

MGTA479 PRICING ANALYTICS

TOYS PRICE DISCRIMINATION

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Introduction



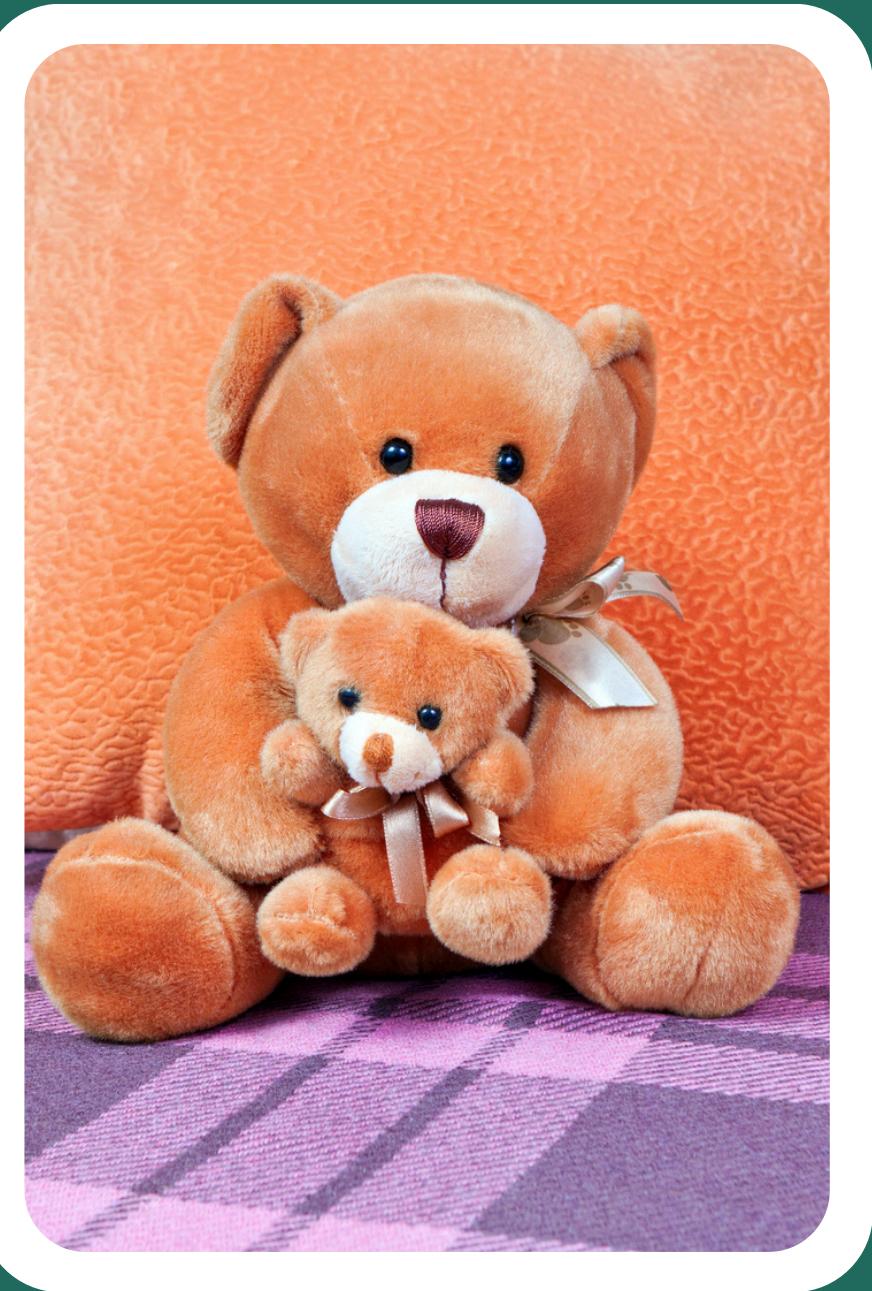
We investigated the pricing dynamics for a Toys Retail company called Maven Toys with 50 stores in Mexico from 2022-01 to 2023-09, analyzing how various factors influence pricing decisions across different product categories.

We analyzed a dataset containing products, stores, and daily sales data, along with current inventory at each store for a toy company, focusing on diverse products like figurines, collectibles, and plush toys, to uncover patterns and discrepancies in pricing strategies.

