

# **MSFT Goes to the Movies**

**Customer Analysis & Insights (April 2020)**

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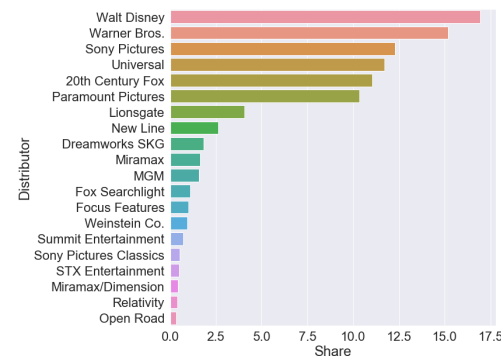
## Problem Statement:

**Microsoft** sees all the big companies creating original video content, and they want to get in on the fun. They have decided to **create a new movie studio**, but the problem is they don't know anything about creating movies. They have hired you to **help them better understand the movie industry**.

Your team is charged with doing **data analysis** and creating a presentation that explores **what type of films are currently doing the best** at the box office. You must then translate those findings into **actionable insights** that the CEO can use when deciding what type of films they should be creating.

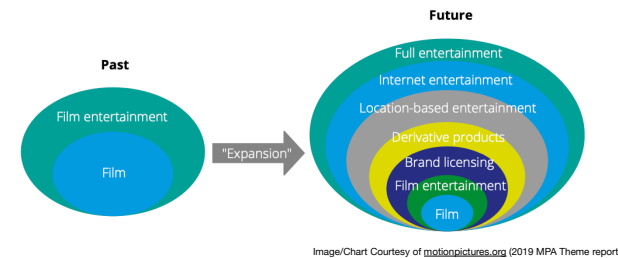
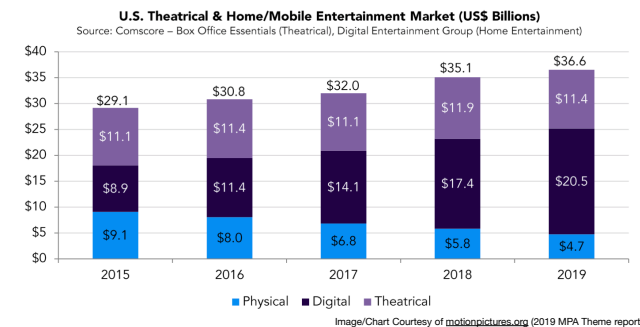
Our client Microsoft have charged us with satisfying their interest in create movies with a better understanding of the movie industry and actionable insights, supported by data analysis, that informs them how to make a transition into such a booming, but uncertain industry.

## Industry Insights Making a Movie



### Takeaways:

1. Mimick Industry Leaders (target 1% marketshare)
2. Industry trends (digital age, diversify revenue streams)

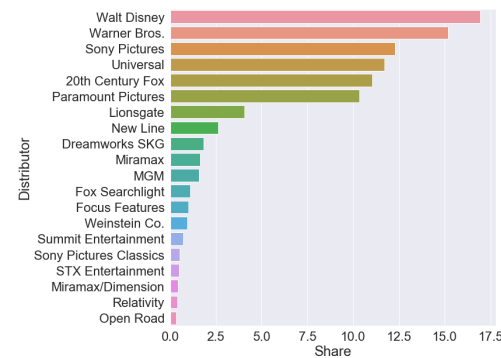


- There are 3 main things to consider upon entry.
- The first is market share and who has it.
- This tells us exactly who Microsoft will be competing against and what businesses they might want to mimic as they build their brand.
- The graph to the left is a collection of the top 20 distributors in the industry organized by market share.
- Evidently Walt Disney and Warner Bros are the giants with around 16% market share in this \$40B industry.
- A decent goal would be to strategize how to get to 1% to put MSFT right in the middle of the pack.
- Second, there are 2 fundamental parts to the filmmaking process, production and distribution.
- Though Microsoft may already be more equipped for the latter due to it's foundations in technological innovation,
- the other trends that make sense to pay attention to include a massive shift in how people are consuming multimedia as is evidenced in the graph to the top right
- Additionally there are increasing opportunities to capitalize on the benefits of culturing an ecosystem or "movie universe" that people can buy into outside of the theater leading to other consumer products

<https://www.motionpictures.org/wp-content/uploads/2020/03/MPA-THEME-2019.pdf>

# Industry Insights

## Making a Movie



### Takeaways:

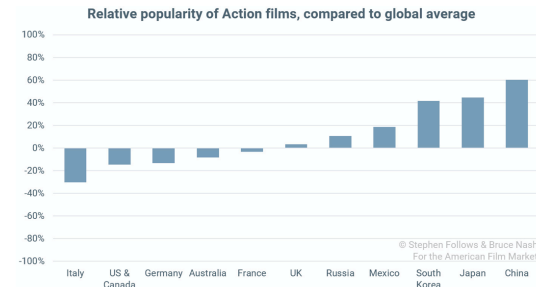
1. Mimic industry leaders (target 1% marketshare)
2. Industry trends (digital age, diversify revenue streams)
3. Maintain global outlook

