How Much Do YouTubers Really Earn?

A Deep Dive into YouTube Channel Analytics!

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1 Introduction

This project analyzes how YouTubers generate income by exploring key metrics that impact engagement, retention, and revenue. Using the YouTube Channel Performance Analytics Dataset from Kaggle, this analysis uncovers trends, engagement drivers, revenue insights, and monetization strategies, providing actionable takeaways for creators.

To provide a clear overview of essential metrics, I've created YouTube Channel Analytics dashboard in Tableau, showcasing some key trends. Before diving into further details, take a moment to explore the dashboard.

2 Dataset Overview

The analysis uses key columns from a dataset with 70 features, including:

- **Revenue Metrics**: Estimated Revenue, Estimated AdSense Revenue, DoubleClick Revenue, YouTube Premium.

- **Engagement Metrics**: Likes, Dislikes, views, Average View Percentage, watch time, YouTube Premium Watch Time, End Screen Click-through Rate, Card Click-through Rate, Video Thumbnail Click-Through Rate.

- **Video Details**: ID, Video Duration, Days Since Publish, Year.

3 Key Insights

3.1 Revenue Trends

- Revenue fluctuates significantly over the years.

- Revenue peaks correspond to higher video publishing rates.
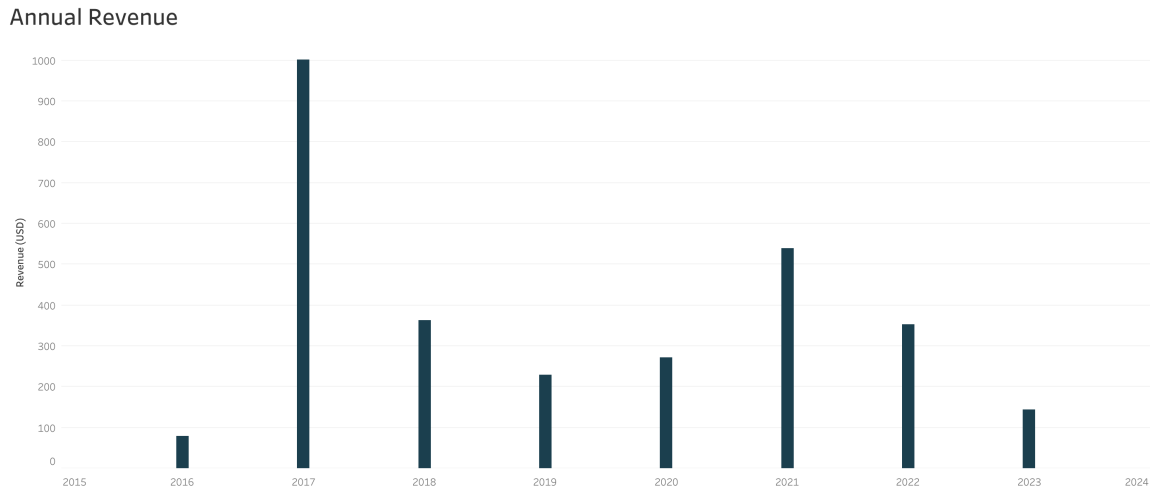
Annual Revenue

Figure 1: Highlighting significant fluctuations in revenue, with a peak in 2017 and varying performance in subsequent years.