Current Pricing Strategies

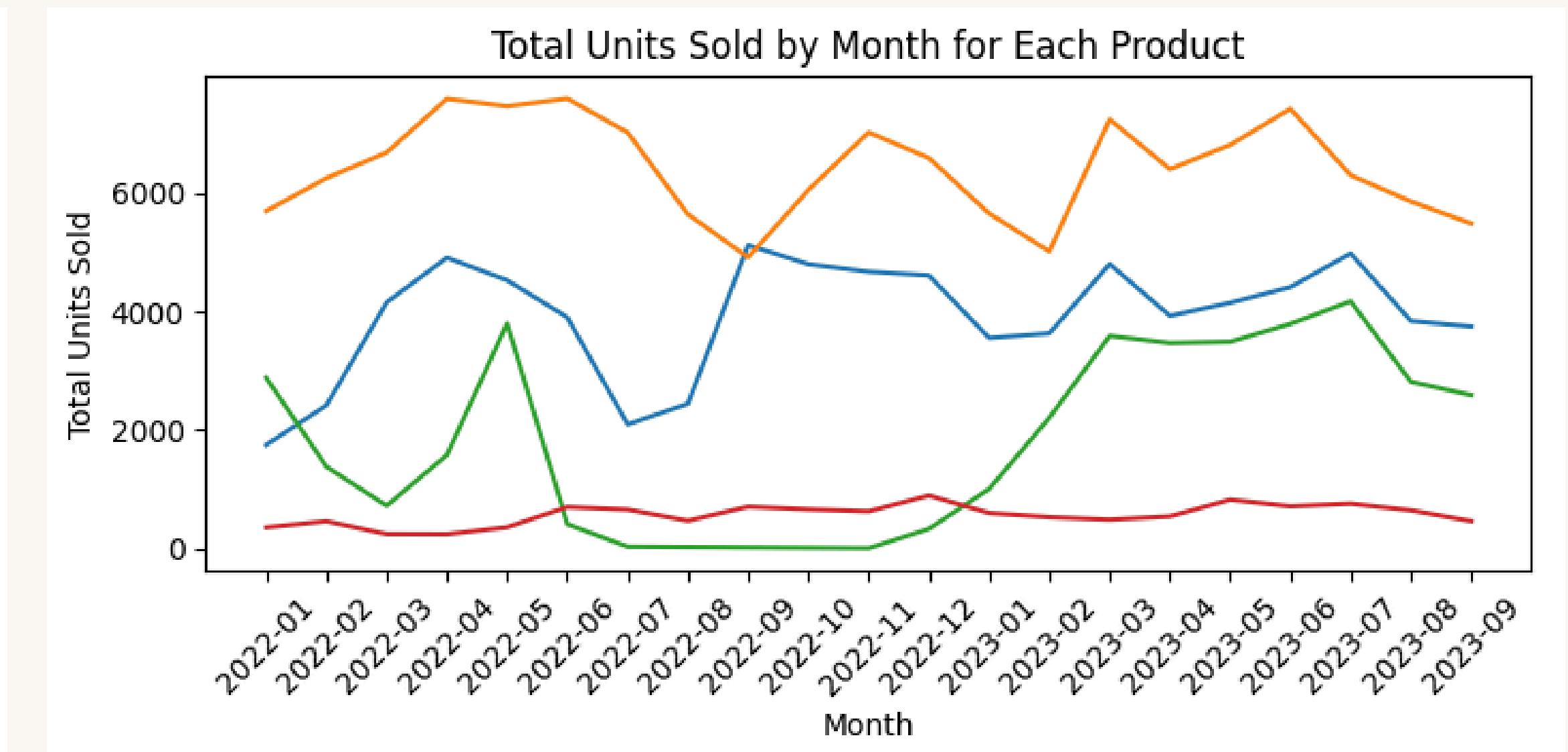
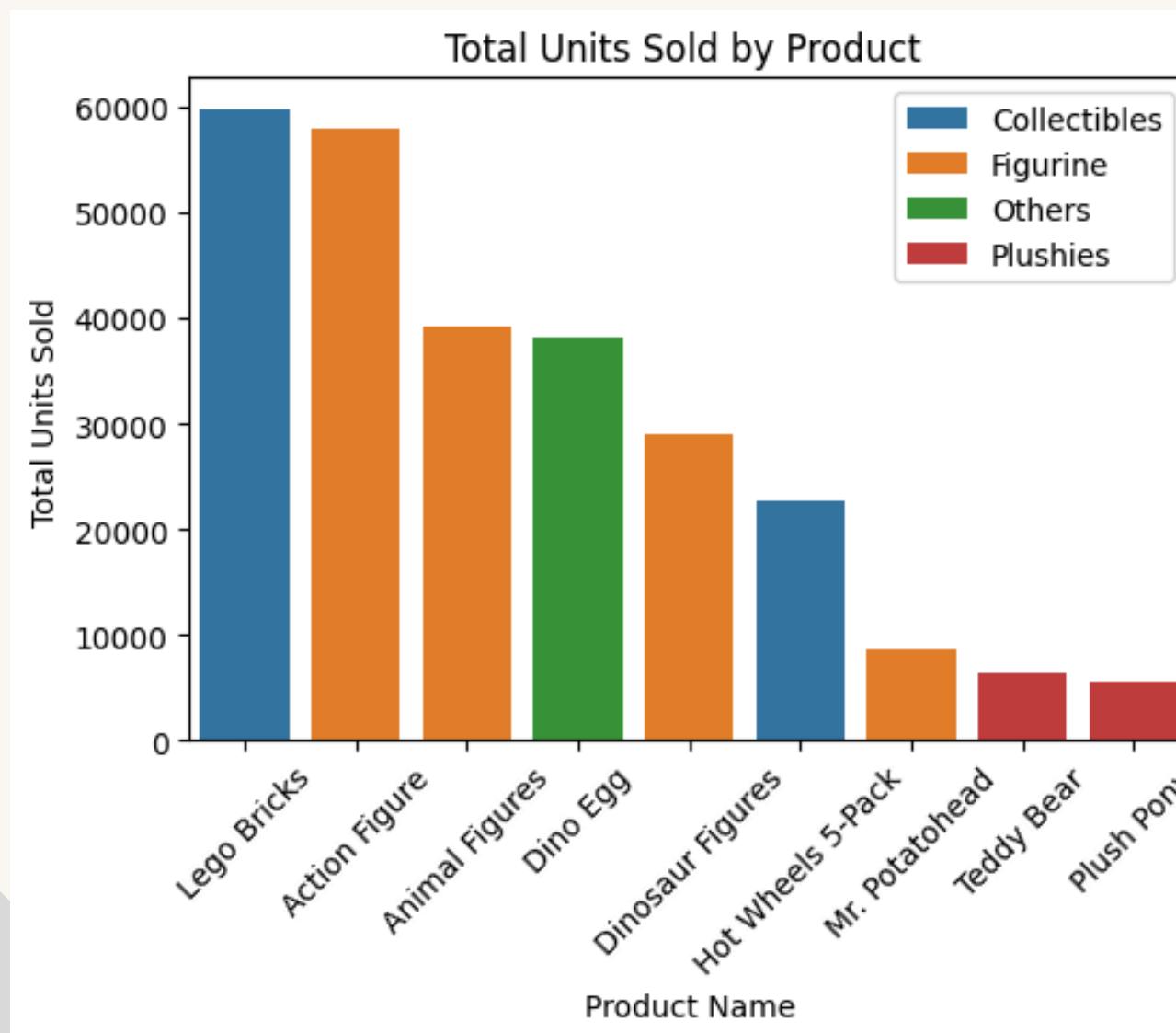
Uniformity in pricing across different products despite varying cost structures and market demands.

- Does not fully capitalize on the opportunities presented by market and demand variability
- Leads to suboptimal profitability



Analytical Insights

- Seasonal fluctuations - possibly coinciding with holidays or promotional periods.
- Spikes seen during March-May period
- When the sales for figurines and demand for collectibles follow a similar trend.



Analytical Insights

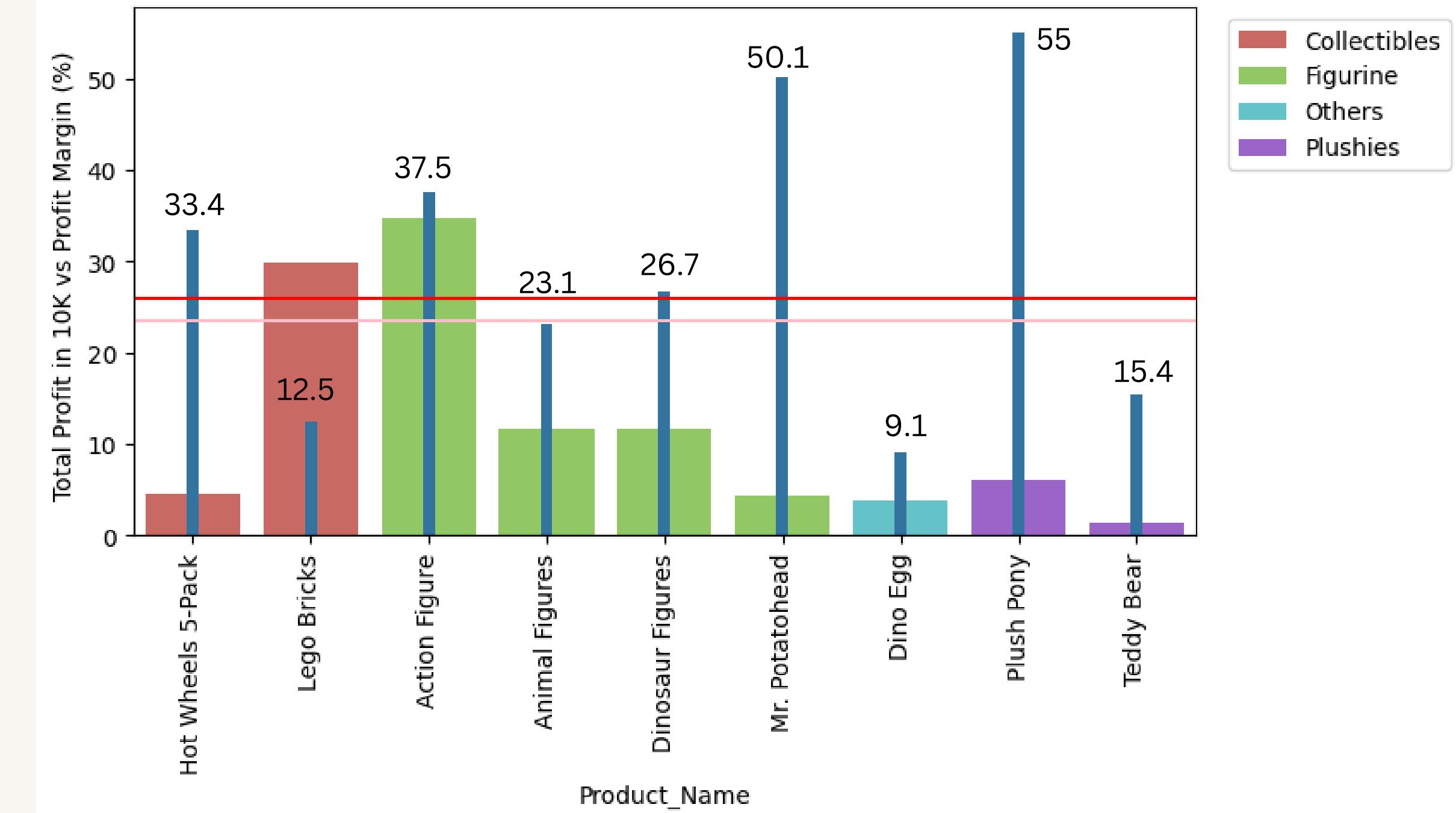
Current Standard for Profit Margin for the Retailers in Toys Industry is: **23.3% to 25.9%** per item

