GfK Marketing Intelligence Review

GfK Verein


HELLO

CONTENTS

Vol. 4, No. 1, May 2012

EDITORIAL

Enhancing the value creation capacity of organizations is a key task of marketing. In times of intensive price competition, incremental investment risk for new product development and increasing outsourcing of various value creation processes, it becomes more and more difficult to be successful. Many companies have to generate substantial turnover to realize little added value (e.g. the German Metro group). Others succeed in establishing a high-margin business (e.g. Apple) with comparatively low sales volume.

A company's marketing intelligence system plays a substantial role in creating value. At first it is necessary to identify benefits for which consumers are ready to spend more than they would on average offers. Then, the benefits need to be transformed into a branding concept that creates additional and sustainable value by building an attractive image. Research of and with consumers is mandatory in this process. Further, it is necessary to quantify consumers' willingness to pay and to leverage value by a sound system of price differentiation. Information on existing and prospective customers needs to be collected and analyzed to serve as a basis for an efficient and effective customer management system. In a world with multiple points of purchase and communication channels, detailed information on consumer behavior is necessary to create an optimal blend of distribution channels and communication tools. The ultimate objective of all these activities is to either increase turnover or to identify savings potential in order to improve margins and generate income for all stakeholders.

In view of these challenges, the articles in this ***seventh issue of GfK Marketing Intelligence Review*** provide most relevant stimulation. The renowned marketing researchers *Thales Teixeira* (Harvard University, Boston), *Michel Wedel* (Smith School, Maryland) and *Rik Pieters* (University of Tilburg) investigate how widely popular zapping through TV commercials can be reduced by cleverly arranging branding elements. (''To Zap or Not to Zap: How to Insert the Brand in TV Commercials to Minimize Avoidance'', p. 14). Given that billions of dollars are still spent on television advertising, there are substantial reserves to increase the added value. From insights of a large-scale eye-tracking study the authors derive very precise guidelines for the script of commercials and the integration of branding elements in it.

Dealing well with one's customers is another value creation buffer. This task ranges from tracking down new customers intelligently to professional complaint management routines. The use and handling of emotions in sales encounters has so far been a less researched field, maybe because emotions are difficult to approach from an analytical standpoint. *Blair Kidwell, David M. Hardesty, Brian R. Murtha* (all from the University of Kentucky) and *Shibin Sheng* (Garden City University, NY) took up the challenge and developed a new scale to validly measure emotional intelligence in the context of customer relations (''A closer look at Emotional Intelligence in Marketing Exchange'', p. 24). The new tool helps to diagnose individual levels of emotional intelligence within marketing exchange and shows that emotionally intelligent sales people achieve better results, both atmospherically and financially. The scale can be very useful for employee selection and designing specific sales trainings in order to improve exchange relationships and interactions between buyers and sellers, in particular.

Cost per contact is widely used to measure the efficiency of advertising and also to identify chances for creating more added value. Internet and mobile services offer new opportunities, especially when consumers are willing to share electronic messages. To stimulate and optimize a viral campaign it is necessary to predict how many customers will be reached, how this reach evolves, and how it depends on promotion activities. *Ralf van der Lans* (Hong Kong University of Science and Technol-

ogy), *Jehoshua Eliashberg* (Wharton School, University of Pennsylvania), *Gerrit van Bruggen* and *Berend Wierenga* (both from Erasmus University, Rotterdam) introduce a new Viral Branching Model, which is based on insights from epidemiology and the spread of viruses and was adapted to a marketing context and an electronic environment. The model is applied to an actual viral marketing campaign in which over 200,000 customers participated during a six-week period. The results show that the model quickly predicts the actual reach of the campaign and serves as a valuable tool to support marketing decisions related to online campaigns (''Seeding a Message to Harvest Reach. Predicting and Optimizing the Spread of Electronic Word-of-Mouth'', p. 32).

No other field determines value creation as plainly as pricing. The trick is to skim consumers' surplus to gain the amount they are willing to pay more than for a conventional product. Market research provides numerous methods to measure such individual willingness to pay as accurately as possible. In their article, *Klaus M. Miller* and *Harley Krohmer* (both from the University of Bern), *Reto Hofstetter* (University of St. Gallen) and *Z. John Zhang* (Wharton School, University of Pennsylvania) test which of the four most common approaches best predicts the optimal price level and resulting sales and profits. (''Measuring Consumers' Willingness to Pay. Which Method Fits Best?'', p. 42).

In our Case Study category, *Marc Fischer* (University of Cologne), *Sönke Albers* (Kühne Logistics University of Hamburg), *Nils Wagner* and *Monika Frie* (former Head of Global Business Support, Bayer AG, Berlin) present a new tool for optimizing a fixed marketing budget across products, regions and marketing activities. The approach takes into account the different growth perspectives of individual segments and the effectiveness of different marketing activities. The profit improvement potential at Bayer – one of the world's largest firms in the pharmaceutical and chemical business – is more than 50 % and worth nearly EUR 500 million in incremental discounted cash flows. Obviously, even well-managed companies have levers to increase added value (''Dynamically Allocating the Marketing Budget: How to Leverage Profits across Markets, Products and Marketing Activities'', p. 50)

Finally, our interview partner *Jeff Cooper*, Consumer Insight Director at Cereal Partners Worldwide (CPW S.A.), a successful 50/50 joint venture between Nestlé S.A. and General Mills Inc., explains, how they stay close to the customer in the dynamic market of breakfast cereals while accepting their social responsibility (p. 60). This trade-off is not easy but is becoming more and more important. Increasingly critical consumers on one side and the pursuit of higher financial value on the other can be a serious source of controversy.

The more success Marketing Intelligence in firms has in detecting and utilizing the potential for value creation, the more influential it will be. Dear reader, let me wish you continued success in doing so. I hope you find our article selection inspiring and useful. We appreciate your feedback, suggestions for improvement, critique or praise.

