Eight Practical Rules
for Building
Marketing Mix Models

Models that work

- and your clients can buy into

# Rule 1: Understand the big picture

- Who are the players in the category
- What are they doing
  - Marketing expenditures
  - Product positioning
  - Marketing channels
  - Product innovations
- What objective is the client trying to meet

Rule 2: Graph everything in sight

- Otto Eckstein rule:
  - Never show a client a more than 2 by 2 matrix
- No client – and very few analysts – can make sense of a complex set of numbers
- Don't show graphs unless they tell a story
  - Some stories they know [to show that you understand the business]
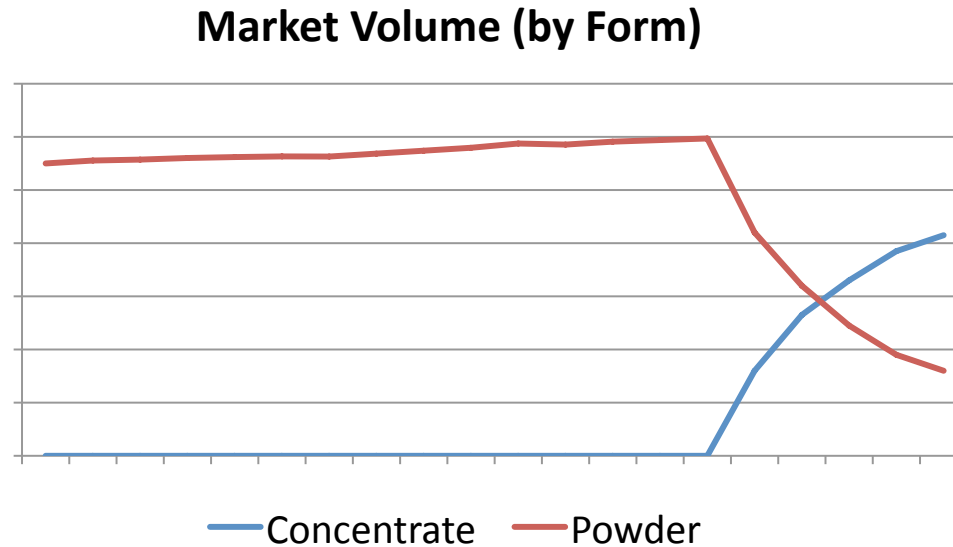 - And some they don't [to show your value]

Illustration: Dish-washing detergent

- Client was disturbed by a sharp decline in market share in long-time category leader

Market Share (by Volume)
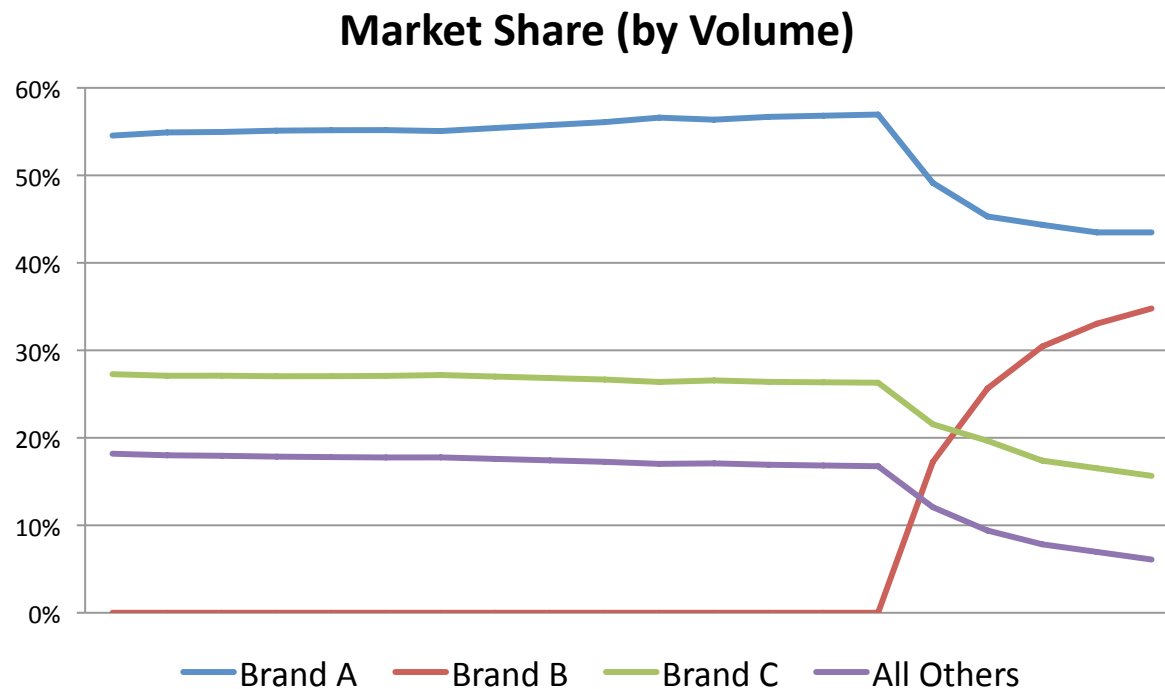
Illustration

- New entry was growing rapidly
- But also fundamentally altering the category by introducing concentrates

