamp challans in Khammam district was **2.00 billion** rupees, which was significantly more than the revenue generated from document registration, which was **1.97 billion** rupees. This is likely due to the fact that Khammam district is a major industrial district, and there is a lot of property transactions happening in the district.

Stamp Registration Analysis

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?

Pattern Between Count of Documents Registration and e-stamps Challan

Before implementation of e-stmap

After Implementing of e-Stamp

Yes, according to this visualisation there has been a significant alteration in the e-stamp challan count:

- After the implementation of **e-stamp**, it can be clearly seen that the **number of e-stamp has increased**.
- The number of document registrations has also increased, but not as significantly as the number of e-Stamp challans.

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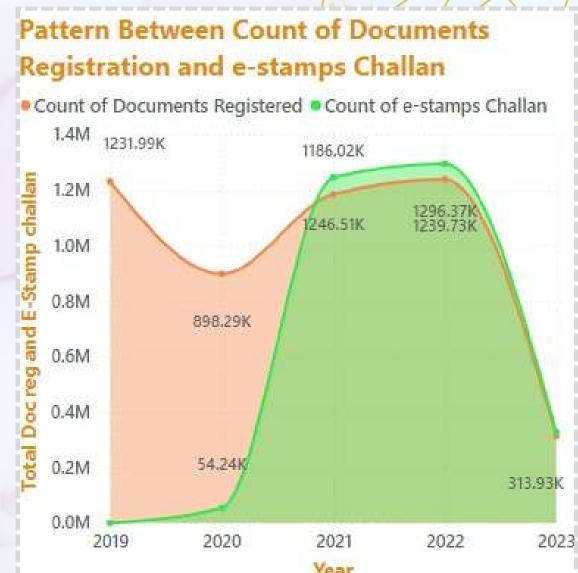
3. Is there **any alteration of e-Stamp challan count and document registration count pattern since the implementation of e-Stamp challan? If so, what suggestions would you propose to the government?**

It can be clearly seen that after the implementation of estamp, there has been more growth in it. Following are some suggestions for its further growth:

Suggestion:

- The government can make the online registration process for e-stamp registration **simpler and more user-friendly**.

- The government can **reduce the fees charged for e-stamp** registration. This will make e-stamp registration more affordable for businesses and individuals.

- The government can launch a **publicity campaign** to explain the benefits and convenience of e-stamp registration.

- The government can partner with government and non-government institutions to promote e-stamp registration.

Pattern Between Count of Documents Registration and e-stamps Challan

● Count of Documents Registered   ● Count of e-stamps Challan

Total Doc reg and E-Stamp challan

Year	Values
2019	1231.99K
2020	898.29K / 54.24K
2021	1186.02K / 1246.51K
2022	1296.37K / 1239.73K
2023	313.93K

Stamp Registration Analysis

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

Here I categorised district into three segments based on total revenue (e-stamp reg revenue+ doc reg revenue):

Categorized District by (E-stamp revenue+Doc reg revenue) FY 2021-2022

- **High** revenue **>10 bn**
- **Medium** Revenue = **2bn to 10 bn**
- **Low** Revenue **<2bn**

Stamp Registration Analysis

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

- The **high-revenue segment includes the four districts** with the highest revenue which have **revenue greater than 10bn rupees** , which are **Ranga Reddy**, **Medchal-Malkajgiri**, and **Hyderabad**. These districts are all major economic centers, with a lot of property transactions happening.

Why ?

1. Ranga Reddy district is a major industrial and commercial district in Telangana. It is home to a number of large industries, including software, manufacturing, and healthcare. The district also has a large population, with a literacy rate of 78.6%.

2. Medchal-Malkajgiri district is a rapidly growing district that is home to a number of IT and manufacturing companies. The district also has a large population, with a literacy rate of 82.3%.

3. Hyderabad district is the capital city of Telangana and is a major commercial and financial center. The district is home to a number of businesses and organizations, including the Telangana State Government.

Here are some specific factors that contribute to the high stamp registration revenue in these districts:

1. The presence of major industries and commercial centers: These industries and centers generate a lot of economic activity, which leads to a higher demand for property.

2. The large population: The large population in these districts means that there are more people buying and selling property.

3. he high level of education and awareness: The high level of education and awareness of stamp registration in these districts means that people are more likely to register their property transactions.

- The **medium-revenue segment includes 13 districts**, which have **revenue between 1 billion and 10 billion rupees**. These districts are also relatively developed, with some economic activity.

- The **low-revenue segment includes 15 districts**, which have revenue of **less than 1 billion rupees**. These districts are mostly rural and agricultural, with less economic activity.

- **Jayashankar Bhupalpalli** district has no any stamp registration related data its may be upsence of data.

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2 Transportation Analysis
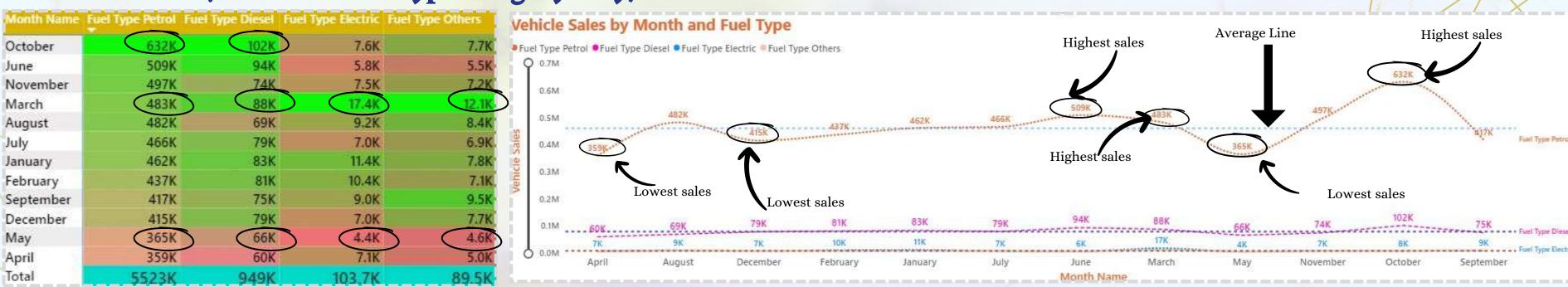
≫ Transportation analysis is a process of collecting, analyzing, and interpreting data related to transportation. It can be used to understand the current state of transportation, identify potential problems, and develop solutions.

≫ For transportation analysis I have been given the **Fact_Transport CSV** file which contains-The table provides information about the individual vehicle sales data from the **RTA(Regional Transport Authority) of the state of Telangana** categorized by fuel type, vehicle class, seating capacity, and other general categories aggregated at the district and monthly level.

Transportation Analysis

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)

Month Name	Fuel Type Petrol	Fuel Type Diesel	Fuel Type Electric	Fuel Type Others
October	632K	102K	7.6K	7.7K
June	509K	94K	5.8K	5.5K
November	497K	74K	7.5K	7.2K
March	483K	88K	17.4K	12.1K
August	482K	69K	9.2K	8.4K
July	466K	79K	7.0K	6.9K
January	462K	83K	11.4K	7.8K
February	437K	81K	10.4K	7.1K
September	417K	75K	9.0K	9.5K
December	415K	79K	7.0K	7.7K
May	365K	66K	4.4K	4.6K
April	359K	60K	7.1K	5.0K
Total	5523K	949K	103.7K	89.5K

Vehicle Sales by Month and Fuel Type

Highest sales — Average Line — Highest sales — Lowest sales

Conclusion:

- Based on the analysis of vehicle sales data in Telangana, there is a clear correlation between vehicle sales and specific months or seasons. The months with the **highest sales** are **October, June, November, and March**. These months are all in the fall and spring, when the weather is mild and people are more likely to be out and about.

- The months with the **lowest sales** are **May and April**. These months are both in the summer, when the weather is hot and humid.

Transportation Analysis

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)

I see. Based on our analysis, it appears that there is a correlation between vehicle sales and specific months or seasons for each fuel type in Telangana.

Driving Factors

1. For **petrol vehicles**, the months with the highest sales are **October, June, November, and March**. The months of October, November, and March have **relatively good weather in Telangana**, which is **ideal for driving**. This could also be a factor that contributes to the higher sales of petrol vehicles during these months. **Agricultural activities:** Telangana is an agricultural state, and the months of October, November, and March are important for agricultural activities such as harvesting and sowing. During these months, farmers may need to purchase new petrol vehicles to transport their produce or to use on their farms.

2. For **diesel vehicles,** the months with the highest sales are **October, June, and March.** The weather is also cooler in these months, which increases the demand for diesel vehicles.

3. For **electric vehicles**, the month with the highest sales is **March**. This is likely because the state government may have offered subsidies or other incentives for the purchase of electric vehicles in this month. Additionally, several new electric vehicle models were launched in this month, which increased demand.

