

HASBRO, Inc.

Voice of Customer (VoC)

A CASE STUDY PRESENTED BY:
DATA DRILLERS

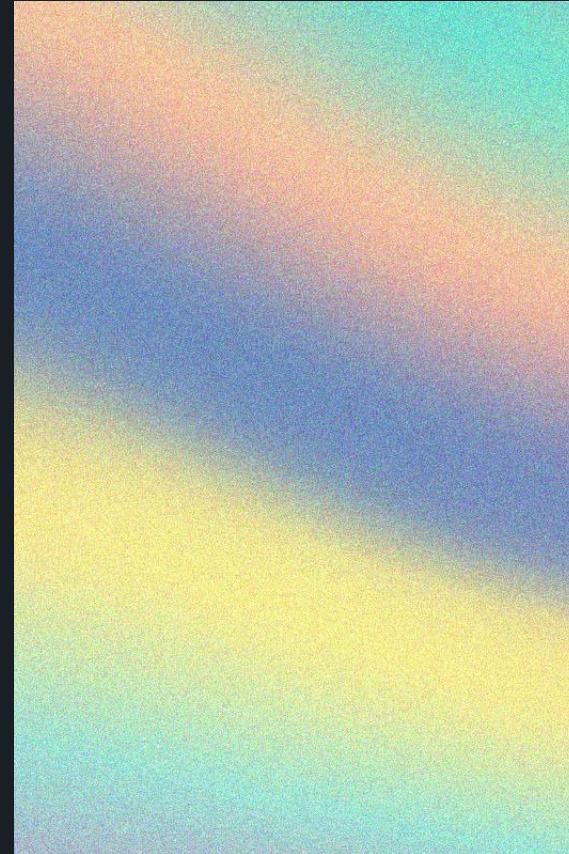


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INTRODUCTION / EXECUTIVE SUMMARY

INTRODUCTION



- **Hasbro** is a multinational conglomerate specializing in toys, board games, & media.
- Hasbro's eCommerce division does a significant amount of business on **amazon.com**.
 - Over the past two quarters, executives have become increasingly nervous about the quality of the products competing with Hasbro products on Amazon, specifically in the **toys** and **games** categories.
- Multiple anecdotal reports from family members and friends of executives state:
 1. The toys and games category is so diluted with products that are nearly indistinguishable from Hasbro products that it's hard to know what is what, and even harder to find the right merchandise when seeking it.
 2. Many of the products in the category are of such a poor quality that they pose health threats to their children.
 3. Some Amazon products claim to be Hasbro products online, but when they are received they are clearly counterfeit.



- These reports could be a huge problem for Hasbro that hurt their brand image and could result in **multifaceted compliance** and **marketing issues**.
 - However, since these issues are coming from *family* and *friends* of executives, the issue could be exacerbated and the sentiment may not be based in reality.
- **In this case study** we will be looking for new product opportunities in these categories (*toys and games*) by applying **advanced analytic techniques**.



EXECUTIVE SUMMARY



- Through these **advanced analytic techniques** we aim to
 - 1. Get ahead of the market by learning what products are becoming more popular over time
 - Discern what products please customers the most
 - 2. Discover product lines Hasbro should divest from by
 - Listening to the “**voice of customer**” (**VoC**) for issues in the supply chain and product positioning
- **In this analysis** we will develop an application and conduct an analysis to make headway on these problems and tackle some of these issues.



2

BUSINESS QUESTION & HYPOTHESES

BUSINESS QUESTION



1. What products can Hasbro offer to **excite potential customers?**
 - 😊 a. What products are highly rated and positively reviewed?
 - ⌚ b. What products should Hasbro focus on **selling in the future?**
2. How does the **market** feel about Hasbro and their products?
 - a. Are the problems that executives worry about a serious concern? (**Diluted market, low quality, counterfeit**) A blue icon of a megaphone with sound waves emanating from it.
 - b. How have these attitudes **changed over time?** A blue icon showing a circular arrow with two arrows pointing in opposite directions.

HYPOTHESIS



1. Through our findings we will identify which products have **positive reviews** and **negative reviews** to make appropriate recommendations for future sales
 - i. Bad reviews suggesting counterfeit as well
2. We hypothesize that **board games** will be a category that will be **positively reviewed** as those are harder to counterfeit
3. We expect a significant change in the most desirable products (higher ranked) Hasbro offers as well as change in customers over time
 - a. Post-2016 we expect older customers
 - i. Products such as video games may be more appealing to younger people
 - b. We also hypothesize that the most desirable products will not be the same pre-2016 to post-2016



