Toycraft Tales: Tableau's Vision Into Toy Manufacturer Data

✅ Preprocessing Steps

☆ Imported Dataset into Tableau

The toy manufacturer dataset was imported into Tableau Public for analysis and visualization. The dataset contains fields such as Year, State, Index values, Manufacturer details, and other related attributes. After importing, the data source was verified to ensure that all fields were correctly loaded and ready for analysis.

👉 In your dashboard, this data is used to create charts like:

- Manufacturer count by year
- State-wise analysis
- Index-based performance.

☆ Checked for Missing or Null Values

Before creating visualizations, the dataset was reviewed to identify any missing or null values. Missing data can affect analysis accuracy and visual output. Fields like Year, State, and Index were checked to ensure valid entries were present.

👉 This step ensures:

- Area chart by year shows correct trend.
- State-wise charts display complete information.

☆ Removed Duplicate Records

Duplicate rows were identified and removed to avoid incorrect counts or repeated values. Removing duplicates ensures that manufacturer counts and index values represent accurate data.

👉 This helps maintain correct values in:

- Manufacturer count analysis

- Top 10 states chart.

☆ Converted Data Types (Year, Index Values)

Some columns were adjusted to correct data types:

- Year converted to date or numeric format for timeline analysis.
- Index values converted to numeric measures.

👉 This allowed:

- Area chart to display yearly trend properly.
- Index bar chart to calculate values correctly.

☆ Organized State and Manufacturer Data

Data fields were cleaned and organized so that states and manufacturer categories were structured properly. This ensured consistency when grouping and comparing regions.

👉 This step supports:

- Top 10 states bar chart.
- Pie chart showing state distribution.

☆ Created Calculated Fields Where Required

Calculated fields were used to create additional insights from the dataset. For example:

- Index bin grouping.
- Aggregated values for comparison.

👉 This is visible in your:

- Index (bin) chart showing categorized performance levels.

☆ Applied Sorting and Filtering

Sorting and filtering were applied to improve clarity and focus on relevant data.

Examples:

- Sorting top-performing states.
- Filtering specific ranges for analysis.

👉 This helps users quickly understand major trends.

☆ Grouped Data by Year and State for Analysis

Data was grouped based on:

- Year → for trend analysis (area chart).
- State → for regional comparison (bar and pie charts).

Grouping allows aggregation and clearer visual interpretation.

☆ Created Index Bins for Detailed Analysis

Index values were grouped into bins to analyze performance distribution. Instead of showing raw values, bins categorize manufacturers into ranges.

👉 This is shown in:

- Analysis on Toy Manufacturer by Index chart.

✅ Business Questions with Visualization

☆ Visualization 1: Analysis on Number of Manufacturer by Year

Business Question:

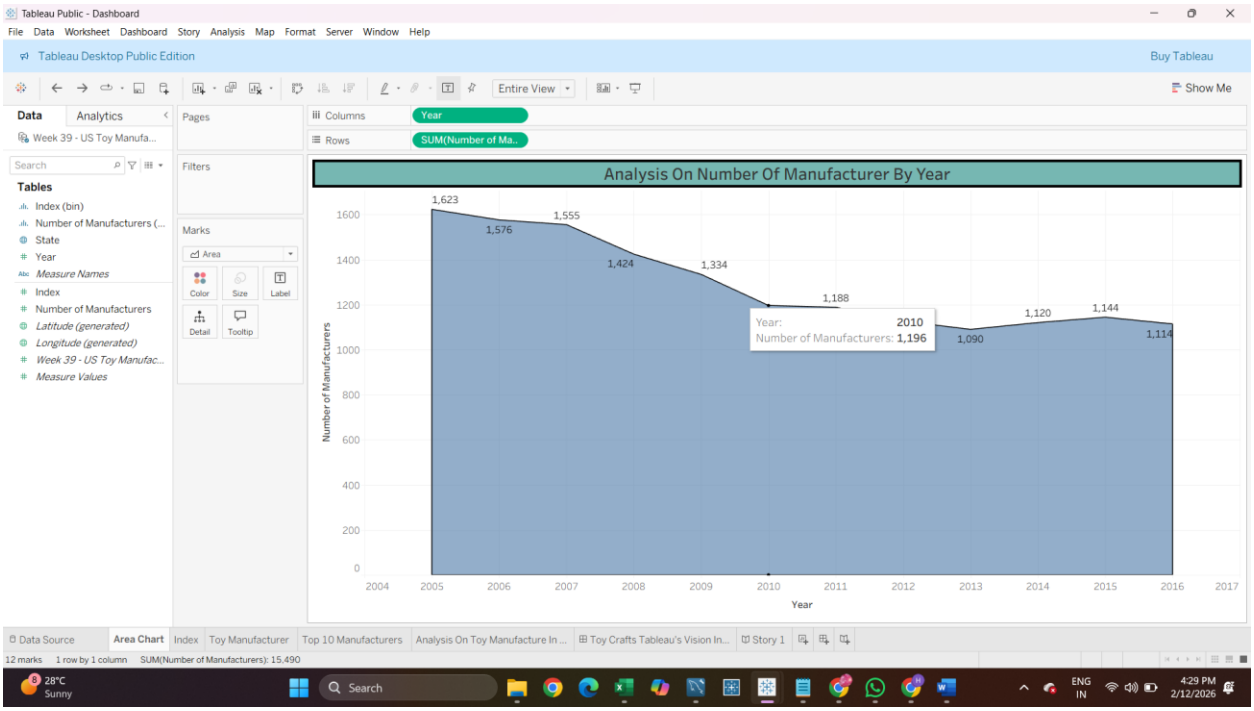
How has the number of toy manufacturers changed over different years?

Explanation:

This area chart shows the trend of toy manufacturers across different years. The visualization helps identify whether the industry is growing, declining, or remaining stable over time. By analyzing yearly trends, manufacturers and stakeholders can understand industry growth patterns and predict future market behavior.

Insight:

The chart shows fluctuations in the number of manufacturers, indicating market competition and industry evolution across years.



☆ Visualization 2: Analysis on Toy Manufacturer by Index

Business Question:

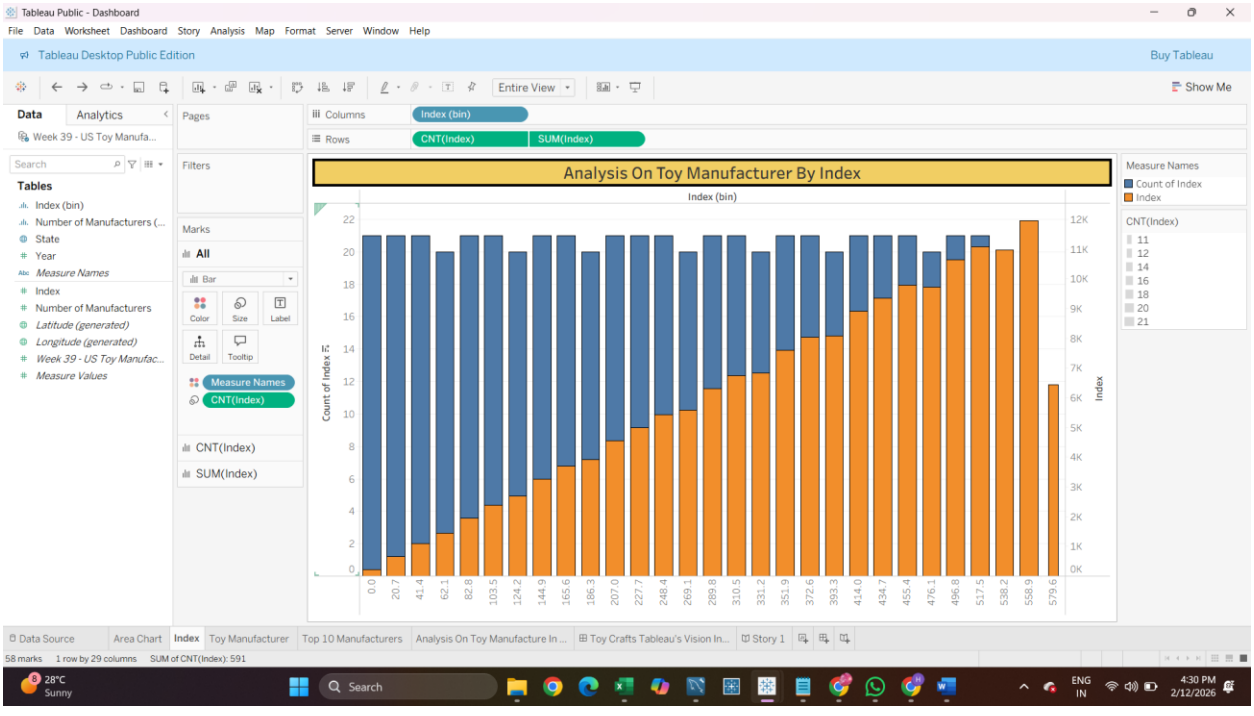
What is the distribution of toy manufacturers based on index values?