4. For **other fuel types**, the month with the highest sales is **March**. This is likely because several new vehicle models were launched in this month, which increased demand.

- In **May and April**, sales of vehicles of **both fuel types** have been **low**. This is likely because the weather is hot and humid in these months, which makes people less likely to buy cars.
- The festive season: May and April are the months leading up to the major festivals in India, such as Eid, Akshaya Tritiya, and Good Friday. People tend to spend more money during this time on other things, such as gifts and travel, so they may be less likely to buy cars.

vehicle sales by fuel type and month

Month Name	Fuel Type Petrol	Fuel Type Diesel	Fuel Type Electric	Fuel Type Others
October	632K	102K	7.6K	7.7K
June	509K	94K	5.8K	5.5K
November	497K	74K	7.5K	7.2K
March	483K	88K	17.4K	12.1K
August	482K	69K	9.2K	8.4K
July	466K	79K	7.0K	6.9K
January	462K	83K	11.4K	7.8K
February	437K	81K	10.4K	7.1K
September	417K	75K	9.0K	9.5K
December	415K	79K	7.0K	7.7K
May	365K	66K	4.4K	4.6K
April	359K	60K	7.1K	5.0K
Total	5523K	949K	103.7K	89.5K

Transportation Analysis

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.**

The distribution of vehicles varies significantly by vehicle class across different districts in Telangana. For FY 2022, are following:

- The districts of **Hyderabad, Medchal-Malkajgiri, and Rangareddy** have a predominant preference for all three vehicle classes. This is likely due to the fact that these districts are the most populous in Telangana and have a high concentration of urban areas. Additionally, these districts are home to a number of educational institutions and businesses, which create a demand for transportation.

- The district of **Nalgonda** has a predominant preference for **agriculture vehicles**. This is likely due to the fact that the district is a major agricultural hub in Telangana. The districts of **Siddipet and Suryapet** also have a significant number of agriculture vehicles, but not as many as Nalgonda.
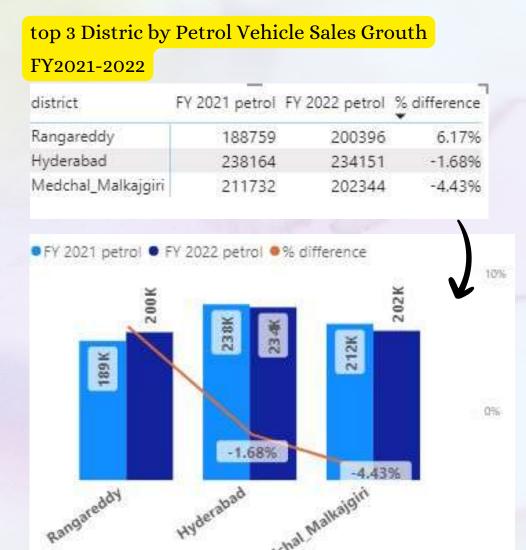
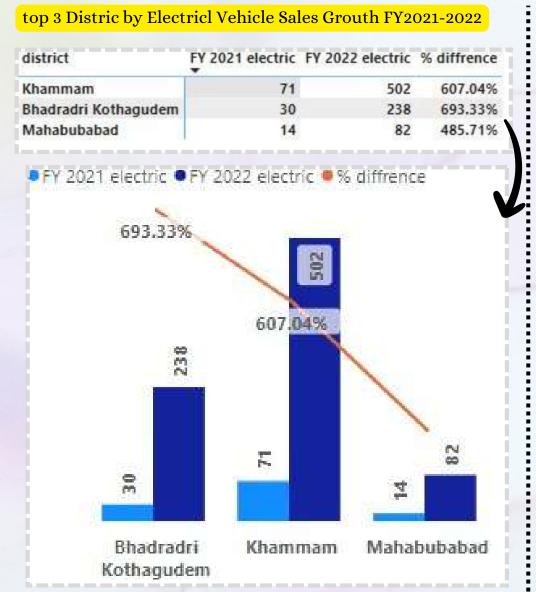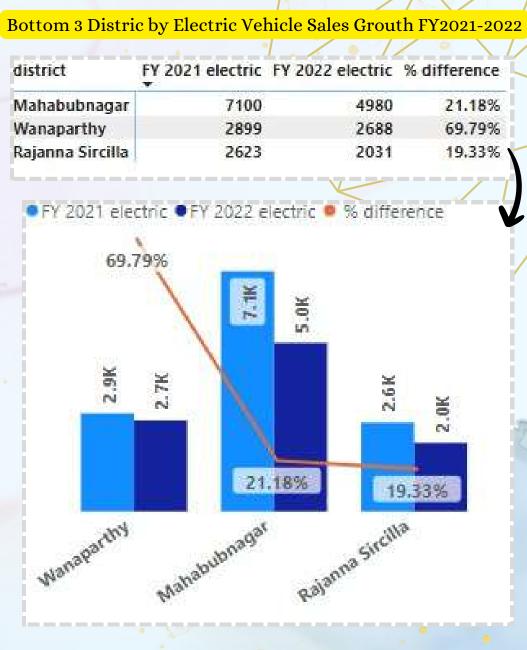Vehicle sales by Vehical Class and District

fiscal_year: 2022

Transportation Analysis

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)

- **Rangareddy** is the only district in Telangana that showed **positive growth in petrol** vehicle sales in FY 2022. The district recorded a growth of **6.17%**, compared to FY 2021.

- **Hyderabad** and **Medchal_Malkajgiri** have not been able to show positive growth from FY 2021 to FY 2022 but have given the **least decrement growth**.

- **Wrangal, Jagtial, and Jayashankar Bhupalpathy** are all performing **poorly** in terms of **Petrol** vehicle sales growth between 2021-2022.. Wrangal recorded a decrease of **-54.74%**, Jagtial recorded a decrease of **-42.08%**, and Jayashankar Nhupalpathy recorded a decrease of **-39.12%**.

top 3 Distric by Petrol Vehicle Sales Grouth FY2021-2022

district	FY 2021 petrol	FY 2022 petrol	% difference
Rangareddy	188759	200396	6.17%
Hyderabad	238164	234151	-1.68%
Medchal_Malkajgiri	211732	202344	-4.43%

Bottom 3 Distric by Petrol Vehicle Sales Grouth FY2021-2022

district	FY 2021 petrol	FY 2022 petrol	% difference
Warangal	46363	20982	-54.74%
Jagtial	28259	16369	-42.08%
Jayashankar Bhupalpally	17545	10682	-39.12%
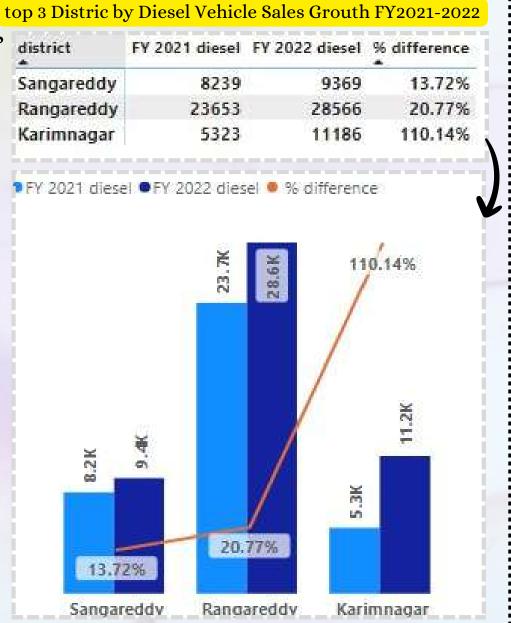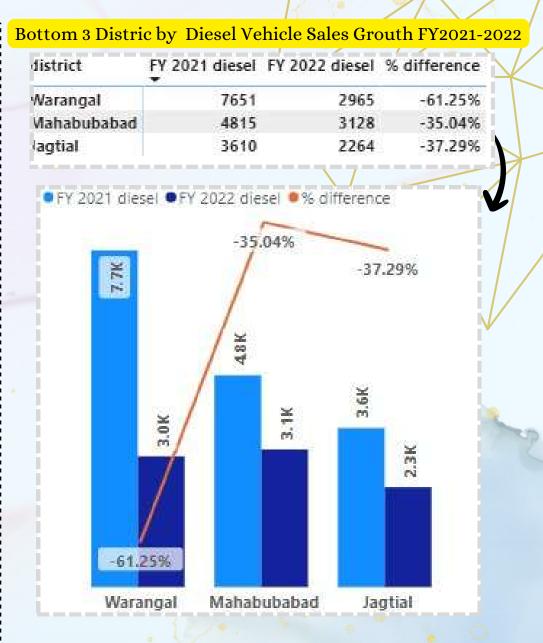
Transportation Analysis

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)

- **Karimnagar** is the best-performing district in Telangana in terms of **diesel vehicle** sales growth. The district recorded a growth of **110.14%**, compared to FY 2021.

