



Toy Horse Conjoint Experiment Case Assignment

MSBA Cohort 2 Group 22

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Benefit Segmentation

Decision-oriented Analysis

❑ Context

Underperforming product set
Fierce competition
Undefined consumers

❑ Tool

Conjoint Analysis

❑ Analytical Goals

Benefit segmentation
Product revitalization

❑ Data

Survey data
- 200 respondents

❑ Method

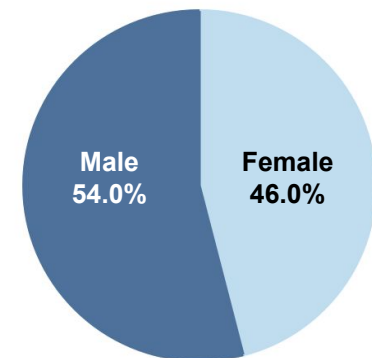
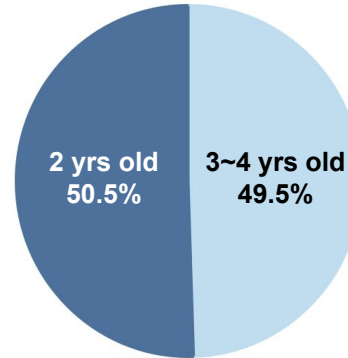
A priori segmentation
- Demographic information
Post-hoc segmentation
- Individual part-utilities

Product Profiles

Price	Height	Motion	Style
\$139.99	18"	Rocking	Glamorous
\$119.99	26"	Bouncing	Racing

4 attributes
16 profiles

Demographic Information of Respondents



- A **quota** sample
- Equal weight on the **age range**
- Can **represent the population** of buyers

Source: respondentData

Market Segmentation

Priori Segmentation

Age & Gender

Coefficient	P-Value
price:factor(seg)2	0.008761 **
price:factor(seg)3	0.866651
price:factor(seg)4	0.334917
size:factor(seg)2	0.047452 *
size:factor(seg)3	0.025311 *
size:factor(seg)4	4.04e-05 ***
motion:factor(seg)2	0.001331 **
motion:factor(seg)3	0.271504
motion:factor(seg)4	0.835281
style:factor(seg)2	0.000225 ***
style:factor(seg)3	0.888958
style:factor(seg)4	0.005487 **

Gender

Coefficient	P-Value
price:factor(seg)2	0.01454 *
size:factor(seg)2	0.00293 **
motion:factor(seg)2	0.00520 **
style:factor(seg)2	1.91e-05 ***

Age

Coefficient	P-Value
price:factor(seg)2	0.37977
size:factor(seg)2	0.00239 **
motion:factor(seg)2	0.02310 *
style:factor(seg)2	0.9502

Findings:

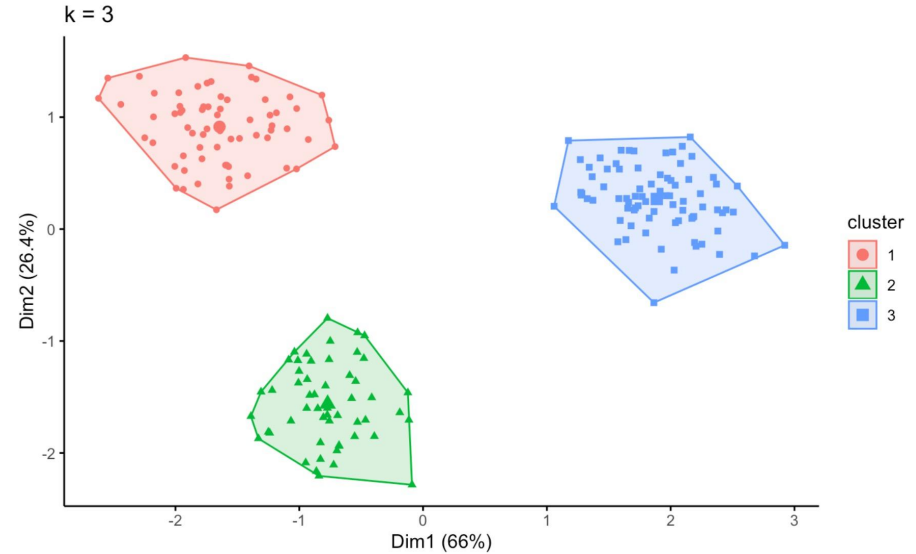
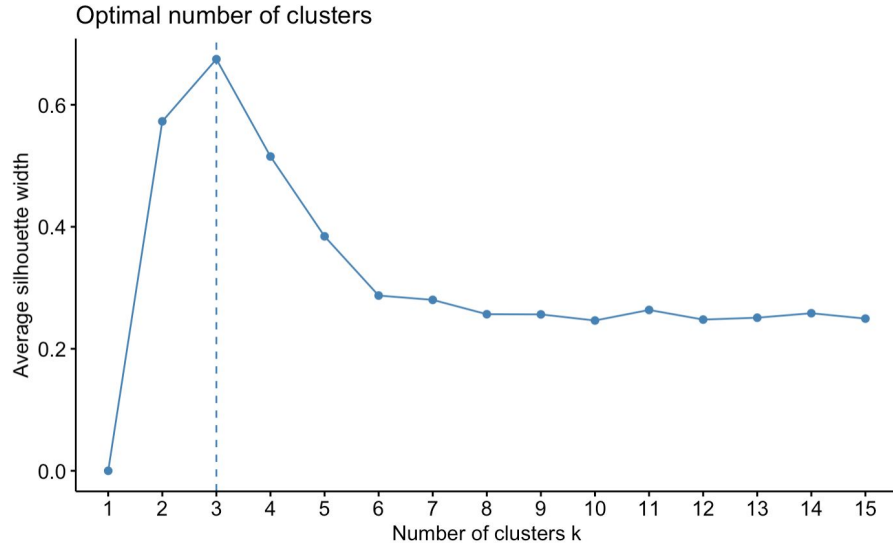
1. Age & Gender Segmentation **insignificant**.
2. Age Segmentation **insignificant**.
3. Gender Segmentation is **significant**.



