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Child Welfare Allocations Analysis Report

1. Dataset Description

1.1 Source: Government of India – Allocations for the Welfare of Children (2019-20 to 2021-22)

1.2 Columns:

- **Category:** Ministry, Department, or State/UT responsible for the scheme
- **Sl.No.:** Serial number of schemes
- **Scheme:** Name of the welfare scheme
- **2020_2021_Actuals:** Actual allocation in crores for 2020-21
- **2021_2022_Budget_Estimates:** Budgeted allocation for 2021-22
- **2021_2022_Revised_Estimates:** Revised allocation for 2021-22
- **2022_2023_Budget_Estimates:** Budgeted allocation for 2022-23
- **index:** Internal index for dataset

1.3 Data Quality:

- No missing/null values in numerical columns
- Clean categorical names with consistent formatting
- Multiple departments, states, and schemes represented
- Numerical ranges vary widely (from 0.02 crores to 260 crores)

2. Operations Performed

2.1 Data Cleaning & Exploration

- Verified absence of null/missing values
- Checked unique departments, states, and schemes
- Summarized allocation amounts: minimum, maximum, mean, median, standard deviation, interquartile range

2.2 Descriptive Analytics

- Department-wise and State-wise total allocations (bar chart / pie chart)
- Year-wise allocation trends (line charts)
- Scheme-wise allocation distribution (histograms, boxplots)

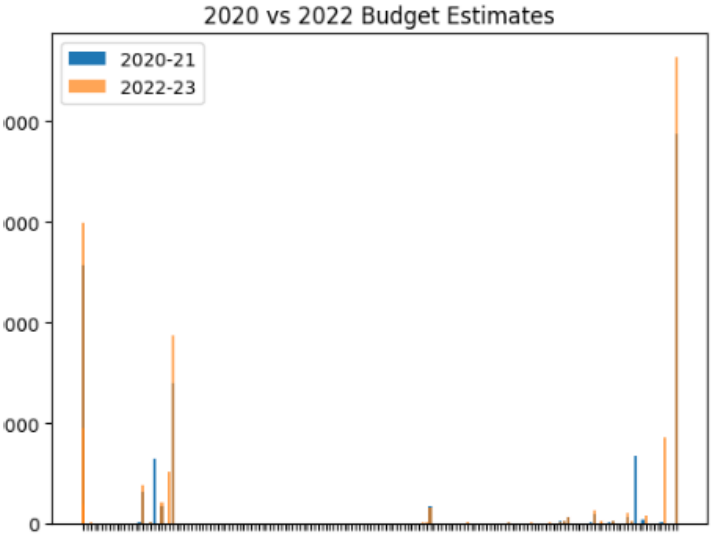
2.3 Relationship Analysis

- Year-wise allocation changes (2020–21 vs 2022–23)
- Category vs. Allocation comparison (bubble charts)
- Departmental and state-wise trends in budget revisions

3. Visual Analysis – Plots & Insights

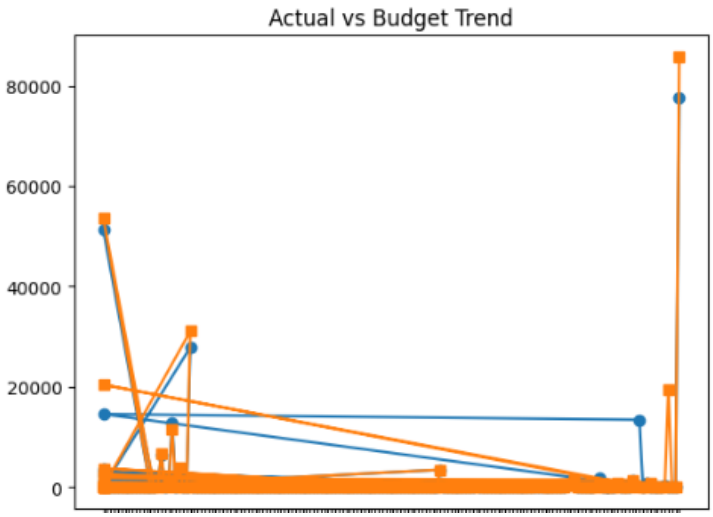
3.1 Bar Plot – 2020 vs 2022 Budget Estimates

- Compares actual allocations in 2020-21 with 2022-23 budgeted allocations.
- **Insight:** Large schemes like AMRUT and central child welfare programs show major increases, smaller schemes remain stable.