Non-Problemsatic Products:

Hot Wheels, Action Figures, Dinosaur Figures, Mr. Potato Head, Plush Pony

Need to Look into:

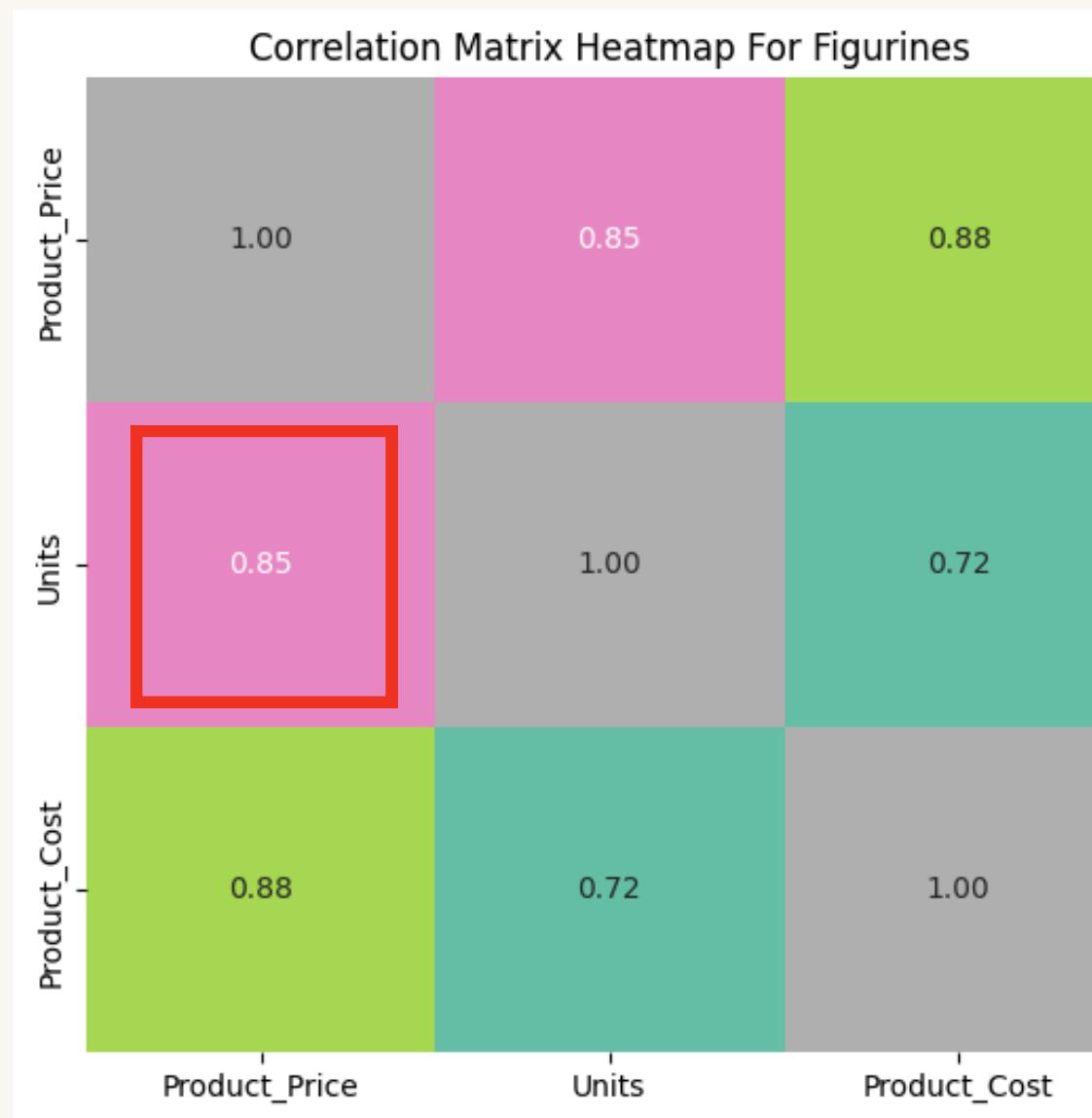
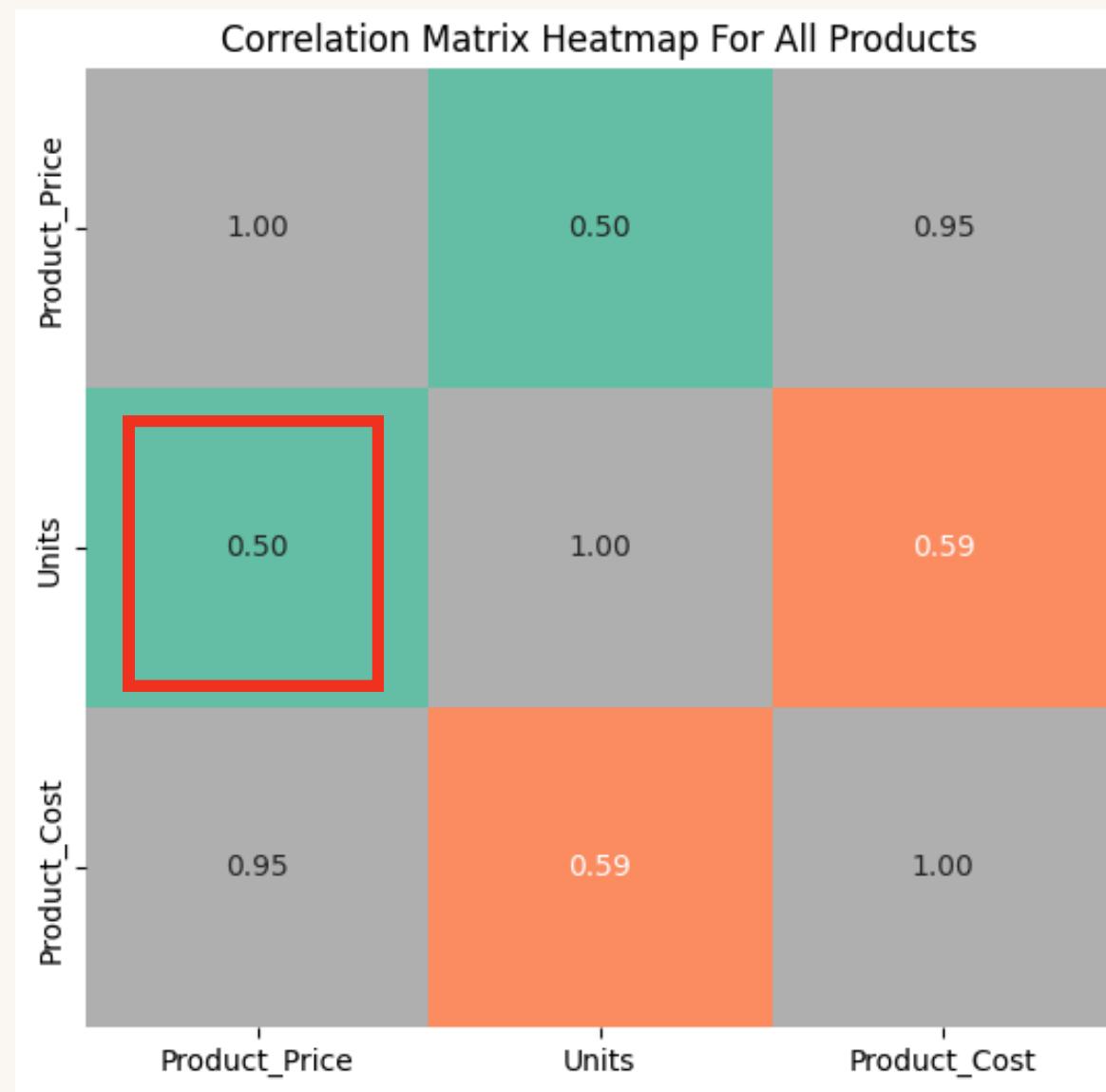
Animal Figures, Lego Bricks, Dino Egg, Teddy Bear



