



Expenditure Data Analysis

Objective

- To run government, it is important to manage expenses.
- It's a way by which any government can handle its economy.
- So, in this project we are going to analyze some key features that describes, how well a state government is in managing its economy.
- For this purpose, we will get our data from NITI Aayog.
- The NITI Aayog is a public policy think tank of the Government of India, established with the aim to achieve sustainable development goals with cooperative federalism by fostering the involvement of State Governments of India in the economic policy-making process using a bottom-up approach.



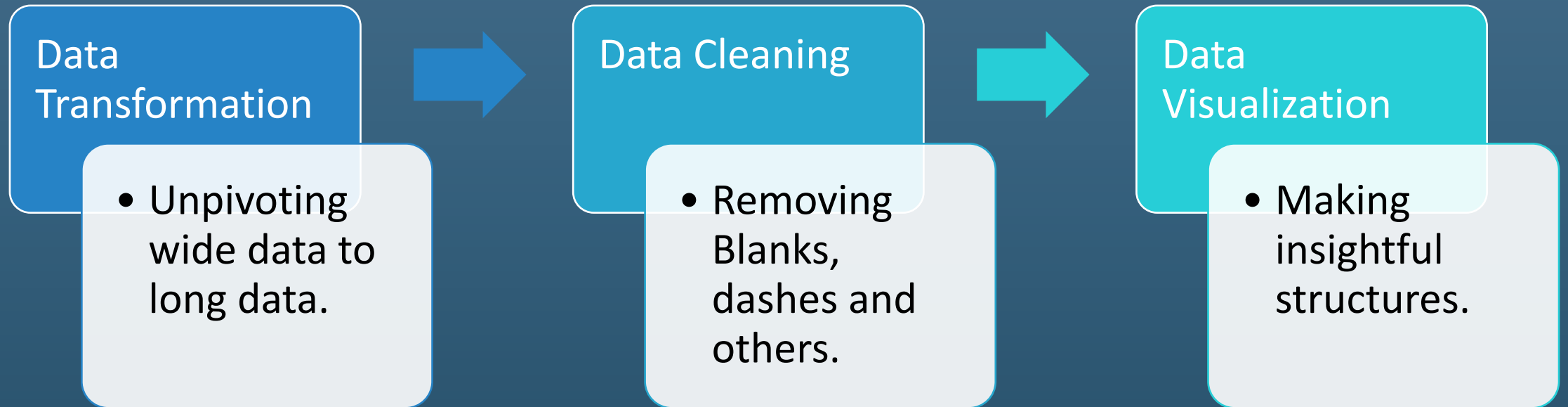
Benefits

- To monitor government expenses.
- To dilute average expenses of various departments.
- To make decision for future Budget allotment.
- Profitability review