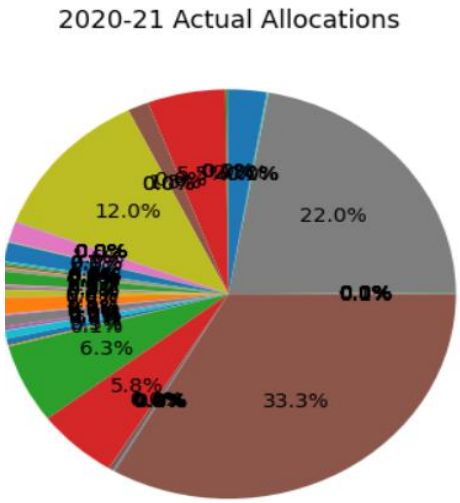
3.2 Line Plot – Actual vs Budget Trend

- Shows trends for 2020-21 actuals and 2021-22 budget estimates.
- **Insight:** Most schemes follow steady growth; a few have sharp increases or reductions based on government priorities.



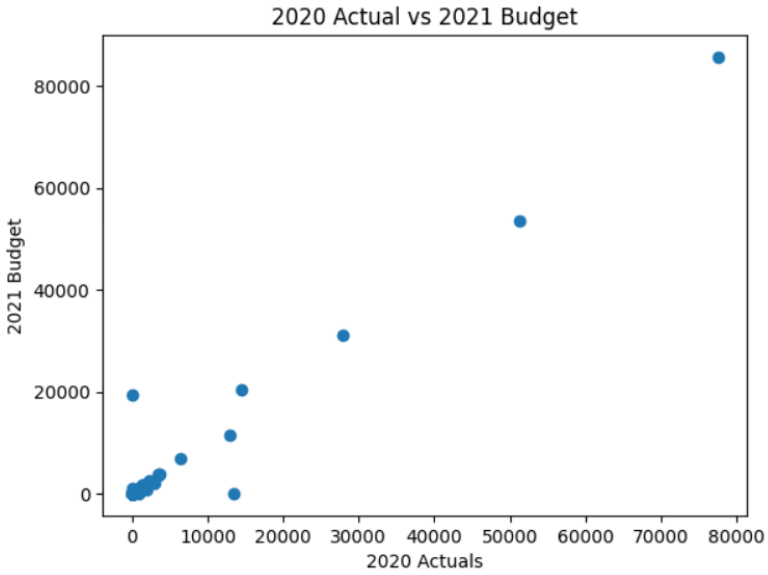
3.3 Pie Chart – 2020-21 Actual Allocations

- Displays the proportion of total allocations contributed by each scheme.
- **Insight:** Major schemes dominate allocation share, reflecting focused expenditure on high-priority programs.



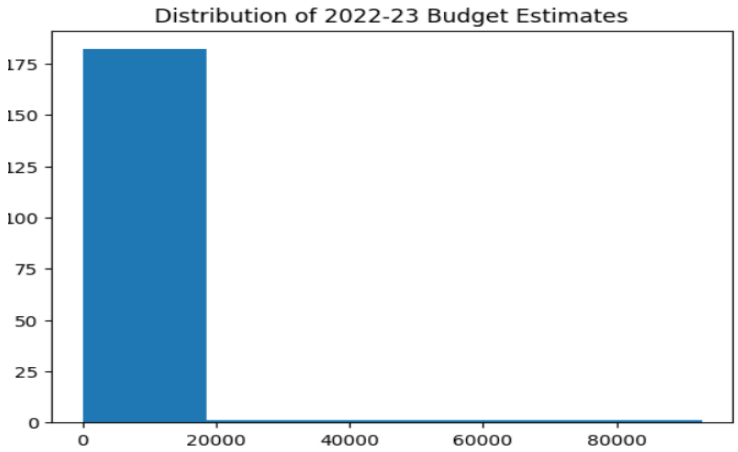
3.4 Scatter Plot – 2020 Actuals vs 2021 Budget

- Relationship between 2020-21 actual allocations and 2021-22 budget estimates.
- **Insight:** Outliers highlight schemes with large budget revisions; majority align closely with previous year's allocations.