Animal Figures:

Correlation of Product Price - Cost - Sales:

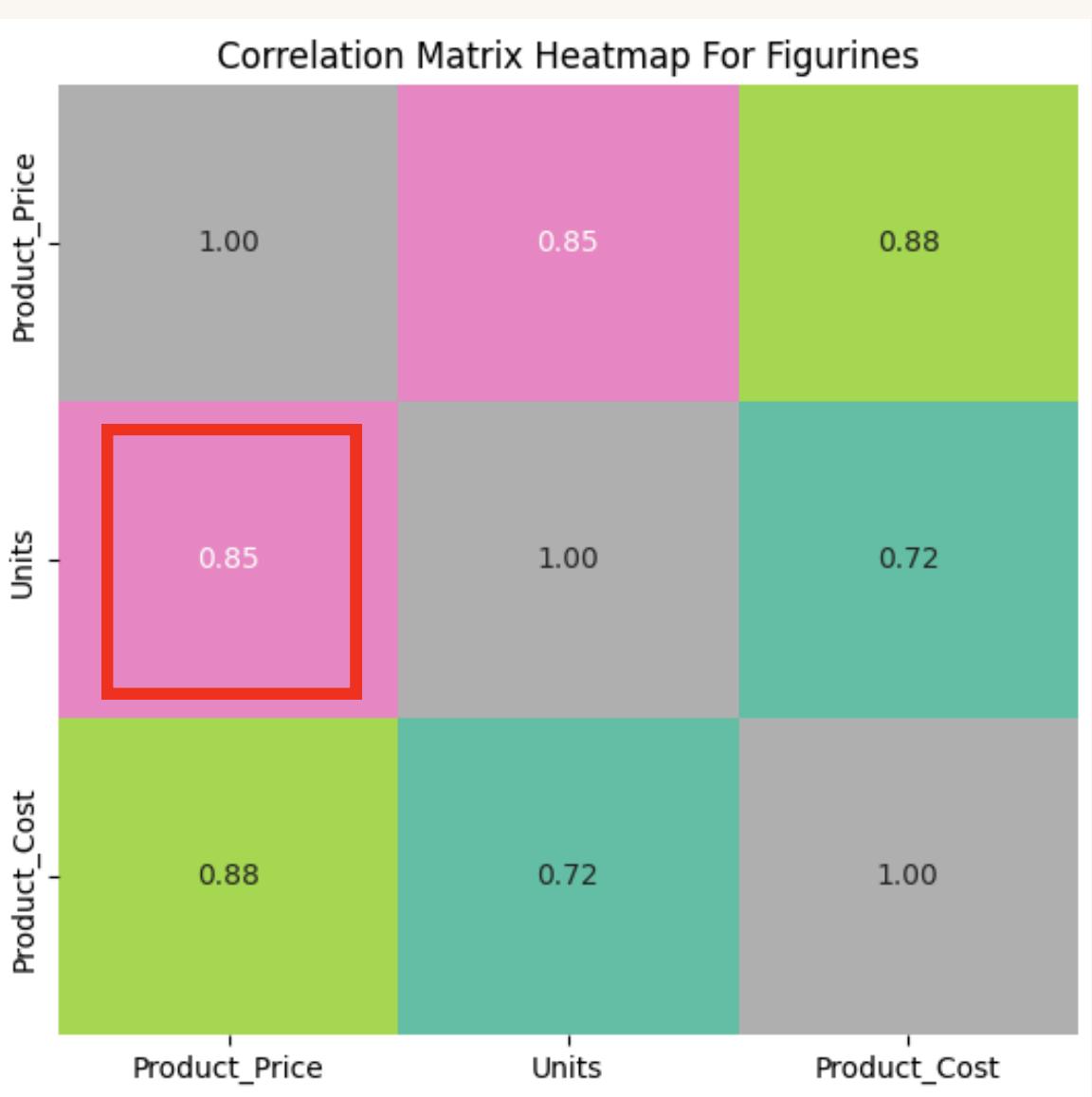
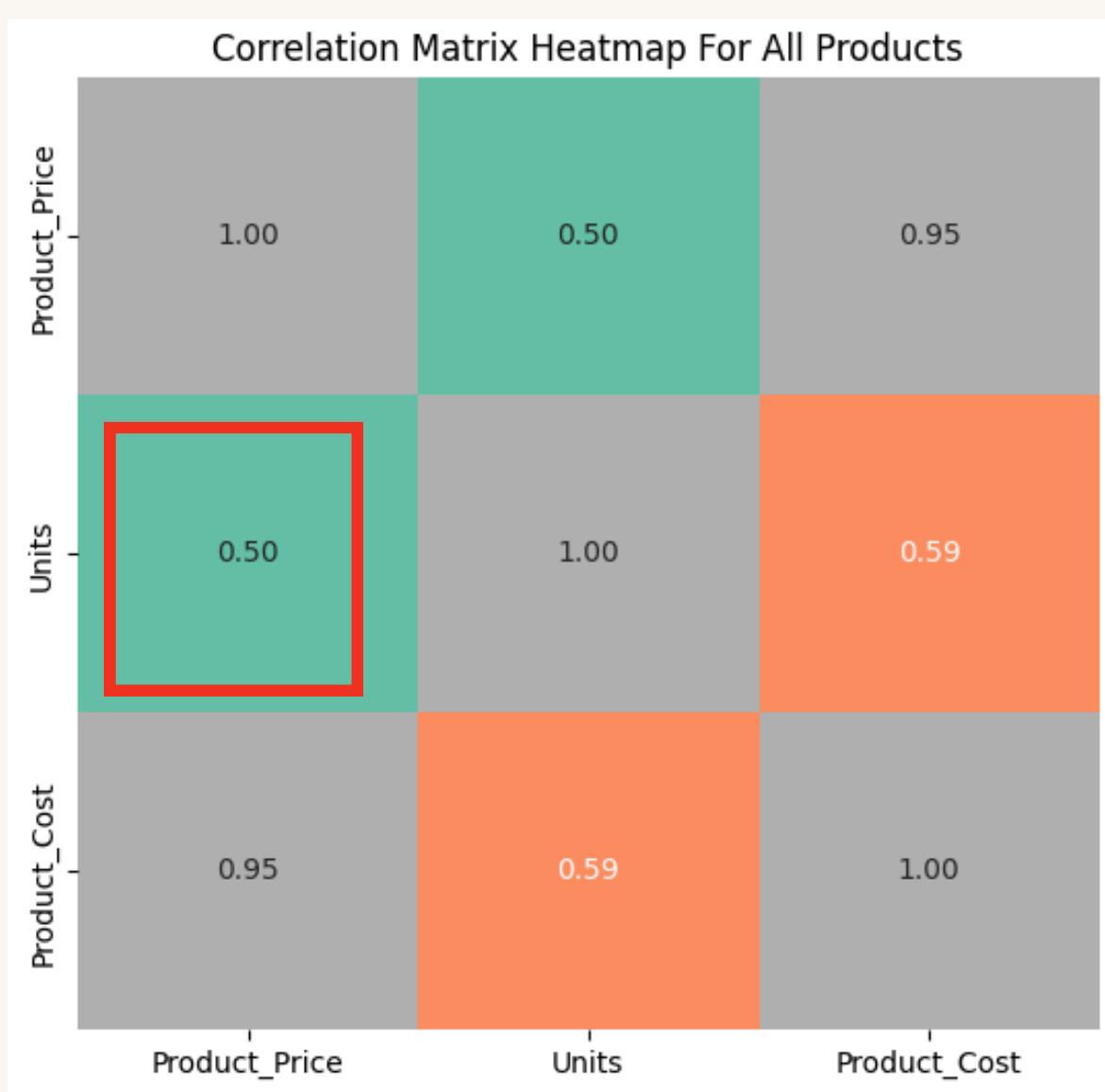
Product Price -& Units sold: Strong positive correlation : Figurines(0.85) > All category (0.50). This suggests that higher priced figurines tend to sell more units, which is notably stronger compared to the correlation observed in the all products.