Gender Segmentation

Market Segmentation

Benefit Segmentation



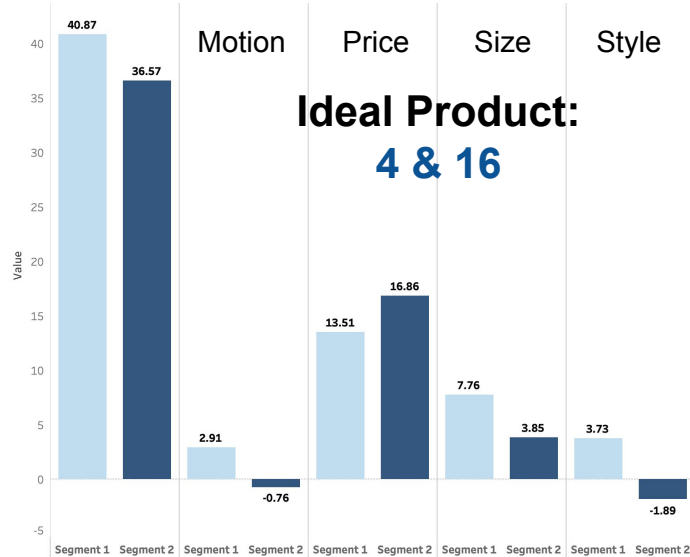
Optimal Number of Segments: 3

highest average silhouette width
three **clear, discrete** group

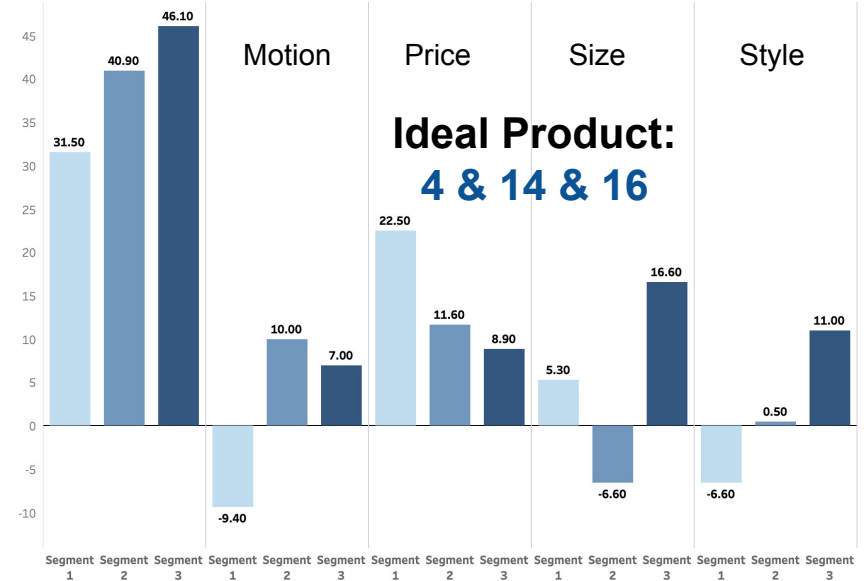
Market Segmentation

Conclusion

Priori Segmentation



Benefit Segmentation



The optimal product set from two segmentation are **mostly consistent**.
These products are **recommended inputs** for the scenarios in **Market Simulation**.