Nuremberg, May 2012

Hermann Diller
Editor-in-Chief

CONTACT

You can contact us at
diller@wiso.uni-erlangen.de,
by phone on
+ 49 911 5302-214,
or by fax on
+ 49 911 5302-210

Dr. Dr. h. c. H. Diller,
GfK-MIR,
University of Erlangen-Nuremberg,
Lange Gasse 20,
D-90403 Nuremberg,
Germany

{ *Editorial Board* }

EDITORIAL BOARD

IMPRINT

GfK Marketing Intelligence Review© is published biannually and replaces the "GfK Jahrbuch der Absatz- und Verbrauchsforschung" / "Yearbook of Marketing and Consumer Research", which has been published since 1954. It focuses on topics from Marketing Intelligence and presents rewritten versions of already published academic articles from leading marketing journals by authors with the highest reputation in a readable form for practitioners.
/ / /

Publisher

GfK Verein

GfK-Nürnberg e.V. (the GfK Verein)
Nordwestring 101
D-90419 Nuremberg
Germany
Tel +49 911 395 22 31
Fax +49 911 395 27 15
Email: info@gfk-verein.org
www.gfk-verein.org
www.gfkmir.com
/ / /

Design & Art Direction
Scheufele Hesse Eigler Kommunikationsagentur GmbH
/ / /

Print
Druckerei Eugen Seubert GmbH, Nuremberg
/ / /

Lithography
607er Druckvorlagen, Darmstadt
/ / /

Subscriptions
75 € per annum
/ / /

ISSN 1865-5866
/ / /

{*Summary*}

To Zap or Not to Zap: HOW TO INSERT THE BRAND IN TV COMMERCIALS TO MINIMIZE AVOIDANCE

Thales Teixeira, Michel Wedel and Rik Pieters

Huge amounts of money are spent on TV advertising. In an environment of rising per-viewer rates for advertisers and increased skipping past ads by consumers it is necessary for advertising managers to understand the determinants of commercial avoidance. In order to optimize brand exposure they need information on how to best retain consumers' attention from moment-to-moment during television advertising. The study tests to what extent the design of the commercial itself favors or prevents zapping.

A large-scale eye tracking study in which 2,000 participants watched 31 ads investigated patterns for commercial avoidance. The observed variables included brand-related characteristics such as presence, size, position and duration of brand name (symbol), the visual complexity of the ad and eye fixation to capture attention concentration. Subsequent experiments with modified ads further helped to draw conclusions on how to optimize commercials to keep zapping as low as possible.

The study results and their implications can be summarized as follows:

> ***Focused attention keeps viewers in line***
Independent of branding activity and other factors, the ability of commercials to concentrate consumers' visual attention reduced commercial avoidance significantly. The farther away a person's gaze is from that of most of the other viewers, the more likely this person is to zap away. Therefore a commercial's power to concentrate, hold and direct visual attention is crucial to advertising effectiveness. By means of eye tracking, advertisers can see where they begin to lose people and (re)design the commercial accordingly.

> ***Medium levels of visual complexity work best***
Consumers' moment-to-moment decisions to continue or stop watching commercials also depended on the optimal amount of visual complexity in the commercials. Both under low and high levels of visual complexity, the likelihood to stop watching commercials was higher than under intermediate levels.

> ***Pulsing brand appearance reduces zapping***
To increase brand awareness managers try to maximize the prominence of their brands in commercials. However, a strong presence of the brand name or logo can actually be harmful to advertising objectives because it encourages zapping. Taken alone, brand presence automatically increases commercial avoidance but a "pulsing strategy" in which the brand is inserted briefly and intermittently throughout the commercial (without decreasing the total time of brand exposure) results in average decreased zapping of 8 to 10 %. Dispersing brand-feature-time across the whole duration of the commercial is therefore an easily manageable strategy which can even be used both before and after final production.

Turn to page

... 14

... to read the full article

Keywords:
TV Advertisement, Zapping, Commercial Avoidance, Branding, Attention, Pulsing

{ *Summary* }

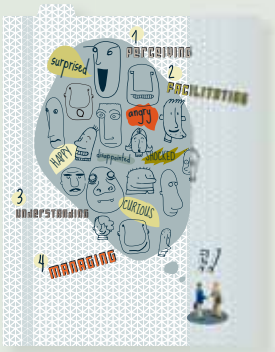
A CLOSER LOOK AT EMOTIONAL INTELLIGENCE IN MARKETING EXCHANGE

Blair Kidwell, David M. Hardesty, Brian R. Murtha and Shibin Sheng

Turn to page

... 24

... to read the full article



Emotional intelligence (EI) is important in many business contexts. Knowing how sales professionals use emotions to facilitate positive outcomes for their firms, themselves and their customers is particularly important for managing marketing exchange. To leverage EI it is necessary to accurately measure it. Being "emotionally intelligent" in marketing exchange means being able to use emotions to facilitate interactions with customers. EI can be described along four different dimensions, in general and in market exchange in particular:

Perceiving emotion is the ability to accurately recognize and appraise emotions. Specific to marketing exchanges, perceiving involves, for example, recognizing emotions from facial expressions.

Facilitating (or using) emotion is the ability to access, generate and use emotions. Specific to marketing exchanges, facilitating emotion involves knowing which emotions are appropriate in sales interactions.

Understanding emotion is the ability to analyze complex emotions and form emotional knowledge. For example, salespeople are at a distinct advantage when they understand that anxious customers are likely to become frustrated.

Finally, ***managing emotion*** is the ability to regulate emotions of oneself and in others to achieve a desired outcome. In marketing exchanges, this dimension involves salespeople's ability to maintain composure in the presence of negative emotions and being able to positively influence customers' emotional responses.

Three independent studies in the insurance and real estate business show the following results:

> ***A new domain-specific, ability-based EI scale (EIME) is superior in assessing EI in marketing exchange***
Measuring EI along the four dimensions in a specific marketing exchange context performs best. Measuring EI using a domain-specific assessment helps to more effectively explain and predict EI effects in marketing exchange and sales. Older domain-general measures, like the MSCEIT scale, have a rather modest correlation with the domain-specific EIME measure and only limited capacity to predict in such specific domains as marketing exchanges. The same is true for self-report scales that are highly susceptible to falsification and invalid for assessing ability.

