



INK OF PROGRESS

Navigating Literacy rates impact on Indian “BIMARU” states socio-economic dynamics

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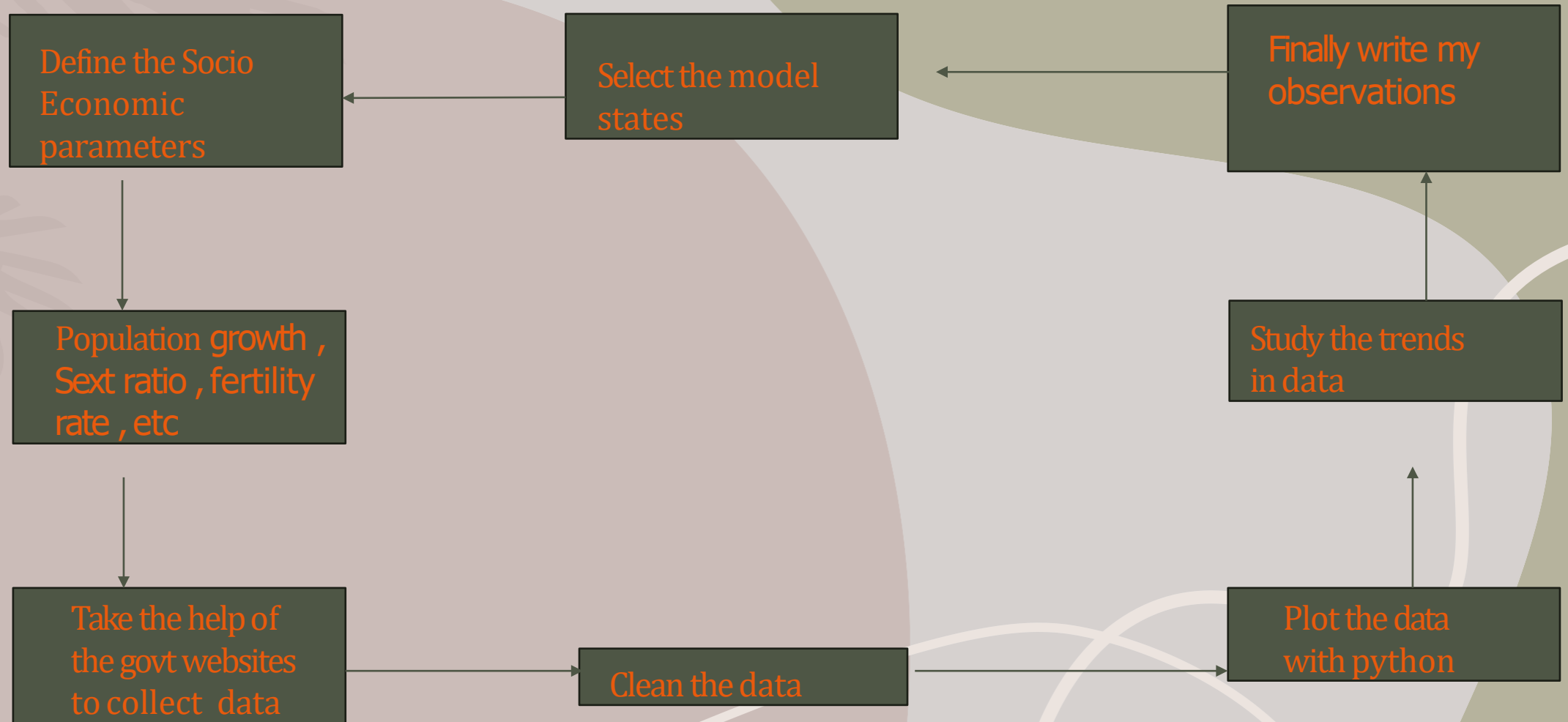
Observation
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Motivation

- Wisdom from grandparents : Emphasis on education as the key to empowerment.
- Fascination with Magadha : Once a hub of knowledge and intellectual prowess.
- Modern Bihar's struggles : A shift from historical eminence to contemporary challenges.
- Question the role of literacy : Exploring the connection between literacy rates and socio-economic status.
- A personal quest : How Bihar's literacy rates may influence its current socio-economic dynamics.



