MIND-SHARE OR HEART-SHARE: COMPETING IN THE PURCHASE FUNNEL

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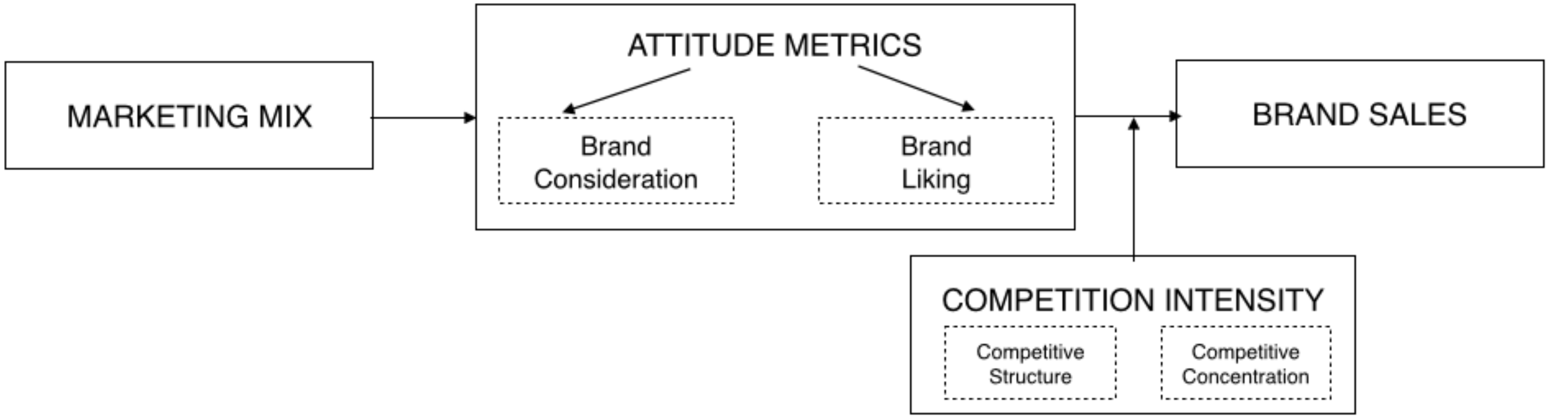
WHY STUDY ATTITUDE METRICS?

"The firm should monitor 3 variables when analyzing potential threats posed by competitors: share of market, share of mind and share of heart" —*Kotler & Keller 2011*

- In efforts to enhance marketing's accountability in the firm, recent research focuses on the linkages of the unobservable consumer attitude metrics to market & financial outcomes
- Research results show consumer attitude metrics to have explanatory power in sales response models as they unlock the black box of marketing-sales effectiveness *(e.g., Srinivasan et al. 2010; Hanssens et al. 2014)*
- Particularly useful for (chief) marketing officers to understand the attitude metrics to:
  - identify specific remedial marketing actions
  - position their brands against competitive actions
  - monitor their brand performance over time
  - gain early signals of market performance
- Competition has been shown to have a significant role in consumer decision-making *(Bronnenberg et al. 2000; Keller 1991)* and the returns from firms' marketing mix efforts *(Keller 1987; Kumar 2000; Unnava and Sirdeshmukh 1994)*: the common wisdom suggests that competition is not desirable for firm performance

WHAT DO WE STUDY?

- Referring to *information processing* and *attitude* research, we examine the process wherein marketing mix efforts generate sales through influencing consumer attitude metrics *(Abelson and Levi 1985; Bettman 1979; Negungadi 1990)*
- In response to *Srinivasan et al.'s (2010)* call for future research, we study an important question left unanswered: the role of *competition intensity* on the conversion of marketing actions to sales through consumer attitude metrics
- We analyze how the mediated effects of consumer attitude metrics on the marketing-sales link are *moderated* by the competition intensity in each category



MAJOR CONTRIBUTIONS

- This is the *first* study to provide quantitative evidence for the implications of *competition intensity* on the sales conversion of firms' marketing mix efforts through consumer attitudes
  - We add to the literature on marketing metrics, which is also of great interest to practitioners by employing on a rich dataset of 148 brands in 6 categories for over 10 years
- We contribute to research on the effects of competition in which the underlying assumption that it is not desirable by showing that competition may *both* **desirable** and **adverse** effects on the marketing mix-sales relationship
  - We show that competition intensity has contrasting effects on the upper-level (brand consideration) versus the lower-level (brand liking) of the purchase funnel
    - Higher <u>number of competing brands</u> in a category:
      - firms' marketing efforts lead to an increase in sales through the cognitive component of consumer attitude (brand consideration), *but*
      - …a decrease in sales through the affective component of consumer attitude (brand liking)
    - Higher level of <u>competitive concentration:</u>
      - firms' marketing efforts lead to a decrease in sales through brand consideration, *but*
      - …an increase in sales through brand liking