Market Volume (by Form)

Legend: Concentrate — Powder

Illustration

- As concentrates were much more profitable
- The client – who had been quick to respond – was now making far more money
  - At the expense of the smaller brands

Projected Profit

Brand A ── Brand B ── Brand C ── All Others
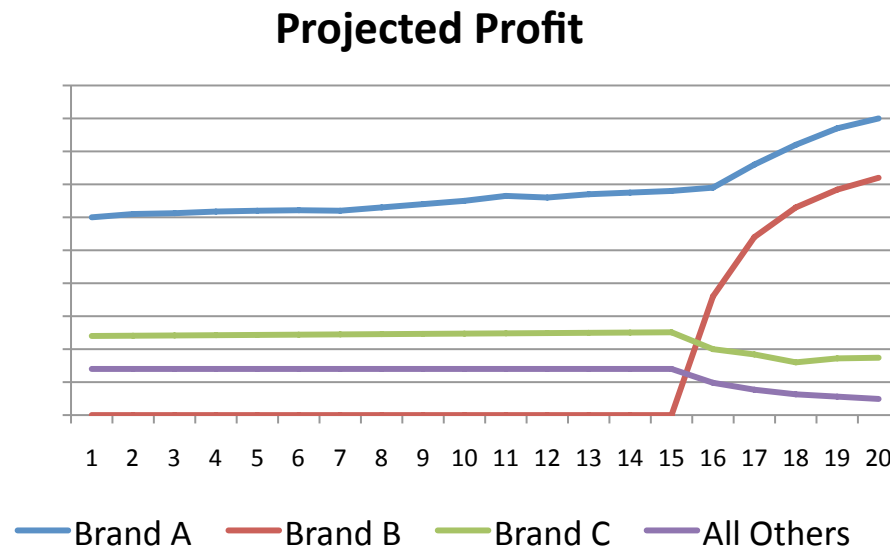
Real objective

- The client's concern was misplaced
- The objective shouldn't have been to restore lost market share
  - But to best respond to competitive pressure in order to maximize profits

Rule 3: Consider everything

- Marketing
- Competitive
- Environmental
- Just because the data base is "big" doesn't mean in contains everything you need
- If you leave something out, the model is open to criticism

Rule 4: Look at – and understand – outliers

- Outliers wreak havoc on models
- In almost all cases, there's an explanation
  - Strikes
  - Product recalls
  - Weather events
  - Geopolitical events
  - Etc.

Rule 5: Graph all relationships

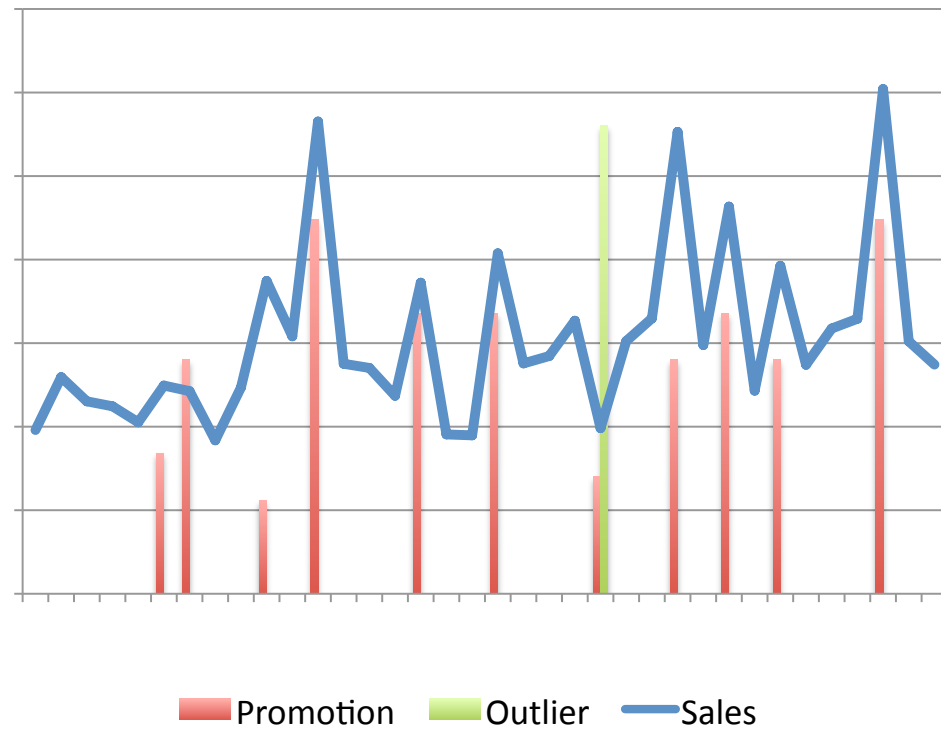- Relationships are usually much easier to explain – and get client buy-in – if they can be demonstrated graphically