BLOCK DIAGRAM



PSEUDOCODE

Function to create a DataFrame from a CSV file function

```
create_dataframe(file_path):  
    return DataFrame from CSV file at file_path
```

Function to clean literacy data

```
function clean_literacy_data(dataFrame_literacy):  
    for each decade in dataFrame_literacy: Replace empty  
        and '-' values with NaN Convert values to float
```

Function to clean population data

```
function clean_population_data(dataFrame_population): for each  
    decade in dataFrame_population:  
        Replace empty and '-' values with NaN  
        Convert values to float
```

Function to clean sex ratio data

```
function clean_sex_ratio_data(dataFrame_sex_ratio):  
    for each decade in dataFrame_sex_ratio: Replace  
        empty and '-' values with NaN Convert values to  
        float
```

Function to clean fertility rate data function

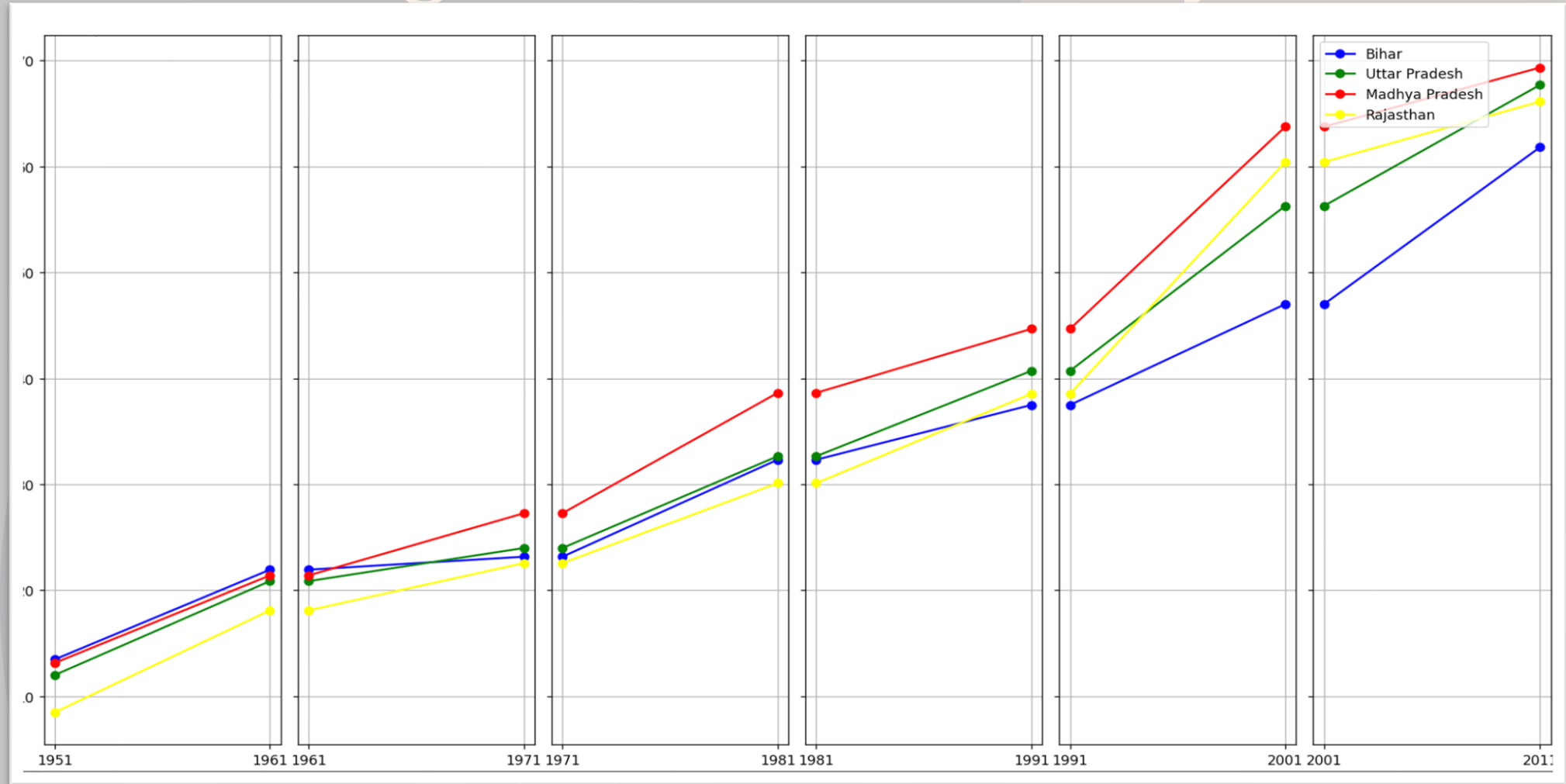
```
clean_fertility_rate_data(dataFrame_fertility_rate):  
    for each year in dataFrame_fertility_rate: Replace empty  
        and '-' values with NaN Convert values to float
```