> ***High EI salespeople add to the bottom line***
Emotional intelligence provides an important key for understanding how sales professionals interact with customers in ways that not only facilitate the interactions, but also lead to positive outcomes for the firm, customer and salesperson. Beyond directly impacting performance, being able to attend to customers' needs (customer orientation) and to influence them (manifest influence) are more positively related to performance when individuals possess high EI. While cognitive abilities are important, they deploy their full potential only in combination with an at least moderate level of EI.

The results imply that

> ***Selection procedures should include EI***
Selection procedures should include measures of EI performance in addition to the assessment of cognitive ability. The elaboration of EI dimensions in marketing exchange and the results of which dimensions are of particular importance in specific fields can be used as a guideline of how to integrate EI into selection procedures.

> ***EI should be integrated into sales training programs***
Companies might assess EI to discern which dimensions are lacking and then focus training on overcoming EI weaknesses.

Keywords:
Emotional Intelligence, Marketing Exchange, Cognitive Ability, Sales Performance, Measurement Scale

{ *Summary* }

Seeding a Message to Harvest Reach
PREDICTING AND OPTIMIZING THE SPREAD OF ELECTRONIC WORD-OF-MOUTH

Ralf van der Lans, Gerrit van Bruggen, Jehoshua Eliashberg and Berend Wierenga

In a viral marketing campaign, organizations stimulate customers to forward marketing messages to their contacts. Even if the ultimate goal of viral campaigns is that the message spreads by itself, marketers have a number of tools to encourage the process and some seeding activities are necessary to start the process. To optimize a viral campaign it is necessary to predict how many customers will be reached, how this reach evolves, and how it depends on promotion activities.

A new Viral Branching Model can provide these results. It is based on insights from epidemiology and the spread of viruses and was adapted to a marketing context and an electronic environment. The model is applied to an actual viral marketing campaign in which over 200,000 customers participated during a six-week period.

The results show that the new model is able to predict the actual reach of the campaign much earlier than other diffusion models (e.g. the Bass model). Therefore it serves as a valuable tool to support marketing decisions related to online campaigns. In particular the model can be used to benchmark and evaluate alternative plans of action:

Benchmarking

Comparing key measures of a campaign like seeding acceptance or forward rates can help to modify a campaign with the right lever by improving individual elements. Further, it is possible to detect any "bottlenecks" in the process. If, for example, the forward rate of a campaign falls behind others, it might help to facilitate forwarding or to offer incentives. If the acceptance rate is low compared to other campaigns, it might be more advisable to improve the content or headline of the email.

What-if Analyses:
Estimating Marketing Tool Effectiveness

The model makes it possible to estimate the spread of alternative marketing options. Thereby it can support decisions about modifying the campaign in order to reach their objectives. E.g., a company might be interested in exploring the effects of either using additional banner ads or additional seeding emails to spur the reach of a campaign. Different effects originate from the different probabilities of participating after receiving a seeding email and after clicking on a banner. Once the rates for both options are known, a company can, based on the model's predictions, determine which seeding method is most cost-effective. The company can further put a dollar value on a customer that participates (e.g. customer lifetime value) to determine if it is profitable to carry out a particular additional seeding.

Turn to page

... 32

... to read the full article

Keywords:
Online Marketing, Viral Marketing; Word-of-Mouth, Reach, Branching Processes; Forecasting; Markov Processes

{ *Summary* }

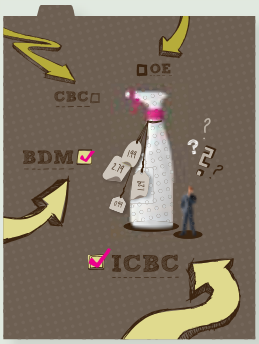
Measuring Consumers' Willingness to Pay
WHICH METHOD FITS BEST?

Klaus M. Miller, Reto Hofstetter, Harley Krohmer, and Z. John Zhang

Turn to page

... 42

... to read the full article



Gauging maximum price or maximum willingness to pay (WTP) accurately is necessary to position a product or service among competing offers, to decide optimal price-related segmentation of a market and for decisions about changing or modifying prices. It determines not only market performance but also financial results. A number of approaches have therefore been developed to accurately estimate consumers' willingness to pay. The comparison of four commonly used measurement approaches with real purchase data as a benchmark shows the relative strengths of each method. The included approaches are

- OE (open ended questions on hypothetical WTP)
- CBS (choice based conjoint analysis generating indirectly measured hypothetical WTB)
- BDM (incentive-compatible mechanism with actual purchases)
- ICBC (incentive aligned choice based conjoint with actual purchases)

and the results can be summarized as follows:

- ***Incentive-aligned approaches performed best***
  Incentive-aligned approaches performed best for products with fairly low complexity and price, such as the cleaning product in this study. However, this may not be true for all types of products. Further, additional factors including budget restrictions, the unavailability of product-prototypes or survey subjects and legal restrictions may limit the application of incentive-aligned approaches.
- ***Type of product and purchasing context matter***
  OE can outperform CBC in estimating mean WTP and WTP distribution, as well as making pricing decisions for an inexpensive, frequently purchased, non-durable product. According to previous findings, however, CBC may perform better when a product is less unique and compete against a greater number of products, unlike the product in this study. Thus, indirect approaches such as conjoint analysis may be better suited for the product category where a more extensive decision process is involved (e.g., a digital camera), while direct approaches are less suitable for infrequently purchased products, but more suitable for offerings absent of any explicit competitive offering (e.g., products without any or only few direct competitors).
- ***Hypothetical bias might be less relevant***
  Focusing on hypothetical bias in evaluating conjoint approaches seems irrelevant for most marketing applications. The analysis shows that even if a particular approach generates biased mean WTPs, and even if the estimated demand curve is different from the actual demand curve, the approach may still be useful in guiding marketing researchers to good pricing decisions. In particular, hypothetical CBC can be appropriate if managers are primarily interested in the relative utilities of product attributes and price and less in predicting the actual best price. If the research objective is to estimate WTP in relation to other product attributes, then OE and CBC can deliver valuable insights, despite some obvious concerns about the hypothetical nature of these approaches.