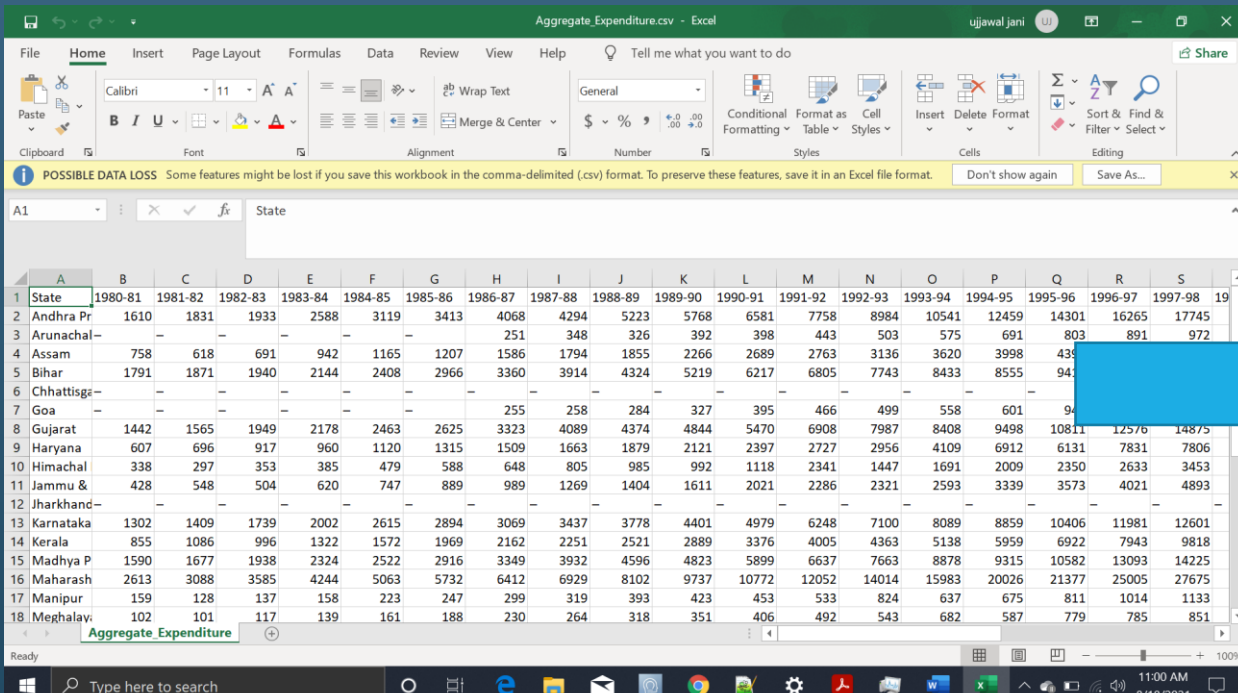


Architecture



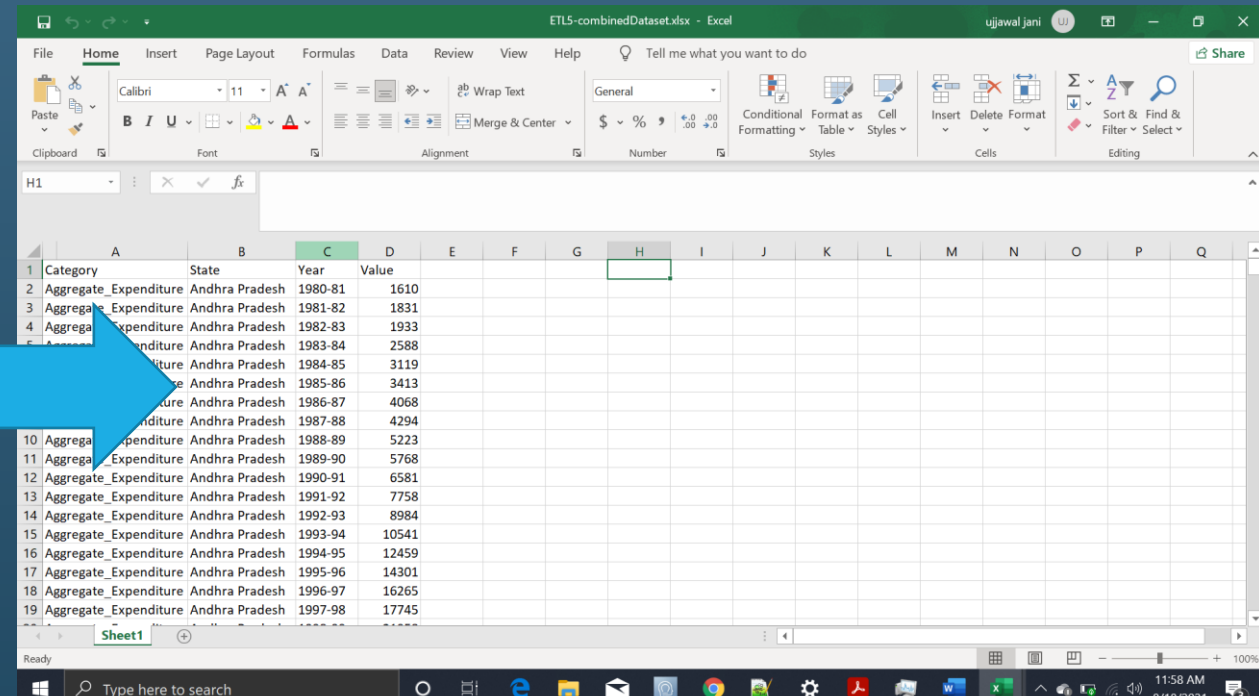
Data Preparation

- In the Preparation Process, we will convert our original datasets with other necessary attributes format.
- As you all can notice that format of the data we have is not good to analyze and visualize. So, we need to reconstruct the structure of the dataset.
- As this is a pivoted data set, we need to unpivot it. That's the only way by which we can make meaningful insights from it. This process is known as converting wide data to long data.
- We will be using only MS Excel for data restructuring and cleaning purpose.