Animal Figures:

Correlation of Product Price - Cost - Sales:

Product Price -& Units sold: Strong positive correlation : Figurines(0.85) > All category (0.50). Higher priced figurines tend to sell more units, notably stronger compared to the all products price vs sales.



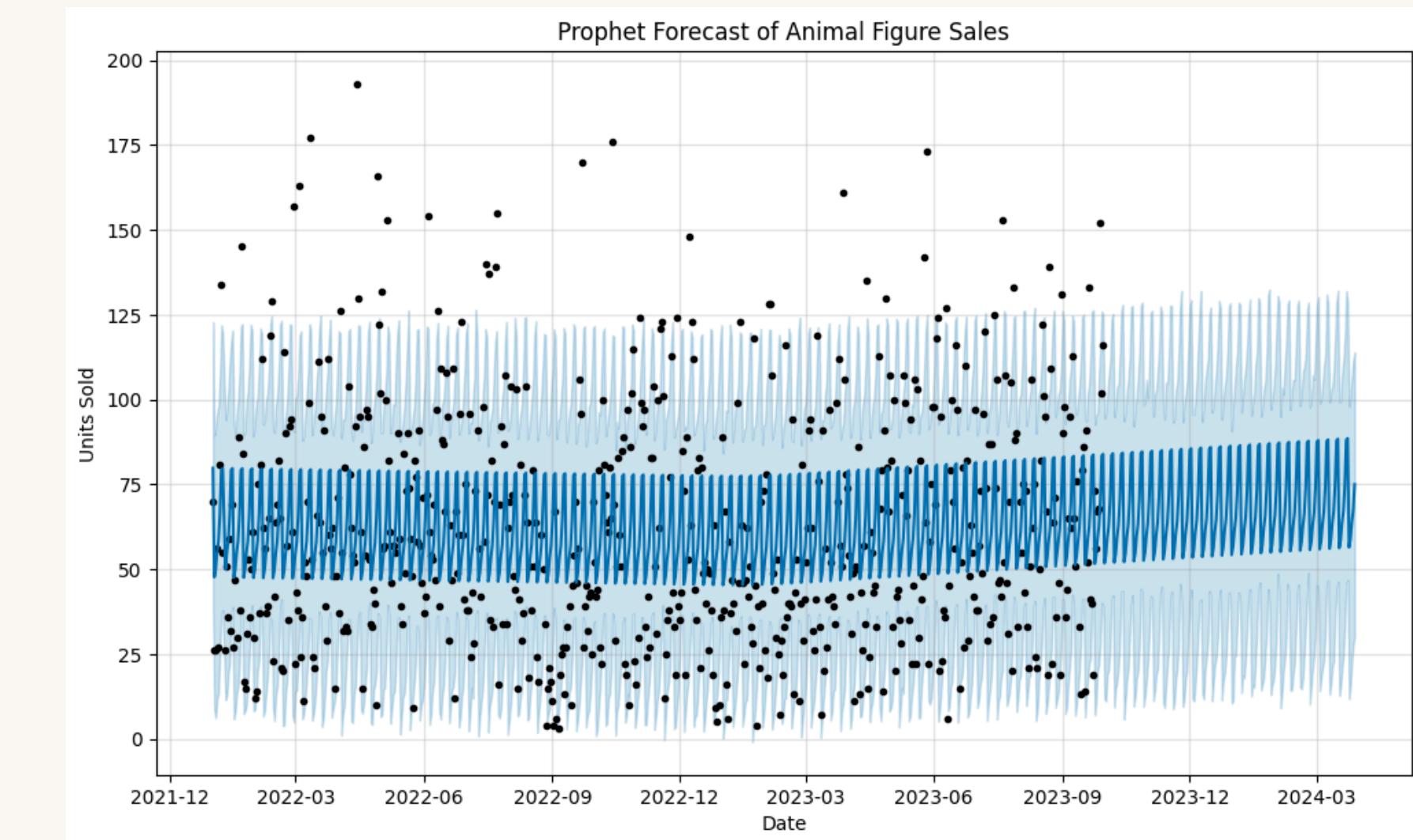
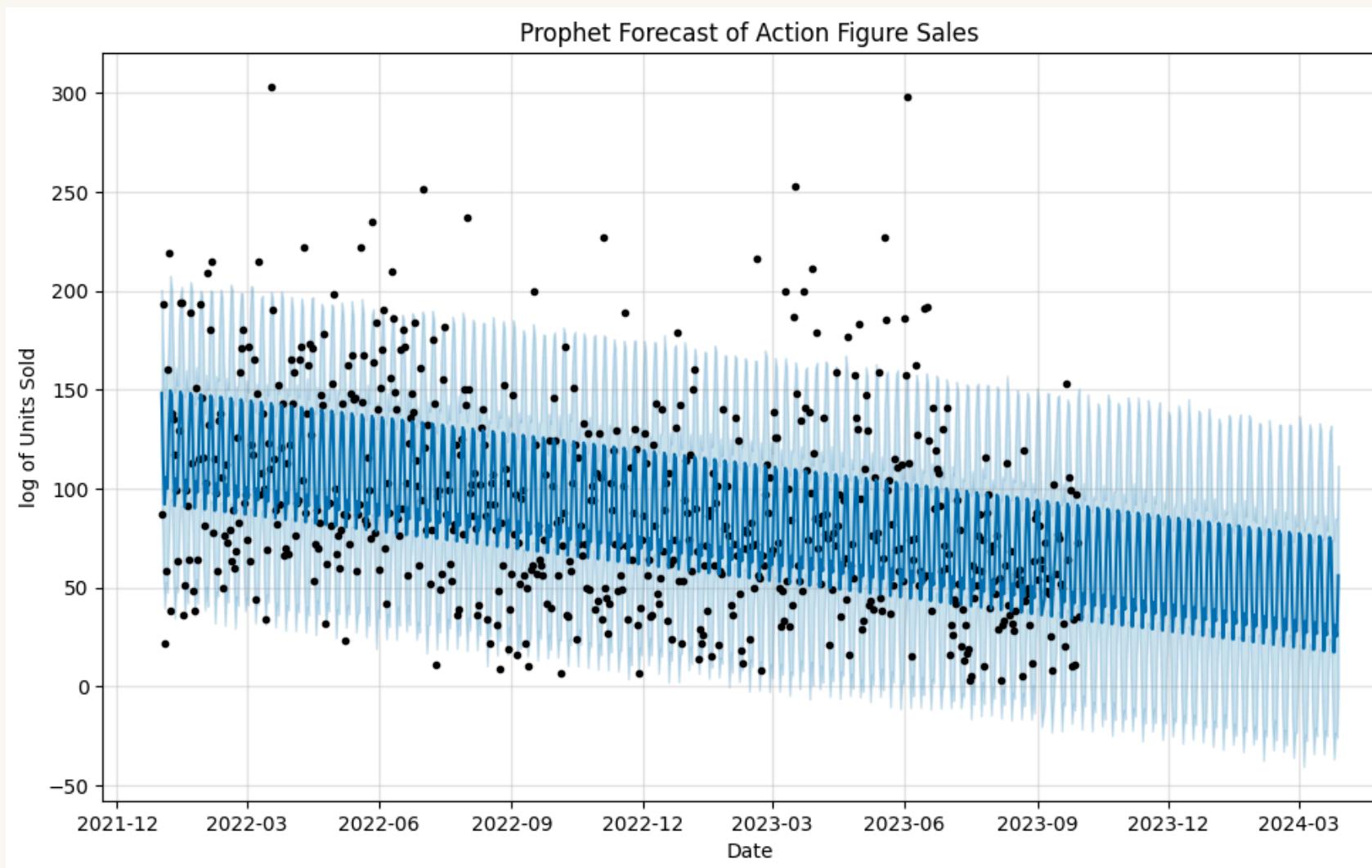
Product_Name	Price	Cost	Total_Sales
Action Figure	15.99	9.99	926748.42
Animal Figures	12.99	9.99	507766.11
Dinosaur Figures	14.99	10.99	434889.88
Mr. Potatohead	9.99	4.99	85963.95