Function to plot literacy and population data function

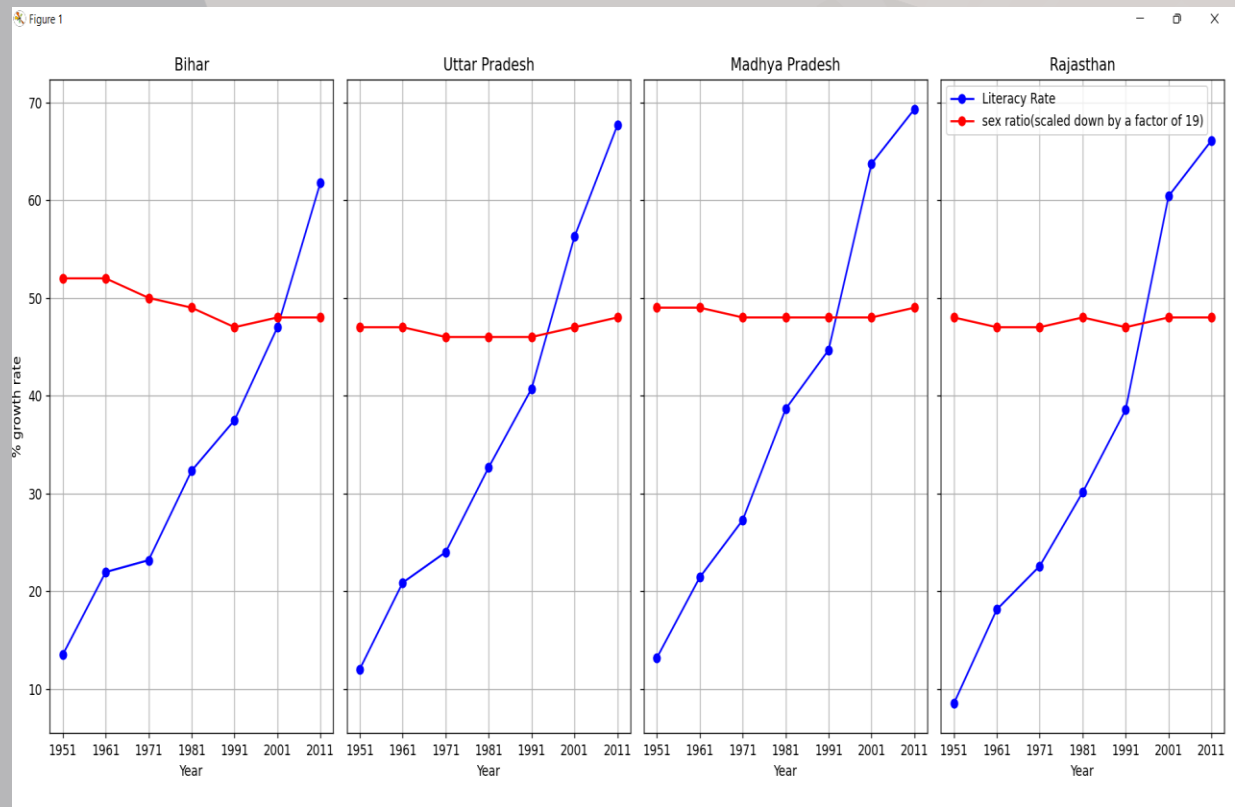
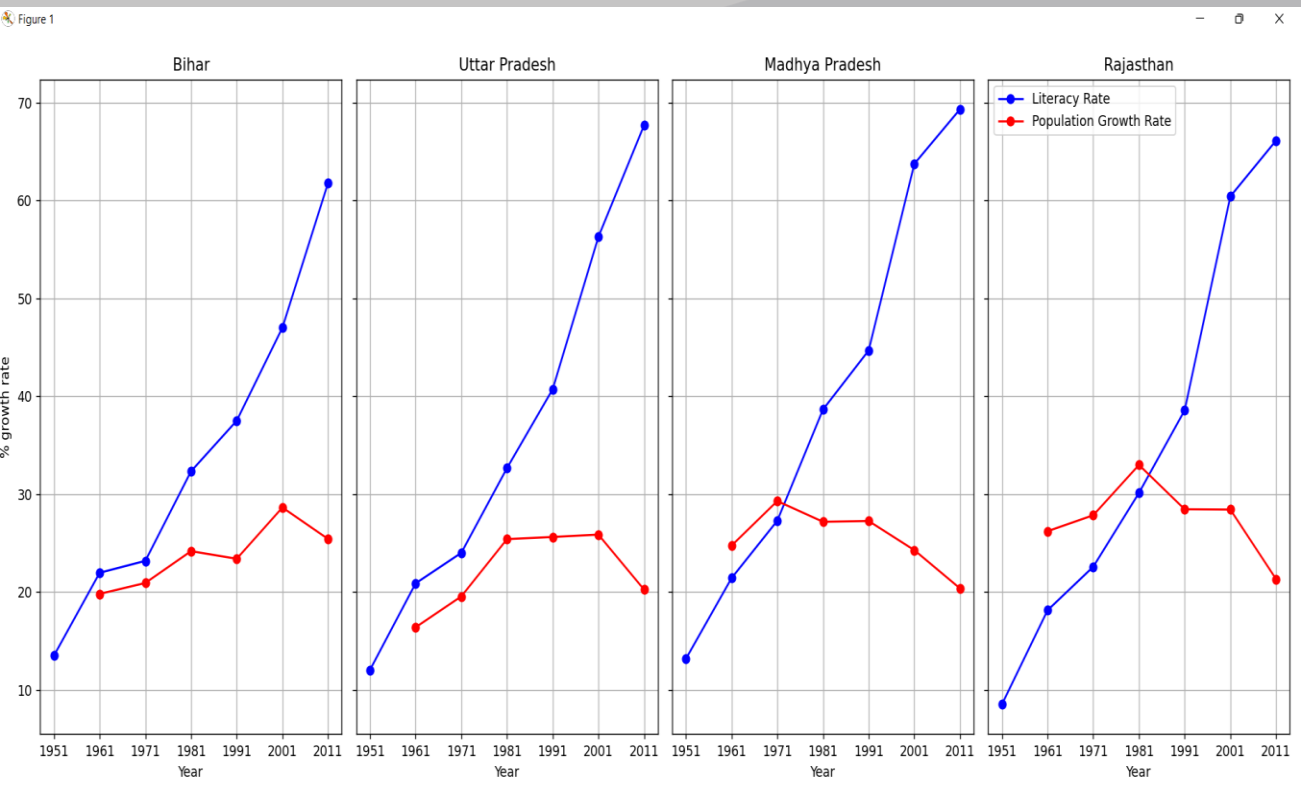
```
plot_literacy_and_population_data(states, df_literacy_states,  
df_population_states, fig, axes):  
    for each state in states:  
        Extract literacy rates and population growth rates for the state  
        Plot line chart for Literacy Rate  
        Plot line chart for Population Growth Rate Set labels,  
        title, and legend  
    Show the plot
```

