# Shark Tank Data Analysis: Report Documentation

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### Executive Summary

This document provides a detailed technical and analytical breakdown of the **Shark Tank US - Deals Exploratory Analysis** Power BI project. The objective of this report is to analyze investment patterns and pitch outcomes using the show's dataset. It covers the specific data cleaning and transformation steps performed in Power Query, the data modeling approach, and a comprehensive list of DAX measures created to support the analysis. This documentation aims to show the complete process from raw data to actionable insights.

### Data Source and Transformation

**Source:** A publicly available Excel workbook containing pitch data from multiple seasons of Shark Tank US.

**Data Cleaning and Preparation (Power Query):** The raw data was imported into Power Query and underwent the following specific transformations to ensure it was clean and ready for analysis:

* **Renamed Columns:** The following columns were renamed for clarity:
  + Original\_Ask\_Amount to Original Ask Amount
  + Original\_Offered\_Equity to Original Offered Equity
  + Total\_Deal\_Amount to Total Deal Amount
* **Replaced Values:** Replaced NULL values in the Original Offered Equity and Original Ask Amount columns with 0 to prevent calculation errors.
* **Corrected Data Types:** Ensured all numerical columns, such as Original Ask Amount, Total Deal Amount, and Number of Sharks, were correctly set to a Decimal Number or Whole Number data type.
* **Added Conditional Column:** A new column, Got Deal, was created. This column assigns a value of 1 if the Got Deal field is not 0 (indicating a deal was made) and 0 otherwise. This allows for easy counting of successful pitches.

### Data Model and Measures

The data model uses a single fact table named Shark Tank Dataset which contains all the pitch information. All analytical calculations are performed using custom DAX measures.

**DAX Measures:**

| **Measure Name** | **DAX Formula** | **Description** |
| --- | --- | --- |
| Avg\_Investment\_per\_Deal | VAR TotalInvestment = SUM('Shark Tank Dataset'[Total Deal Amount]) VAR DealCount = COUNTROWS(FILTER('Shark Tank Dataset','Shark Tank Dataset'[Got Deal] = 1)) RETURN DIVIDE(TotalInvestment, DealCount) | Calculates the average monetary investment for all pitches that successfully closed a deal. |
| Got\_Deals | CALCULATE(COUNTROWS('Shark Tank Dataset'), FILTER('Shark Tank Dataset','Shark Tank Dataset'[Got Deal] = 1)) | Counts the total number of pitches that resulted in a deal. |
| Deal\_Closed\_Rate | VAR TotalPitches = COUNTROWS('Shark Tank Dataset') VAR DealsClosed = [Got\_Deals] RETURN DIVIDE(DealsClosed, TotalPitches) | Calculates the percentage of pitches that successfully closed a deal out of all pitches. |
| Total\_All\_Shark\_Deals | CALCULATE(COUNTROWS('Shark Tank Dataset'), FILTER('Shark Tank Dataset','Shark Tank Dataset'[Number of Sharks in Deal] = 5)) | Counts the number of deals where all five sharks participated. |

### Visualizations and Key Findings

The following visualizations were created to reveal key insights from the data:

* **Deal Metrics Card Visuals:** Four cards were created at the top of the report to provide a quick summary of the data:
  + Avg of TRP rating: Shows the average TV rating for all seasons.
  + Average of Original Ask Amount: Displays the average amount of money entrepreneurs originally asked for.
  + Average of Original Offered Equity: Shows the average amount of equity offered by entrepreneurs.
  + Average of Valuation Request: Displays the average valuation requested by the entrepreneurs.
* **Deals by Season Bar Chart:** A bar chart titled **"Avg TRP Per Season Number"** was created to show the average TRP rating for each season. This helps identify which seasons were most popular with viewers.
* **Total Deals Pie Chart:** A pie chart titled **"Sum of Got Deal"** visualizes the total number of deals made versus pitches with no deal. This provides an immediate overview of the show's deal success rate.
* **Historical Investment Trend:** A combo chart titled **"Sum of Total Deal Amount and Sum of Total Deal Equity by Year"** tracks investment over time. It uses bars to represent the total deal amount and a line to show the total equity given. This visualization clearly shows that investment amounts have fluctuated over the years, with a notable peak around 2015.

### Conclusion

This documentation provides a comprehensive look at the steps taken to transform raw data into a dynamic and insightful report. By detailing the Power Query transformations, DAX measures, and specific visualizations, it shows the complete analytical process from start to finish.