MAJOR FINDINGS

1. Main Effects

Variable	Sales Effect	Mindset Effect	
		Consideratio	Liking
Consideration	***-0.005***	-	-
Liking	***0.020***	-	-
Advertising	***0.014***	***0.019***	-0.002
Promotion	***0.030***	***0.026***	***0.013***
Price	***-0.176***	0.036	0.040
Competitive Advertising	***-0.007***	***0.019***	-0.004
Competitive Promotion	-0.003	0.002	-0.006
Competitive Price	0.046	0.015	-0.035

2. Mediated Effects Conditional on Competition

In markets with **high** (**low**) **number of brands**, the change in sales due to **1 unit** change in:

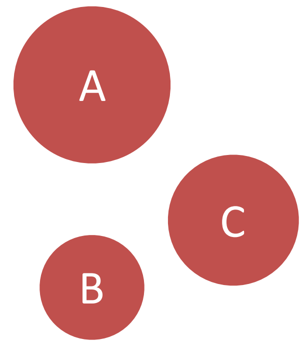
- advertising through consideration is **0.028 (-0.031) units**; through liking is **-0.007 (0.010) units**
- promotion through consideration is **0.037 (-0.041) units**; through liking is **-0.006 (0.008) units**

In markets with **high (low) concentration**, the change in sales due to **1 unit** change in:

- advertising through consideration is **-0.008 (0.005) units**; through liking is **not sig. (0.003) units**
- promotion through consideration is **-0.011 (0.007) units**; through liking is **not sig. (0.003) units**

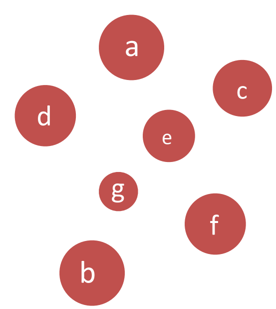
3. Total Effects

In markets with *high concentration + low number of brands, 1-unit investment in marketing mix:*



- marketing mix through **consideration** will result in -0.093 *units sales decrease*
- marketing mix through **liking** will *result in 0.018 units sales increase*

In markets with *low concentration + high number of brands, 1-unit investment in marketing mix:*



- marketing mix through **consideration** will result in 0.077 *units sales increase*
- marketing mix through **liking** will *result in -0.007 units sales decrease*

MANAGERIAL BEHAVIOR

COMPETITION INTENSITY	High # of Competitors	Low # of Competitors
Market with high concentration *(Rival brands with heavy efforts)*	Firms should carefully invest and manage both consideration and liking *(e.g., shampoo)*	Sales conversion of brand liking is the highest; invest on liking for higher sales *(e.g., Greek yogurt)*
Market with low concentration *(Rival brands with low efforts)*	Sales conversion from consideration is the highest; invest on consideration for higher sales *(e.g., bottled water)*	Firms should invest and carefully manage both consideration and liking *(e.g., organic detergents)*

DATA & VARIABLE OPERATIONALIZATION

- Data provided by Prométhée (Kantar WorldPanel's brand performance tracker) includes complete ***weekly*** observations between Jan 2001 – Dec 2010 over ***6 categories*** on ***148 brands***: bath gels (18 brands), bottled water (21 brands), dairy (29 brands), laundry detergents (32 brands), milk (24 brands) and soft drinks (24 brands)

- Data variables include:

Consumer Attitudes *(Srinivasan et al. 2010)*

1. **Brand consideration** (consumers' mind/ cognitive states) as % of respondents who consider the brand for purchase among all other brands
2. **Brand liking** (consumers' hearts/ affective states) using the average of a 10-point scale rating ranging between '*like enormously*' and '*not at all*'

Marketing mix efforts

1. **Advertising** (the gross rating points of the brand)
2. **Promotion** (% of the brand sales in value with special display, special offers, special packs and/or price discounts)
3. **Price** (average price paid per unit)

Brand sales volume

- The evolution of the sales volume aggregated across all product forms of each brand: % of sales increase in liters or grams compared to that of the same period in the last year

OPERATIONALIZATION OF COMPETITION

Competitive Marketing Efforts

- Average of the marketing efforts of all other brands in the category weighted by marketshare

Competition Intensity *(Bell et al. 1999; Gatignon 1984; Montgomery & Wernelfelt 1991; Morgan & Rego 2009; Nijs et al. 2001):*

1. **Competitive structure** as the number of brands in the category
2. **Competitive concentration** as the *Herfindahl index* of promotional actions efforts
   - Sum of squares of the ratio of promotional actions efforts of the all other brands excluding the focal brand to the total efforts of the category
   - Higher (vs. lower) clutter indicates rival brands engage in heavy (vs. low) promotional actions

Calculating competitive concentration in a three-brand market

- *Promotion efforts:* Brand A: **50** Brand B: **30** Brand C: **20**
- Then, the *promotion-shares* will be: Brand A: **0.5** Brand B: **0.3** Brand C: **0.2**
- Market concentration for:
  - Brand A: $(0.3)^2 + (0.2)^2 = 0.13$
  - Brand B: $(0.5)^2 + (0.2)^2 = 0.29$
  - Brand C: $(0.5)^2 + (0.3)^2 = 0.36$

Therefore, irrespective of the number of competitors, Brand C has more active competitors compared to Brand A and Brand B, in terms of promotional activities.