- **Rangareddy** and **Sangareddy** are also performing well in terms of diesel vehicle sales growth. Rangareddy recorded a growth of **20.77%**, and Sangareddy recorded a growth of **13.72%**.

- **Wrangal, Mahbubabad, and jagtial** are all performing poorly in terms of **diesel** vehicle sales growth between 2021-2022.. Wrangal recorded a decrease of **-61.25%**, Mahbubabad recorded a decrease of **-35.04%**, and Jagtial recorded a decrease of **-37.29%**.

top 3 Distric by Diesel Vehicle Sales Grouth FY2021-2022

district	FY 2021 diesel	FY 2022 diesel	% difference
Sangareddy	8239	9369	13.72%
Rangareddy	23653	28566	20.77%
Karimnagar	5323	11186	110.14%

Bottom 3 Distric by Diesel Vehicle Sales Grouth FY2021-2022

district	FY 2021 diesel	FY 2022 diesel	% difference
Warangal	7651	2965	-61.25%
Mahabubabad	4815	3128	-35.04%
Jagtial	3610	2264	-37.29%

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Transportation Analysis

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)

- **Bhadradri Kothagudem** is the best-performing district in Telangana in terms of **electric vehicle** sales growth. The district recorded a **growth of 693.33%**, compared to FY 2021.

- **Khammam** and **Mahbubabad** are also performing well in terms of electric vehicle sales growth. Khammam recorded a growth of 607%, and Mahbubabad recorded a growth of **485.71%**.

- **Wanaparthy**, **Mahbubnagar**, and **Rajana Sircilla** are all performing poorly in terms of **electric vehicle** sales growth. Wanaparthy recorded a decrease of 69.79%, Mahbubnagar recorded a decrease of 21.38%, and Rajana Sircilla recorded a decrease of 19.33%.

top 3 Distric by Electricl Vehicle Sales Grouth FY2021-2022

district	FY 2021 electric	FY 2022 electric	% diffrence
Khammam	71	502	607.04%
Bhadradri Kothagudem	30	238	693.33%
Mahabubabad	14	82	485.71%

Bottom 3 Distric by Electric Vehicle Sales Grouth FY2021-2022

district	FY 2021 electric	FY 2022 electric	% difference
Mahabubnagar	7100	4980	21.18%
Wanaparthy	2899	2688	69.79%
Rajanna Sircilla	2623	2031	19.33%

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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)**

Conclusion:

The data shows that there is a significant variation in vehicle sales growth across different districts in Telangana. The top three districts are all urban districts with good economic conditions and infrastructure. The bottom three districts are all rural districts with lower incomes and poorer infrastructure.

Suggestions

The government and auto industry should work together to promote vehicle sales in all districts in Telangana. This would help to ensure that everyone has access to the transportation they need to get around.

Specific suggestions

- The government could provide incentives for vehicle purchases in rural areas. These incentives could include tax breaks, subsidies, or loan programs.
- The auto industry could work to improve the availability of vehicles in rural areas. This could include opening dealerships in rural areas or providing online sales and delivery options.
- The government and auto industry could work together to educate people about the benefits of owning a vehicle. This could include public awareness campaigns or educational programs.

Additional analysis

The data also shows that electric vehicle sales are growing rapidly in Telangana. This is likely due to a number of factors, including:

- The government of Telangana is promoting the use of electric vehicles. The government has offered a number of incentives for electric vehicle purchases, such as tax breaks and subsidies.
- The cost of electric vehicles is decreasing. Electric vehicles are becoming more affordable as battery technology improves and production costs decrease.
- People are becoming more aware of the environmental benefits of electric vehicles. Electric vehicles produce zero emissions, which can help to improve air quality and reduce greenhouse gas emissions.

OPEN DATA
TELANGANA

CODE
BASICS

3 Primary Question

>> 3 Ts-Ipass Analysis

Telangana State Industrial Project Approval
& Self Certification System (TS-iPASS)

GOVERNMENT OF TELANGANA

TS - iPASS

Telangana State Industrial Project Approval
and Self-certification System

3 Ts-Ipass Analysis

>> TS-iPASS - **Telangana State Industrial Project Approval and Self-Certification System (TS-iPASS)**. TS-iPASS is a single window clearance system for setting up businesses in Telangana. It allows businesses to obtain all of the necessary approvals and clearances from a single location, in a timely and efficient manner.

>> The data in the **fact_ts_ipass**.csv file can be used to analyze the impact of TS-iPASS on economic growth, investments, and employment in Telangana.

>> TS-iPASS analysis is the process of analyzing the data from the TS-iPASS system to understand the impact of the system on various economic indicators, such as investment, employment, and economic growth.

>> The TS-iPASS system collects data on all of the projects that have been approved under the system. This data includes information such as the project name, project type, location, investment amount, employment generation, and approval date.

>> TS-iPASS analysis is a valuable tool for policymakers in Telangana. By carefully analyzing the data from the TS-iPASS system, policymakers can gain insights into how the system is working and how it can be further improved to promote economic growth, investments, and employment in the state.

8. List down the top 5 sectors that have witnessed the most significant investments in FY 2022.
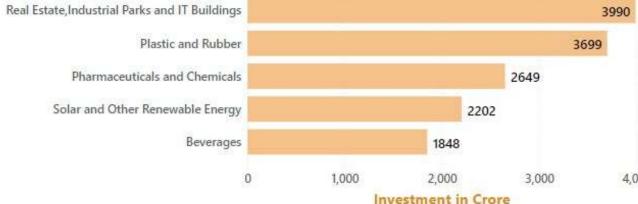
Here are the top 5 sectors that have witnessed the most significant investments in FY 2022 in Telangana, along with the amount of investment in each sector:

1. **Real Estate Industrial Parks and IT Buildings:** This sector attracted the highest investment of **3990 crores** in FY 2022, accounting for **24%** of the total investment in the state. This was driven by the state government's focus on promoting the IT and electronics sector, as well as the increasing demand for commercial and residential real estate in Telangana.

top 5 Sector by Significant investment in FY 2022

top 5 Sector by Significant investment in FY 2022

sector	Sum of investment in cr
Real Estate,Industrial Parks and IT Buildings	3,990.25
Plastic and Rubber	3,699.12
Pharmaceuticals and Chemicals	2,649.13
Solar and Other Renewable Energy	2,201.60
Beverages	1,848.19

Top 5 Sector by Investment in FY 2022

Sector	Investment in Crore
Real Estate,Industrial Parks and IT Buildings	3990
Plastic and Rubber	3699
Pharmaceuticals and Chemicals	2649
Solar and Other Renewable Energy	2202
Beverages	1848

2. **Plastic and Rubber:** This sector attracted an investment of **3699 crores** in FY 2022, accounting for **22%** of the total investment. The state is home to several major plastic and rubber manufacturing companies, such as MRF and Apollo Tyres. The sector is also benefiting from the growth of the automotive and electronics sectors.

3. **Pharmaceuticals and Chemicals:** This sector attracted an investment of **2649 crores** in FY 2022, accounting for **16%** of the total investment. The state is home to several major pharmaceutical and chemical companies, such as Dr. Reddy's Laboratories and Aurobindo Pharma. The sector is also benefiting from the growth of the medical devices and export sectors.

4. **Solar and Renewable Energy:** This sector attracted an investment of **2202 crores** in FY 2022, accounting for **13%** of the total investment. The state is committed to achieving 100% renewable energy by 2030, and is investing in solar, wind, and biomass projects.

5. **Beverage:** This sector attracted an investment of **1848 crores** in FY 2022, accounting for **11%** of the total investment. The state is home to several major beverage companies, such as Coca-Cola and Pepsico. The sector is also benefiting from the growing popularity of ready-to-drink beverages.

Telangana Grouth Analysis
Project Lead : Saddam Ansari

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?**

Here are the top 3 districts that have attracted the most significant sector investments during FY 2019-2022

1. **Rangareddy:** Rangareddy district has attracted the highest investment of **13.93k** crore during FY 2019 to 2022. This is due to the following factors:

Factors:

- **Proximity to Hyderabad**: Ranga Reddy is located on the outskirts of Hyderabad, the capital of Telangana. This makes it an attractive destination for government investment, as it provides easy access to the city's resources and markets.

top 3 district by Significant investment in FY 2019-2022

District	Sum of investment in cr
Rangareddy	13.93K
Sangareddy	6.00K
Medchal_Malkajgiri	5.43K
Total	25.36K

Top 3 District by Investment in FY(2019 - 2022)

- Rangareddy is home to a number of major industrial and commercial areas, such as **Shamshabad**, **Uppal, and LB Nagar**. It is also home to the **Rajiv Gandhi International Airport**, which is one of the busiest airports in India thats why for the maintenance of all this investment is high .
- **Infrastructure development**: The government has invested in the construction of roads, railways, and other infrastructure projects in Ranga Reddy.
- **Industrial development**: The government has invested in the development of industrial parks and other industrial infrastructure projects in Ranga Reddy.
- The development of the **Outer Ring Road (ORR)**, which is a 158 km long highway that connects the major industrial and commercial areas in Ranga Reddy district.