Market Simulation

Methodologies

Simulate **market share** and **profitability** in 4 scenarios, in which we launch product:

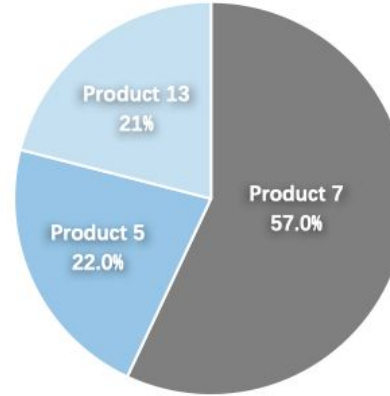
- (1) **5 and 13** (current market)
- (2) **4, 14 and 16** (ideal products from post-hoc analysis)
- (3) **4 and 16** (ideal products from priori segmentation)
- (4) **14 and 16**

Competitor's response: lower their price to \$119.99 to keep market share.

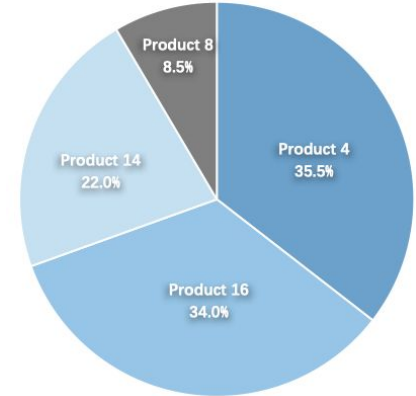
Findings:

In **Scenario 2** with product 4, 14 and 16, we yield the largest market share.

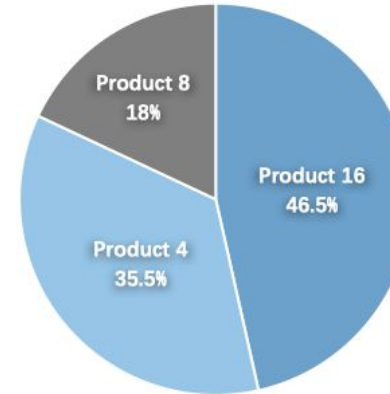
Market Share



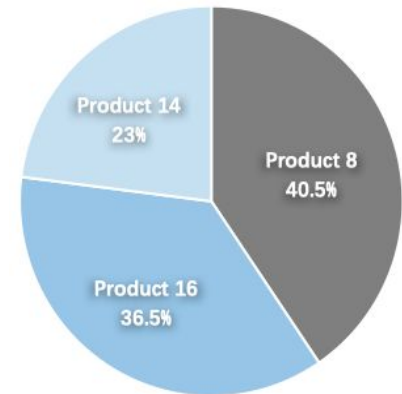
Scenario 1



Scenario 2



Scenario 3



Scenario 4

Market Simulation

Scenario 1 (current market)

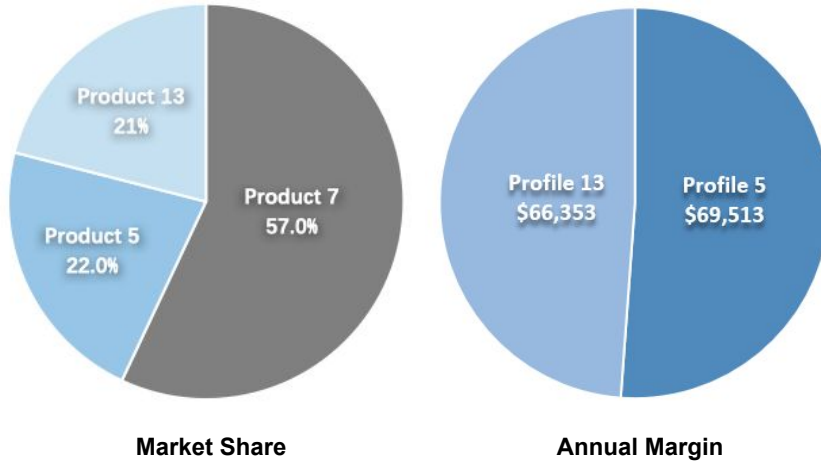
Our Products:

profile 5: 18" Glamorous Rocking Horse at \$139.99

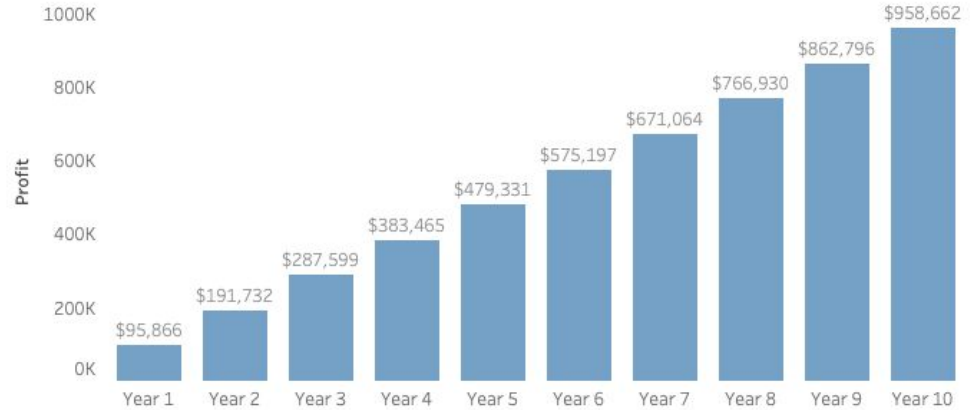
profile 13: 18" Racing Rocking Horse at \$139.99

Competitor's Product:

profile 7: 26" Racing Rocking Horse at \$139.99



Profitability over 10 years



Findings:

1. Competitor currently takes up the largest proportion of market share (57%).
2. Profile 5 and profile 13 has an annual margin of \$69,512 and \$66,353 respectively.

Market Simulation

Scenario 2 (ideal products from post-hoc analysis)

Our Products:

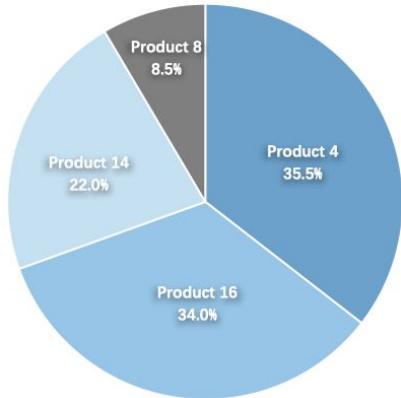
profile 4: 26" Racing Bouncing Horse at \$119.99

profile 14: 18" Racing Bouncing Horse at \$119.99

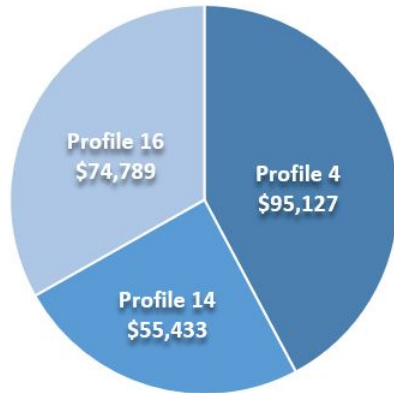
profile 16: 18" Glamorous Rocking Horse at \$119.99

Competitor's Product:

profile 8: 26" Racing Rocking Horse at \$119.99

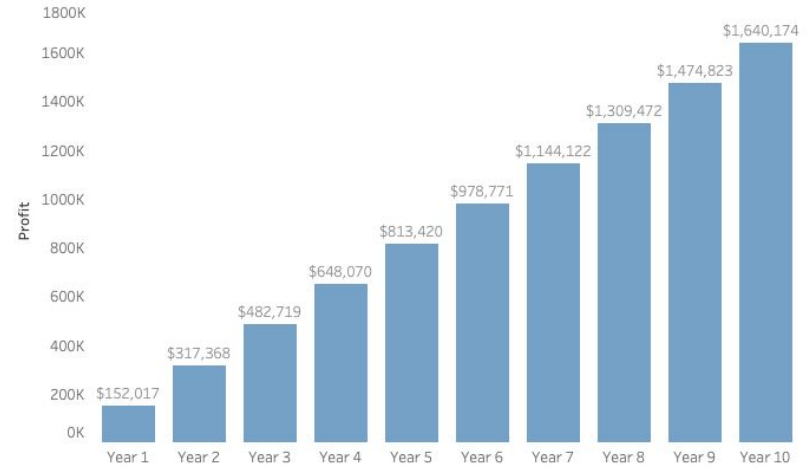


Market Share



Annual Margin

Profitability over 10 years



Findings:

Profile 4 accounts for the largest market share (35.5%), and the greatest proportion of profit annually, with a total margin of \$95,127.