Keywords:
Market Research, Pricing, Demand Estimation, Willingness to Pay, Hypothetical Bias

{*Summary*}

Dynamically Allocating the Marketing Budget
HOW TO LEVERAGE PROFITS ACROSS MARKETS, PRODUCTS AND MARKETING ACTIVITIES

Marc Fischer, Sönke Albers, Nils Wagner and Monika Frie

Allocating a fixed marketing budget to different marketing instruments and sales segments, like products, regions and time intervals, is of paramount importance to marketers. The challenge for management is to find a balance between the allocation of marketing resources that trades off the size of the business, growth expectations, and eventually the effectiveness of marketing expenditures. The main objective is to improve the process and results of the annual budget allocation.

A new innovative budgeting allocation approach provides a simple but comprehensive tool that accounts for dynamics in marketing effects and product growth. It was implemented and tested by Bayer's prescription drug business in the five European countries which contribute the largest share to total sales. The application was developed in the period 2005-2006 and budget recommendations for 2007 were derived. In the model, sales are represented by a general growth function (a product life cycle) and the response of marketing investments. The growth function describes the evolution of new product sales over time. The effect of marketing investments on growth is determined by a marketing stock that arises from previous investments and depreciates over time plus the marketing investments in the current period. Based on these specifications, the discounted net value of the product portfolio is maximized.

The tool is easy to use and flexible enough to adapt to varying conditions of decision making. It improves managerial decision making in several ways:

- ***It helps structure the allocation problem*** by specifying the necessary information.
- The transparency and top-down perspective of the tool ***improves the decision*** process by providing an independent perspective and entirely fact-based recommendations.
- In contrast to separate ROI analysis, ***it shows the trade-offs and synergies between alternative budget allocations***.
- It provides a mathematical solution that ***increases profits***.

The results indicate that

(1) Products which generate more incremental sales with the same budget should get a larger slice of the total budget.
(2) Products with a higher level of profit contribution generate more financial resources to cover their own marketing expenditures and contribute more to overall profits.
(3) Marketing should support growing and not declining products and shift resources over the life cycle.
(4) A product with high marketing effectiveness but a low profit contribution level should have a lower budget than a product with a high level of profit contribution but lower marketing effectiveness. Even though that product's spending is less effective, it may still contribute more to overall profit because of its larger sales base.

A simulation of the prescription drug business of Bayer, based on the year 2007, suggests an increase in discounted profits of 55 % over the following five years when allocation is optimized using the tool. This is worth EUR 493 million. In contrast, changing the overall budget by 20 % promised a profit impact of less than 5 %. Even if only a small portion of this increase can be realized the additional profit for each business unit is substantial.

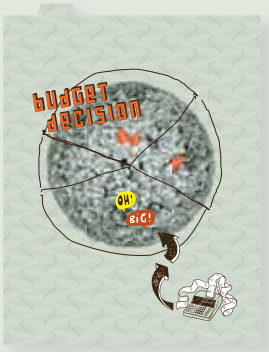
The tool is suitable for many industries, including consumer durables and consumer packaged goods, provided that rich information is available at the aggregate product level.

Keywords:
Marketing Budget, Optimization, Resources, Allocation, Case Study

Turn to page

... 50

... to read the full article



{New Strategy}

/// Good commercials need to manage attention frame by frame.

To Zap or Not to Zap: HOW TO INSERT THE BRAND IN TV COMMERCIALS TO MINIMIZE AVOIDANCE

Thales Teixeira, Michel Wedel and Rik Pieters

Vast sums of money are still spent on TV advertising. In an environment of rising per-viewer rates for advertisers and increased skipping past ads by consumers it is necessary for advertising managers to understand the determinants of commercial avoidance. In order to optimize brand exposure they need information on how to best retain consumers' attention from moment-to-moment during television advertising. This large-scale eye tracking study shows that the decision to zap or not to zap depends on how the brand is presented within the commercial. First, the ability of a commercial to concentrate consumers' visual attention reduced avoidance significantly. Second, the likelihood that viewers will zap can be decreased with a "pulsing strategy" in which brand images are shown more frequently for a shorter period of time within the commercial instead of longer at the beginning or end.

THE AUTHORS

Thales S. Teixeira, Assistant Professor of Marketing, Harvard Business School, Boston, Massachusetts 02163, tteixeira@hbs.edu

Michel Wedel, Professor of Marketing, Robert H. Smith School of Business, University of Maryland, College Park, Maryland, USA, mwedel@rhsmith.umd.edu.

Rik Pieters, Professor of Marketing, Tilburg University, Faculty of Economics and Business, Department of Marketing, Tilburg, the Netherlands, f.g.m.pieters@uvt.nl.

The article is an adapted version of *Teixeira, Thales S.; Wedel, Michel; Pieters, Rik* (2010): "Moment-to-Moment Optimal Branding in TV Commercials: Preventing Avoidance by Pulsing", Marketing Science, Vol. 29, No. 2, 783 – 804.

The Growing Challenge of Keeping TV Advertisement Efficient

Effective television advertising still plays a major role in building long-term brand equity by generating brand awareness, and forming associations and attitudes. However, several trends have emerged making efficient TV advertising more challenging. Despite declines in prime-time audiences of up to 30 % in recent years, the networks have been imposing hefty price increases for ads by raising their per-viewer rates by more than 100 % in the last ten years. On the other hand consumers have become "more difficult". Not only do they increasingly use other electronic media in addition to TV, they also change their routines of watching TV in general and commercials in particular. Omnipresent remote controls and digital video recorders (DVR) permit consumers to record and replay TV content without having to see all or parts of commercial breaks and the effectiveness of television advertising may be slipping due to consumers' zapping away from commercials. Jointly, this leads to inefficiencies in marketing expenditure, increasing costs per viewer, and potential erosions of brand equity. It urges brand and advertising managers to understand the determinants of commercial avoidance and how to best retain consumers' attention from moment-to-moment during television commercials, in order to optimize brand exposure.