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DATA & METHODS

DATA & METHODS



- Reviews from amazon.com of the toys & games category
 - “Toys_and_games.json.zip”
- 1657 reviews, 35 products
- Variables
 - overall
 - text
 - sku
 - reviewer_id
 - date

	overall	text	sku	reviewer_id	date
1	5	The stained glass pages are pretty cool. And it is nice...	0486427706	A2LSCFZM2FBZK7	2013-10-06
2	5	My 11 y.o. loved this...and so do I (you know I really b...	0486427706	A3IXP5VS847GE5	2013-08-09
3	5	The pictures are great , I've done one and gave it to a ...	0486427706	A1274GG1EB2JLJ	2016-04-05
4	5	I absolutely love this book! Its translucent paper mak...	0486427706	A30X5EGBYAZQQK	2016-02-13
5	5	I love it!	0486427706	A3U6UNXLAY6ZV	2015-12-10
6	5	MY HUSBAND LOVED IT. HE IS IN TO DRAGONS.	0486427706	A1SAJF5SNM6WJS	2015-10-26
7	5	love it	0486427706	A2HK5AVQW6AUQ5	2015-10-12
8	4	cool	0486427706	AHJWO3SIOSOOR	2015-09-15
9	5	Exactly as described, nice pictures, great transaction, ...	0486427706	ALLSNTNR6N6UL	2015-05-24

DATA & METHODS



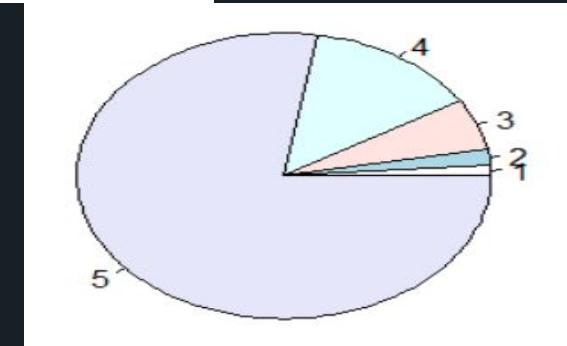
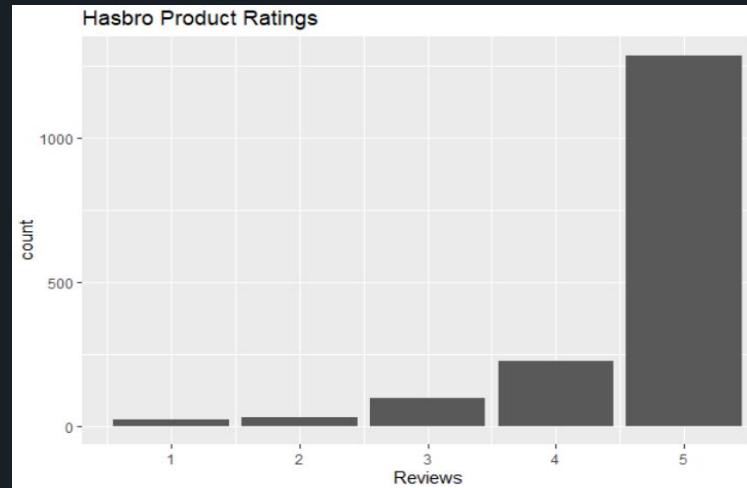
- Analyze distribution of customer ratings
- Group customer review by ratings and analyze frequently used words in review
 - Split data into reviews with ratings of 1-3 (poor performing) and 4-5 (high performing)
 - For high performing group, split the data before and after 2016 to analyze trends
 - For each group, conduct natural language processing (NLP) and extract frequently used words and positive words
- Figure out what kind of products are rated highly/poorly based on commonly used words

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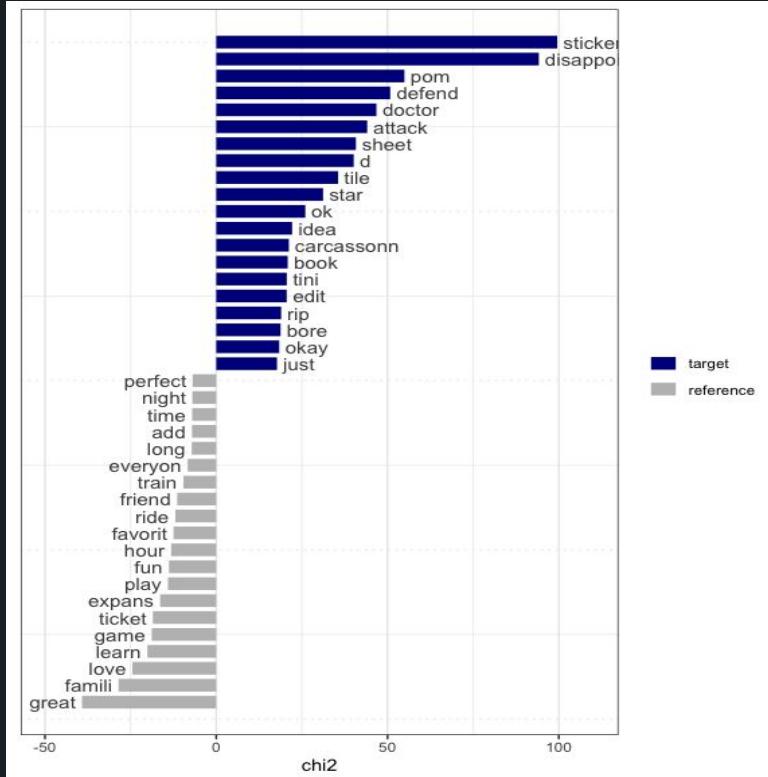
FINDINGS