Graph all relationships
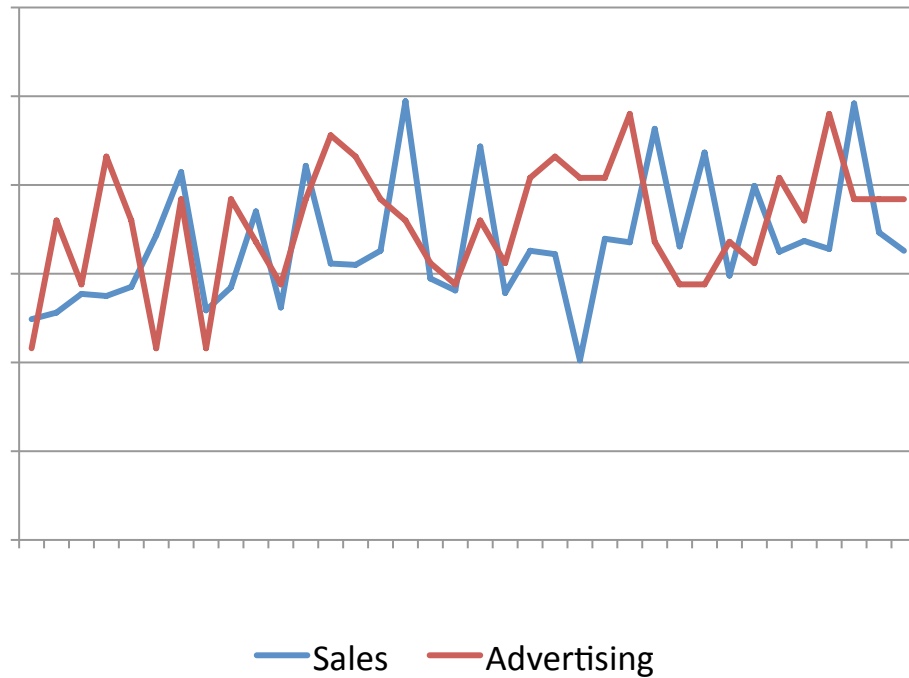
- Sometimes, explanation is easy

Graph all relationships

- Outliers usually pop out

Don't show confusing graphs

- If statistically significant relationships don't stand out
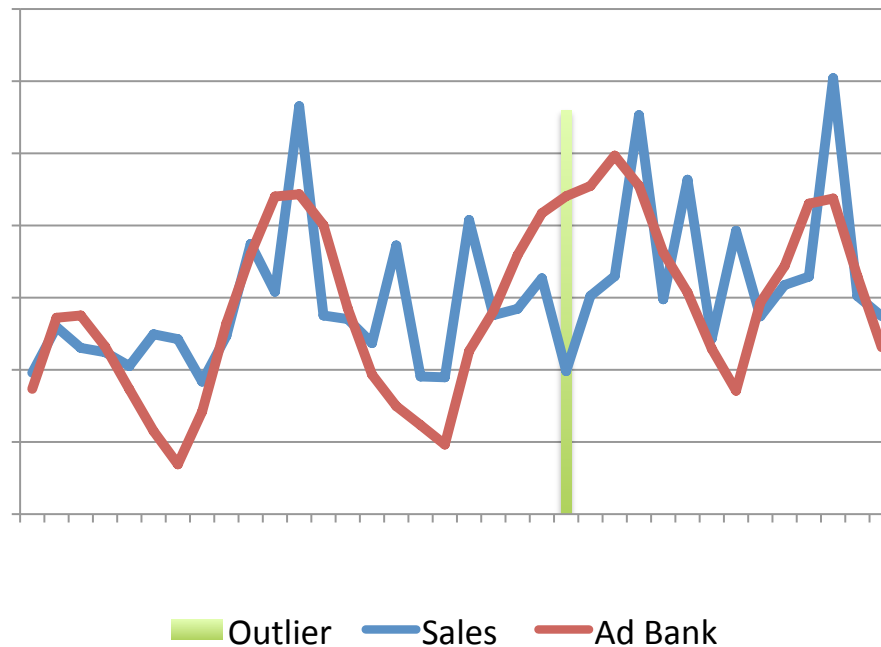