Overall, Ranga Reddy has attracted maximum investment by the Government of Telangana due to its proximity to Hyderabad, availability of land, favorable demographics, government focus, and presence of major industrial and educational institutions. The government's investment in the district has had a significant impact on its economy and social development.
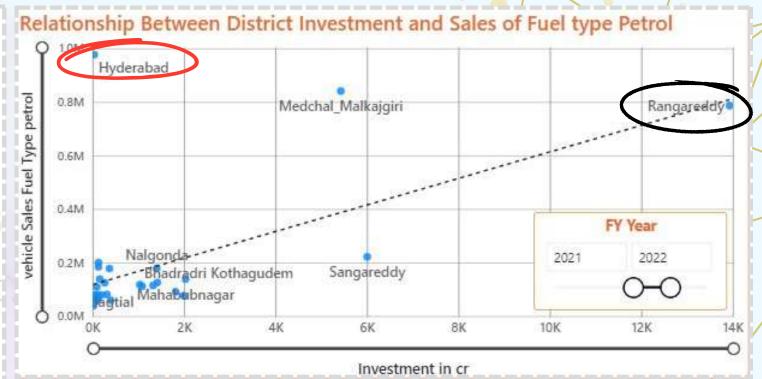
Telangana Grouth Analysis
Project Lead : Saddam Ansari
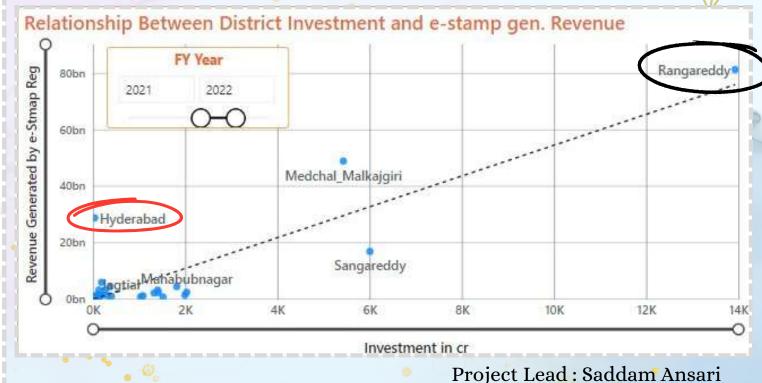
9. List down the top 3 districts that have attracted the most significant sector investments during FY 2019 to 2022? What factors could have led to the substantial investments in these particular districts?

Here are the top 3 districts that have attracted the most significant sector investments during FY 2019-2022

2. **Sangareddy:** Sangareddy district has attracted an investment of **6k** crore during FY 2019 to 2022.

This is due to the following factors:

Factors:

top 3 district by Significant investment in FY 2019-2022

District	Sum of investment in cr
Rangareddy	13.93K
Sangareddy	6.00K
Medchal_Malkajgiri	5.43K
Total	25.36K

- **Availability of land**: Sangareddy has a relatively large amount of available land, which is suitable for industrial and commercial development.

- **Proximity to Hyderabad:** Sangareddy is located about 50 km from Hyderabad, the capital of Telangana. This makes it attractive to businesses that want to be close to the city's markets and talent pool.

- **Government support**: The Telangana government has been supportive of industrial and commercial development in Sangareddy. It has offered a number of incentives to businesses that invest in Sangareddy, such as tax breaks and subsidies.

- **Infrastructure**: The Telangana government has **invested heavily** in infrastructure in Sangareddy, such as **roads, railways, and electricity**. This has made it easier for businesses to operate in Sangareddy.

- **Presence of major companies**: A number of major companies have invested in Sangareddy, such as **Amazon**, **Microsoft,** and **Tata Consultancy Services.** This has made Sangareddy more attractive to other businesses.

- **Workforce**: Sangareddy has a large and skilled workforce. This is attractive to businesses that are looking for employees with the skills and experience they need.

Telangana Grouth Analysis
Project Lead : Saddam Ansari

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?

Here are the top 3 districts that have attracted the most significant sector investments during FY 2019-2022

3. **Medchal_Malkajgiri:** Medchal_Malkajgiri district has attracted an investment of **5.43k** crore during FY 2019 to 2022. This is due to the following factors:

Factors:

- **Upcoming international airport**: The district is home to the upcoming international airport at Shamshabad, which is expected to boost economic activity in the region. This makes it an attractive option for businesses looking to benefit from the airport's connectivity and economic opportunities.

- **Favorable demographics**: Medchal-Malkajgiri has a young and growing population. The district has a high literacy rate and a skilled workforce. This makes it an attractive destination for government investment in education, healthcare, and other social sectors.

- **Government focus**: The Government of Telangana has made Medchal-Malkajgiri a priority district for development. The government has allocated significant resources for infrastructure development, social development, and industrial development in the district.

- The development of the Genome Valley Biotechnology Park, which is one of the largest biotechnology parks in India.

Overall, Medchal-Malkajgiri has attracted maximum investment by the Government of Telangana due to its proximity to Hyderabad, availability of land, favorable demographics, government focus, and presence of major industrial and educational institutions. The government's investment in the district has had a significant impact on its economy and social development.

top 3 district by Significant investment in FY 2019-2022

District	Sum of investment in cr
Rangareddy	13.93K
Sangareddy	6.00K
Medchal_Malkajgiri	5.43K
Total	25.36K

Top 3 District by Investment in FY(2019 - 2022)

FY Year: 2019 — 2022

District	Investment in cr
Rangareddy	13926.95
Sangareddy	6004.48
Medchal_Malkajgiri	5428.40

Ts-Ipass Analysis

10. Is there any relationship between district investments, vehicles sales and stamps revenue within the same district between FY 2021 and 2022?
Yes, there is a relationship between district investments, vehicles sales, and stamps revenue within the same district between FY 2021 and 2022 are folow.

- In general, districts with higher vehicle sales also have higher investments and higher stamps revenue. This is because vehicle sales are a good indicator of economic activity. As the economy grows, people are more likely to buy new vehicles, which leads to investment in new businesses and infrastructure. This, in turn, leads to higher stamps revenue, as more people buy and sell property.

- However, there are some exceptions to this rule. For example, Hyderabad is a district with high vehicle sales but low investment. This is likely due to the fact that **Hyderabad is already well-developed**: Hyderabad is the capital of Telangana and is already a well-developed city with good infrastructure and amenities. The Telangana government may be prioritizing investments in other parts of the state that are less developed.

district	Sum of investment in cr	Sum of fuel_type_petrol	total e-stamp revenue generated
Rangareddy	13.93K	786.1K	81.34bn
Medchal_Malkajgiri	5.43K	840.8K	48.82bn
Hyderabad	0.03K	976.7K	28.65bn
Sangareddy	6.00K	221.6K	16.71bn
Hanumakonda	0.18K		5.75bn
Yadadri Bhuvanagiri	1.81K	91.2K	4.25bn
Khammam	0.37K	177.7K	4.21bn
Nizamabad	0.13K	200.1K	3.05bn
Nalgonda	1.40K	178.9K	3.01bn
Karimnagar	0.26K	124.6K	2.99bn
Mahabubnagar	2.03K	138.5K	2.24bn
Suryapet	1.41K	125.6K	2.09bn
Siddipet	1.32K	114.1K	1.95bn
Peddapalli	0.09K	76.6K	1.27bn
Medak	1.99K	76.4K	1.25bn
Mancherial	0.19K	79.0K	1.25bn
Jagtial	0.09K	108.7K	1.20bn
Vikarabad	0.15K	138.5K	1.00bn
Kamareddy	1.08K	111.1K	0.98bn
Nagarkurnool	0.31K	81.0K	0.98bn
Jangoan	0.10K	59.0K	0.84bn
Adilabad	0.01K	66.8K	0.83bn
Wanaparthy	0.40K	59.3K	0.83bn
Rajanna Sircilla	0.08K	59.7K	0.83bn
Mahabubabad	0.11K	78.3K	0.78bn
Jogulamba Gadwal	0.11K	67.1K	0.71bn
Nirmal	0.06K	79.1K	0.71bn
Bhadradri Kothagudem	1.03K	117.7K	0.62bn
Narayanpet	1.52K		0.52bn
Warangal	0.13K	184.0K	0.48bn
Mulugu	0.03K		0.41bn
Kumurambheem Asifabad	0.02K	39.3K	0.15bn
Jayashankar Bhupalpally	0.02K	65.8K	
Total	41.85K	5523.3K	220.68bn