- Revenue correlates with the number of videos published annually.
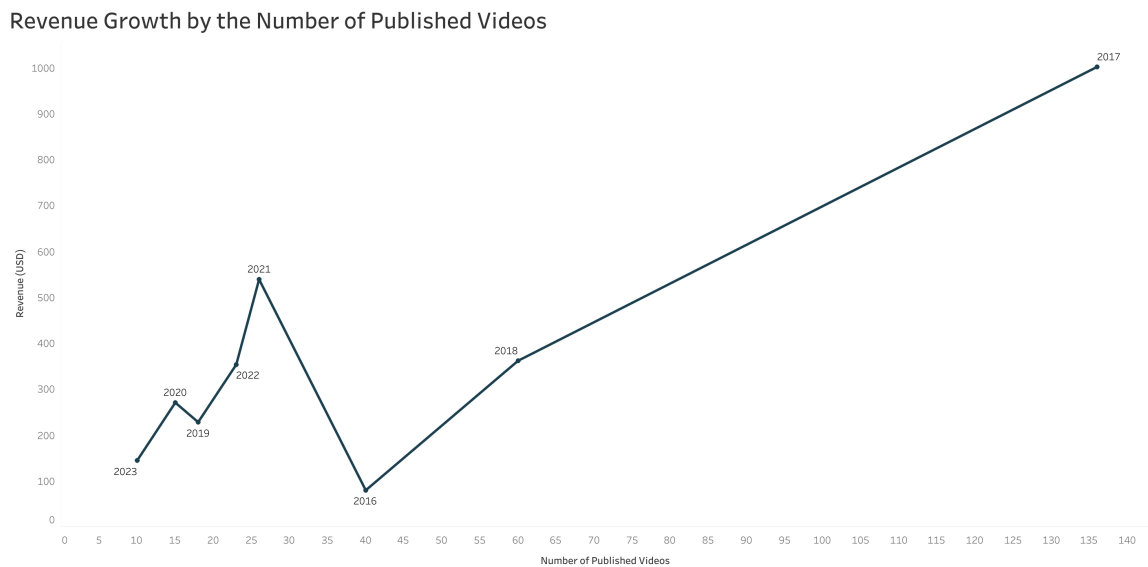- There is a consistent growth beyond 60 published videos.

Revenue Growth by the Number of Published Videos

Figure 2: Highlighting fluctuations in revenue across years, with a notable peak in 2021 and consistent growth beyond 60 published videos.

3.2   From Watch Time to Revenue: Understanding the Connection

- Most viewers tend to watch within 3.5–5 minutes.
- Shorter durations resonate better with audiences.

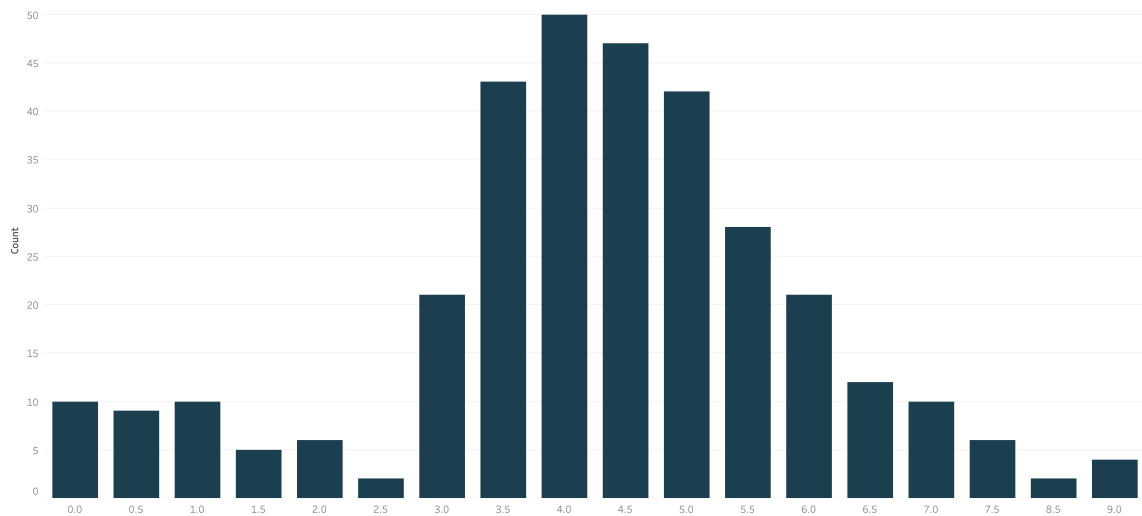Distribution of Engagement: Watch Time per View (in Minutes)

Figure 3: Engagement peaks around 3.5 to 5 minutes, suggesting this range resonates most with viewers.

- Revenue growth accelerates for videos exceeding 30K watch hours, emphasizing the importance of scaling audience reach.