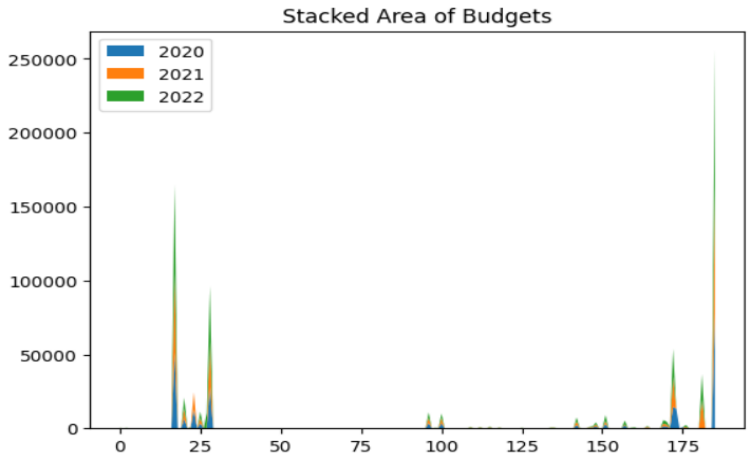
3.5 Histogram – Distribution of 2022-23 Budget Estimates

- Shows how budget allocations are distributed across schemes.
- **Insight:** Most schemes have smaller allocations; a few high-budget schemes skew the distribution.



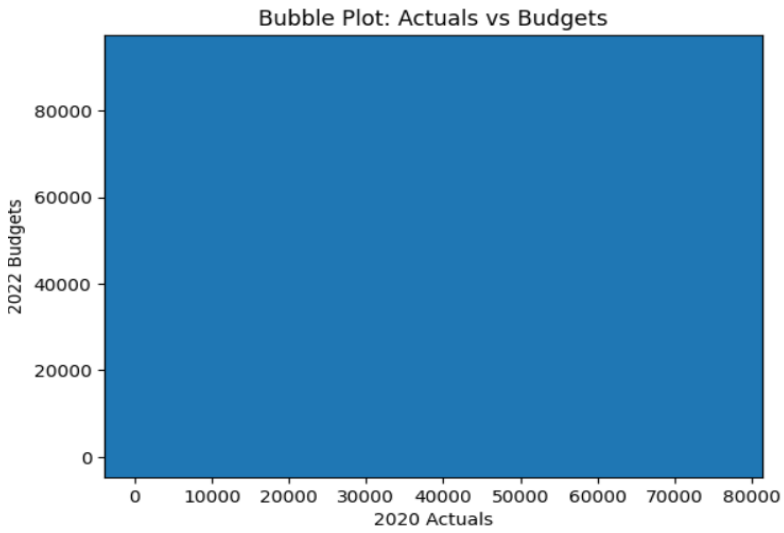
3.6 Area Chart – Stacked Budget Over Years

- Illustrates cumulative allocations for 2020-21, 2021-22 budget.
- **Insight:** Highlights growth trends and the relative contribution of each scheme over time.