Aggregate_Expenditure.csv - Excel

State	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Andhra Pradesh	1610	1831	1933	2588	3119	3413	4068	4294	5223	5768	6581	7758	8984	10541	12459	14301	16265	17745
Arunachal Pradesh							251	348	326	392	398	443	503	575	691	803	891	972
Assam	758	618	691	942	1165	1207	1586	1794	1855	2266	2689	2763	3136	3620	3998	4381	4811	5244
Bihar	1791	1871	1940	2144	2408	2966	3360	3914	4324	5219	6217	6805	7743	8433	8555	9481	10411	11341
Chhattisgarh																		
Goa							255	258	284	327	395	466	499	558	601	641	681	721
Gujarat	1442	1565	1949	2178	2463	2625	3323	4089	4374	4844	5470	6908	7987	8408	9498	10811	12576	14875
Haryana	607	696	917	960	1120	1315	1509	1663	1879	2121	2397	2727	2956	4109	6912	6131	7831	7806
Himachal Pradesh	338	297	353	385	479	588	648	805	985	992	1118	2341	1447	1691	2009	2350	2633	3453
Jammu & Kashmir	428	548	504	620	747	889	989	1269	1404	1611	2021	2286	2321	2593	3339	3573	4021	4893
Jharkhand																		
Karnataka	1302	1409	1739	2002	2615	2894	3069	3437	3778	4401	4979	6248	7100	8089	8859	10406	11981	12601
Kerala	855	1086	996	1322	1572	1969	2162	2251	2521	2889	3376	4005	4363	5138	5959	6922	7943	9818
Haryana	607	696	917	960	1120	1315	1509	1663	1879	2121	2397	2727	2956	4109	6912	6131	7831	7806
Madhya Pradesh	1590	1677	1938	2324	2522	2916	3349	3932	4596	4823	5899	6637	7663	8878	9315	10582	13093	14225
Maharashtra	2613	3088	3585	4244	5063	5732	6412	6929	8102	9737	10772	12052	14014	15983	20026	21377	25005	27675
Manipur	159	128	137	158	223	247	299	319	393	423	453	533	824	637	675	811	1014	1133
Meghalaya	102	101	117	139	161	188	230	264	318	351	406	492	543	682	587	779	785	851



ETL5-combinedDataset.xlsx - Excel

Category	State	Year	Value
Aggregate_Expenditure	Andhra Pradesh	1980-81	1610
Aggregate_Expenditure	Andhra Pradesh	1981-82	1831
Aggregate_Expenditure	Andhra Pradesh	1982-83	1933
Aggregate_Expenditure	Andhra Pradesh	1983-84	2588
Aggregate_Expenditure	Andhra Pradesh	1984-85	3119
Aggregate_Expenditure	Andhra Pradesh	1985-86	3413
Aggregate_Expenditure	Andhra Pradesh	1986-87	4068
Aggregate_Expenditure	Andhra Pradesh	1987-88	4294
Aggregate_Expenditure	Andhra Pradesh	1988-89	5223
Aggregate_Expenditure	Andhra Pradesh	1989-90	5768
Aggregate_Expenditure	Andhra Pradesh	1990-91	6581
Aggregate_Expenditure	Andhra Pradesh	1991-92	7758
Aggregate_Expenditure	Andhra Pradesh	1992-93	8984
Aggregate_Expenditure	Andhra Pradesh	1993-94	10541
Aggregate_Expenditure	Andhra Pradesh	1994-95	12459
Aggregate_Expenditure	Andhra Pradesh	1995-96	14301
Aggregate_Expenditure	Andhra Pradesh	1996-97	16265
Aggregate_Expenditure	Andhra Pradesh	1997-98	17745

