
Exploratory Data Analysis of “Popular” Movies

Prepared By: Marvin Lee

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Business Case

- Microsoft's objective: **To start its own movie studio**
- Objective: To better understand the movie industry and determine the types of films to create
- Question: **What's the best film production strategy to implement?**
- Average time between original announcement of film & eventual release: **871 days**
- **70% of consumers** would rather watch new movies at home



Data Source + Approach

1

Data Source: TMDb via API (TMDb Wrapper); 1000/3000 random movie titles from the “Popular” database

2

Most of the insights come from analyzing movies released **between 01.2017 - 12.2019**

3

Assumption:

Microsoft is interested in starting a **cash flow positive studio**

4

Assumption:

$\text{Revenue} - \text{Budget} = \text{Gross Income}$

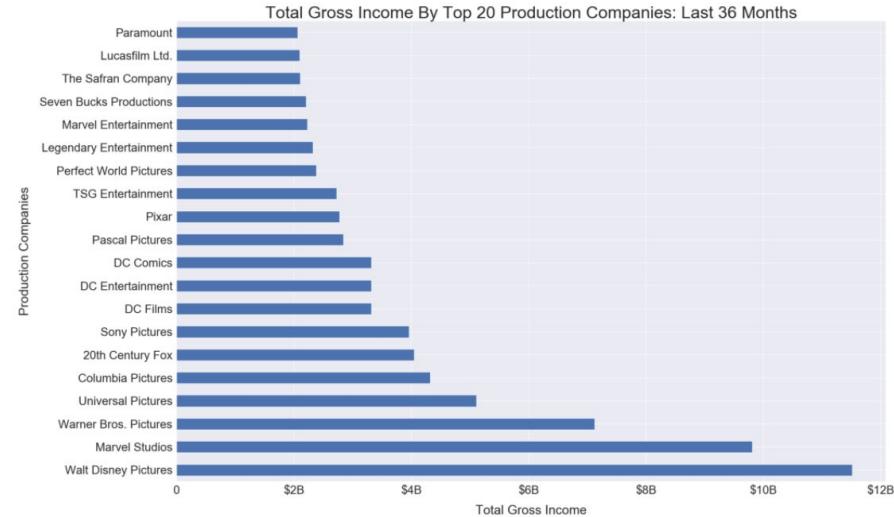
5

Hypothesis: “**Popularity Score**” isn’t a reliable metric

Production Companies

Who are the winners?

- Median gross income: \$0 USD
- These production companies from the last 36 months are solid choices (generally) for benchmarking
- **Top genres:** Action, Drama, and Thrillers

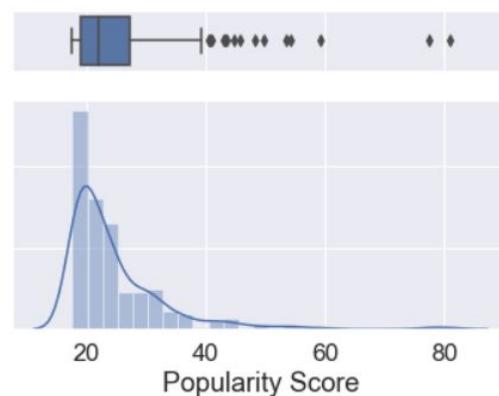
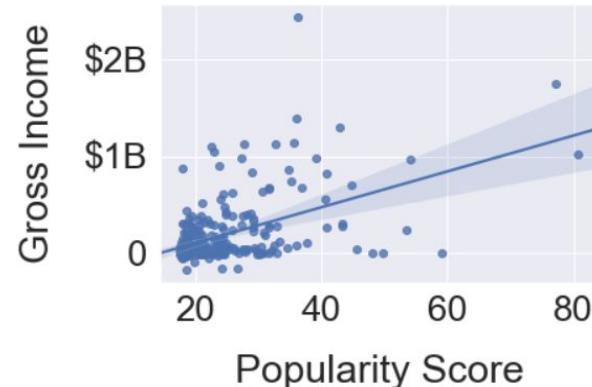


“Popularity” Scores

Reliable metric?