A case of Price Discrimination

Action Figure is positioned as a more premium or desirable product compared to the Animal Figures. The significant price difference yet identical cost suggests a form of price discrimination where pricing is potentially based on demand elasticity, perceived value, or brand positioning.

Animal Figures: But there is more!

Forecasting into Future: Diving further into Figurines



Next step:

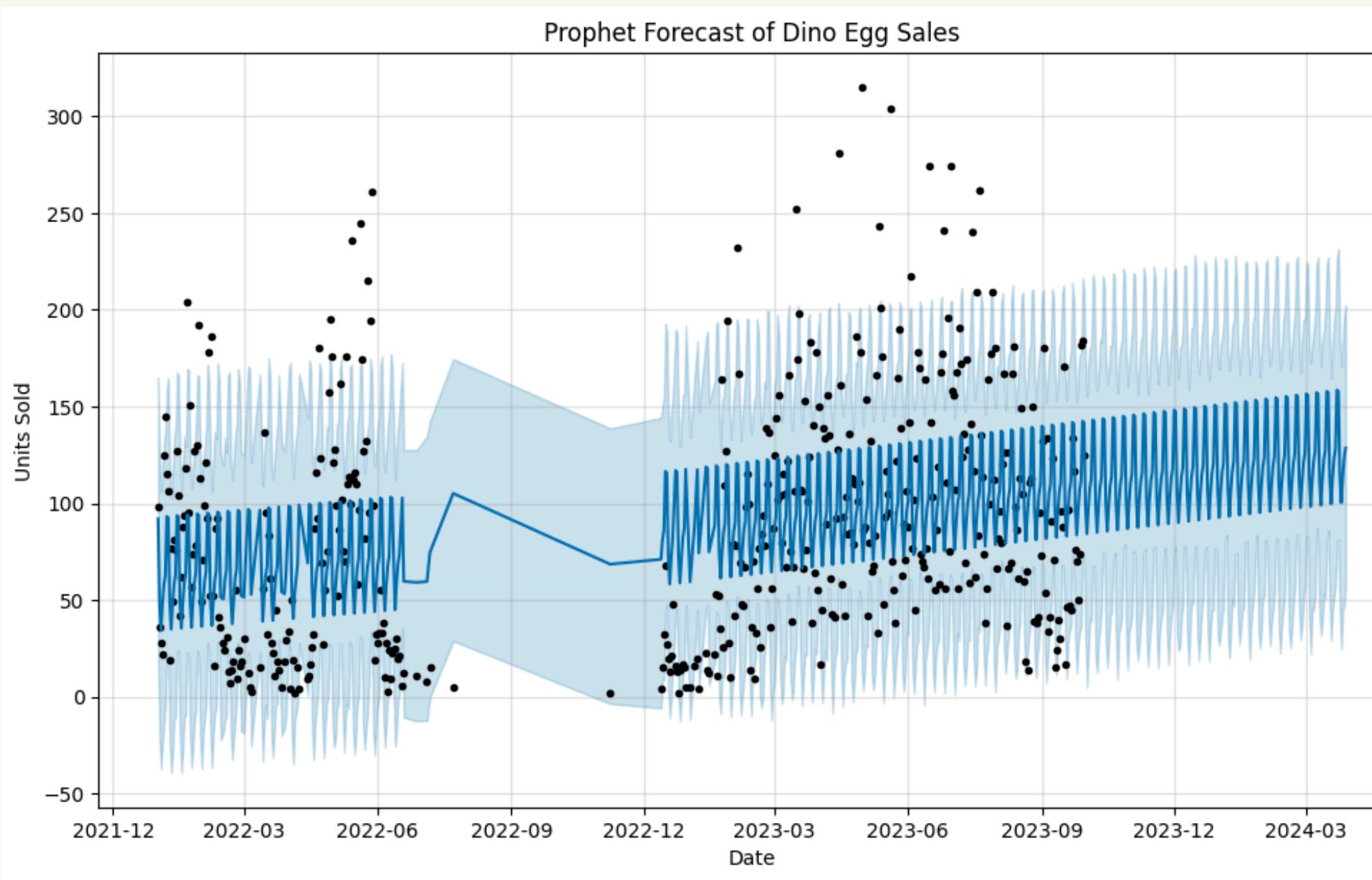
Boost sales through pricing strategies, promotional offers, or decreasing price.