Relationship Between District Investment and Sales of Fuel type Petrol
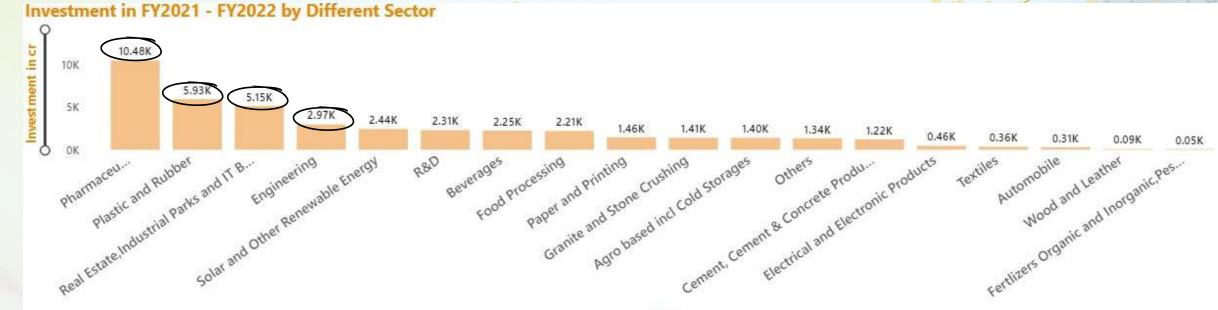
Relationship Between District Investment and e-stamp gen. Revenue

Project Lead : Saddam Ansari

11. **Are there any particular sectors that have shown substantial investment in multiple districts between FY 2021 and 2022?**
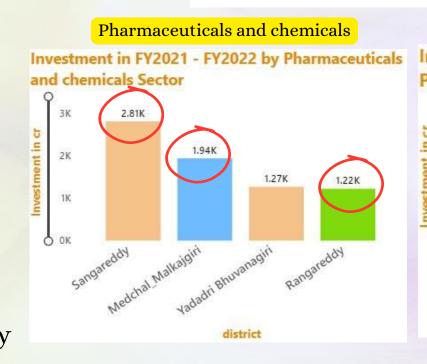
Yes, there are Top 4 sectors that have shown substantial investment in multiple districts between FY 2021 and 2022. These sectors are:

1. Pharmaceuticals and chemicals
2. Plastics and rubber
3. Real estate, industrial parks, and IT buildings
4. Engineering

The districts that have received the most investment in these sectors are:

1. Rangareddy
2. Sangareddy
3. Medchal-Malkajgiri

- **Rangareddy** district has received the most investment in **all four sectors**, followed by Sangareddy and Medchal-Malkajgiri.

- The **real estate sector** is the only sector in which Rangareddy district is the only district to have received **significant investment.**

Investment in FY2021 - FY2022 by Different Sector

Pharmaceuticals and chemicals

Plastics and Rubber

Engineering

Real Estate

Telangana Grouth Analysis
Project Lead : Saddam Ansari

Ts-Ipass Analysis

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

Here is the analysis of seasonal patterns in investment trends for specific sectors in Telangana.

- **Real estate, industrial parks, and IT buildings:** Investment in this sector tends to be higher during the first quarter of the year, with February being the month with the highest investment.
- **Pharmaceuticals and chemicals:** Investment in this sector tends to be higher during the summer months, with July being the month with the highest investment.
- **Plastics and rubber:** Investment in this sector tends to be higher during the holiday season, with December being the month with the highest investment.
- Solar and renewable energy: Investment in this sector tends to be higher during the second half of the year, with November being the month with the highest investment.
- **Fertilizers and inorganic and organic:** Investment in this sector tends to be higher during the winter months, with December being the month with the highest investment.

Conclusion:

The analysis shows that there are seasonal patterns in investment trends for certain sectors in Telangana. These patterns can be explained by a variety of factors, such as demand, weather, and government policies.
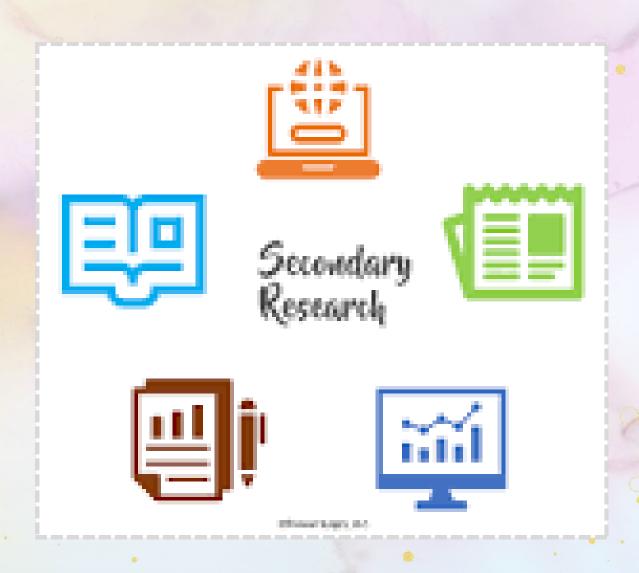
The following table shows the total investment for specific sectors and the month in which investment is highest. The table also shows the percentage of total investment that occurred during that month.

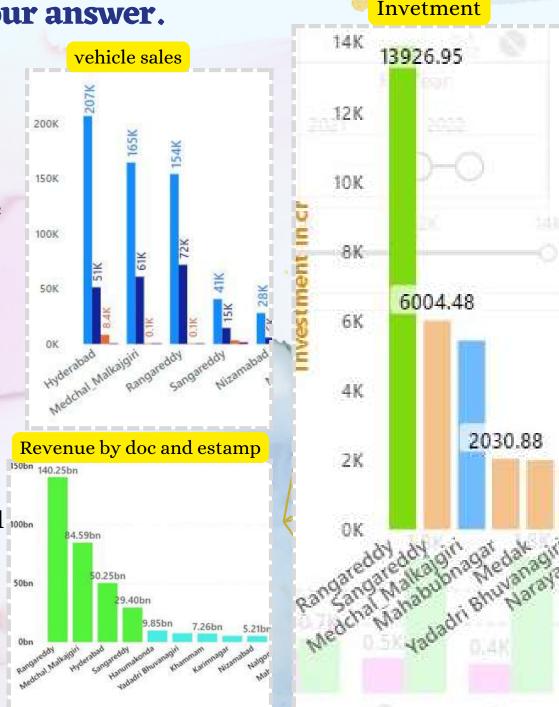| Sector	Total Investment (₹ crores)	Month of Highest Investment	Highest Investment (₹ crores)	Percentage
Real estate, industrial parks, and IT buildings	29,778.17	February	17,843.35	60.2%
Pharmaceuticals and chemicals	15,858.06	July	2,807.09	17.8%
Plastics and rubber	9,649.78	December	1,958.33	20.2%
Solar and renewable energy	5,639.09	November	2,008.20	35.8%
Fertilizers and inorganic and organic	5,418.40	December	5,274.00	97.7%

4 Secondary, Research and Recommendation

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

Before investing in a commercial property anywhere, a person should check for good infrastructure, government policies, road and electricity connectivity, and education, etc in that location.

In Telangana, based on these factors and our research and analysis, the following districts are the best investments for commercial properties:

1. Hyderabad
2. Rangareddy
3. Medchal-Malkajgiri
4. Sangareddy
5. Warangal

Invetment

vehicle sales

Revenue by doc and estamp

Telangana Grouth Analysis
Project Lead : Saddam Ansari

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

Justification:

- **Hyderabad:** Hyderabad is the capital of Telangana and the largest city in the state. It is also one of the fastest-growing cities in India. Hyderabad is home to a number of Fortune 500 companies and is a major IT hub. The city has excellent infrastructure and connectivity, making it an ideal place to do business. Hyderabad is also a major tourist destination, which attracts a large number of visitors from all over the world. This creates a lot of opportunities for businesses in the hospitality and retail sectors.

- **Rangareddy:** Rangareddy is a district located on the outskirts of Hyderabad. It is home to a number of IT parks and industrial clusters. The cost of commercial property in Rangareddy is generally lower than in Hyderabad, making it a good option for businesses on a budget.

- **Medchal-Malkajgiri:** Medchal-Malkajgiri is another district located on the outskirts of Hyderabad. It is home to a number of IT parks and residential areas. the district is experiencing rapid growth due to the development of new IT parks and residential areas. This is creating a lot of demand for commercial properties in the district.

- **Sangareddy:** Sangareddy is a district located to the north of Hyderabad. It is home to a number of industrial clusters and is emerging as a major IT hub.The district is home to a number of large-scale industries, such as the **Maruti Suzuki manufacturing plant**. This creates a lot of opportunities for businesses in the industrial sector.