Sales   Advertising

Make relationships clear

- Do something to make the relationship clear
  - Lag, smooth, transform or aggregate variables
- In this example, AdBank is a smoothed advertising series [equivalent to AdStock]
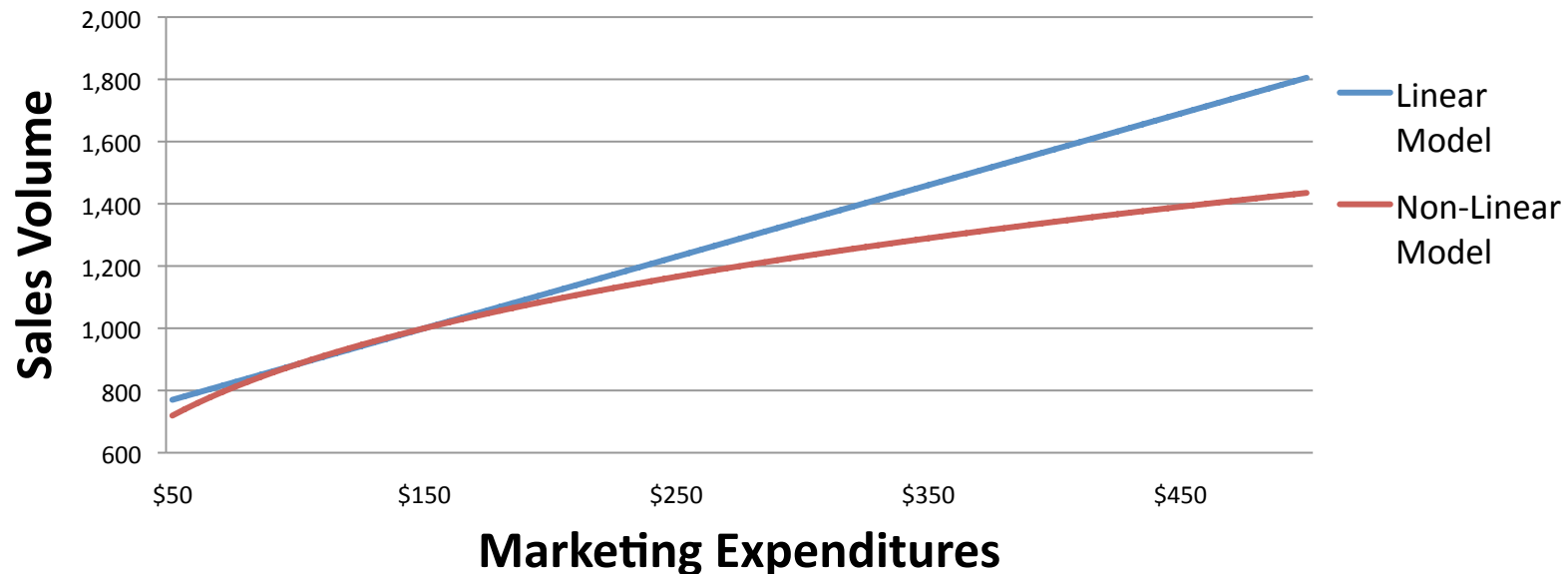