### 2019 Top 20 International Box Office Markets – All Films (US\$ Billions)

Source: IHS Markit, local sources

1. China <sup>11</sup>	\$9.3	11. Italy	\$0.7
2. Japan	\$2.4	12. Spain	\$0.7
3. South Korea	\$1.6	13. Brazil	\$0.7
4. U.K.	\$1.6	14. Taiwan	\$0.4
5. France	\$1.6	15. Netherlands	\$0.4
6. India	\$1.6	16. Indonesia	\$0.4
7. Germany	\$1.2	17. Poland	\$0.3
8. Mexico	\$1.0	18. UAE	\$0.3
9. Russia	\$0.9	19. Malaysia	\$0.3
10. Australia	\$0.9	20. Hong Kong	\$0.3

Image/Chart Courtesy of [motionpictures.org](http://motionpictures.org) (2019 MPA Theme report)



© Stephen Follows & Bruce Nash  
For the American Film Market

Image/Chart Courtesy of [motionpictures.org](http://motionpictures.org) (2019 MPA Theme report)

- Last but not least, one should pay attention to where and how the movie industry has grown the most.
- As you can see for the charts on the right, the largest movie industries after the U.S. are China and Japan.
- So it makes sense to make movies that would appeal to a significant portion of their populations, as they make up a significant portion of the market.
- This might include movies with themes or elements that are culturally agnostic or globally well understood, such as action.
- As a multibillion dollar company with plentiful resources, Microsoft should absolutely take a global outlook.

## **Business Value**

### **From Software to Movies**

- Increased reward gained by diversifying portfolio with movie industry, though at increased risk
- Opportunity to capture market share of \$40B and grow using the built-in infrastructure/platform of Microsoft software as a primary distributor and cloud service provider [potentially as subscription based service]
- Extend consumer products portfolio with hardware optimized for digital movie market + expanded marketing prospects through movie sales (globally)

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The business value gained from this venture include, but are not limited to:

1. Increased reward by diversifying their portfolio (What can our company do better than any of its competitors in its current market? Answer: Distribute on digital cloud platform —> XBOX Live is evidence)
2. Opportunity to capture part of a \$40B market, further sustained through subscription based services
3. Extend consumer products portfolio within the market optimized to provide content for their global customers

<https://hbr.org/1997/11/to-diversify-or-not-to-diversify>

## Three Questions

How can Microsoft best perform in a global digital market?

1. Which **genre** should we choose to get the most **global reach**?
2. Which **director/producer** has demonstrated the best success in the digital age (2010-) to lead us, and **recruit the best talent**?
3. Are there **seasonal trends** that would suggest when we should **release** movies or what **genres** we should focus on in each season to maximize profit?

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With those three takeaways in mind, here are three questions from my analysis that will serve as the basis of the information I will share today.

The first is to consider which genres have been most successful over the years in the international market.

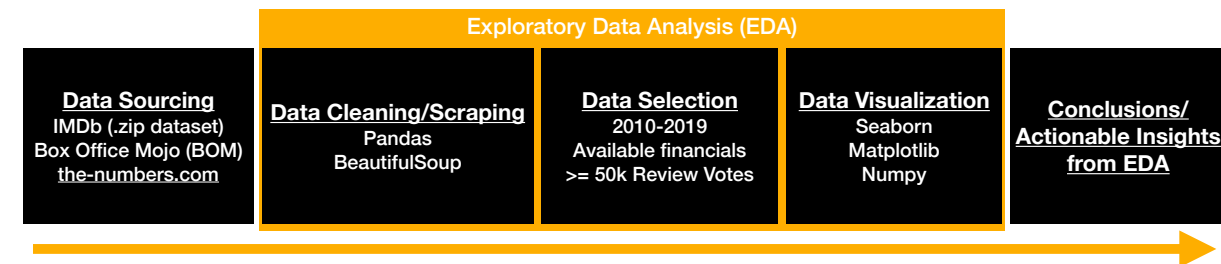
The second includes identifying which people, namely the director/producer, have demonstrated the ability a keen ability to generated revenue, which is driven by garnering top talent, compelling story lines, and excellent market awareness.

And finally, I briefly will touch on what season trends seem apparent in the movie genres that have been most successful,

And whether this information might give insight on whether there is an opportunity to sustainability produce and distribute year round or double down during certain times of the year.