- **Warangal**: Warangal is located to the north of Hyderabad and is the second largest city in Telangana. It is a major industrial and commercial center and is home to a number of major companies, such as **NTPC, BHEL, and HAL**. It is also home to a number of educational institutions, such as Kakatiya University and the National Institute of Technology Warangal.

vehicle sales

Invetment

Revenue by doc and estamp

1. What are the top 5 districts to buy commercial properties in Telangana? Justify your answer.
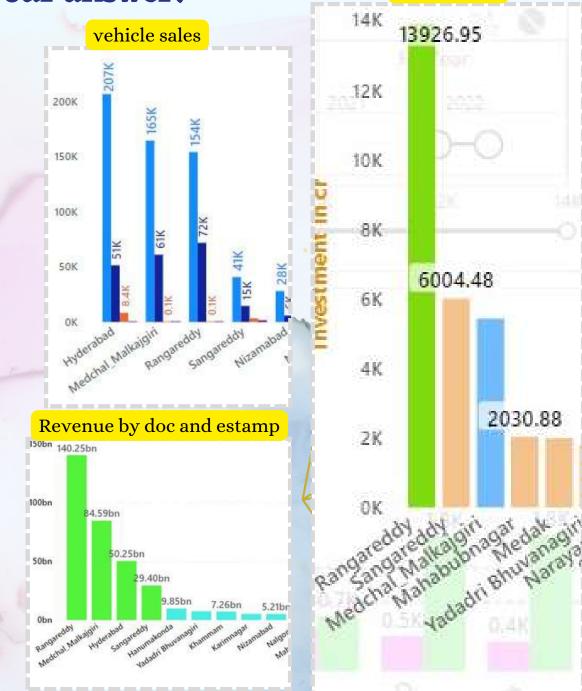
1. Hyderabad
2. Rangareddy
3. Medchal-Malkajgiri
4. Sangareddy
5. Warangal

All of these districts have the following factors in common:

- High demand
- Good infrastructure
- Excellent connectivity
- Government support

Finnal Conclusion:

- When choosing a district to buy commercial property in Telangana, it is important to consider your specific needs and requirements. For example, if you are looking for a specific type of commercial property, such as an office space, retail space, or warehouse, you will need to choose a district that has a good supply of such properties.

- These districts are attractive to commercial property investors due to their proximity to Hyderabad, availability of land, government support, infrastructure, workforce, and presence of major industrial and educational institutions. The commercial property market in these districts is expected to continue to grow in the coming years, making them a good investment destination.

vehicle sales

Invetment

Revenue by doc and estamp

Telangana Grouth Analysis
Project Lead : Saddam Ansari

Secondary, Research and Recommendation

2. 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?

The current government of Telangana has implemented a number of significant policies and initiatives to enhance economic growth, investments, and employment in the state. Some of the key policies and initiatives include:

1. **E-stamp:** E-stamp policies have played a significant role in promoting investment and economic growth in Telangana. E-stamping is a system that allows for the purchase and application of stamps electronically. It is more convenient and efficient than the traditional stamping process.

E-stamping has helped to promote investment and economic growth in Telangana in the following ways:

- It makes the process easier and faster for investors.
- It reduces the cost of stamps.
- It reduces the time and effort required to purchase and apply for stamps.

Impect:

- E-stamping has boosted investment in Telangana. Since the implementation of e-stamping, investment in the state has increased significantly. In 2020, Telangana attracted over ₹31 thousand crore in investment, which was 39% higher than 2019.
- E-stamping has also promoted economic growth in Telangana. E-stamping has helped businesses to reduce the time and effort required to purchase and apply for stamps. This has allowed businesses to focus their resources on other important tasks.
- It also brought more income to the government.

Telangana Grouth Analysis
Project Lead : Saddam Ansari

Secondary, Research and Recommendation

2. 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?

The current government of Telangana has implemented a number of significant policies and initiatives to enhance economic growth, investments, and employment in the state. Some of the key policies and initiatives include:

2. **TS-iPASS** policies have played a significant role in promoting investment and economic growth in Telangana.TS-iPASS is a single-window clearance system that allows investors to obtain all the necessary approvals from various government departments from a single place. This system makes the process easier and faster for investors.

TS-Ipass: has helped to promote investment and economic growth in Telangana in the following ways:

- It makes the process easier and faster for investors.
- It saves investors time and money.
- It encourages investors to invest in Telangana.

Impect:

- TS-iPASS has also promoted economic growth in Telangana. TS-iPASS has encouraged businesses to invest in Telangana. This has led to an increase in employment opportunities in the state.
- Overall, TS-iPASS policies have had a positive impact on investment and economic growth in Telangana. TS-iPASS has made the process easier and faster for investors, and it is also encouraging businesses to invest in Telangana.

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2. **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?**

The current government of Telangana has implemented a number of significant policies and initiatives to enhance economic growth, investments, and employment in the state. Some of the key policies and initiatives include:

3. TS-bPASS: TS-bPASS, or Telangana State Building Permission Approval and Self Certification System, is a single-window platform for processing various permissions required during development of land and construction of buildings through self-certification system in Telangana. It is designed to provide the services within stipulated timelines.

TS-bPASS has enhanced growth in Telangana in the following ways:

- **Reduced the time and cost of obtaining building permissions:** TS-bPASS has reduced the average time it takes to obtain a building permission from 30 days to 15 days. It has also reduced the cost of obtaining a building permission by up to 50%.

- **Increased transparency and efficiency in the building permission process:** TS-bPASS is an online system, which means that the entire building permission process is transparent and efficient. There is no scope for corruption or delays.

- **Improved the investment climate in Telangana:** TS-bPASS has made Telangana a more attractive destination for investment by making it easier and faster to start new businesses and expand existing ones.

Impect:

The impact of TS-bPASS has been significant. In the first two years of its implementation, the number of building permissions issued in Telangana increased by 20%. The construction sector also saw significant growth, with new investment of over ₹10,000 crore.

TS-bPASS

Available Services
1. Building Permission (New + Addition)
2. Layouts
3. Occupancy certificate

https://tsbpass.telangana.gov.in/

TS-bPASS

Telangana State Building Permission Approval and Self-Certification System

TS-bPASS /ts_bpass /officialtsbpass

Telangana Grouth Analysis
Project Lead : Saddam Ansari

2. **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?**
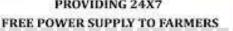
The current government of Telangana has implemented a number of significant policies and initiatives to enhance economic growth, investments, and employment in the state. Some of the key policies and initiatives include:
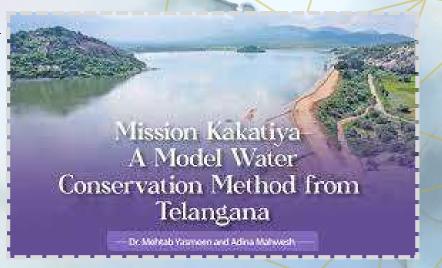
4. **Rythu Bandhu:** Rythu Bandhu is an investment support scheme for farmers in Telangana, India. It was launched by the Telangana government in 2018 with the aim of providing financial assistance to farmers to cover the cost of inputs such as seeds, fertilizers, and pesticides.
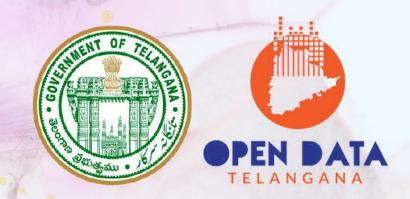
Impect: The Rythu Bandhu scheme has had a significant impact on the growth and development of the agricultural sector in Telangana. It has helped to increase agricultural productivity and incomes, and has reduced the debt burden on farmers.

5. **Mission Kakatiya:** Mission Kakatiya is a water conservation and irrigation project launched by the Government of Telangana in 2014. The project aims to restore and renovate all irrigation tanks in the state, in order to improve water availability for farmers and drinking water supply for rural communities.

Impect: Mission Kakatiya has had a significant impact on the growth and development of Telangana. It has helped to increase agricultural productivity and incomes, and has improved the standard of living in rural communities.

Telangana Grouth Analysis
Project Lead : Saddam Ansari

Secondary, Research and Recommendation

2. **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?**

The current government of Telangana has implemented a number of significant policies and initiatives to enhance economic growth, investments, and employment in the state. Some of the key policies and initiatives include:

6. **24x7 Free Power to Agriculture:** 24x7 Free Power to Agriculture is a scheme launched by the Government of Telangana in 2018 that provides free electricity to farmers for all agricultural purposes. The scheme is open to all farmers in Telangana, regardless of their size of holding.

Impect: The 24x7 Free Power to Agriculture scheme has had a significant impact on the growth and development of the agricultural sector in Telangana. It has helped to increase agricultural productivity and incomes, and has reduced the cost of cultivation for farmers.