Branding in Commercials: Characteristics that Matter

Branding activity is the way in which brand identity symbols (name, logo, typeface, trademark) are present at each moment and across time in the commercial. This activity determines the prominence of the brand in commercials. At each moment during the ad, the brand is more prominent to the extent that it appears larger (versus smaller), more central (versus peripheral) and distinguished from its background (versus embedded), visually and eventually simultaneously supported by audio. Further, it is more conspicuous when it appears more (versus less) frequently and for longer (versus shorter) periods during the commercial.

In theory and practice there is still debate on which form of advertising works best. Some recommend small, unintrusive branding while others prefer large, intrusive branding. Likewise, there are recommendations to place the brand as early as possible in commercials, late or early-and-late. Most of the recommendations were derived from experiments with forced exposure — when consumers cannot avoid watching the ads. In such conditions, early and late exposure and more frequent and longer branding can improve comprehension, recall and persuasion.

However, in practice consumers do have increasing control over commercial exposure, which is important. When consumers stop watching commercials before they naturally end, later branding activity cannot have the beneficial effects that have been reported for forced exposure conditions. What if one of the main objectives for advertisers investing heavily in commercials, namely to expose the brand, is related to the consumer's decision to continue or stop watching the ad? Beside other reasons for zapping during commercial breaks, there might be an impact of the branding activity itself on consumers' moment-to-moment avoidance decisions.

Television commercials are narratives which aim to convey the brand message and at the same time entertain and retain consumers. Because brands convey information, their prominent presence in television commercials can strengthen the likelihood of their avoidance due to information overload. Moreover, higher levels of branding activity decrease the "soft sell" and boost the "hard sell" character of ads, and people generally resist the forceful persuasion that comes with the hard sell. Therefore, higher intensities of branding activity, though beneficial for comprehension, recall and persuasion when analyzed under forced exposure conditions might in fact have adverse effects. The likelihood of avoidance, might increase at each moment during the commercial with certain momentary (size, separation and centrality) and dynamic (frequency and duration) characteristics of branding activity.

Another, less discussed issue is a commercials' ability to concentrate consumers' attention. Consistent with findings in aesthetic psychology it is likely that viewers with less focused attention do not actively follow the ad script and may decide to zap away while commercials that are able to concentrate consumers' attention are better able to retain them, thus preventing commercial avoidance.
While the first mentioned characteristics can be observed directly from the commercial, eye tracking is necessary to follow the pattern of consumers' attention to specific elements of an ad. To the extent that commercials are successful in focusing and conducting attention, eye fixations of consumers at each moment across its entire duration will be more concentrated at specific locations. Such a dense pattern of eye fixations would reflect desirable bottom-up control of consumers' focal attention by characteristics of the commercial and the likelihood of commercial avoidance is expected to be lower than for dispersed patterns of eye fixation.

The impact of all these characteristics on commercial avoidance was analyzed in a large-scale experiment using eye tracking technology. Box 1 gives an overview of all the included parameters. Box 2 comprises information on the eye tracking experiment and the devolution of the study (see Box 1+2).

» Consumers who fail to look where all other consumers concentrate their attention have a higher probability to zap. «

{ Box 1 }

THE VARIABLES AND THEIR MEASUREMENT

Commercial avoidance: variable to be explained

Every recorded avoidance decision, when a participant chooses to stop watching a particular commercial by pushing a button (1 = avoid, 0 = else).

Branding activity: each featured brand name, logo, typeface or trademark

Recorded semi-automatically by means of specialized software for each time frame of a commercial.

Stationary brand characteristics: presence, size, position, separation and *mode*

Dynamic brand characteristics: cardinality and *duration* across frames.

- *Presence* indicates whether the brand is on screen (1) or not (0) during a particular frame.
- Size is the proportion of the screen covered by the brand and is zero when the brand is absent.
- *Position* indicates whether the brand takes a central (within the viewing angle of the eye) (1) or peripheral (0) position on the screen.
- *Separation* indicates whether the brand is well-separated from its background (1) or not (0).
- Mode indicates whether the brand was additionally present (1) in audio mode or not (0).
- *Cardinality* captures how many times a brand appears non-consecutively in video mode.
- *Duration* indicates how long a brand was present consecutively in video mode up to that point.

Attention concentration: eye fixations

Individual attention dispersion: eye fixation of each individual per frame at a time

Aggregate attention dispersion: variance of individual fixation across consumers per frame and time

Control Variables (of ads and participants and featured brands)

- *Visual complexity:* file size in kilobytes of the GIF-compressed image (found to correlate highly with human judgments of visual complexity in similar applications)
- *Pacing:* presence of cuts and edits (1) versus none (0)
- *Gender* (1 = male, 0 = female)
- *Age* (years)
- *Brand familiarity* (familiar = 1, unfamiliar = 0) and
- *Product Category* (utilitarian = 1, hedonic = 0)

{ Box 2 }

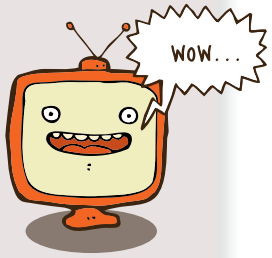
THE STUDY: EYE TRACKING DURING COMMERCIAL EXPOSURE

The data for this research was collected by the marketing research company Verify International (Rotterdam, the Netherlands). A sample of 31 regular, newly aired commercials of 25, 30 and 35 seconds were selected. They featured known (Citroen, T-Mobile) and unknown (Radio 538, KWF), national (Albert Hein, Unox) and international (Mastercard, Kodak) brands, from a variety of different product categories (food, durables, public and services, electronics, telecoms, clothing), with utilitarian (checking account) and hedonic (chocolate) purchase motivations.

Participants were a random sample of 1,998 regular television viewers (aged 20 to 62, 48 % male) and consumers of the advertised products, who were paid for participation. Each person watched a maximum of four television commercials. On average, each commercial was watched by 111 participants.

