What is Known About the Long-Term Impact of Advertising

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Overview

- What are the response metrics ?
- Definition of the long term
- How do long-term effects build up ?
  - Empirical findings

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Response Metrics*

- Attitudinal, e.g. awareness, preference
  - High inertia, slow moving
- Transactional, e.g. sales, market share
  - Low inertia, fast moving
- Financial flow, e.g. revenue, profits
- MASB's focus is on transactional and financial metrics

*See Lehmann & Hanssens (2010) for an elaboration

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Short and Long-Term Impact

- Short term : immediate effects, distributed lag effects
  = temporary lift (followed by mean reversion)
- Long term: persistent impact (no mean reversion)
  = permanent lift
- Not tied to specific time subscripts
- These lifts occur at the level of response, but also at the level of advertising spending
- Resulting in four strategic scenarios

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Strategic scenarios

	Only Temporary Performance Lift	Permanent Performance Lift
Temporary spending (campaign)	Business as usual	Hysteresis
Sustained spending (policy)	Escalation	Evolving business

(Dekimpe & Hanssens 1999)

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… and the marketer's perspective

	Only Temporary Performance Lift	Permanent Performance Lift
Temporary spending (campaign)	Another day at the job	The marketer's dream
Sustained spending (policy)	The marketer's nightmare	Constant Motion

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Some observations

Most impact research – including experimental designs – examines only short-term effects. Time-series methods are needed to venture beyond the short term.

Empirical generalizations suggest that most sales time series data are evolving, but most market share time series are stationary (see MSI EG Book 2009).

Thus business-as-usual/evolving business are common, and hysteresis is rare. *Most long-term marketing impact is the result of a series of repeated short-term marketing actions.*

Escalation is fairly common, but not long-run sustainable: eventually results in mergers or bankruptcies.

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Empirical Findings: Advertising Actions (“campaigns”)

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Long-term effects: marketing actions

- Examples: ad campaigns, sponsorships, promotions etc…
- Compare performance before and after over time, after the “dust has settled”
- Question: does performance eventually return to pre-action levels ?
  - Yes: temporary effects dominate (can be distributed over time) . Elasticities average 0.1, and range from 0 to 0.3.
  - No: permanent effects (true long-term) are rare
- Good data + modern time-series econometrics provide good answers. Marketing experiments can supplement when data are lacking.

