

POWER BI PROJECT

INTRODUCTION:

Power BI is a powerful business intelligence tool developed by Microsoft that allows users to visualize, analyze, and share insights from data. In today's data-driven world, organizations rely on clear and interactive reports to make better decisions. Power BI makes it possible to transform raw data into visually appealing dashboards that provide actionable insights.

WHAT IS POWER BI?

Power BI is a data visualization and business analytics tool that connects to various data sources and helps users create interactive reports and dashboards. It combines data preparation, visualization, and sharing in one platform. Supply Chain Performance & Optimization Dashboard This may include:

- Data Connectivity – Importing or connecting live data from sources like Excel, SQL, or cloud platforms.
- Data Transformation – Cleaning, shaping, and modeling data using Power Query and DAX.
- Data Visualization – Creating interactive charts, graphs, maps, and KPI cards.
- Dashboard Creation – Building user-friendly dashboards that highlight key business metrics.
- Data Sharing – Publishing reports to the Power BI Service for collaboration and decision-making.

WHAT IS POWER QUERY EDITOR?

Power Query Editor is a data transformation tool in Power BI (also available in Excel). It allows users to connect, clean, and shape data before loading it into Power BI for analysis and visualization.

It provides an easy-to-use interface with point-and-click options as well as an underlying M language (Power Query Formula Language) for advanced transformations.

Key Features of Power Query Editor:

- **Data Import** – Connect to multiple sources like Excel, SQL, Web APIs, CSV, etc.
- **Data Cleaning** – Remove duplicates, handle missing values, filter out irrelevant rows, and correct errors.
- **Data Transformation** – Split columns, merge tables, pivot/unpivot, change data types, and create custom columns.
- **Data Shaping** – Reorganize data structures to make them analysis-ready.
- **Applied Steps** – Every transformation is recorded as a step, making the process transparent and reversible.
- **Automation** – Once defined, the same query can be refreshed automatically with updated data.

Big Black Money

Introduction:

Title: Analysis of Global Black Money Transactions Using Power BI

Objective:

To analyze international money transactions and identify trends related to suspicious or illegal fund movements using data visualization in Power BI.

Purpose:

- Detect potential patterns in black money flow.
- Identify countries and industries with higher illegal transaction rates.
- Help authorities and analysts make data-driven anti-money-laundering (AML) decisions.

Column Details of Big Black Money Data Set:

Dataset Name: Big Black Money Dataset

Total Records: 10,000

Columns: 14

Key Columns:

- Transaction ID – Unique ID for each transaction
- Country – Origin country of transaction
- Amount (USD) – Transaction amount
- Transaction Type – Nature of the transaction (e.g., Property Purchase, Offshore Transfer, etc.)
- Date of Transaction – When the transaction occurred
- Industry – Sector involved (e.g., Finance, Real Estate, Mining, etc.)
- Destination Country – Target location of funds
- Reported by Authority – Flag showing whether the transaction was reported to authorities
- Source of Money – Legal or illegal origin of the money

Average Transaction Value: ≈ \$2.5 million

Most Frequent Source: Illegal funds (~70% of records)

Most Common Transaction Type: Property Purchases

Top Origin Country: China

Top Destination Country: USA

DATA CLEANING & PREPARATION NOTE

The dataset was directly imported into Power BI from Kaggle. Normally, in Big Black Money analytics, the Power Query Editor is used to clean and preprocess the dataset (e.g., handling missing values, removing duplicates, renaming columns, fixing data types).

However, in this case:

- The dataset contained no missing values.
- There were no duplicates.
- Column data types were correctly assigned (numeric, categorical, etc.).
- Values were already in a clean and consistent format.

Dashboards:

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