The instruction on the screen asked people to watch the commercials, and to stop watching any commercial at any time by zapping. Immediately after zapping a commercial or after it ended without the participant zapping, the next commercial in the sequence appeared. The order of the commercials was randomized. Filler ads were shown between the target ads but no program content was shown. This experimental setup mimics the common situation of ''road-blocking'', in which blocks of commercials are aired at the same time on different channels, so that consumers zapping away from one commercial zap into another one.

Infrared corneal-reflection eye tracking methodology was used to record the focal positions of the viewers' right eye, in an X and Y coordinate. The data was combined into 40 millisecond (ms) frames, which results in an average of 750 consecutive frames (moments) for every 30 second commercial. For the analysis, the frames were aggregated to a length of approximately 240 ms leading to a total of 125 frames (equal in duration). They retained sufficient detail while making the analysis task manageable.



{*Box 3*}

MODEL AND ESTIMATION PROCEDURE

The model describes commercial avoidance as a utility-based decision that is made on a moment-to-moment basis. It specifies certain branding parameters to be time-varying to allow for the evolution of their effects. It accounts for observable individual and commercial heterogeneity partially by the eye tracking data and by covariates, and for other unobserved sources of heterogeneity, by assuming normal distributions of all parameters.

For the dynamic probit model a Markov Chain Monte Carlo (MCMC) Gibbs sampling procedure was used. In essence, the estimation is done by using latent values for utilities for all individuals, commercials and time frames. The MCMC chains were run for 60,000 iterations on 1,998 viewers, 31 commercials, and a maximum of 125 time-frames, totaling 293,000 observations.

In a second step, possibilities for optimizing branding activities were explored. The goal of improving patterns of branding was solved by minimizing the avoidance likelihood for a commercial subject to a certain minimum brand activity level and simultaneously maximizing opportunities to see the brand. The focus was on branding decisions that can be made both before and after the actual production of the commercial and even while running the campaign. To ensure a realistic solution for the optimum branding pattern, constraints were placed on variables to be in the range of the observed values of the data. The brand activity level in commercials ranged from 0.38 to as much as 15.25 (mean = 4.65). All 31 commercials were individually optimized, subject to their brand activity level remaining unchanged. The optimization procedure was carried out in a Linux Grid Server based on processors with 3.0 GHz of speed and 15 GB of memory, taking between 49 hours and 172 hours of CPU clock time to arrive at the solution depending on the specific commercial.

Determinants of Moment-to-Moment Zapping Decisions

The results showed that all sets of variables had an impact on commercial avoidance. Further dynamic effects and the extent of heterogeneity among consumer attention patterns did matter. The model (see Box 3 for details on the estimation procedure) predicts commercial avoidance with an average absolute error of only 6.5 % across the 31 commercials.

A comparison of the relative importance of standardized variable groups shows the following results (Figure 1). Most important are attention dispersion metrics, with a combined posterior (absolute) mean effect of 1.50, followed by branding variables, with a total effect of 0.49, third are visual complexity measures with 0.10, then product-brand control variables (brand familiarity and product category) with 0.04 and finally demographic control variables (age and gender) with 0.02.

Among the ***branding activity variables***, specifically, the presence of a brand, independent of the other branding variables, significantly increased the probability that viewers would stop watching the commercial. Also, when the brand appeared more central and well-separated from the rest of the scene, and later and longer in the commercial (for some periods) the probability of viewers to stop watching the commercial increased as well. The size of the brand did not have an independent effect once the other branding and all other effects were accounted for. Yet, when brands were simultaneously present in audio mode, as opposed to just video or no brand, the probability that viewers avoided the commercial decreased marginally.

Consumers' ***attention dispersion*** had a strong influence on zapping, over and above the effects of all other variables. Advertising aims to attract viewers' attention to certain parts of a depicted scene and direct it across scenes in an orchestrated fashion to let a message or story unfold. Commercials that are better able to concentrate consumers' attention are perceived as being more exciting or entertaining and more likely to be watched to the end. Aggregate and individual attention dispersion effects are described in Figure 2. A commercial's failure

to concentrate all consumers' attention simultaneously increased the probability that consumers would stop viewing (dispersed dark dots on squares on the right side) the commercial. Also, consumers who fail to look where all other consumers concentrate their attention have a higher probability to zap (depicted by a fairly large distance from the white dot to the cross indicating the center of the gazes in the lower two squares). On the other hand, the probability to stop viewing was lowest when all consumers and each of them individually, concentrated their attention on the same locations in the commercial (upper left square). Therefore, attention needs to be managed frame by frame to keep consumers interested and on the story.

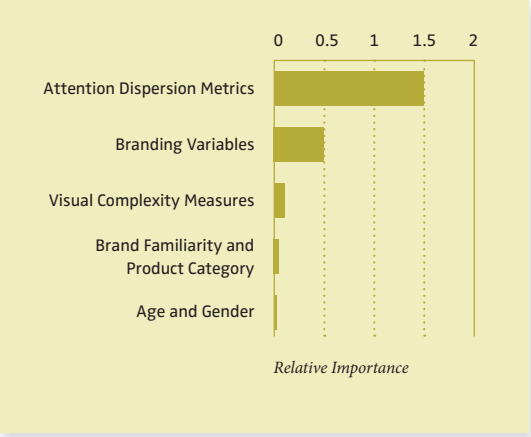


FIGURE 1:
Relative Importance of Variable Groups in Predicting Commercial Avoidance