- There is a positive correlation between gross income and popularity score
- However, most top-earning films received popularity scores in the 20-30 range.
- *High* popularity scores are not characteristic of the top movie titles

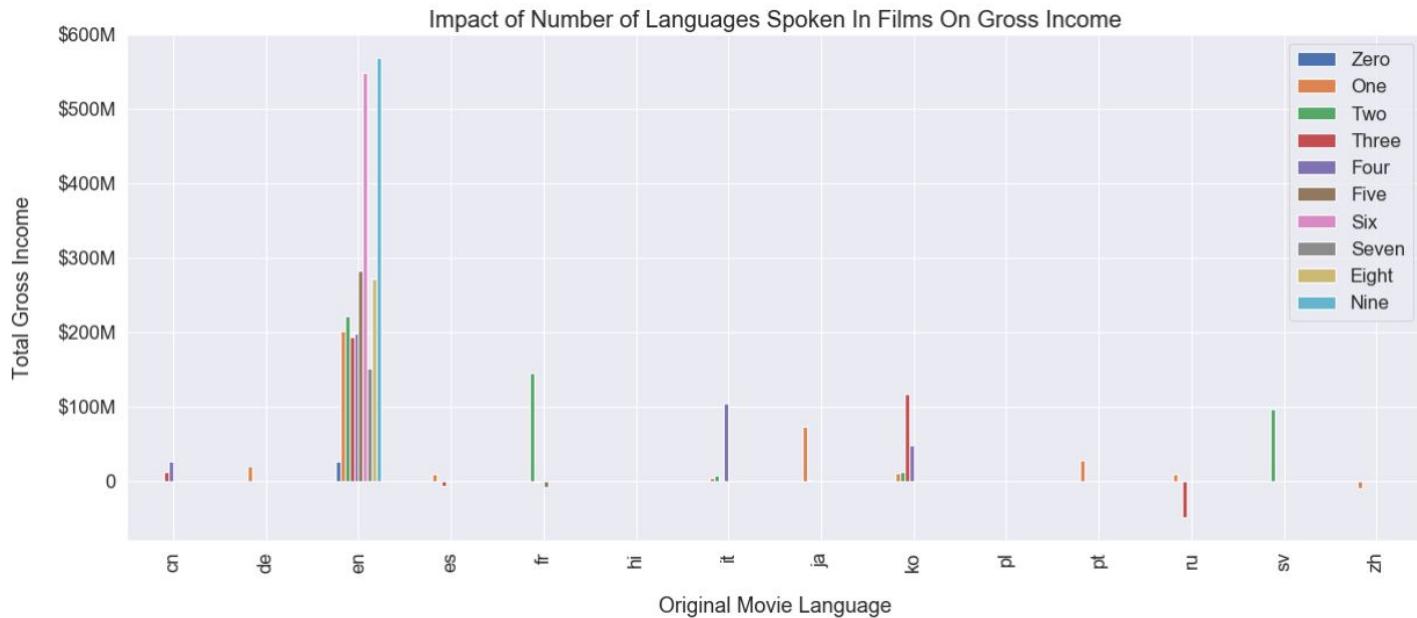
Income-Popularity Relationship: Last 36 Months





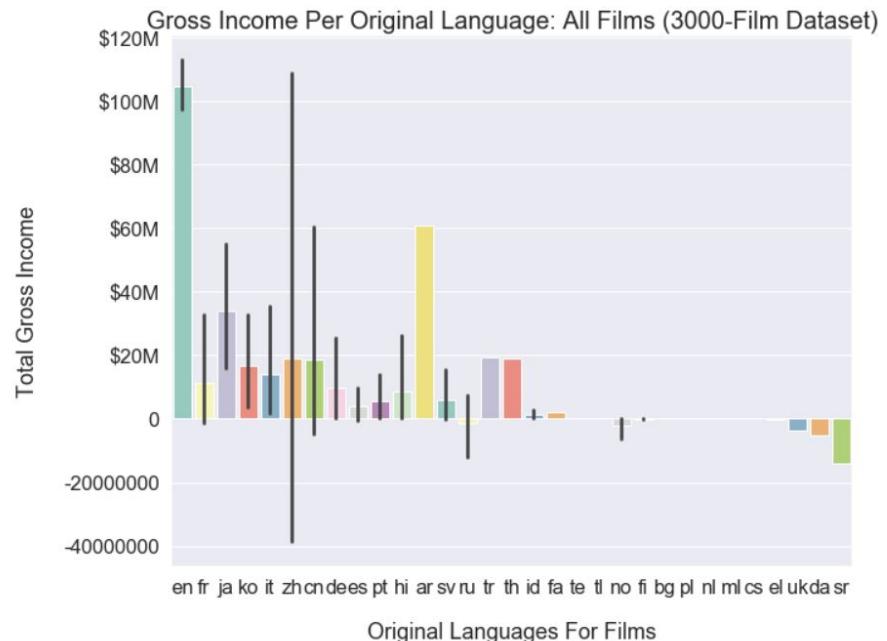
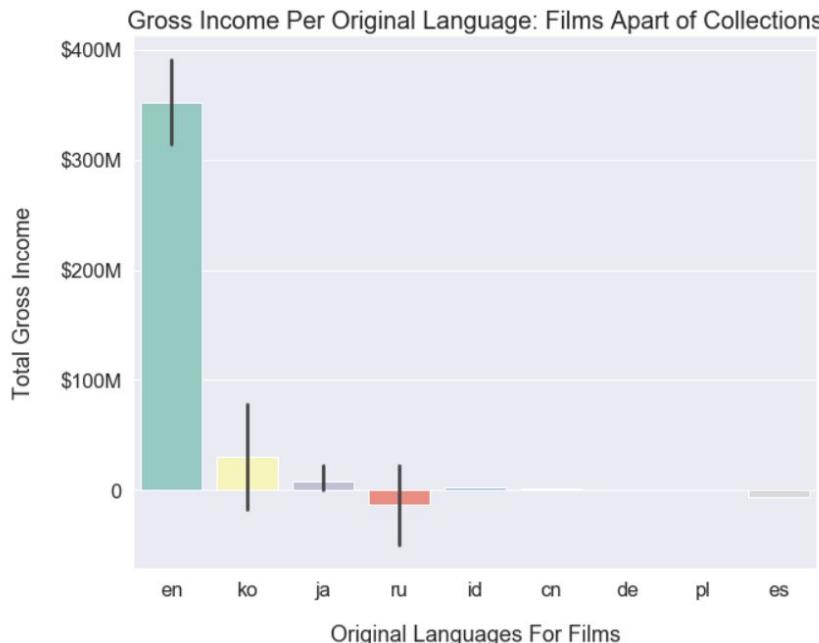
Language Factor