Sales   Ad Bank
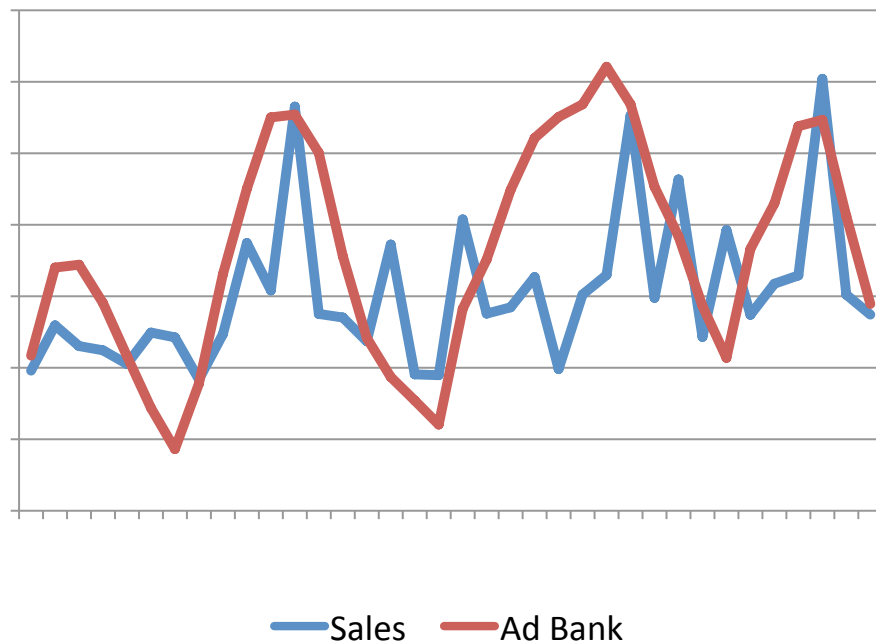
Make relationships clear

- Plot against residuals or add additional information, as necessary

Rule 6: Never present a linear model

- Although linear and non-linear models yield similar results in the range of actual data
  - They can be quite different when extrapolated

Problems with linear models

- The world is non-linear
  - All economic theory is based on a declining return to scale

- Linear models lead to dangerous interpretations, such as:
  - Why don't we triple ad spending….
  - If promotion has a higher response than advertising, why not put everything into promotion

Problems with linear models

- In my opinion, all regression based models should be log-log

$$\text{Ln}[\text{Sales}_t] = \beta_0 + \beta_1 \text{Ln}[\text{Adv}_t] + \beta_2 \text{Ln}[\text{Promo}_t] + \beta_3 \text{Dummy} + \ldots..$$

Or

$$\text{Sales}_t = \text{Exp}[\beta_0] \times \text{Exp}[\beta_3 \times \text{Dummy}] \times [\text{Adv}_t]^{\beta_1} \times [\text{Promo}_t]^{\beta_2} \times \ldots$$

Rule 7: Be sure the model makes sense

- To you and to the client
  - Avoid negative marketing elasticities
    - And [in most cases] positive price elasticities
  - Be aware of the difference between price and promotion
  - Have strong evidence before you challenge the client's basic assumptions
- Test all results

Rule 8: Use the model to guide decision-making

- Use the model results to simulate a P&L

- Evaluate alternative scenarios

- Consider possible competitive actions
 - And reactions

Illustration: Laundry detergent

- Our client's brand was the category leader facing challenge from heavily supported multi-national brand

- Both brands were spending about the same on both advertising and trade support

- However, the two brands responded quite differently to marketing and followed distinctly different marketing strategies

Modeling results

- Both brands were responsive to advertising
  - Client's brand was more responsive
- Both brands were also influenced by trade promotion
  - Promotional effects were similar for both brands
  - But competitive promotions had a substantial effect which could effectively offset the impact of their own promotions
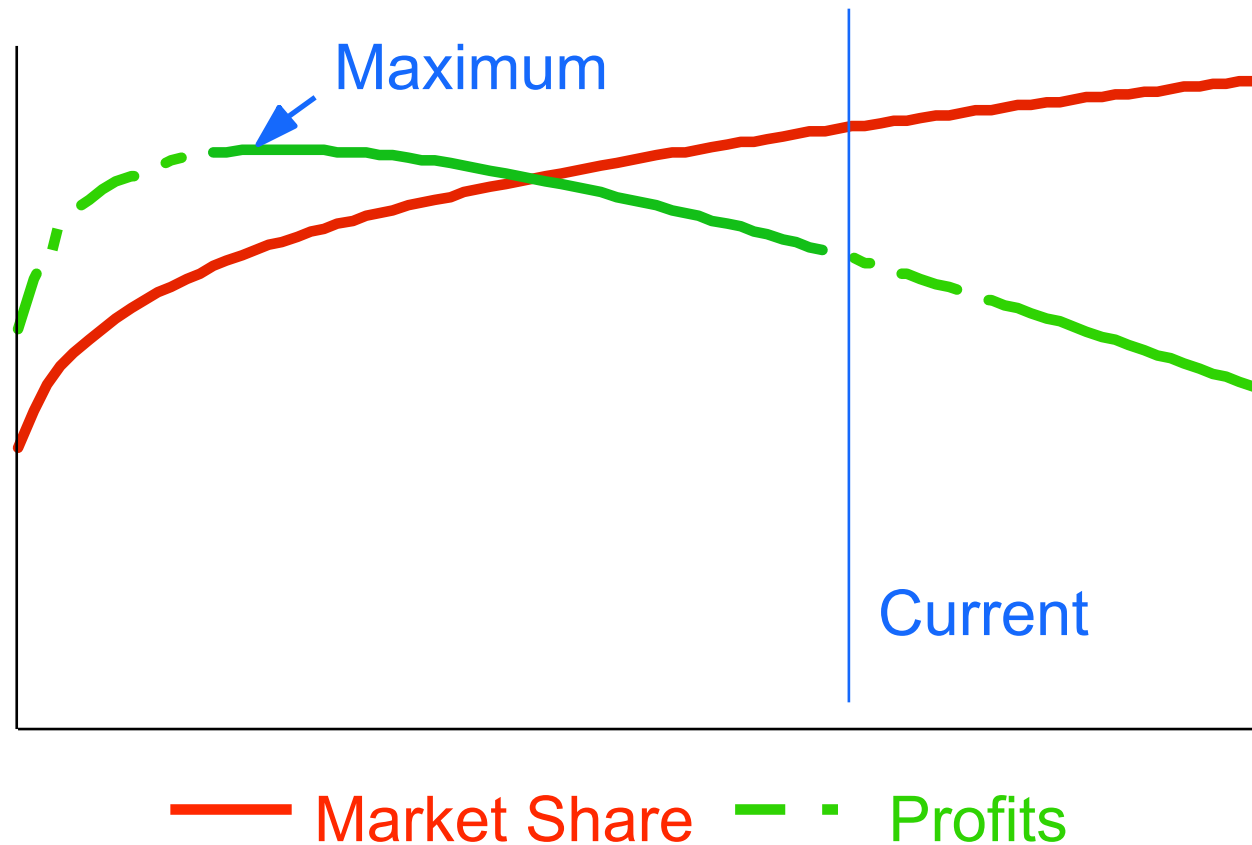
Impact of advertising on leader