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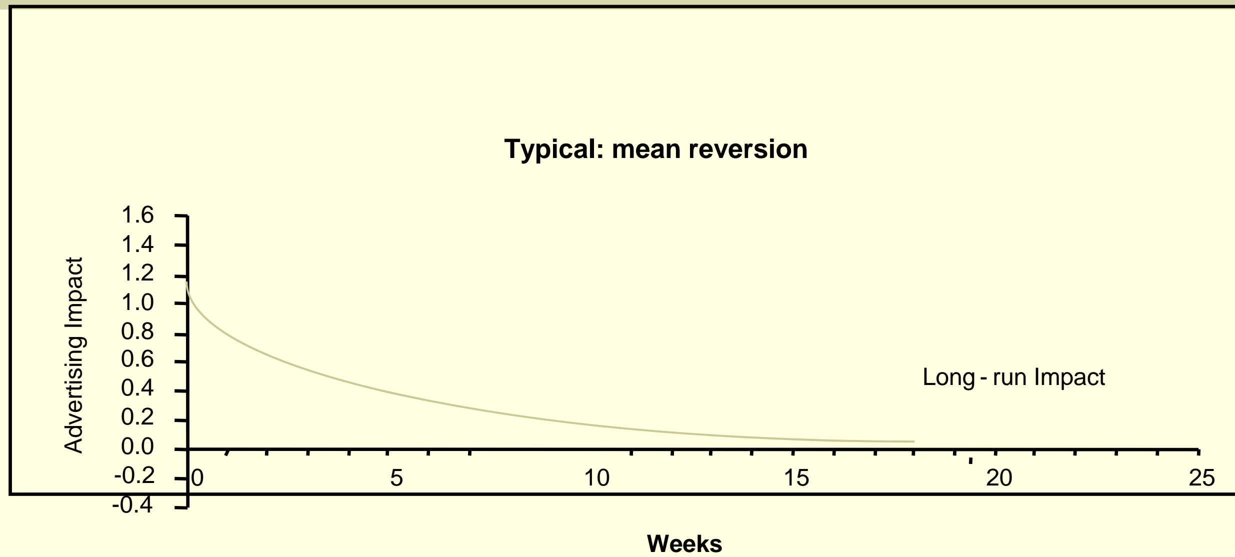
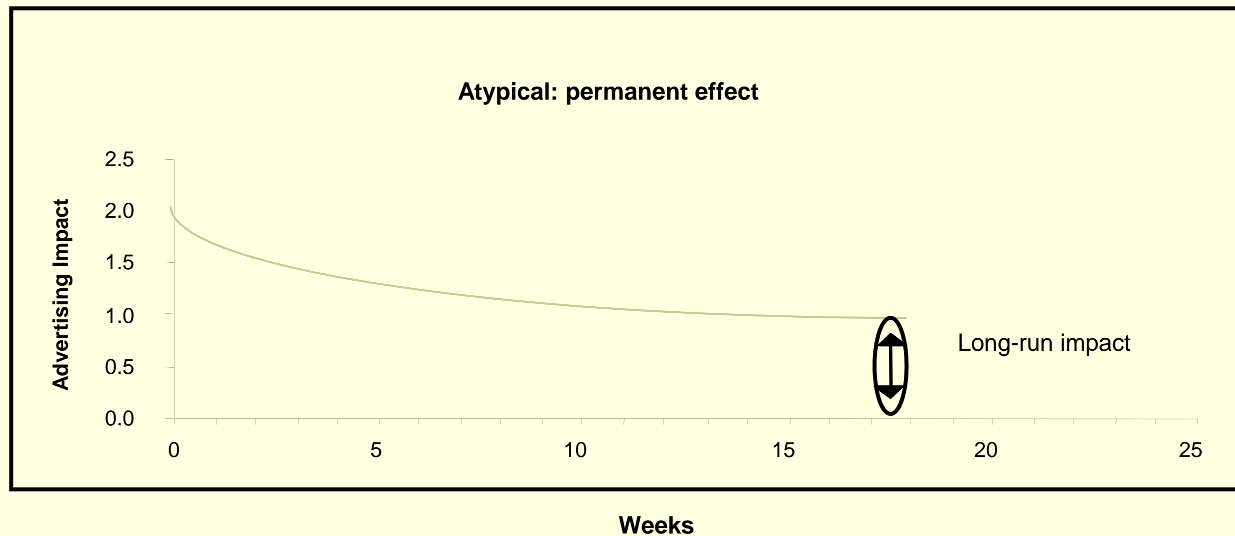
Dynamics of Advertising Effects





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Key learnings: marketing action impact

- Return-to-the-mean is the rule, permanent effects are the exception.
- Permanent impacts (hysteresis) occur almost exclusively in emerging, evolving markets

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Can the marketer's dream (hysteresis) occur ?

Yes, when customers are still learning, and when marketing support coincides with a temporary competitive product advantage

Occurs rarely in practice

Innovation quality of the Apple iPhone, coupled with aggressive marketing, is a good case-in-point

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Long-term advertising impact

- Most common: smooth decay to mean reversion
- Short-term effect depends mainly on business conditions (e.g. pre-existing awareness, new products)
- Average short-term elasticities: 0.10
  - up to 0.3 for new products
  - 0.05 or less for established products
- Long-term consumer response effect = about 2 * short-term effect
  - Customers learn quickly, forget slowly
  - Economic effects duration: a few months