Data validation

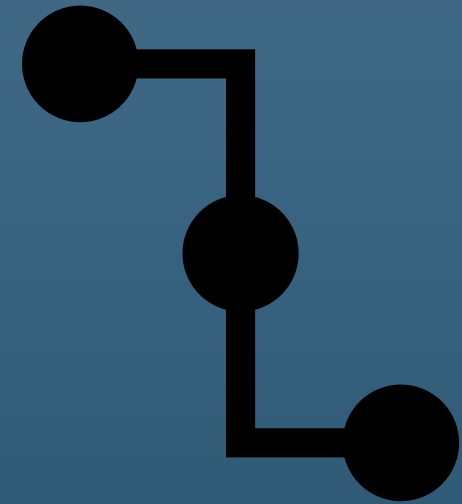
- The data we have contains blank or “-” values. We have to fill them with Zero(0) to make values column a proper numerical column.
- In Excel we can do that by selecting the whole column,
 1. Click on “Find and select” and then “Find” to replace all “-” values with “0”.
 2. Click on “Find and select” and then “Go To Special” to replace all Blanks with “0”.
- Next, In the years column some data points have extra text. To remove them, we can create a new column with formula “=Right(C2,7)” and apply it for whole column to select only year range from Years column and replace it with original Years column.



Make the MS Excel connection and set up the data source

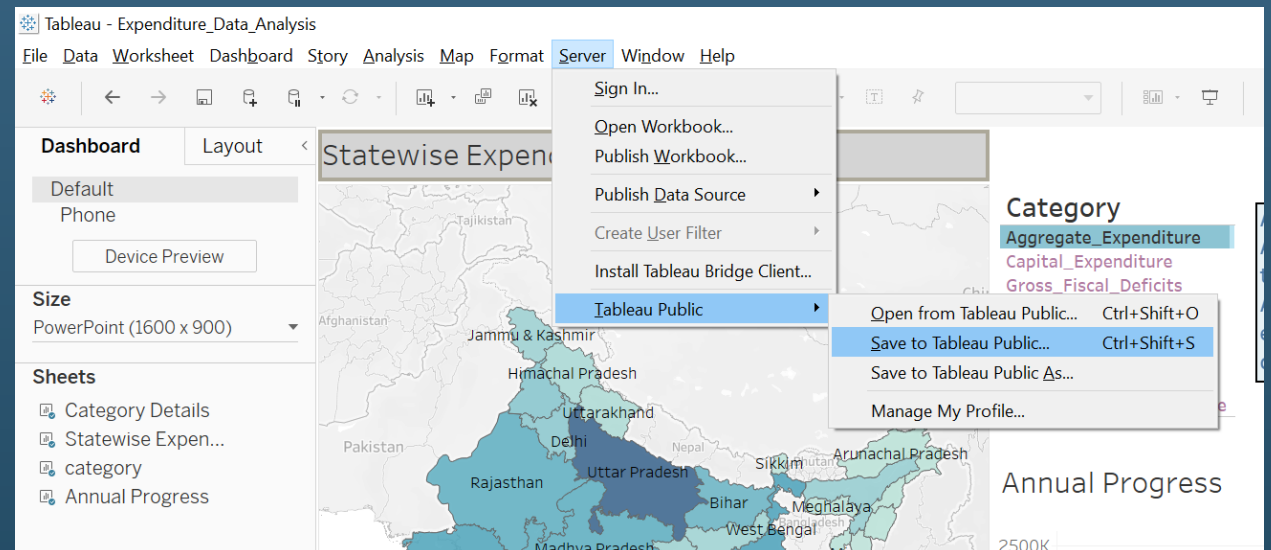
Configuring Tableau

- 1. After you open Tableau, under Connect, click Excel.
- 2. Select the Excel workbook you want to connect to, and then click Open.
- 3. On the Data Source page, click the sheet tab to start your analysis.



Deployment

1. Once you've completed your dashboard, follow these steps: Server, Tableau Public, Save to Tableau Public As
2. You may be prompted to log into your Tableau Public profile first if this is your first-time publishing.



Final Dashboard

[Link to
Tableau Public](#)