Similar pseudocode for other plot functions...

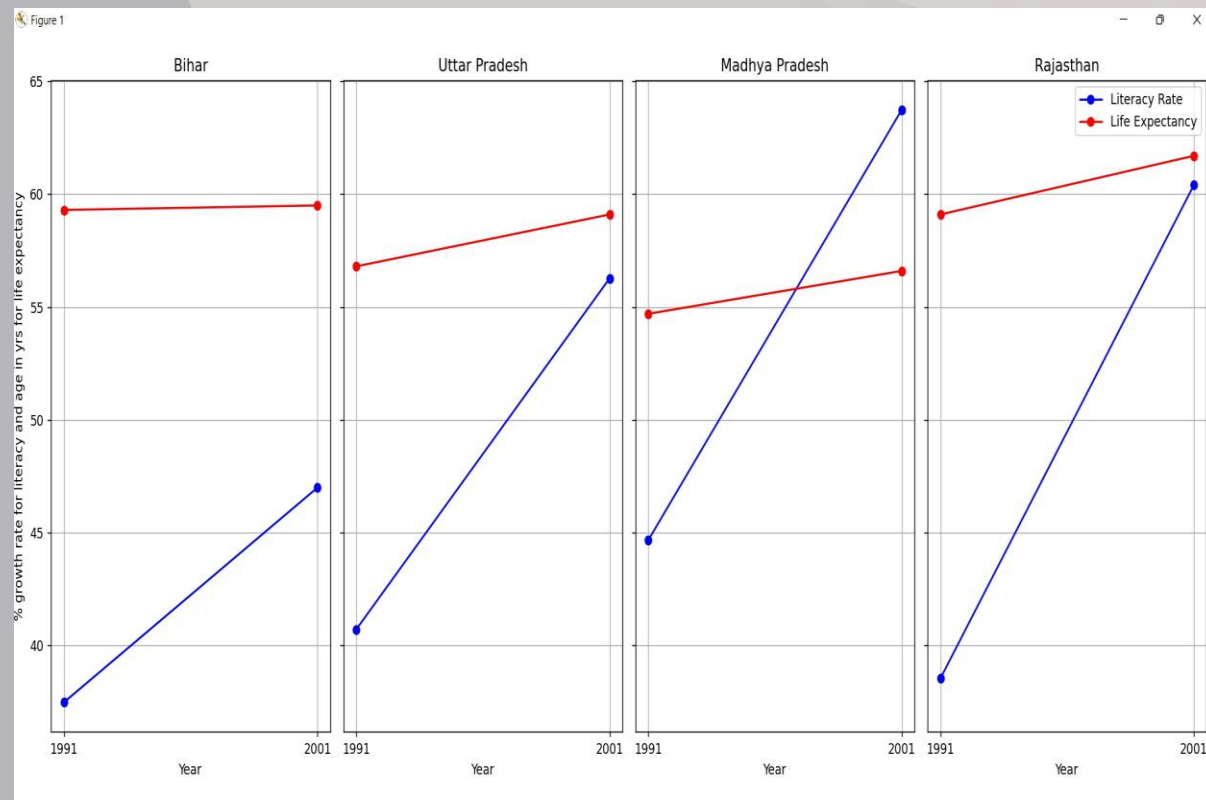
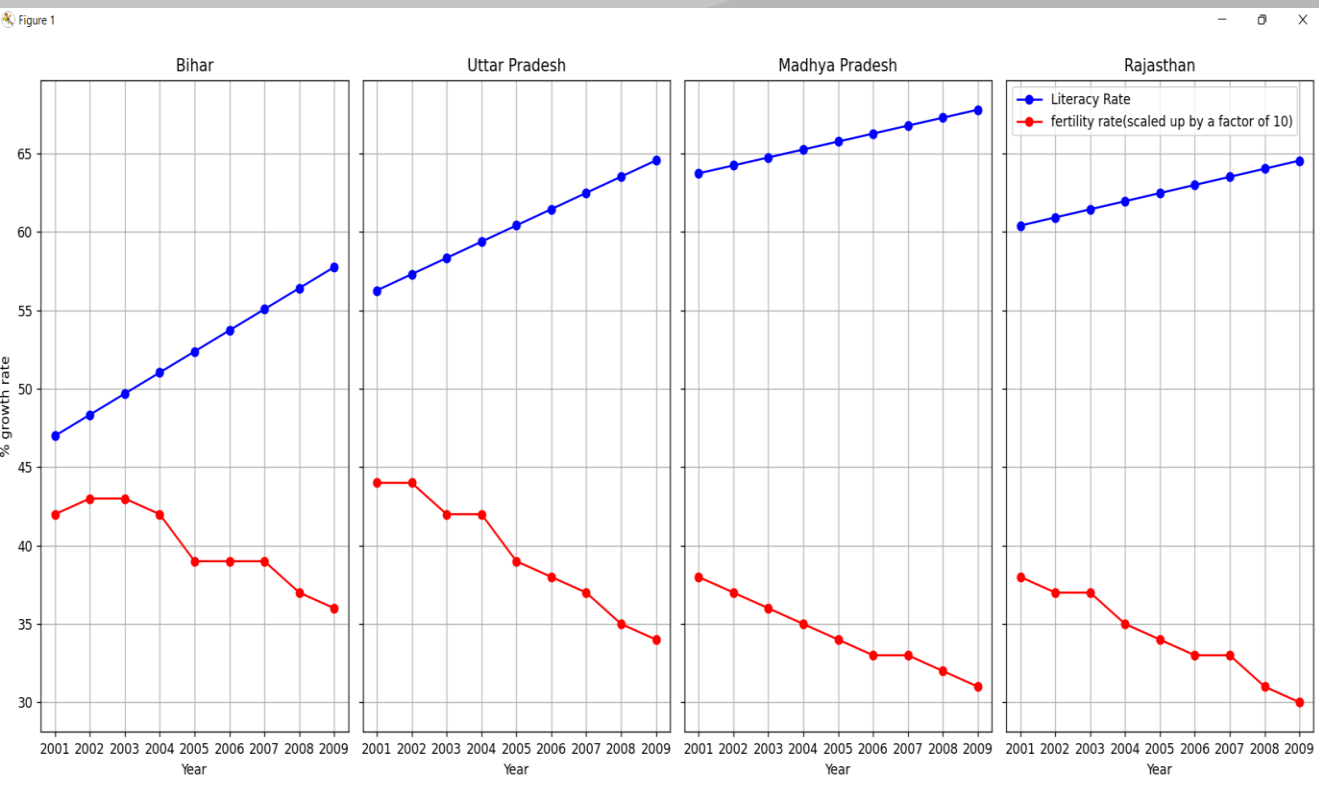
Decadal growth of literacy-rate:



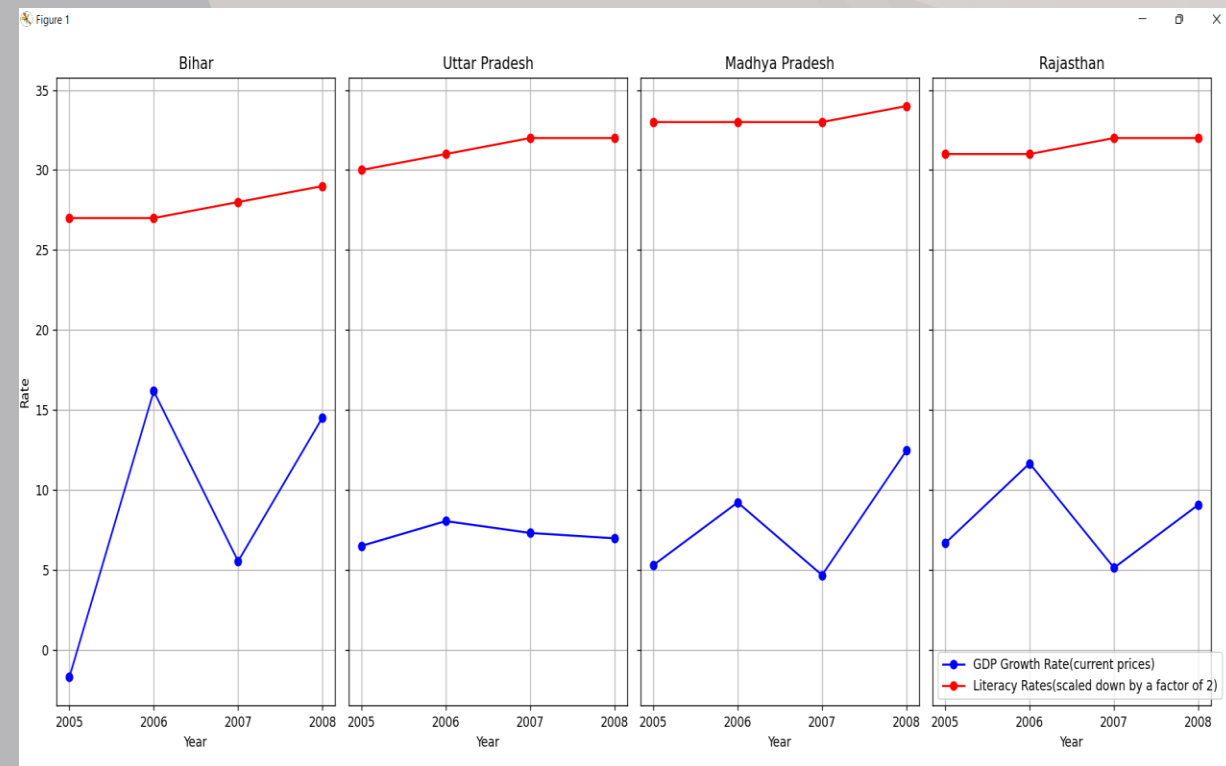
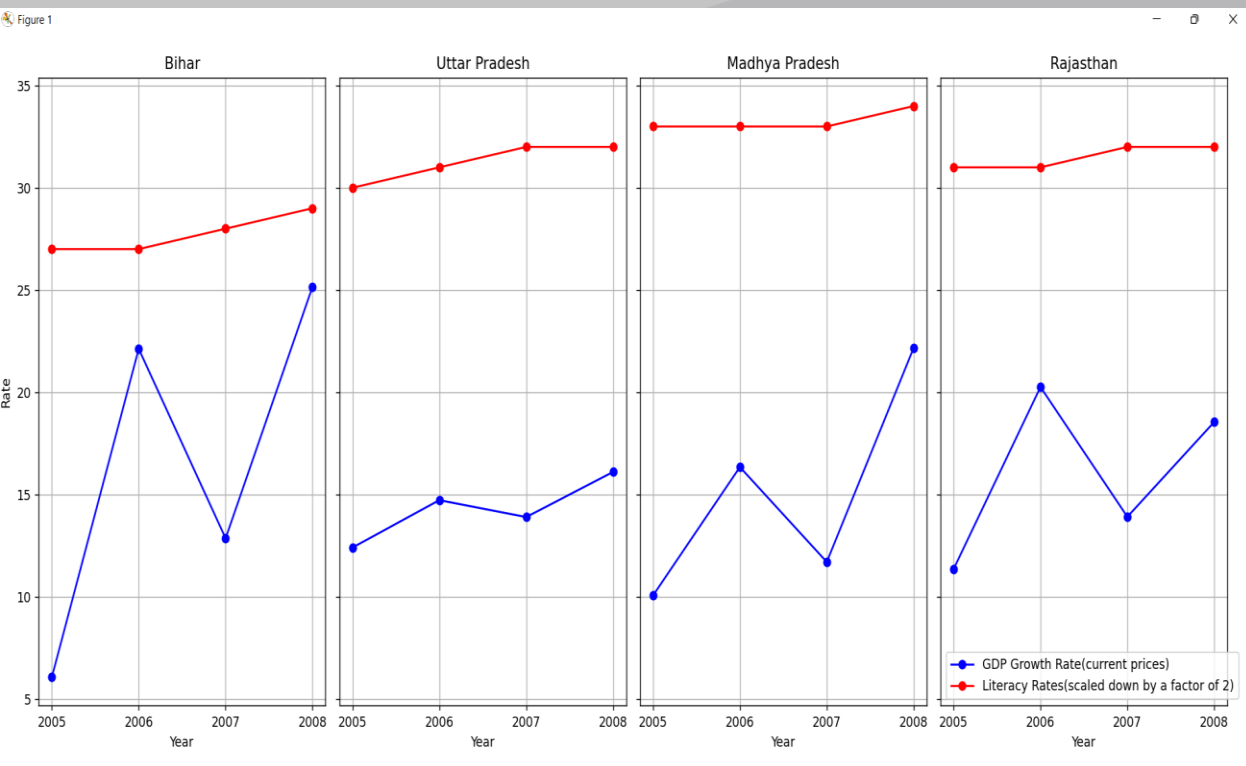
Effect of literacy on population growth and sex ratio:-



Effect of literacy on fertility rate and life expectancy:-



Literacy compared to GDP growth rate-:



Observations -:

POPULATION GROWTH

- A decline in the growth rate of population wrt and increase in literacy rates across all states could be seen

SEX RATIO

- In all the four states, an increase in literacy rate has had almost no impact on the sex ratio.

FERTILITY RATE

- An increase in literacy rate has shown a steep decline in fertility rates across all the states.

Observations :

LIFE EXPECTANCY

- A minimal impact on life expectancy can be visualized. No significant impact.

GDP GROWTH RATE

- No significant impact on GDP wrt literacy can be found.

summary

In summary we can say that, although Literacy rate did impact some socio-economic parameters like population growth rate and fertility rate, it had almost no impact on issues like sex ratio, life expectancy and GDP growth rate. The reasons could be the effect of other issues like regional politics, health infrastructure or orthodox mindset of the common population.

Although Literacy rate did not impacted all the parameters that I chose, still, I do believe literacy has an important role to play for the overall upliftment of the society. Although gains can not be seen in the short span, it would prove to have a long lasting effect in the long run



thank you

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