Reviews

Stars	Count
1	21
2	28
3	97
4	225
5	1286

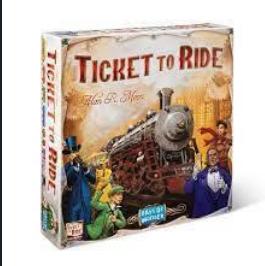


Poor Performance Products

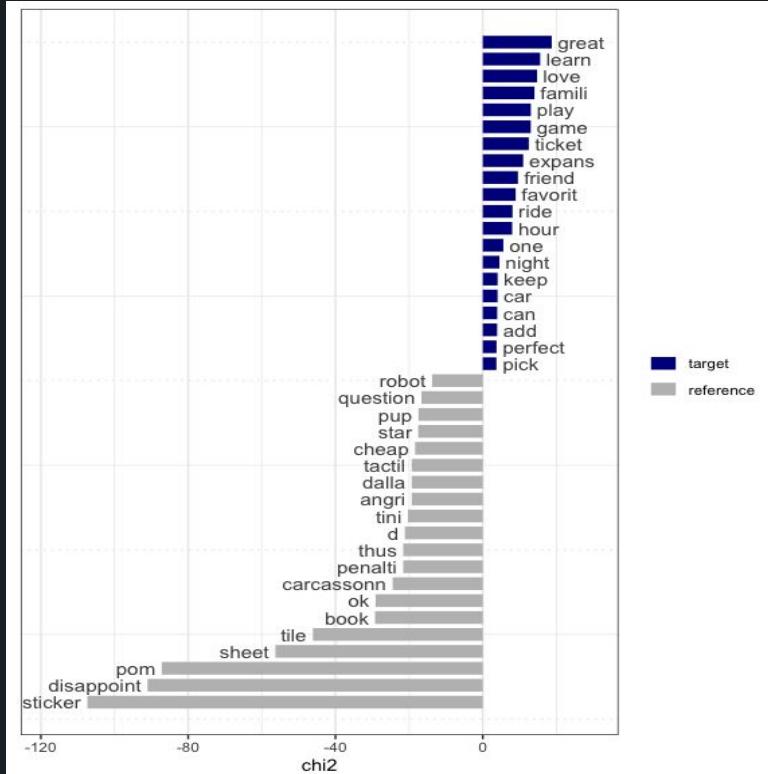


Most Popular Poor Performance Products

Item	Count
Ticket to Ride	33
Quiddler	15
Book with Toy	13

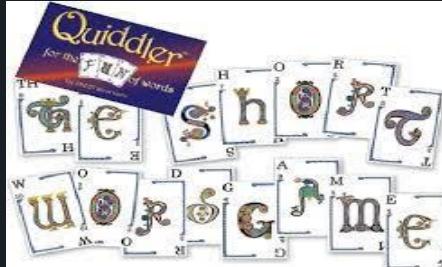


High Performance Products (Pre 2016)