See JAR Special Issue 2009 or MSI EG Book 2009 for elaboration

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Guiding principles

- As most ad campaigns have a temporary impact, long-term effects generally require sustained advertising spending
- This becomes evident when "share of voice" is a significant driver of business performance
- Reduction of short-term consumer response can result in unprofitable spending escalation
- Continuous monitoring of short-term impact is therefore important

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Importance of Corporate Decisions

- When you include firm behavior, the long-term effect can be up to fives times stronger and longer-lasting than the mere consumer response effect
- Difference is driven mainly by strategic company actions, *not* by competitor response
  - Support by other marketing-mix variables
  - Inertia

(Pauwels 2004)

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Long-term impact of policy shifts

- Defined as a *structural break* in spending pattern ("doing things differently")
- Important, but harder to measure, fewer case studies
- Lessons from a strategic marketing shift: P&G
- Most policy shifts are gradual or evolutionary

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P&G "Value Pricing" strategy

- Two years of *sustained* shift to fewer promotions and more advertising in 24 categories, featuring 118 brands
- On average, P&G market share was down 16%
- But net profit increased by over $ 1 billion !
- Transfer of promotion savings to advertising ($260 million) was not essential
- Is the shareholder better off ?

(Ailawadi, Lehmann & Neslin 2001)

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How long-term effects build up

There are six main factors:

1) Immediate response
2) Carry-over effects
3) Purchase reinforcement
4) Feedback effect
5) Decision rules
6) Competitive reaction

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Creating MASB guidelines for effective long-term resource allocation

- For each of the six long-term impact factors:
  - Definition
  - Key metrics
  - Available analytics
  - Processes to be targeted
- These steps are illustrated below with several hypothetical examples

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Long-term Impact Factor I

- **1) Immediate response** , for example as described in the MASB TV advertising document. It must be measured *above and beyond* base sales, with either experimental or econometric techniques.
  - temporary lift
  - focus of most advertising research
  - is *essential for the creation of long-term impact*

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Long-term Impact factor II

- **2) Carry-over effects** reflect delayed buyer response, especially in durable-goods markets. It is often determined either with distributed-lag models, or with intermediate performance metrics (e.g. leads in business-to-business markets).
  - Result in time-shifting of impact ("dust settling")
  - Not fundamentally different from short-term effect
  - Immediate + carryover = total temporary lift

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Factors I & 2 : Immediate response and Carryover

- **Metric: lift in a performance metric that is known to be financially relevant**
  - **Examples: unit sales, leads, internet searches**
- **Analytics: market response model or experiment**
- **Process: periodic review with tangible action**
  - **shift resources toward marketing that provides tangible lift**
  - **discontinue unproductive marketing**

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Factors I and 2 : Guidelines illustration

- Market response model reveals current + carryover effects (elasticities) of
  - TV .05
  - Print .07
- Guideline: optimal allocation between these two media should be .05/(.05 +.07) = 42% TV, and therefore 58% print
- If the brand is currently allocating 70% TV and 30% print, the guideline implies a sizeable reallocation

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Long-term Impact factor III

- **3) Purchase reinforcement** refers to repeat-buying as a result of the initial, advertising-induced purchase. It is equivalent to “customer retention” in relationship businesses. It can also build word-of-mouth.
  - Builds long-term potential
  - Without purchase reinforcement, long-term effect cannot materialize

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Factor 3: Purchase reinforcement

- Metric: improvement in a reinforcement variable
  - Examples: repeat-purchase rate, retention rate, customer referrals, customer satisfaction
- Analytics: monitoring the metric or dynamic market response models
- Process: periodic monitoring with diagnostic action when needed (red flags)
  - Example: repeat rates are down. Why?

    What has been done to correct the problem ?