# Methodology

## The Power of Data

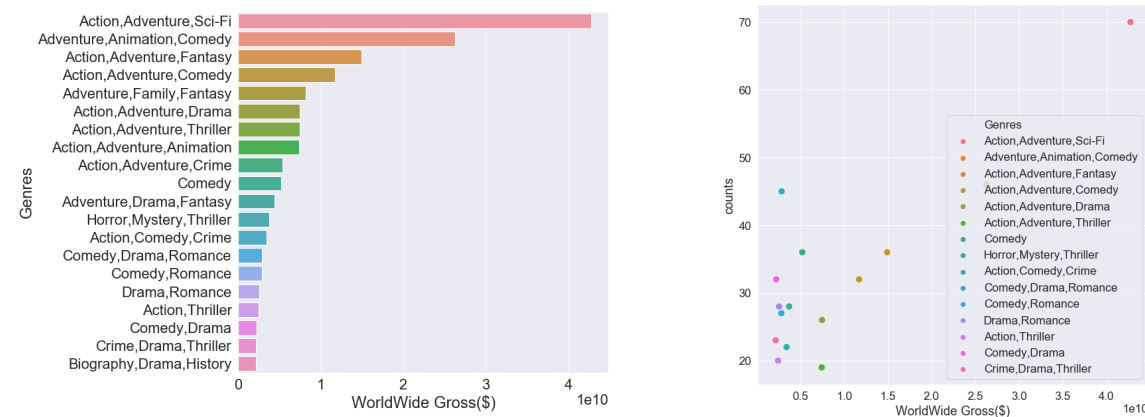


Title Code	Title	Director	Release Date	Genre	Avg Rating	Worldwide Gross	International Gross	Domestic Gross
IMDb	IMDb	IMDb	IMDb/BOM	IMDb	IMDb	BOM / the-numbers	BOM	BOM

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- My methodology includes sourcing data from Amazon's IMDb / BOM and information from [the-numbers.com](https://www.the-numbers.com/),
- The chart at the bottom represents the data we were looking for
- Data cleaning primarily done in python language with the pandas library of methods, and data scraping with BeautifulSoup from bs4
- Some of the assumptions taken to simplify data during cleaning include using (\$\$) as the primary success marker in qualifying top performers, and limitations are that I primarily used IMDb based sources due to its exquisite organization, though there are other available platforms
- narrowing down our data selection to titles from 2010-2019, those with available financial info on IMDb, and with 50k + votes on IMDb allowed us to capture the most accurate information available for a successful subsection of market
- Data visualizations and calculations were facilitated through the seaborn, matplotlib, and numpy packages

# Genres for Global Reach



## Takeaways:

1. Multi-classification for movies is a rising trend
2. Top movies classified by unique genre collection: AcAdSci, AdAnCo
3. # of genre movies not necessarily associated with genre success

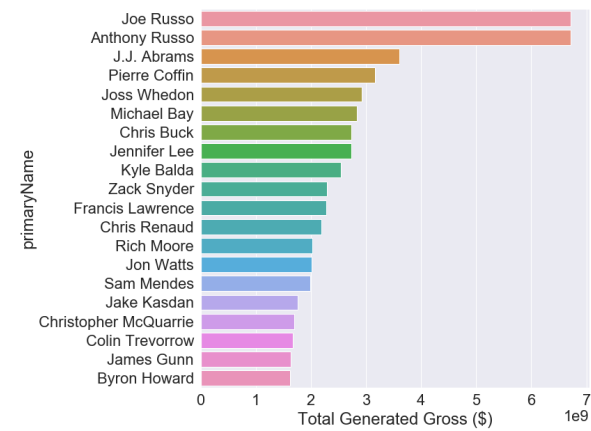
All Worldwide Gross plots in (\$Billions)

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- First we examine genres that would allow Microsoft to maximize their global reach.
- In organizing the data by genre, it's first worth recognizing that many more movies are being classified by multiple genres.
- With that insight we were able to plot worldwide gross by genre collection, to discover the genre collections that populate the most successful titles as seen to the left.
- They include [Action, Adventure, Sci-fi], [Adventure, Animation, Comedy], and [Action, Adventure, Fantasy]
- In an auxiliary box plot on the conclusions slide(11), we can see that this is confirmed, with [Adventure, Animation, Comedy] having the highest median of the top 6 of around \$500M, but with a \$500M spread of variability in the IQR (middle 50% of the data).
- Finally we explored the correlation between the number of movies made and the worldwide gross, and do not see a strong correlation within our subset.