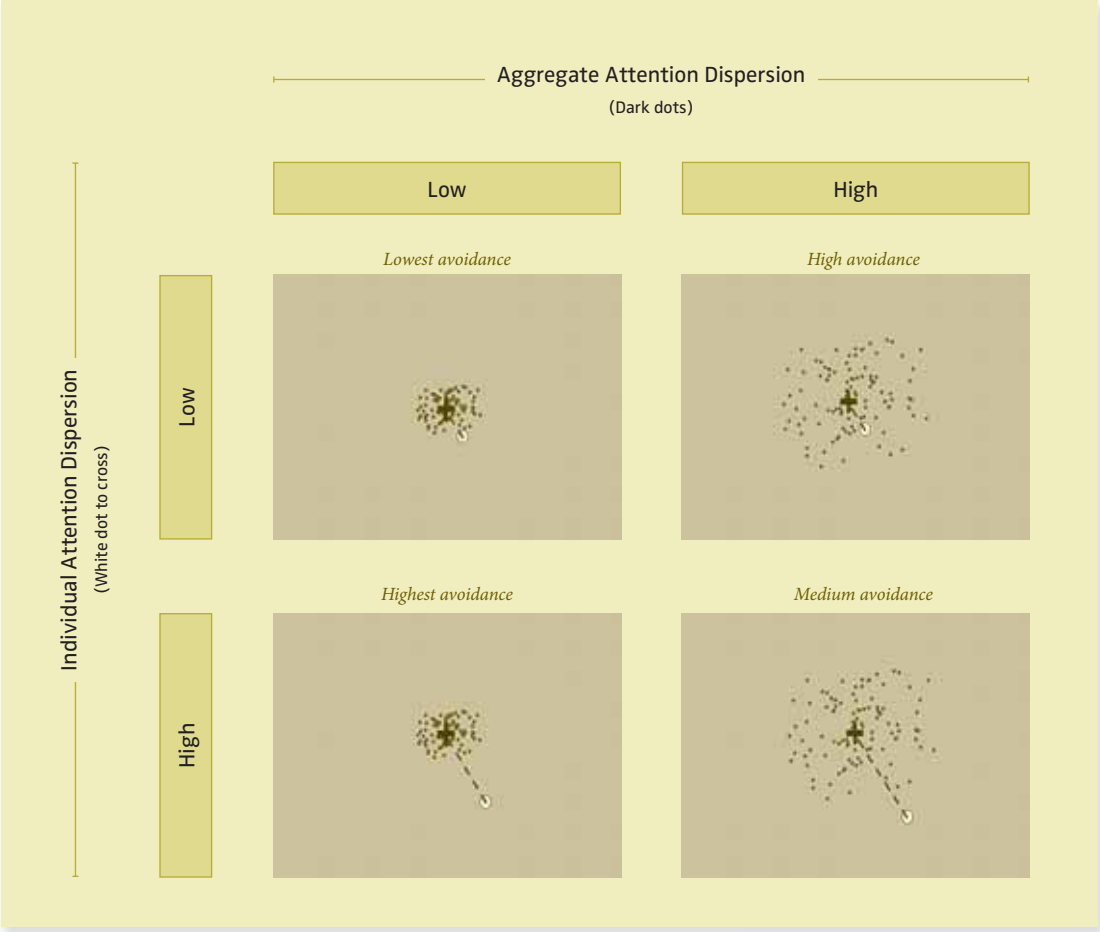


FIGURE 2:
Attention Concentration and Commercial Avoidance

» Commercials that are better able to concentrate consumers' attention are perceived as being more exciting or entertaining and more likely to be watched to the end. «

The ***effect of visual complexity*** on avoidance proved to be U-shaped. This is evidence for an "optimum level" of visual complexity for commercials at which avoidance is minimal, while both lower and higher levels of visual complexity increase avoidance probabilities. Low visual complexity provides the chance to feature the brand very prominently but seems to bore consumers. High levels might be more interesting but hinder a clear focus of attention (see Table 1).

TABLE 1:
Overview: Impact of Individual Variables on Zapping

Variable	Impact on Zapping
Brand presence	↑
Brand position (central, later, longer)	↗
Size of brand	↔
High individual attention dispersion (lack of visual focus of single consumers)	↘
Low aggregate attention dispersion (Clear visual focus across consumers)	↗
Visual complexity	U-shaped ↘ (low and high levels) ↔ (medium levels)
Cardinality (number of separate brand appearances)	⇔
Duration (consecutive brand presence)	↗

Further, ***dynamic effects*** of a brand's presence, cardinality, duration and size determined the zap-rate. Baseline avoidance levels are fairly constant throughout the commercials, with less avoidance in the beginning, a stable and long period in the middle, and an increase towards the end. It indicates that there is no point in time, apart from start and finish, when viewers systematically tend to stop viewing more. Brand presence drives the avoidance probability up throughout the commercial, except in the last few time frames, where brands are generally expected to appear, and consumers expect the commercial to naturally end soon. Apart from the start and end, the effect of brand presence slightly increases over time. No strong significant effects emerged for brand cardinality, the number of separate brand-featuring episodes throughout the commercial. However, higher cardinality of brand presence slightly decreased avoidance towards the second half. Just the opposite effect emerged for duration: prolonged brand presence increased avoidance in the middle (significant) with the effect dying out towards the end.

Optimizing Commercials: Brand Pulsing

The optimization problem was solved based on the model described in Box 3. The optimal effect of branding on (minimal) avoidance likelihood depends predominantly on four variables and their estimated time-varying effects: presence, size, cardinality and duration of the brand. According to the model, brand presence will increase avoidance, but taking cardinality, duration and size into account, it may in fact decrease avoidance at certain moments, as is the case, for example, for a large brand shown in the beginning. Apart from the extremes (start and finish of ads), brands that appear later cause more zapping than ones that appear earlier, with larger brands only causing marginally less zapping in the first half of the commercial.

In the optimization process total brand duration (the sum of number of frames with a brand appearance) was decreased for those ads with comparatively high original total duration and increased for those with comparatively low total duration, trading it off with size. The extent to which each of the above effects (increase in cardinality, earlier brand appearance, total duration, size) is mostly responsible for the optimal solution depends on the specific time-frame, because of the specific way the parameter estimates of these variables