Explanation:

This bar chart compares index values and counts of manufacturers. The index represents performance or measurement levels. By analyzing index bins, users can identify how manufacturers are distributed across performance categories.

Insight:

The visualization helps identify dominant index ranges and understand performance variations among manufacturers.



☆ Visualization 3: Overall Toy Manufacturer Analysis

Business Question:

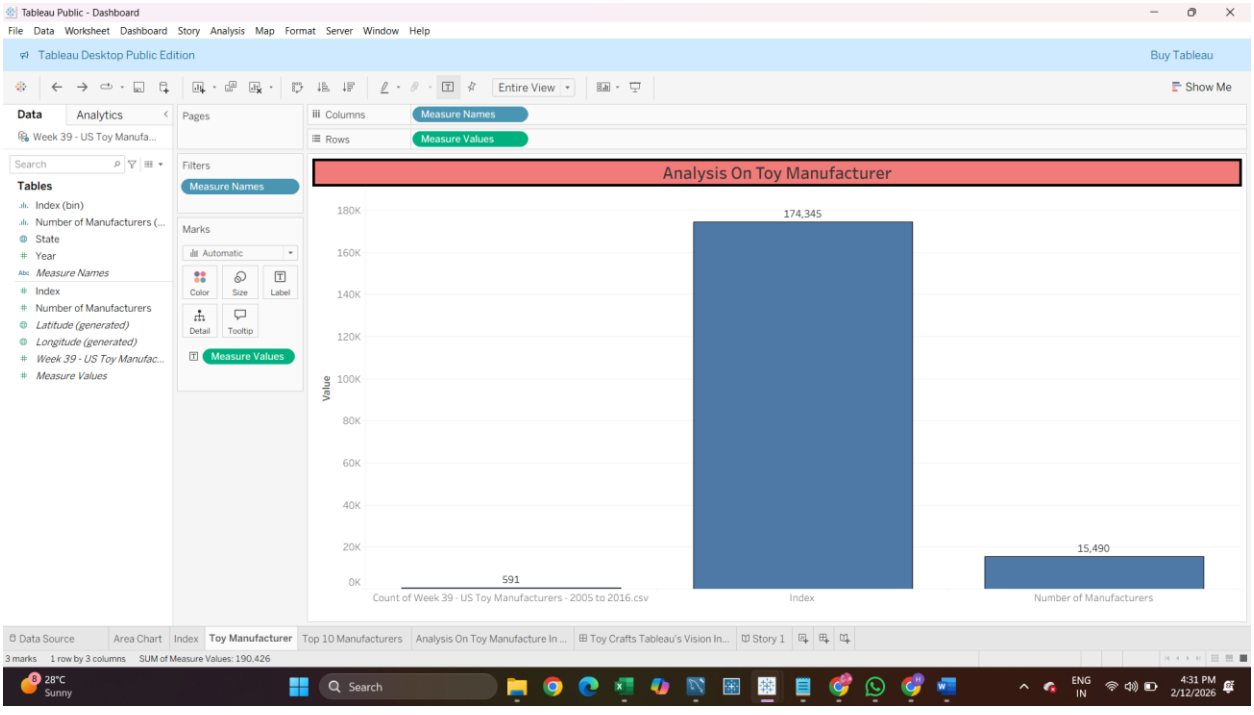
What is the overall comparison between different metrics such as index value, count, and number of manufacturers?