- Highest returns beyond 50,000 hours, likely due to increased ad impressions.
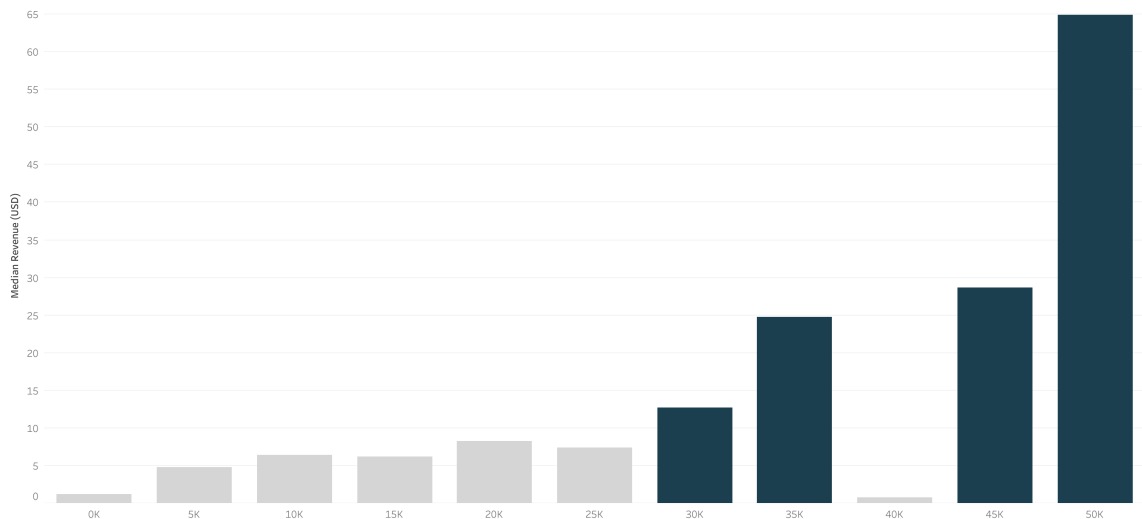
Median Revenue by Hours of Watch Time

Figure 4: A significant rise in median revenue is observed as total watch time surpasses 30,000 hours, with the highest returns beyond 50,000 hours.

3.3 Viewer Engagement and Dislike Ratios

- Shorter videos retain a higher percentage of viewers, while longer videos see retention drop-offs.

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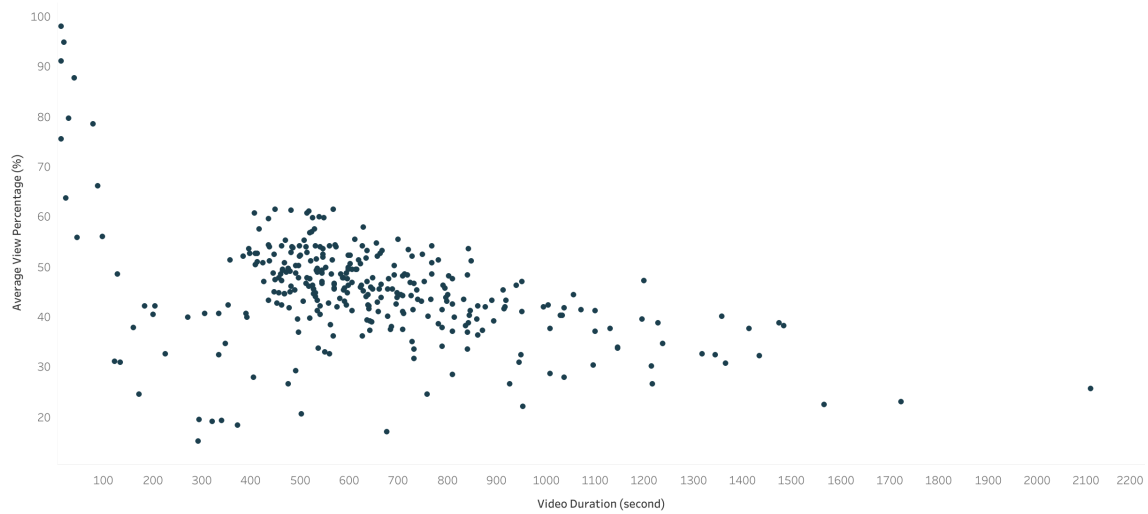Average View Percentage vs Video Duration

Figure 5: Shorter videos generally maintain higher average view percentages, while longer durations see a gradual decline in viewer retention.

- Videos with positive viewer sentiment, indicated by low dislike-to-like ratios, achieve higher watch times.

- Interestingly, moderate controversy can also drive significant engagement.