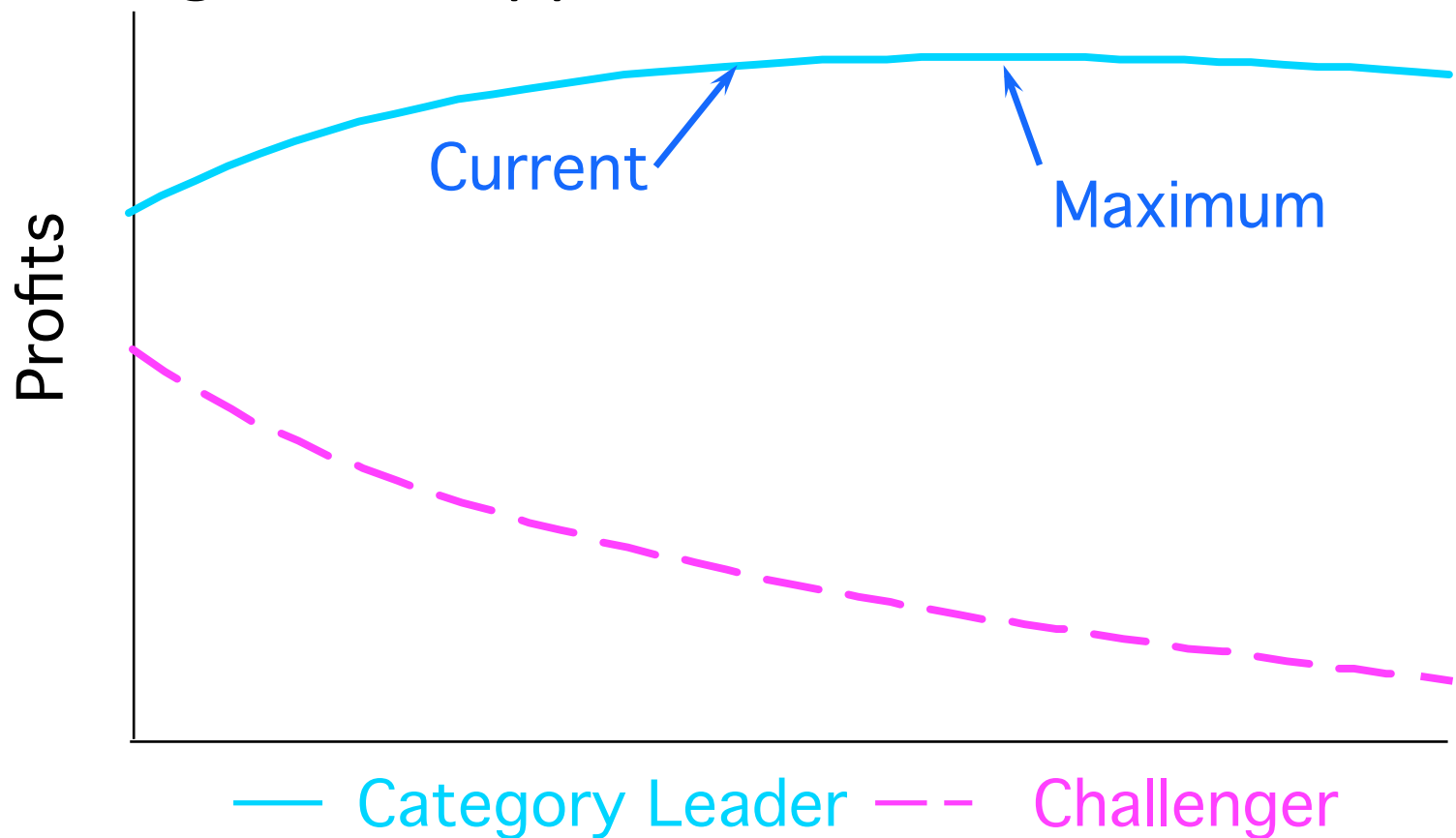- Leader was in a position to increase share at minimal cost