- **Attracting foreign investment**: The government has been actively promoting Telangana as a destination for foreign investment.
- **Developing tourism**: The government is developing the tourism sector to create jobs and generate revenue.
- **Improving infrastructure:** The government is investing in infrastructure development, such as roads, railways, and airports.
- **Promoting education and skills development**: The government is investing in education and skills development to create a skilled workforce.
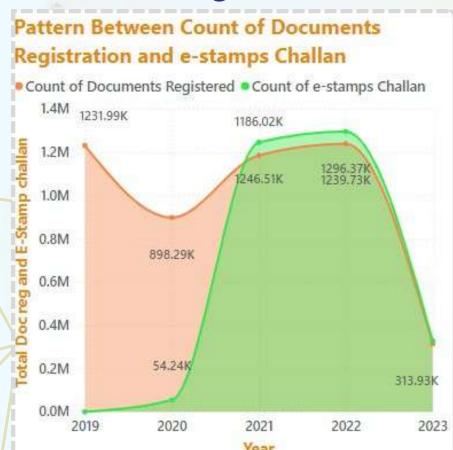
Telangana Grouth Analysis
Project Lead : Saddam Ansari

RESUME PROJECT CHALLANGE #7
Secondary, Research and Recommendation

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

Insight #1

Pattern Between Count of Documents Registration and e-stamps Challan

- Count of Documents Registered
- Count of e-stamps Challan

1231.99K
1186.02K
1246.51K
1296.37K
1239.73K
898.29K
54.24K
313.93K

According to my analysis:

- After the implementation of e-stamp, it can be clearly seen that the number of e-stamp has increased.
- The number of document registrations has also increased, but not as significantly as the number of e-Stamp challans.

Insight #2

38bn — Rangareddy
24bn — Medchal Malkajgiri
14bn — Hyderabad
8bn — Sangareddy
3bn — Hanumakonda

After my analysis I found that these are the top 5 districts where maximum revenue is generated, maximum vehicle sales and maximum investment has taken place.

Insight #3

Vehicle Sales by Type

4809987 — Motor Cycle
1036430 — Motor Car
195714 — Agriculture
135145 — Auto Rickshaw
488632 — others

Insight #4

Vehicle Sales by Fuel Type

5523265 — Petrol
949384 — Diesel
103659 — Electric
89469 — others

After my analysis, I found that across Telangana, most people like to buy motorbikes, followed by motorcars.

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Insight #5

Month Name	Fuel Type Petrol	Fuel Type Diesel	Fuel Type Electric	Fuel Type Others
October	632K	102K	7.6K	7.7K
June	509K	94K	5.8K	5.5K
November	497K	74K	7.5K	7.2K
March	483K	88K	17.4K	12.1K
August	482K	69K	9.2K	8.4K
July	466K	79K	7.0K	6.9K
January	462K	83K	11.4K	7.8K
February	437K	81K	10.4K	7.1K
September	417K	75K	9.0K	9.5K
December	415K	79K	7.0K	7.7K
May	365K	66K	4.4K	4.6K
April	359K	60K	7.1K	5.0K
Total	5523K	949K	103.7K	89.5K

After my analysis, I found that in Telangana, the fuel type vehicle sales of petrol and diesel have been highest in the month of October and June. Similarly, for electric type and other fuel types, the sales have been highest in the month of March.

Insight #6

District	Motor Cycle	Motor Car	Auto Rickshaw	Agriculture
Nalgonda	163909	20825	6455	15330
Suryapet	117325	12185	2762	13519
Siddipet	105980	13115	2506	11966
Khammam	161383	23911	7414	11580

After my analysis I found that in all over Telangana Nalgonda, Suryapet, Siddipet and Khamam districts have the highest sales of agriculture related vehicles. This makes it possible to say that is agriculture dominated district.

Insight #7

District	Motor Cycle	Motor Car	Auto Rickshaw	Agriculture
Hyderabad	854183	196428	35990	84
Medchal_Malkajgiri	686735	232514	115	1616
Rangareddy	598298	254022	104	1699

- After my analysis I found that in all over Telangana Hyderabad district have the highest sales of Motorcycle, Motorcar and Autorikshaw but not agricultured vehicles. This makes it possible to say that is a hitech district where everyone wants to professional life, our personal car bike.
- but same medchal_malkajgiri, rangareddy district have the only highets sales of Motorcar and motorcycle
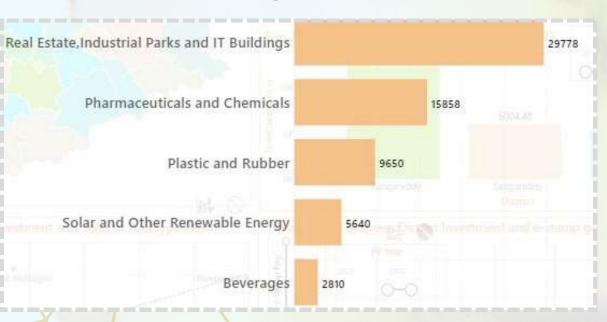
Telangana Grouth Analysis
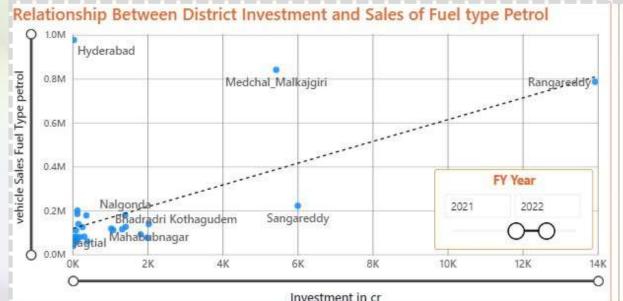Project Lead : Saddam Ansari

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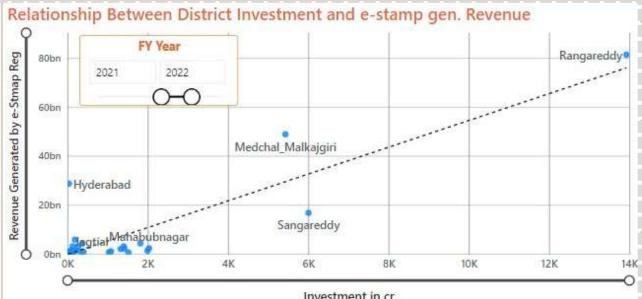
Insight #8

Insight #9

After my analysis, I found that in Telangana, Real Estate, Industrial Parks and It Building , Pharmaceuticals and chemicals, Plastics and Rubber , Solar and Other Renewable Energy and Bevrage Sector have highest investments in past 5 fives years.

- After my analysis, I found that in Telangana, In general, districts with higher vehicle sales also have higher investments and higher stamps revenue.

- However, there are some exceptions to this rule. For example, Hyderabad is a district with high vehicle sales but low investment

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RESUME PROJECT CHALLANGE #7
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Insights Conclusions:

1. Telangana has a strong economic foundation. The state's GDP growth rate has averaged **10%** over the past five years, which is significantly higher than the national average.

2. Telangana is a major hub for **IT and IT-enabled services (ITES)**. The state is home to over **1,500 IT and ITES companies**, which employ over 6 lakh people.

3. Telangana is also a **major hub for manufacturing**. The state is home to a number of large-scale manufacturing industries, such as automobiles, pharmaceuticals, and electronics.

4. Telangana has a young and educated population. The state's literacy rate is over **70%**, and the median age is **27 years**.

5. Telangana has a favorable investment climate. The state government has implemented a number of policies and initiatives to attract investment, such as **TS-iPASS and e-stamping**.

6. Telangana is well-positioned to benefit from the growing global demand for sustainable products and services. The state has a number of natural resources, such as solar and wind energy, that can be used to produce sustainable energy.

7. Telangana is a major tourist destination. The state is home to a number of historical and cultural attractions, such as the Charminar and Golconda Fort.
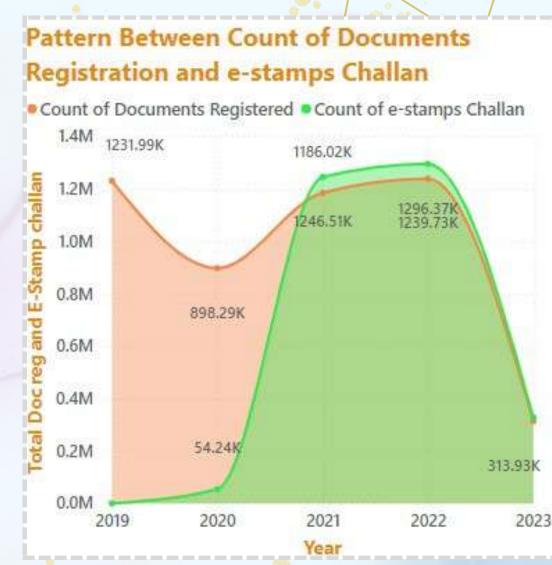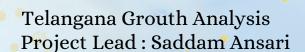
3. Provide top 5 Insights & 5 recommendations to Telangana government for sustained growth in the next 5 years based on your analysis.