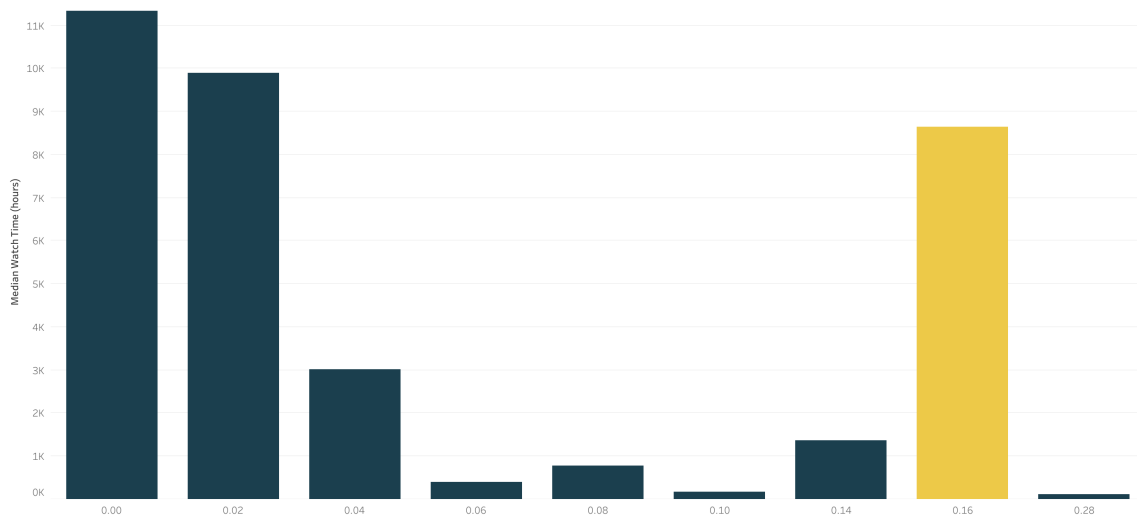Median Watch Time by Dislike-to-Like Ratio

Figure 6: Videos with lower dislike-to-like ratios generally achieve significantly higher median watch times, with a notable spike at a ratio of 0.16.

3.4 The Role of Video Features

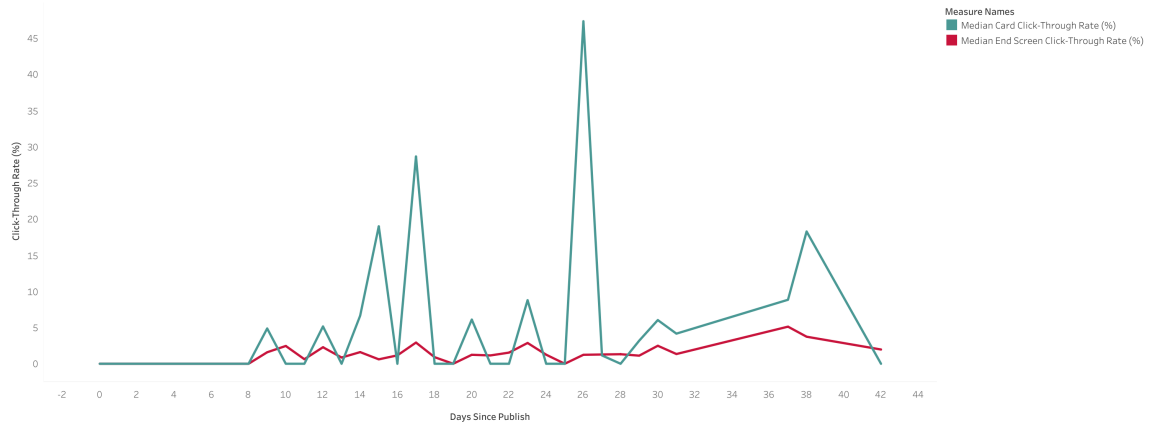- Cards outperform end-screens due to their mid-video placement, making them more engaging.

Figure 7: Card click-through rates show significant spikes while end-screen click-through rates remain relatively steady over the publishing timeline.