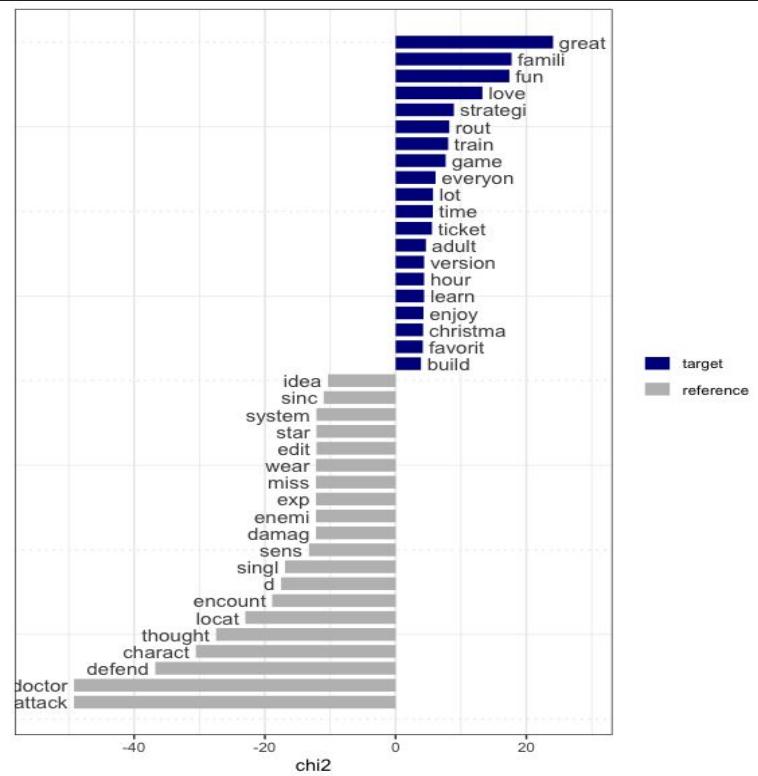


Most Popular High Performance Products (Pre 2016)

Item	Count
Ticket to Ride	490
Quiddler	113



High Performance Products (Post 2016)



Most Popular High Performance Products (Post 2016)

Item	Count
Ticket to Ride	285
Quiddler	59



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DISCUSSION

DISCUSSION



Low Performing Products

Words relating to “stickers” and “books” are common among products with poor reviews

- Should look away from products like sticker books

Words relating to combat are also common - “attack”, “defend”

- Possibly means games relating to combat are becoming less popular with our consumers

Carcassonne also is a popular word among poorly reviewed items

DISCUSSION



High Performing Products

“Family” is consistent between pre and post 2016

- Should continue trying to market games towards family play

After 2016, new words appear that weren’t there before 2016

- Now see trends with “build”, “adult”, and “strategy”
 - Gives us different types of products that we can focus on
 - Also gives a new demographic to potentially focus on
- “Christmas” suggests working around the holidays

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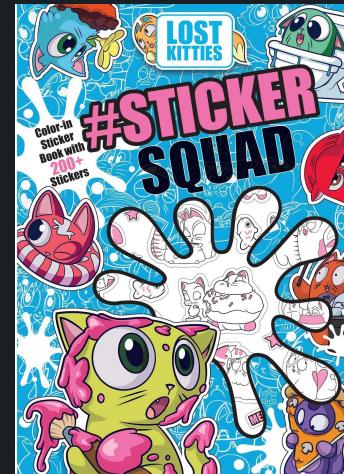
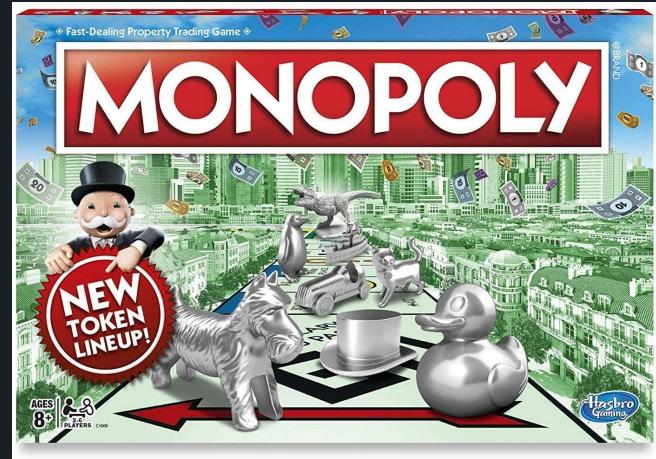
RECOMMENDATIONS

& VALUE

RECOMMENDATIONS



- ❖ High-performance products
 - Strategic board games
 - Suitable for family and groups of friends
- ❖ Low-performance products
 - Combat board game (defend-attack)
 - Sticker books

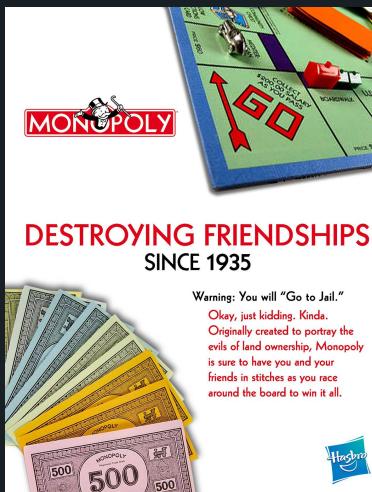


RECOMMENDATIONS



- ❖ Focus on strategic family-friendly board games
- ❖ Start interactive and family-friendly advertising campaigns (like Ravensburger)
- ❖ Increase sales and promotions program near holiday seasons
 - Christmas
 - Thanksgivings
 - Summer holiday

20% INCREASE IN REVENUE



REFERENCES



Brian Sozzi. (2020, October 27). *Hasbro CEO: Toy sales are rocking before the holidays.* Yahoo!

Ravensburger. (2020, September 28). *Toys - Ravensburger revenue 1999-2018.* Statista.



QUESTIONS?