YouTube Channel Performance Analysis

Introduction

With the rapid growth of digital content platforms, YouTube has become one of the largest sources of online entertainment, education, and media consumption worldwide. Millions of creators compete for audience attention, subscribers, and monetization opportunities. Understanding patterns in subscribers, video views, earnings, and regional performance is essential for identifying what drives success on the platform.

This project analyzes global YouTube channel statistics to uncover trends across categories, countries, earnings, and growth rates. The goal is to identify which content types perform best, which regions dominate the platform, and how subscriber growth impacts revenue.

Abstract

The dataset contains information on subscribers, video views, earnings, country, and 30-day growth metrics. Using Power BI, the data was cleaned, transformed, and organized for analysis. Categories were grouped into major segments such as Entertainment, Education, Gaming, Music, and Others for better visualization.

An interactive dashboard was developed to display key performance indicators, category trends, country-wise distribution, and the relationship between subscribers and earnings. The findings reveal that content type and audience size strongly influence revenue and growth.

Tools Used

- **Power BI Desktop** – Data cleaning (Power Query), DAX measures, and dashboard creation
- **Power Query Editor** – Data transformation and preprocessing
- **DAX (Data Analysis Expressions)** – Creating calculated measures
- CSV Dataset – Global YouTube Channel Statistics

Steps Involved in Building the Project

1. Data Import

The cleaned CSV dataset was imported into Power BI using the “Get Data” feature.

2. Data Transformation (Power Query)

- Standardized column names
- Corrected data types (Whole Number, Decimal, Text)
- Removed null and irrelevant columns
- Cleaned numeric fields with formatting issues
- Created calculated columns:
- Grouped categories into major segments (Entertainment, Education, Gaming, Music, Others)

These steps ensured the dataset was structured and ready for analysis.

3. Data Modeling and DAX Measures

Key measures were created:

- Total Subscribers
- Total Video Views
- Average Yearly Earnings
- Subscriber Growth (Last 30 Days)

These measures helped summarize overall performance and enabled dynamic filtering.

4. Dashboard Development

The final dashboard included:

- KPI Cards for overall metrics
- Bar charts for category performance
- Map visualization for country-wise distribution
- Scatter plot showing relationship between subscribers and earnings
- Top 10 fastest-growing channels
- Slicers for interactive filtering (country, category, channel type)

The layout was designed for clarity, readability, and professional presentation.

5. Insight Generation

Data was analyzed to identify:

- High-performing content categories
- Countries with dominant subscriber bases
- Correlation between audience size and revenue
- Channels showing rapid recent growth

Conclusion

The analysis reveals that channel performance on YouTube is strongly influenced by content category and geographic audience. Entertainment and Music categories generally attract higher views and earnings. Countries with large digital populations show significantly higher subscriber counts. A strong positive relationship exists between subscriber numbers and yearly earnings, confirming that audience size directly impacts monetization potential.

The interactive Power BI dashboard effectively presents global performance patterns and provides valuable insights for content creators, marketers, and digital strategists. This project demonstrates how data transformation, visualization, and analytical techniques can convert raw data into meaningful business intelligence.