MODEL

Sales conversion model

- How attitudinal changes are translated into behavioral responses and generate sales
- Competition intensity and promotion clutter moderates the conversion

$$SALES_t = \alpha_0 + \alpha_1 * SALES_{t-1} + [\beta_{11}\beta_{12}\beta_{13}]\begin{bmatrix} ADV_{jst} \\ PROMO_{jst} \\ PRICE_{jst} \end{bmatrix} + [\beta_{21}\beta_{22}\beta_{23}]\begin{bmatrix} ADV_{js(t-1)} \\ PROMO_{js(t-1)} \\ PRICE_{js(t-1)} \end{bmatrix} + [\gamma_{11}\gamma_{12}\gamma_{13}]\begin{bmatrix} COMP\_ADV_{jst} \\ COMP\_PROMO_{jst} \\ COMP\_PRICE_{jst} \end{bmatrix} + [\gamma_{21}\gamma_{22}\gamma_{23}]\begin{bmatrix} COMP\_ADV_{js(t-1)} \\ COMP\_PROMO_{js(t-1)} \\ COMP\_PRICE_{js(t-1)} \end{bmatrix}$$

$$+ [\theta_{11}\theta_{12}]\begin{bmatrix} CONS_{jst} \\ LIKING_{jst} \end{bmatrix} + [\theta_{21}\theta_{22}]\begin{bmatrix} INTENSITY_{jst} \\ CONCENTRATION_{jst} \end{bmatrix} + [\theta_{31}\theta_{32}]INTENSITY_{jst} * \begin{bmatrix} CONS_{jst} \\ LIKING_{jst} \end{bmatrix} + [\theta_{41}\theta_{42}]CONCENTRATION_{jst} * \begin{bmatrix} CONS_{jst} \\ LIKING_{jst} \end{bmatrix}$$

Mindset/market response model

- How marketing mix efforts influence consumer attitude metrics
- Competition intensity and promotion clutter moderates the conversion

$$\begin{bmatrix} CONS_{jst} \\ LIKING_{jst} \end{bmatrix} = \alpha_0 + [\alpha_1\alpha_2]\begin{bmatrix} CONS_{js(t-1)} \\ LIKING_{js(t-1)} \end{bmatrix} + [\beta_{11}\beta_{12}\beta_{13}]\begin{bmatrix} ADV_{jst} \\ PROMO_{jst} \\ PRICE_{jst} \end{bmatrix} + [\beta_{21}\beta_{22}\beta_{23}]\begin{bmatrix} ADV_{js(t-1)} \\ PROMO_{js(t-1)} \\ PRICE_{js(t-1)} \end{bmatrix} + [\gamma_{11}\gamma_{12}\gamma_{13}]\begin{bmatrix} COMP\_ADV_{jst} \\ COMP\_PROMO_{jst} \\ COMP\_PRICE_{jst} \end{bmatrix} + [\gamma_{21}\gamma_{22}\gamma_{23}]\begin{bmatrix} COMP\_ADV_{js(t-1)} \\ COMP\_PROMO_{js(t-1)} \\ COMP\_PRICE_{js(t-1)} \end{bmatrix}$$

ESTIMATION

- Employed three-stage least square (3SLS) *(Zellner and Theil 1962)*:
  - Allowed the errors in different equations to correlate
  - Estimated all equations simultaneously
    (c.f., Bruno et al. 2012; Luo et al. 2012; Van Heerde et al. 2013)
- Used the lagged-level values of endogenous variables as instruments, to avoid endogeneity bias *(Arellano and Bond 1991; Tuli and Bharadwaj 2009)*
- Applied pooling using the Constant Coefficient Model (CCM), to reduce collinearity and increase model parsimony and degrees of freedom
  (c.f., Hanssens et al. 2014; Horváth and Wieringa 2008)
- Included variables in their differences (rather than levels) to control for unobserved heterogeneity due to time & category effects
  (Gruca and Rego 2005; Luo et al. 2010)
- We checked model assumptions with Durbin-Watson, White's, RESET, Jarque-Bera, VIF, & Breusch-Pagan tests
  (Morgan and Rego 2006, 2009; Luo et al. 2012): no violation

STRATEGIC IMPLICATIONS

- If a firm is operating in **a market with many players**, it may be more beneficial for firms to be amongst the brands that are **considered** by consumers
  - Because the higher the alternative brands, the higher the consumers' motivation to simplify information processing and limit purchase alternatives to brands in their restricted consideration set
  - Hence, firms may need to develop products with visible higher benefits than substitutes, and communicate these benefits of their products through informative advertising

- If a firm is operating in a **concentrated market** in which a few strong players invest heavily in promotions, then it is better to have the brands that are **most liked** by consumers
  - Because the intensified information content may lead consumers to disproportionately put more weight on unfavorable information in competing ads and attach more to the brand they like, making brand liking a shield against all other brands
  - Hence, firms may need to create emotional ads, build self–brand connections and develop brand personalities to match with the consumer expectations