Next step:

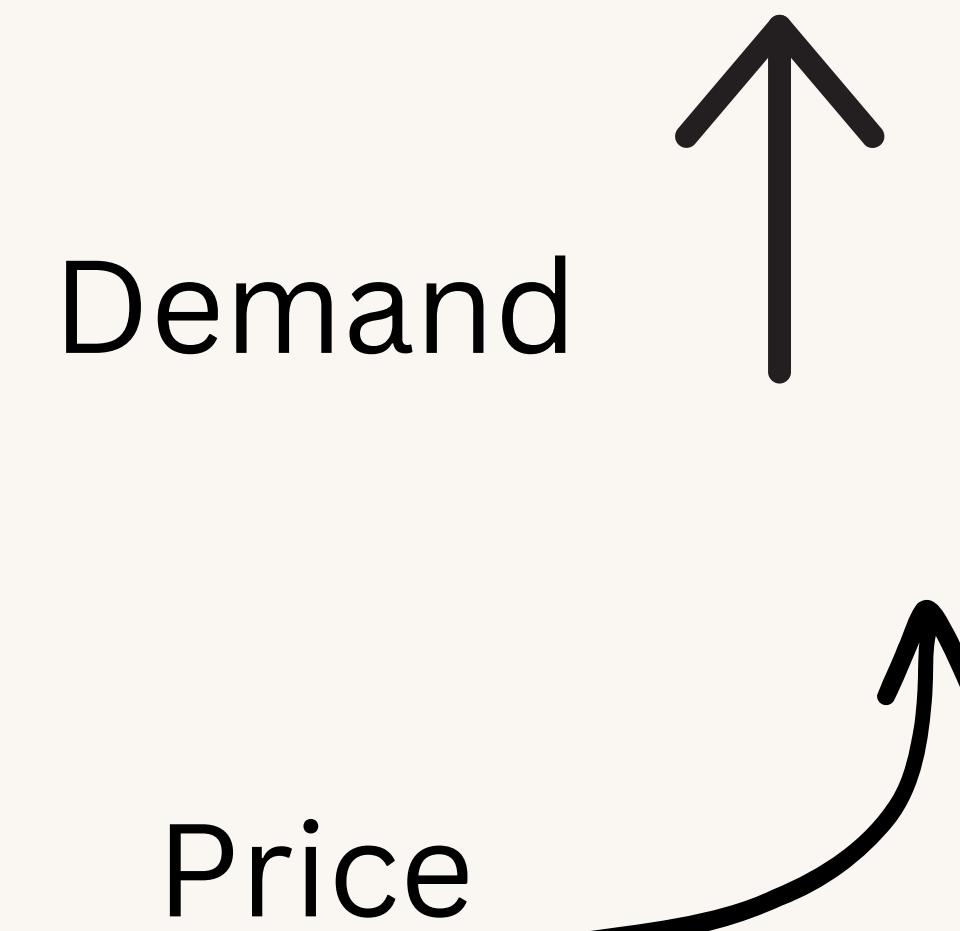
Experiment with the increase in price to leverage increase in demand.

Dino Egg

Forecasting into Future:



Product_Name	Price	Cost	Total_Sales
Dino Egg	10.99	9.99	420213.64



Hence, we can benefit from the increasing price!!

Teddy Bears & Lego Bricks

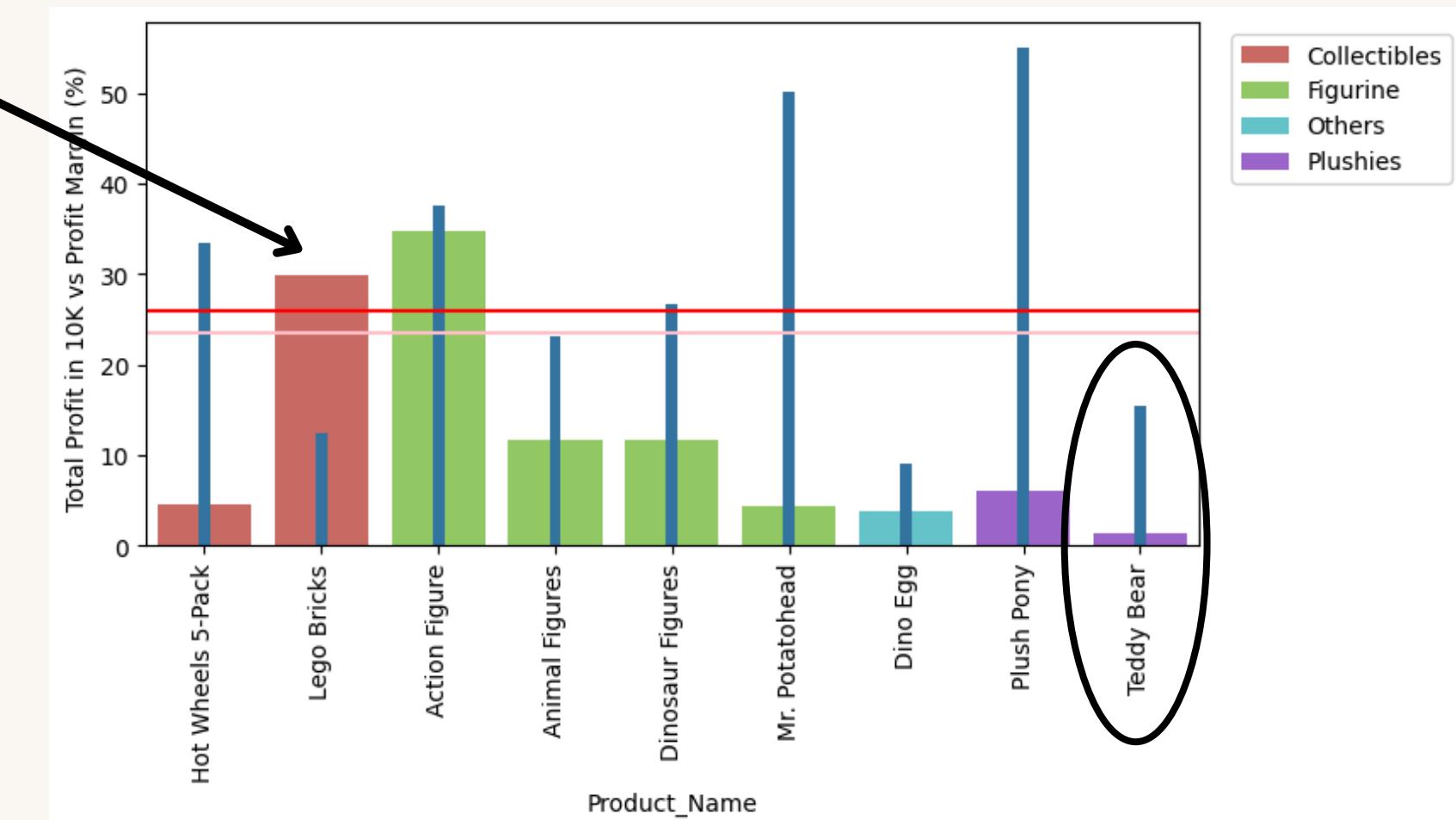
Lego Bricks:

- **High Revenue, Low Margin:** Despite generating the second-highest revenue, Lego Bricks maintain a low profit margin, influenced by external brand regulations and significant market competition.