- Thumbnail design directly impacts initial viewer attraction but saturates with a broader audience reach.
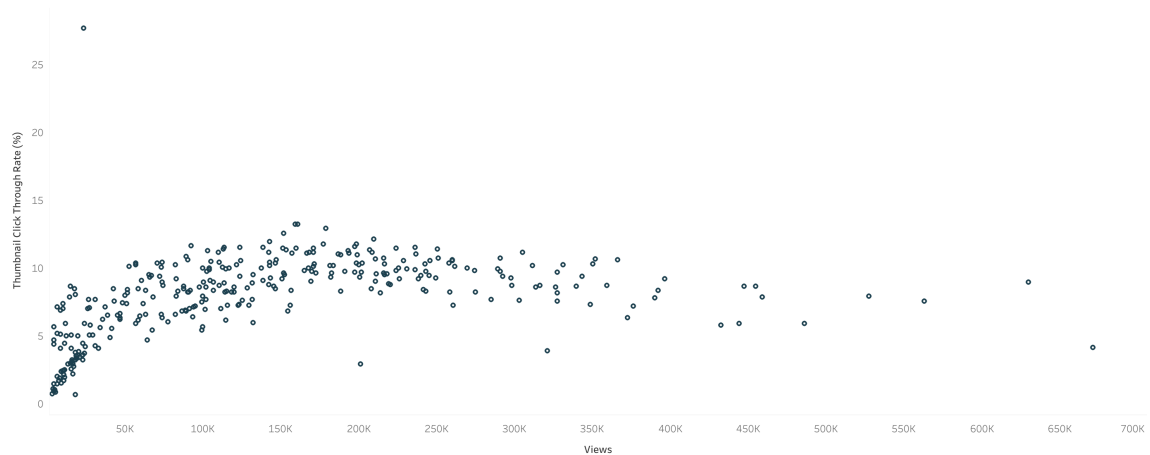

Figure 8: Higher click-through rates are observed for videos with fewer views, while videos with more views tend to stabilize around lower click-through rates.

4 Revenue Streams

- AdSense is the dominant income source, with steady growth from YouTube Premium starting in 2018.

- DoubleClick revenue declined after 2017, likely due to shifting ad strategies.
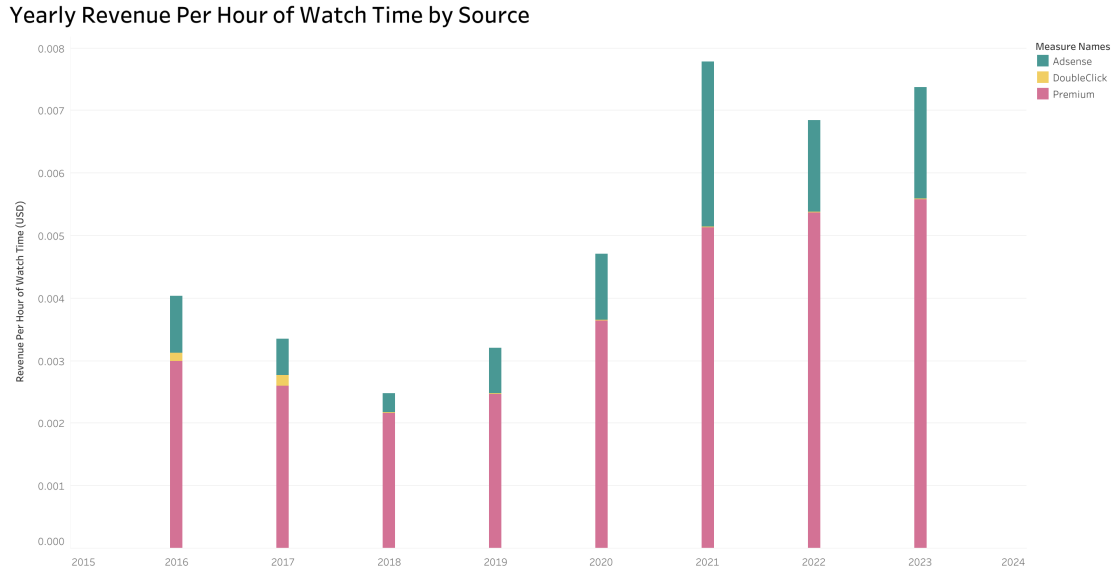
Yearly Revenue Per Hour of Watch Time by Source

Figure 9: Premium contributions dominate yearly revenue growth, with AdSense providing steady support and DoubleClick showing minimal impact.

5 Actionable Insights

- **Consistency Matters:** Regular uploads help sustain engagement and stabilize revenue.

- **Maximize Viewer Retention**: Create contents that keep viewers watching longer.

- **Keep Videos Engaging and Concise**: Shorter videos boost retention; longer ones increase ad impressions. Balance for best results.

- **Monitor Viewer Sentiment**: Positive feedback boosts retention, but moderate controversy can also increase engagement.

- **Engage Strategically**: Place cards at key moments and design engaging thumbnails to attract clicks and broaden your audience reach.

- **Diversify Revenue**: Focus on content appealing to YouTube Premium users while attracting AdSense and DoubleClick advertisers for a stable income.