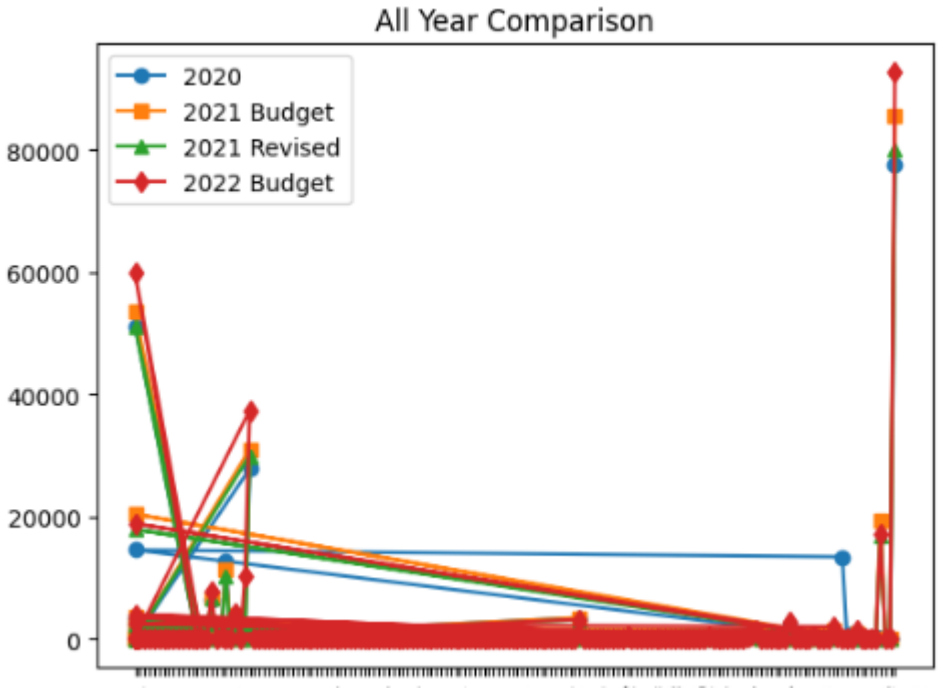
3.7 Bubble Plot – Actuals vs Budgets

- Bubble size represents 2021-22 budget; x-axis 2020-21 actuals, y-axis 2022-23 budgets.
- **Insight:** Visually identifies major schemes and their financial importance relative to smaller schemes.



3.8 Multi-Year Comparison

- Compares all four allocation columns: 2020-21 actuals, 2021-22 budget & revised, 2022-23 budget.
- **Insight:** Tracks trends over multiple years, highlighting consistently funded schemes and those with budget adjustments.



Summary of Visual Insights:

- Large national schemes dominate total allocations across years.
- State-specific schemes are smaller but stable.
- Growth trends indicate government priorities in child welfare, education, health, and urban development.
- Outliers and revised budgets suggest areas for monitoring, auditing, and performance evaluation.

4. Key Insights

4.1 Overall Allocation Trends

- Allocation ranges widely across schemes: 0.02 crores to 260 crores
- Ministries like Housing & Urban Affairs and Women & Child Development have higher allocations
- Average allocation across all schemes: ~15–20 crores

4.2 Departmental/Ministry Insights

- Ministry of Housing & Urban Affairs (AMRUT) has the largest allocation (~260 crores)
- Departments like Ayush, Culture, and Atomic Energy have smaller allocations

- Many smaller schemes are state/UT-specific (e.g., Ladakh Anganwadi, Dadra & Nagar Haveli)

4.3 Year-wise Allocation Trends

- Some schemes show significant budget increase (AMRUT from 121 → 231 crores)
- Others are stable or slightly revised (Books & Stationary for SC/ST students remain at 0.04 crores)
- Revisions indicate performance or policy-driven changes

4.4 Geographic & State-Level Insights

- Smaller states/UTs have lower allocations
- Larger states/ministries dominate budget allocations, reflecting operational scale

4.5 Scheme-Level Insights

- Schemes for child welfare, adoption, and adolescent girls show consistent allocation
- Performance-based revisions visible in some sectors, e.g., Ayush research councils
- Allocations reflect government focus on health, education, urban development, and child care

5. Recommendations

5.1 Policy Priorities & Resource Allocation

- Reassess smaller schemes to optimize allocations and avoid underutilization
- Ensure high-priority child welfare schemes receive consistent funding
- Track state-wise utilization for equitable distribution

5.2 Budget Planning & Monitoring

- Conduct variance analysis between budget estimates and revised allocations
- Identify schemes with large budget swings for detailed audit
- Align allocations with measurable outcomes (enrollment, health indices, adoption rates)

5.3 Future Analytics Opportunities

- Predictive modeling for future budget needs per state/department
- Cluster schemes by allocation trends to identify high-impact vs low-impact programs
- Time-series analysis for multi-year allocation forecasting