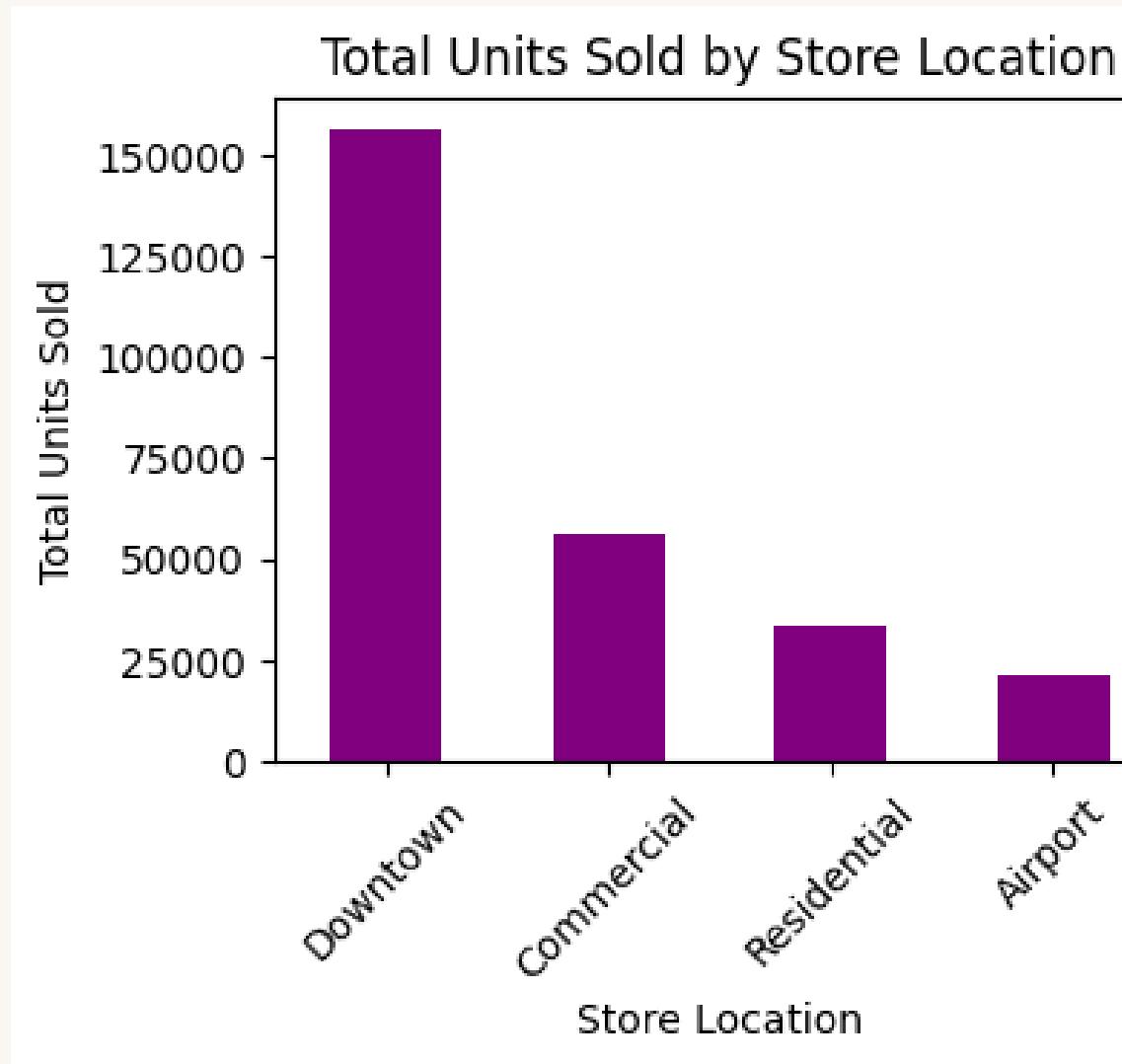
Additional data required to formulate advanced strategies that address price elasticity and competitive pressures.

Teddy Bears:

- **Low Profit Contribution:** Generates **minimal profit** with a **low margin**, indicating inefficiencies in cost.
- Strategic Recommendations:
 - Explore sourcing lower-cost materials to improve profitability.
 - Integrate unique features to differentiate from competitors and stimulate demand.

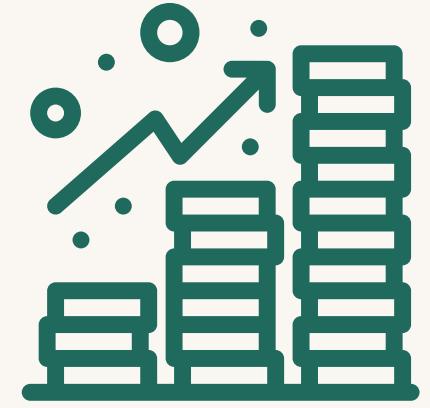


Strategic Pricing Recommendations



1. **Location-based dynamic pricing strategy**
2. **Product - wise dynamic pricing:**
 - i. High-volume, lower-margin products (Lego Bricks, Animal Figures) - slightly increase prices and keep monitoring demand.
 - ii. Low-volume, high-margin products (Mr. PotatoHead) - Boost sales through marketing and promotions.

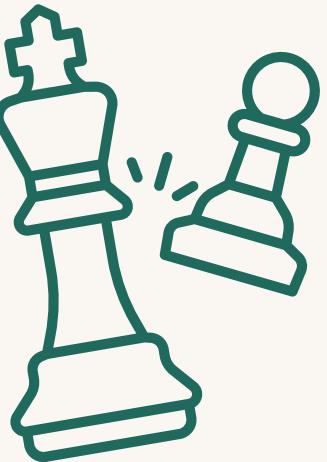
Impact of our Strategy



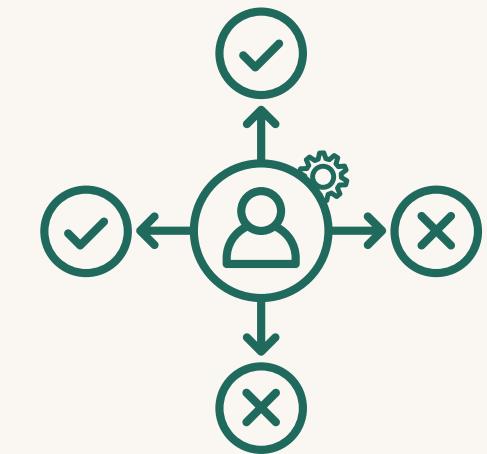
Revenue Growth



Improved Profit Margins



Competitive Advantage



Data - driven
Decision Making

Challenges and Limitations



No price variation

Product_Price is consistent
across all store locations.



Optimal Price
Calculation

The model calculates the
same optimal price across all
subcategories.

Why toys price indiscrimination might be reasonable?

- The toy market's high seasonality and rapid turnover necessitate a flexible pricing strategy, responsive to market changes and consumer expectations. The transient utility of toys, typically used for up to two years, encourages consumers to prioritize cost, influencing pricing dynamics and category management in the industry.
- In the highly competitive and price-sensitive toy industry, retailers need to strategically adapt pricing strategies, analyzing competitor positioning and differentiating accordingly.
- For instance, **large food retailers** leverage **aggressive toy pricing** to boost traffic during holidays, utilizing loyalty promotions to indirectly support sales, while **specialized toy shops** may opt for targeted assortments and **optimized pricing** to maintain profitability.
- “Finding the right price at the right time, combining profitability and customer expectations: this is the challenge of good price positioning in games and toys distribution. You have to adapt to the expectations of several target customers, to structural changes in the market, and to be aware of new consumer trends.”

Reference: <https://www.mercio.io/en/article/news-en/pricing-challenges-in-the-toy-industry/>



Thank you



Feel free to ask questions!