# Choose the Winning Director



## Takeaways:

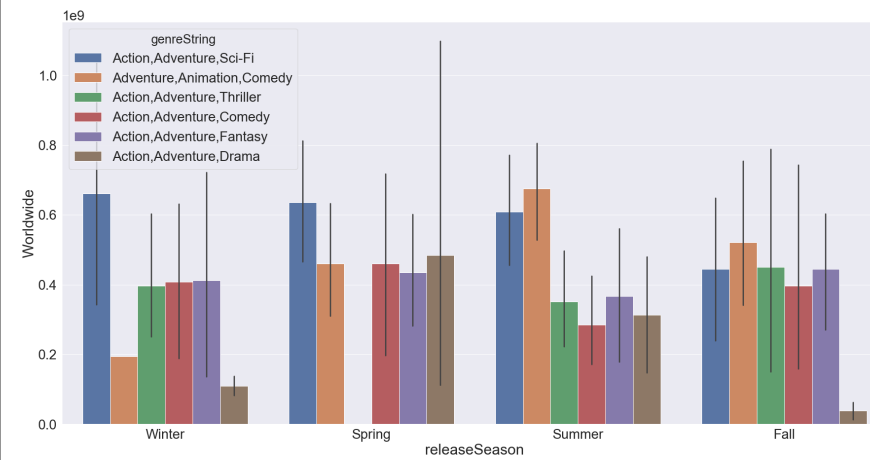
1. Choose directors within the top 20
2. Producers (3-5) , Director (1-2)
3. Recruit the best talent

All Worldwide Gross plots in (\$Billions)

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- In plotting director success, it seems that simply based on gross, the clear favorites are the Russo brothers.
- However it's important to note that each movie has 1 or 2 directors and multiple producers. And both working closely together to build the best talent.
- So in choosing the best leadership possible, one can guarantee to attract the best talent to generate revenue

# Seasons Greetings



## Takeaways:

1. Release Spring/Summer, least variability
2. AcAdSci and AdAnCo are the rockstars

- Finally, the season data plotted vs worldwide gross and split by genre reveals that the spring/summer months have the least variability in success of every genre
- Secondly AcAdSci and AdAnCom are the most resilient to making the most money throughout the whole year

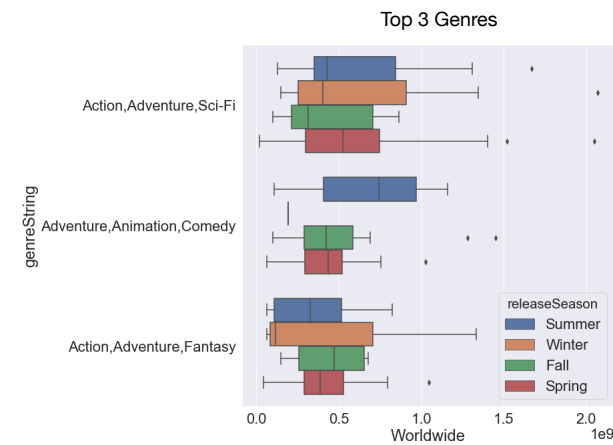
# Conclusions/Actionable Insights

## Do The Right Thing

1.**Genre:** Action, Adventure, SciFi (AcAdSci) & Adventure, Animation, Comedy (AdAnCo)

2.**Directors:** Russo Brothers, or top 20 directors in the top 3 genres based on worldwide gross in digital age [2010 - ]

3.**Seasons:** focus on spring/summer, with opportunities for year-round production, with selected genres [AcAdSci & AdAnCo]



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- In conclusion, the genres to best focus resources include AcAdSci & AdAnCo,
- ideally with director/producers combos of the caliber, market awareness, and cast recruiting capability of the Russo brothers,
- With the best seasons for release being the spring/summer for most types of movies [with an opportunity for year round production with the suggested genres]

# Future Work Item 1

## Tracking Director/Producer Growth

- Base director projected success on all of their work, particularly their consistency and potential range for success (boxplot)
- Do directors get better as they produce more movies (gained experience) compared to the genre average gross of the time —> shows growth trajectory and whether or not their current production is above or below average

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- 1.Boxplot (narrower plot/low stddev indicates consistency, while being in the upper quartile indicates high performance)
2. Line plot (movie gross income vs. movie number + line representing average gross of movie market gross)

## Future Work Item 2

### Where's the gross? How's my budget?

- In the absence of budget information, a true revenue would reveal how well directors/genres manage budgets [correlation between budget & success?]
- Correlation of movie success with percentage of domestic/international sales, will the movies that make the most revenue have an even split 50/50 (maybe in the US and China); how does this vary by region

## **Future Work Item 3**

### **Kids Market**

- It should be noted that, though pG13 movies may be the most made, kids movies have the potential to bring in at least 2 people per interest, like more
- As movies become more digital, what are better ways to engage families, particularly in the franchise of the characters and movie-verse created

# Thank You