

# Empowering India: Analysing the Evolution of Union Budget Allocations for Sustainable Growth in this topic solution requirement

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Below is a clear, structured "Solution Requirements" section you can directly include in your project/report on:

Empowering India: Analysing the Evolution of Union Budget Allocations for Sustainable Growth  
These requirements focus on what data, tools, methods, and outputs are needed to successfully analyze how India's Union Budgets support sustainable development.

## 1. Data Requirements

### 1.1 Primary Data Sources

Union Budget documents published by Government of India (annual budget statements)

Ministry-wise and sector-wise expenditure reports

Economic Survey of India

Open Government Data ([data.gov.in](https://data.gov.in))

### 1.2 Time Period

Minimum: Last 10–15 financial years

Example: FY2010–11 to FY2024–25

### 1.3 Key Variables

Total Budget Expenditure

Sector-wise Allocation (Education, Health, Agriculture, Renewable Energy, Infrastructure, Social Welfare, Environment)

Capital vs Revenue Expenditure

GDP Growth Rate

Fiscal Deficit

Inflation Rate

## 2. Data Preparation Requirements

Data cleaning (handling missing values, inconsistencies)

Standardization of sector names across years

Inflation adjustment (convert nominal values to real terms)

Creation of calculated fields:

Percentage share of each sector

Year-on-year growth rate

Compound Annual Growth Rate (CAGR)

## 3. Analytical Requirements

### 3.1 Trend Analysis

Identify long-term trends in allocations

Detect growth or decline patterns by sector

### 3.2 Comparative Analysis

Compare social sector vs infrastructure spending

Capital expenditure vs revenue expenditure

### 3.3 Sustainability Focus

Map budget allocations to sustainability pillars:

Economic sustainability

Social sustainability

Environmental sustainability

### 3.4 Impact Indicators (where available)

Literacy rate

Healthcare access

Renewable energy capacity

Poverty reduction statistics

#### 4. Visualization Requirements (Using Tableau / BI Tool)

Line charts → Budget trends over time

Stacked bar charts → Sector-wise allocation comparison

Pie charts → Percentage distribution by sector

Heat maps → High/low allocation years

Dashboards combining all visuals

#### 5. Functional Requirements

Interactive filters (Year, Sector, Type of Expenditure)

Hover tooltips with detailed values

Drill-down from total budget → ministry → scheme

Export option for charts and reports

#### 6. Non-Functional Requirements

Accuracy and data consistency

Fast dashboard loading

User-friendly layout

Clear labeling and legends

#### 7. Tools & Technologies Required

Tableau / Power BI

Microsoft Excel / Google Sheets

Python or R (optional, for preprocessing)

PDF or Word processor for documentation

#### 8. Expected Outcomes

Clear understanding of how budget priorities have evolved

Identification of sectors driving sustainable growth

Evidence-based insights for policymakers and researchers

#### 9. Deliverables

Cleaned dataset

Interactive dashboard

Analytical report (PDF)

Presentation slides

#### 10. Evaluation Criteria

Completeness of data

Quality of visualizations

Depth of insights

Alignment with sustainable development goals

If you want, I can next provide:

✓ Sample problem statement

✓ Objectives & scope

✓ Dataset template (Excel format)

✓ Dashboard layout design

✓ Conclusion & future scope

Just tell me 👍