1. Films with English as original language that had **3 or more spoken languages** are heads and shoulders above the rest, consistently.
 2. Films with **Japanese as their original language** brought in the 2nd most gross earnings



Films Apart of Collections

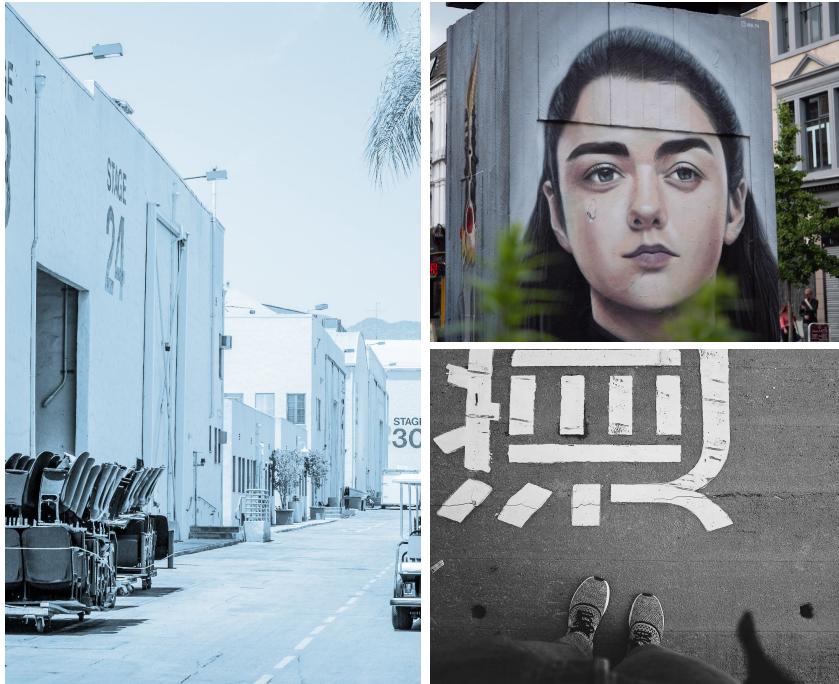
More than 65% of gross income from random sample of 1000 titles came from movies apart of collections



Recommendations:

Given Microsoft's stature as a global brand, **it is recommended** to start an original movie studio, but with the following strategies in mind:

- 01** | Consider partnership or acquisition
- 02** | Produce films with both English-language origin and at least four spoken languages
- 03** | Produce films (or series) with English-language origin and ability to be expanded into collections if well-received
- 04** | Consider action films with origin in Japanese or Korean
- 05** | **Future Analysis:** How do metrics like “popularity score” and “vote count” relate to time a customer spends within an online streaming platform?



Thank You :)



Questions?

Contact:

<https://www.linkedin.com/in/marvinleemills/>

<https://github.com/eme1333>