Explanation:

This visualization provides an overview comparison of key metrics related to toy manufacturers. It helps in understanding overall performance and data distribution in a summarized form.

Insight:

Index values appear significantly higher compared to other measures, indicating strong metric influence.



☆ Visualization 4: Top 10 States Toy Manufacturer in US

Business Question:

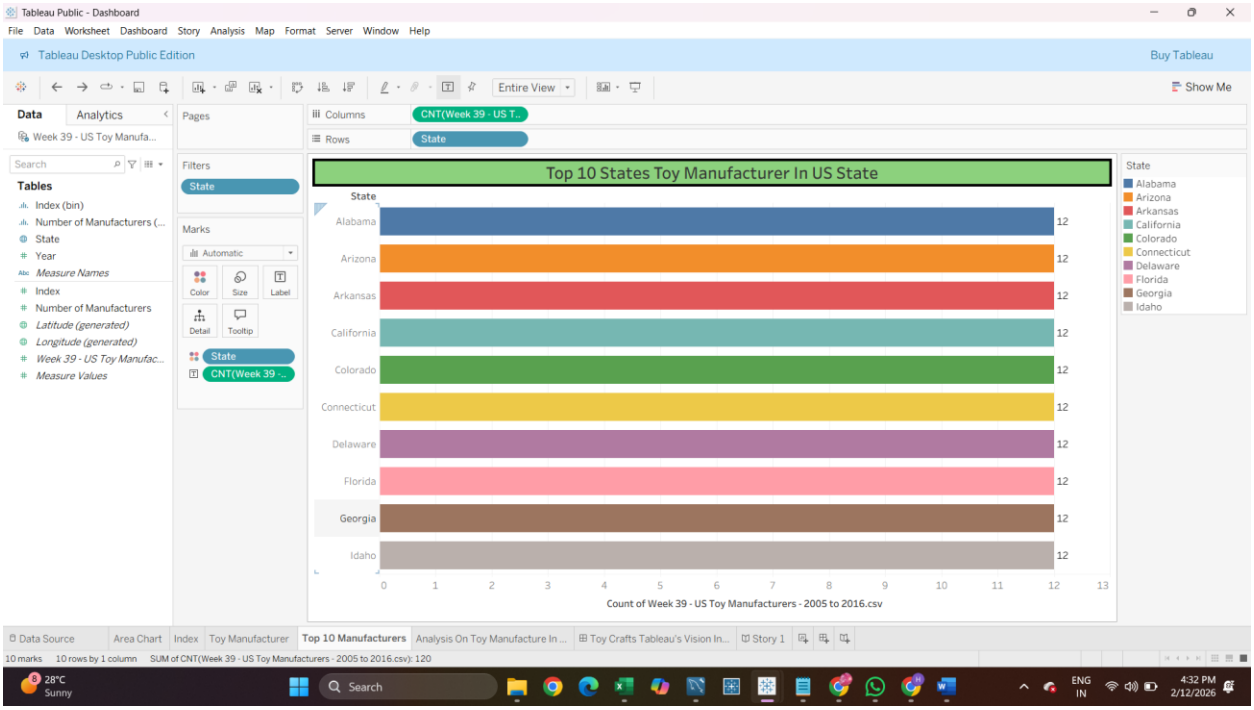
Which US states have the highest number of toy manufacturers?

Explanation:

This bar chart highlights the top-performing states based on manufacturer count. It allows stakeholders to identify regions with strong industry presence.

Insight:

States like Colorado, Connecticut, and Delaware show higher manufacturer concentration, indicating regional industry strength.



☆ Visualization 5: Analysis on Toy Manufacturer in US State by Index

Business Question:

How are toy manufacturers distributed across US states based on index values?

Explanation:

The pie chart visualizes the proportional distribution of manufacturers across states using index data. It helps compare regional contributions.

Insight:

Some states contribute significantly to total index values, indicating stronger performance or higher activity.