- After the implementation of e-stamp, it can be clearly seen that the number of e-stamp has increased.
- But the government should focus more on e-STMAP challan so that the number of document registered challans can not be reduced. Because they are still using more than people document registration.

Recommendation #1

- The government can make the online registration process for e-stamp registration simpler and more user-friendly.

- The government can reduce the fees charged for e-stamp registration. This will make e-stamp registration more affordable for businesses and individuals.

- The government can launch a publicity campaign to explain the benefits and convenience of e-stamp registration.

- The government can partner with government and non-government institutions to promote e-stamp registration.

Pattern Between Count of Documents Registration and e-stamps Challan

- Count of Documents Registered
- Count of e-stamps Challan

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Here are some recommendation for how to grow revenue in the low-revenue districts:

Recommendation #2

Low Revenue Generated By District

- **Increase awareness of e-stamps:** The government can make efforts to increase awareness of e-stamps in these districts. This can be done through public awareness campaigns, outreach to local businesses, and partnerships with community organizations.

- **Make it easier for people to use e-stamps:** The government can make it easier for people to use e-stamps in these districts. This can be done by providing training and support to local businesses and individuals.

- **Offer incentives for using e-stamps:** The government can offer incentives for using e-stamps in these districts. This could include discounts on the cost of e-stamps or tax credits for businesses that use e-stamps.

Here are some additional suggestions that could be specific to Telangana:

- The government could work with local banks and financial institutions to offer loans and other financial services to businesses and individuals in low-revenue districts. This could help to stimulate economic activity and generate more property transactions.

- The government could also invest in infrastructure and other development projects in low-revenue districts. This could make these districts more attractive to businesses and individuals, which could lead to more property transactions.

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Recommendation #3

According to my analysis I saw that even after the introduction of electric vehicles, people are still using petrol and diesel vehicles more. which is harmful to the environment that why-Here are some suggestions for the Telangana government to reduce the sales of petrol-fueled vehicles and encourage the adoption of electric vehicles (EVs) to mitigate environmental damage:

Vehicle Sales by Fuel Type

Petrol	5523265
Diesel	949384
Electric	103659
others	89469

Suggestion:

1. **Subsidies and Incentives:** The government should provide subsidies and incentives for EV buyers, such as tax rebates on the purchase price, low-interest loans, and financial benefits to make EVs more affordable.

2. **Charging Infrastructure:** To boost EV sales, the government should rapidly develop a robust charging infrastructure network. Charging stations should be strategically placed in public areas, shopping malls, residential communities, and along highways.

3. **Public and Commercial Vehicles:** Promote the adoption of EVs in public transportation, taxis, buses, and commercial fleets. This will reduce pollution and accelerate the shift towards electric mobility.

4. **Awareness Campaigns:** Launch awareness campaigns to educate the public about the benefits of EVs. The government can utilize social media, seminars, workshops, and other mediums to highlight the advantages of electric vehicles.

5. **Research and Development:** Support local EV manufacturers by encouraging research and development efforts. Provide technical support and funding to boost innovation in the EV sector.

6. **Public Procurement:** Increase government procurement of EVs for its own departments and agencies. This will stimulate demand and support local EV manufacturers.

7. **Recycling and Disposal Policy:** Establish a robust framework for recycling and disposing of EV batteries. This will reduce the environmental impact and ensure the safe disposal of EV components.

8. **Taxation Policy:** Implement lower or zero road tax and registration fees for EVs to make them more financially attractive to consumers.

9. **R&D Centers and Skill Development:** Establish R&D centers for electric vehicle technology development and invest in skill development programs to train the local workforce in EV technology.

10. **Partnerships:** Collaborate with private sector companies, academic institutions, and international organizations to strengthen the EV industry and promote sustainable transportation.

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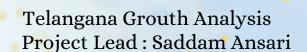### Recommendation #4

Telangana is a large state with **31 districts**, of which **10 are rural districts.** The population living in these districts accounts for about **40%** of the state's total population. To promote development in rural districts, the Telangana government should take the following measures:

- **Improve infrastructure:** Rural districts lack roads, electricity, water, and other basic infrastructure. Improving this infrastructure will boost development in rural areas.

- **Improve education and healthcare:** The quality of education and healthcare in rural districts needs to be improved. This will improve the standard of living of people in rural areas.

- **Create employment opportunities:** There is a lack of employment opportunities in rural districts. The government should create employment opportunities in the agriculture, industry, and service sectors in rural areas.

- **Implement rural development programs:** The government should implement various programs for rural development, such as the **Rural Development Scheme**, the **National Rural Employment Guarantee Scheme**, and the **Pradhan Mantri Awas Yojana.**

Specific suggestions

- **Promote e-governance in rural areas.** This will make it easier for people in rural areas to access government services.

- **Implement programs for women and children in rural areas**. This will improve the standard of living of women and children in rural areas.

- **Implement environmental protection programs in rural areas.** This will protect the environment in rural areas.

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

Recommendation #5

This time **India was hosting the G20 meeting**. In which all the member countries together decided that **by 2030** they will **reduce** their **dependence on petrol and diesel**. For which together every country will do its **investment and research on solar energy and renewable energy**.

But after my analysis I saw that still Telangana gov is making maximum investment every year in real estate, industrial building, pharmaceuticals and chemicals, rubber and plast sectors. But Telangana government should invest maximum in solar energy and renewable energy. Due to which our environment will also be saved from pollution so that the government does not have to pay extra attention to pollution.

Investing in solar and renewable energy is important for a number of reasons, including:

- **Environmental benefits**: Solar and renewable energy sources are clean and sustainable, and they do not produce greenhouse gases or other pollutants. This can help to reduce air and water pollution, and mitigate climate change.

- **Economic benefits:** Investing in solar and renewable energy can create jobs and boost the economy. The solar and renewable energy sector is one of the fastest-growing sectors in the world, and it is expected to continue to grow rapidly in the coming years.

- **Energy security:** Solar and renewable energy sources can help to reduce Telangana's reliance on imported fossil fuels. This can make the state more energy secure and less vulnerable to energy price fluctuations.

here are some specific suggestions for the Government of Telangana to invest more in solar and renewable energy:

- Create a solar and renewable energy investment fund. This fund could be used to provide financial incentives for solar and renewable energy projects, as well as to support research and development in this sector.

- Establish a solar and renewable energy park. This park could provide a dedicated space for solar and renewable energy companies to develop and operate their projects.

- Make it easier for solar and renewable energy projects to connect to the grid. The government could streamline the permitting process and reduce the cost of connecting solar and renewable energy projects to the grid.

- Promote the use of solar and renewable energy in government buildings and infrastructure projects. This could help to set an example for the private sector and encourage wider adoption of solar and renewable energy.

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#Advance Recommendation

1. **Invest in research and development**: The government should invest in research and development to promote innovation and technological advancement. This will help Telangana to develop new industries and compete globally.

2. **Develop a digital economy**: The government should support the development of a digital economy by providing access to affordable broadband and by promoting the use of digital technologies.

3. **Promote e-governance**: The government should promote e-governance to make it easier for citizens and businesses to access government services.

4. **Be transparent and accountable**: The government should be transparent and accountable to its citizens. The government should also be responsive to the needs of its citizens.

5. **Promote entrepreneurship**: The government should promote entrepreneurship by providing financial assistance and other support to startups. The government should also create a culture of innovation and risk-taking.

6. **Support the services sector**: The government should support the growth of the services sector, such as IT, tourism, and financial services. The government should also invest in education and training to create a skilled workforce for the services sector.
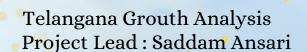
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Recommendations Conclusions:

1. **Improve infrastructure:** Rural districts lack roads, electricity, water, and other basic infrastructure. Improving this infrastructure will boost development in rural areas.

2. **Improve education and healthcare**: The quality of education and healthcare in rural districts needs to be improved. This will improve the standard of living of people in rural areas.

3. **Create employment opportunities:** There is a lack of employment opportunities in rural districts. The government should create employment opportunities in the agriculture, industry, and service sectors in rural areas.

4. **Implement rural development programs:** The government should implement various programs for rural development, such as the Rural Development Scheme, the National Rural Employment Guarantee Scheme, and the Pradhan Mantri Awas Yojana.

5. **Attract foreign investment**: The government should work to attract foreign investment to Telangana. The government should highlight the state's strengths, such as its skilled workforce and its proximity to Hyderabad.

Here are some additional suggestions that could help the Telangana government promote development in rural districts:

- Modernize agriculture in rural areas. This includes improving irrigation, seed, and fertilizer use.
- Promote local industries in rural areas. This will boost economic development in rural areas.
- Promote tourism in rural areas. This will create employment opportunities in rural areas.

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