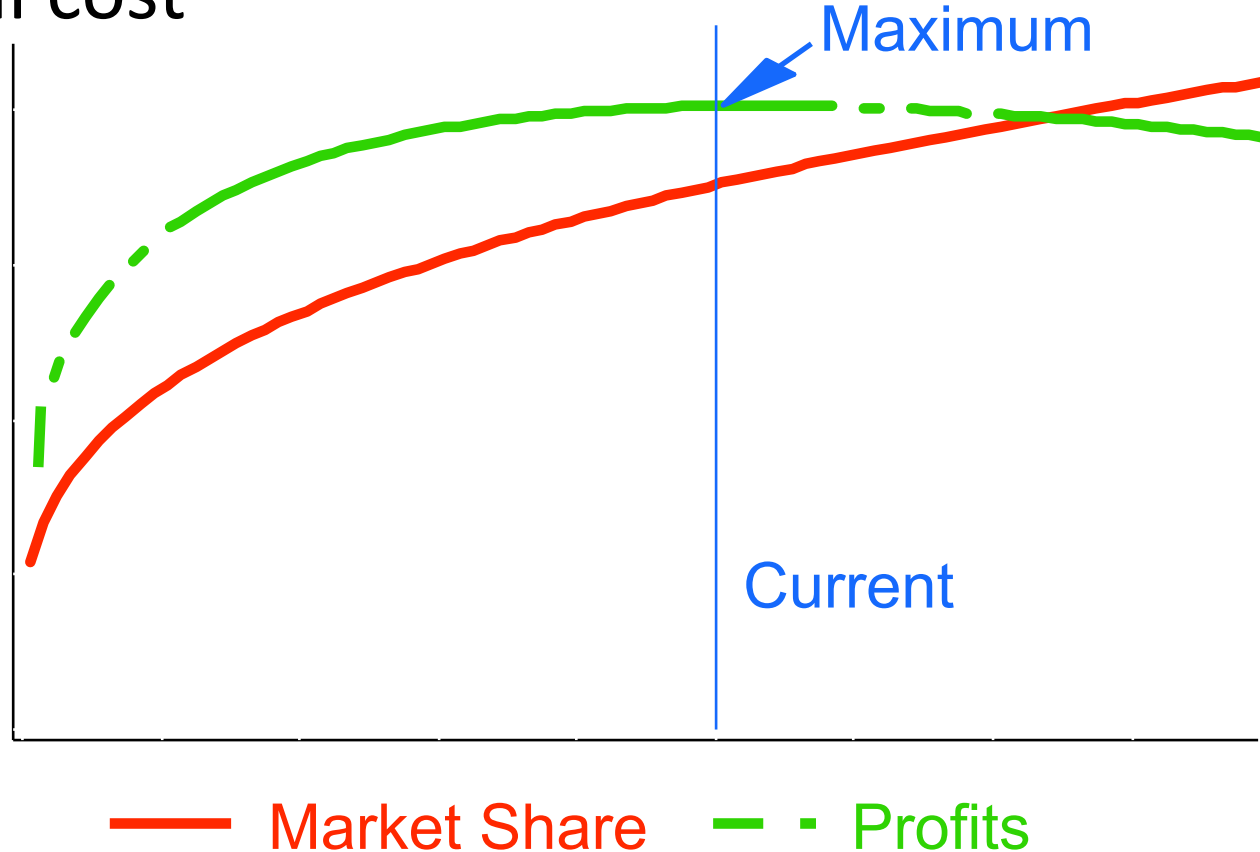
Impact of advertising on challenger