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Factor 3: Guidelines illustration

- Database inquiry reveals typical annual customer retention rate is 75%, with typical annual purchase growth of 5%
- This implies that long-term customer value (gross margin) is about 4.76 times short-term value (excluding discount rates)
- Guideline: the brand is currently spending $100 to acquire a new customer on average, and short-term gross margin is $600. The guideline suggest major *under*utilization of marketing resources, with resulting opportunity loss in firm value.

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Long-term Impact factor IV

- **4) Feedback effect** is the impact of the initial sales lift on subsequent advertising spending. For example, is the advertising limited to a single campaign, or does it become "policy" as a result of its initial success?
  - also helps build the long-term effect
  - however, can result in escalation if response effect wanes, yet spending continues

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Factor 4: Feedback effects

- Metric: evolution of budget allocations as a result of new market response insights
  - Continuing a successful campaign (per components 1-3)
  - Discontinuing or rejuvenating a worn-out campaign
- Analytics: monitoring the metric, or advertising decision modeling
- Process: from tradition-based to response-based marketing
  - Recognizing past allocation errors and implementing learnings

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Factor 4: Guidelines illustration

- The brand's annual advertising budget of 4% of revenue is consistent with historically established advertising response elasticity of 0.08.
- However, in the last year
  - Life-cycle progression has reduced advertising elasticity to 0.05
  - Increased competition has squeezed profit margins by 20%
- Guideline: recalibrate optimal spending rule in light of reduced advertising impact and profitability. New guideline should be, say, 3% of revenue. The organization seems slow to adapt to new market realities.

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Long-term Impact factor V

- **5) Decision rules** refer to the impact of advertising spending on the other parts of the brand's marketing mix. For example, reductions in trade promotions to offset the ad spend, increases in sales calls or retail price to capitalize on positive consumer response to advertising.
  - Together, they shape the firm's overall marketing strategy
  - Inertia in decision making is part of this
  - Opportunity to create synergy

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Factor 5: Decision rules

- Metric: degree of coordination across the marketing mix
  - Example: correlation between sales calls and advertising support should be positive if synergistic
- Analytics: market response models with interaction effects, marketing decision models
- Process: cross-functional decision teams
  - Coordination when there is synergy
  - Clutter avoidance when there is competition

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Factor 5: Guidelines illustration

- A full market response model reveals synergy between advertising and sales promotion impact, both of which impact financial performance level *and* volatility
- A decision rule model reveals uncoordinated, independent decisions of advertising/sales promotion campaigns across brands
- Guideline: reduce harmful volatility effects by coordinating marketing across brands during the fiscal year. Requires organizational alignment.
- Impact: same revenue and profit, lower volatility => higher firm value

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Long-term Impact factor VI

- **6) competitive reaction** with advertising (which can be share-stealing or category-expanding) and other competitive marketing tactics. The intensity of these reactions can determine the ultimate level of marketing rivalry in an industry.
  - The predominant form of reaction is NO reaction
  - If reaction, often category-enhancing in new markets, share-stealing in established markets

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Factor 6: Competitive reaction

- Metric: cross-elasticities
  - Examples: cross-sales effects , reaction elasticities
- Analytics: competitive market response models with competitive effects, reaction functions
- Process: decision rules for optimal competitive behavior
  - If no negative cross-sales effect: don’t react
  - If negative cross-sales effect: react only with effective instruments

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Factor 6: Guidelines illustration

- Market response model for brand A reveals the following own and cross-advertising elasticities:
  - Brand A: +.08
  - Brand B: -.05
  - Brand C: 0
- Guideline: advertising planning for brand A should proceed regardless of competitor C's behavior. However, some reaction to competitor B's advertising is called for, in order to protect market position.

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Conclusion on long-term build-up

- The “long term” develops as a result of the relative strength of these six components
- Simple example: sustained, effective advertising without competitive reaction is likely to have a stronger long-term impact
- Methods exist for disentangling the effect components , such as VAR models on long time series
- Non-advertising forces help determine the long-term impact of advertising , such as product innovation and sales calls

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