Market Simulation

Scenario 3 (ideal products from priori segmentation)

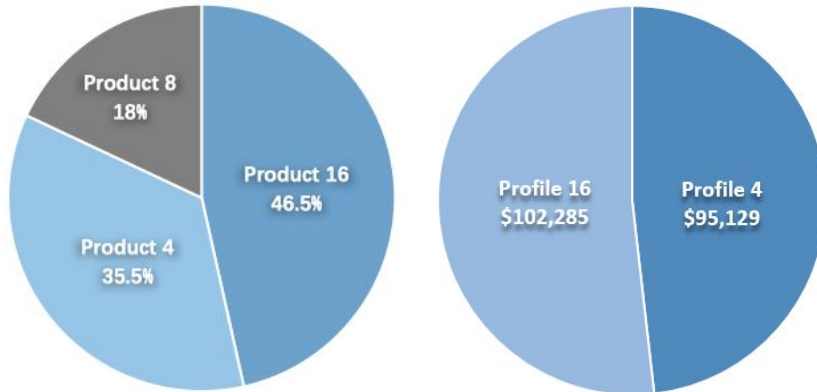
Our Products:

profile 4: 26" Racing Bouncing Horse at \$119.99

profile 16: 18" Glamorous Rocking Horse at \$119.99

Competitor's Product:

profile 8: 26" Racing Rocking Horse at \$119.99



Market Share

Annual Margin

Profitability over 10 years



Findings:

Profile 16 accounts for the largest market share(46.5%), and the greatest proportion of profit annually, with a total margin of \$102,285.

Market Simulation

Scenario 4:

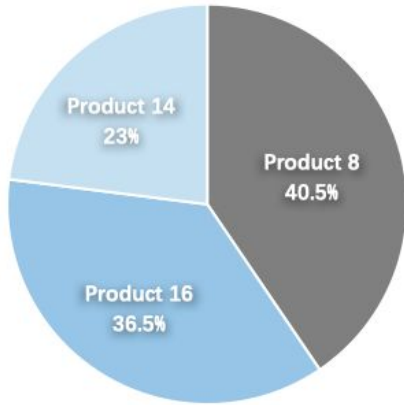
Our Products:

profile 14: 18" Racing Bouncing Horse at \$119.99

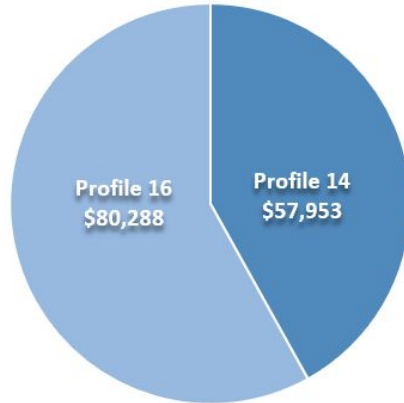
profile 16: 18" Glamorous Rocking Horse at \$119.99

Competitor's Product:

profile 8: 26" Racing Rocking Horse at \$119.99

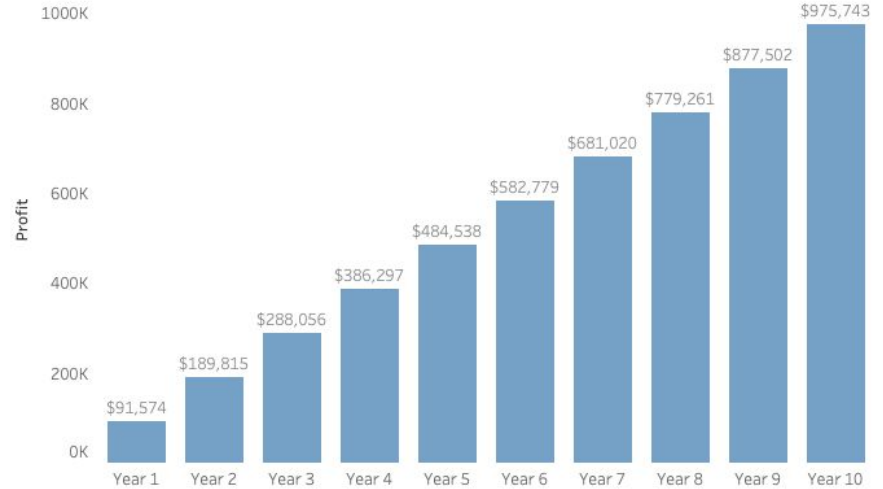


Market Share



Annual Margin

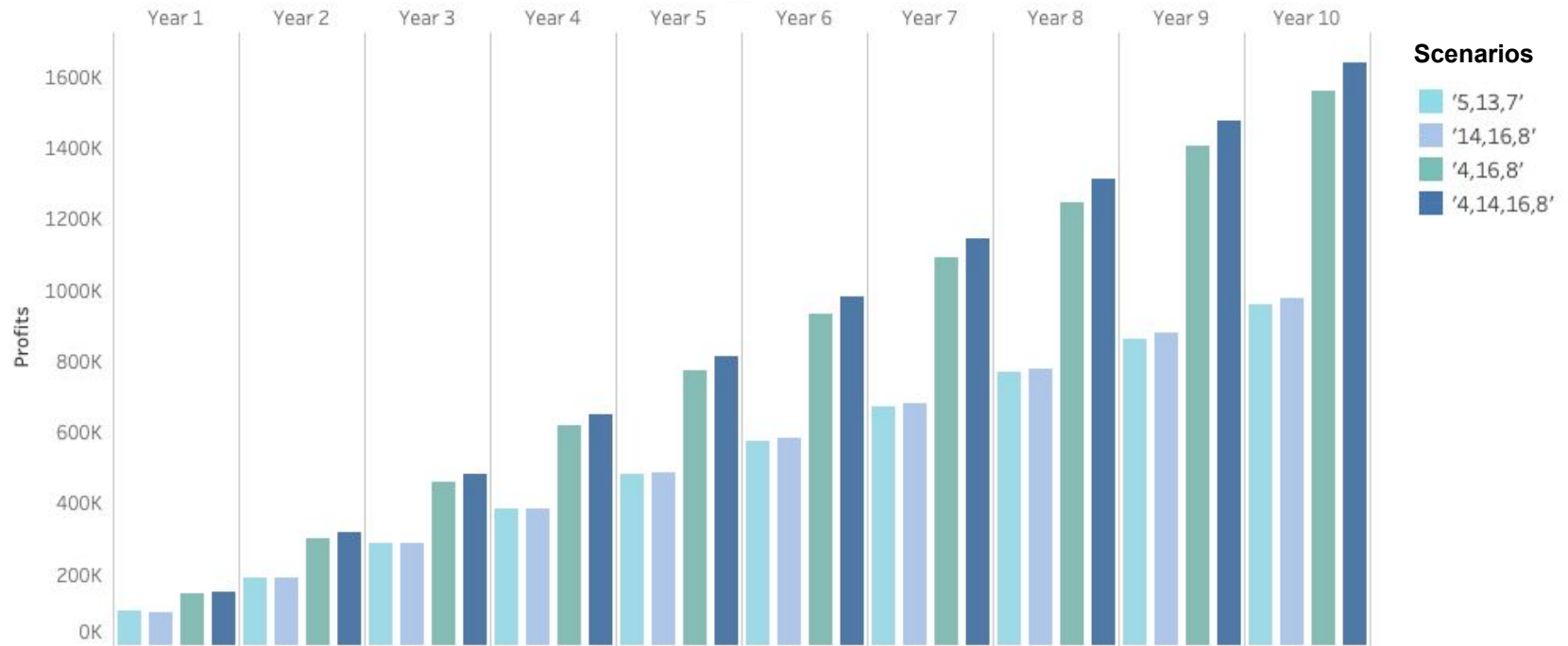
Profitability over 10 years



Findings:

1. Competitor's product takes up the largest proportion of market share (40.5%).
2. Profile 16 and profile 14 has an annual margin of \$80,288 and \$57,953 respectively.

Comparison for Profitability



Offering profile 4, 14 and 16 yields the highest profitability!

SUMMARY

Market Segmentation

Priori Segmentation

2 Customer Segments

Preferred Product:

4 & 16

Benefit Segmentation

3 Customer Segments

Preferred Product:

4 & 14 & 16

Market Simulation

Scenario Combination
Competitor Response

Market Share
Profitability
(short-run, long-run)

Recommended Product Line

Most Profitable Scenario

Competitor: 8

Our Products:

4 & 14 & 16

\$119.99

26" Racing Bouncing Horse

\$119.99

18" Racing Bouncing Horse

\$119.99

18" Glamorous Rocking Horse