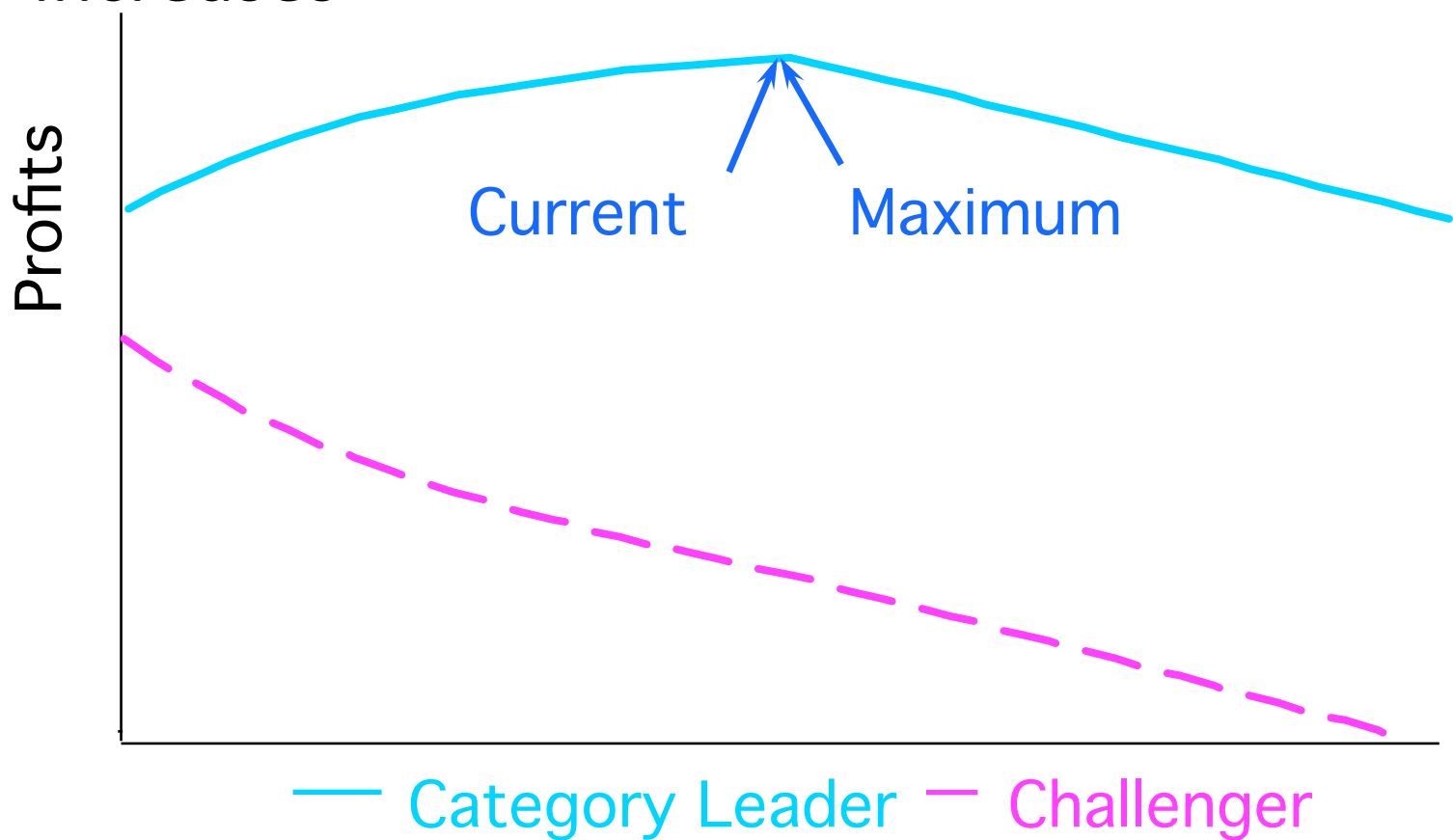- Challenger was investment spending to buy share

Impact of leader's trade spending

- Client's brand could make only limited gains by increasing trade support

Impact of leader's trade spending

- But not if competitor matches spending increases

Outcome

- Category leader increased ad spending
  - While the challenger continued its high level of ad support

- Both brands carefully avoided a trade war

- As a result, both brands grew
  - At the expense of the smaller brands in the category

In conclusion

- If your clients understand and buy into your models
  - They'll use them
  - And profit from them
- If they don't
  - ………