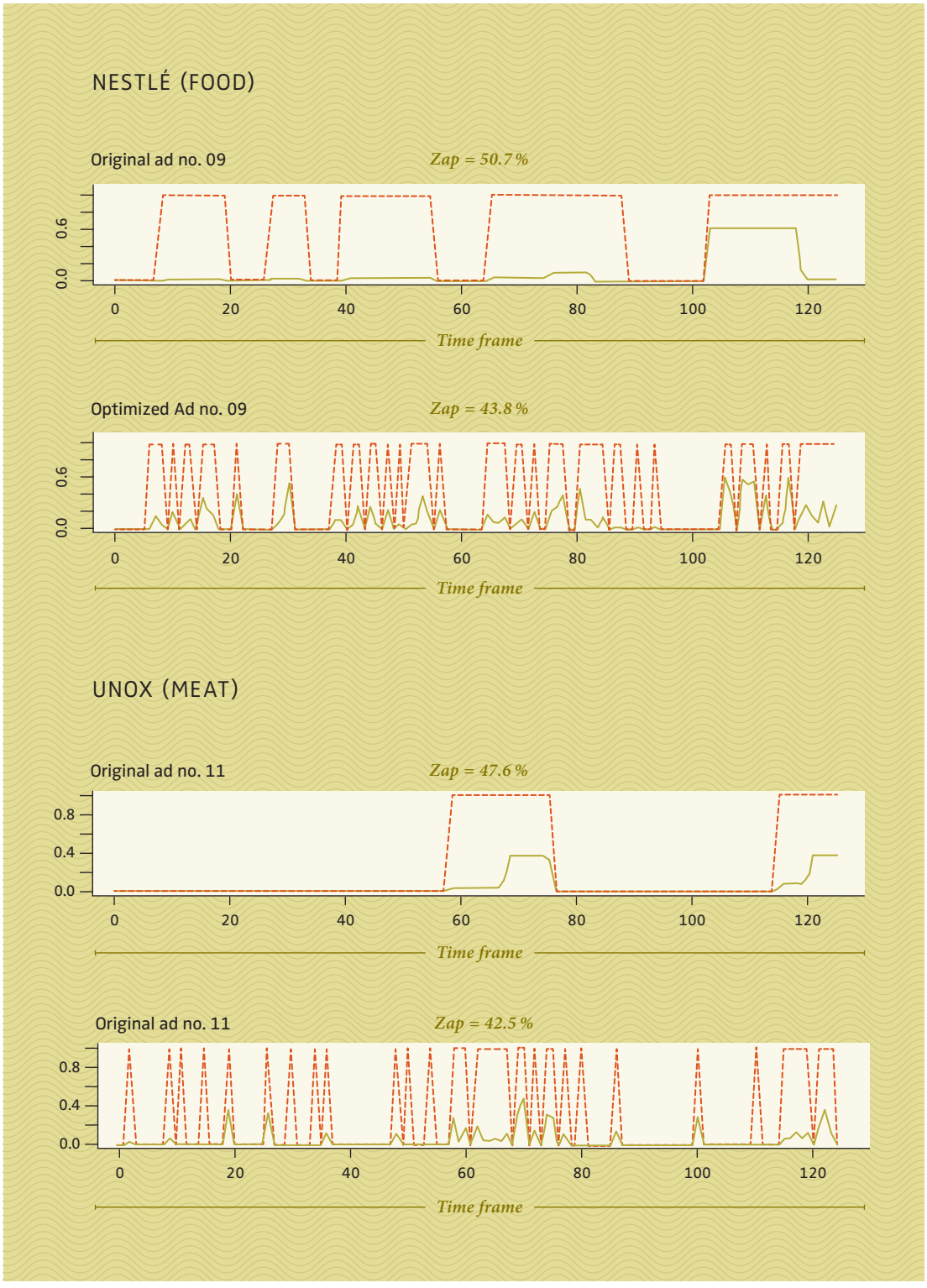


FIGURE 3:
Example of Branding Optimization Frame by Frame

» The improved solutions have frequent but brief brand appearances. Therefore good commercials need to manage attention frame by frame. «

vary over time. Figure 3 compares the original (upper graph) with the optimized ad (lower graph) for two of the 31 commercials. It shows brand presence (thick line) and the size of the brand (thin line). As described before, most of the improved ads have more/shorter brand appearances up to around the 100th frame mark and less/longer ones thereafter. The improved solutions have frequent but brief brand appearances. Therefore good commercials need to manage attention frame by frame. This result is analogous to the finding of pulsing benefits ***across exposures*** in the advertising effectiveness literature but is shown here ***within exposures***.

On average, avoidance dropped by 7.9 % in the optimized compared to the original commercials, with a range from 2.0 % to 19.1 %. All improved ads were predicted to be avoided less than their original counterparts, and for 12 of the 31 ads the magnitude of the reduction was larger than the estimation error.

While these findings are theoretical, a follow-up lab experiment confirmed the superiority of brand pulsing with actually modified commercials via moderate, not drastic changes in cardinality of the brand. Maintaining average brand size and total duration of brand exposure constant, four out of six ads showed appreciable differences in zapping, ranging from 9 % to 25 %, between the versions with high and low numbers of brand pulses. In particular, three commercials altered to have a ***higher number*** of pulses showed major decrease in zapping and one commercial altered to have a ***lower number*** of original brand pulses showed a major increase in zapping. This is an indication that the findings work both ways. Further, an average relative reduction in zapping was attained despite the number of inserted brand pulses being lower than the number suggested by the optimal solution (because of practical restrictions in modifying existing ads in an unobtrusive way).

Key Findings and Managerial Implications

> ***Pulsing brand appearance reduces zapping***
Marketing managers try to maximize the prominence of their brands in commercials, for instance, by exposing them early, long, in the middle of the screen, separated from the rest of the commercial. While such branding strategies increase brand awareness when a commercial is watched from end to end they can actually be harmful to advertising objectives because they favor zapping. Taken alone, brand presence automatically increases commercial avoidance but a "pulsing strategy" in which the brand is inserted briefly and intermittently throughout the commercial (without decreasing the total time of brand exposure) results in average decreased zapping of 8-10 %. Dispersing brand-feature-time across the whole duration of the commercial is a cost-free and easily manageable strategy that can be used both before and after final production, even while the campaigns are in the media (subject the creative design allows for minor adaptations). The brand pulsing tactic can be observed very well in some ads, as in the award-winning "The Happiness Factory" for Coca-Cola, and various automobile commercials that briefly show the brand logo of a car from various angles, e.g. as it maneuvers a winding road.

- ***Focused attention keeps viewers in line***
  Independent of branding activity and other factors, the ability of commercials to concentrate consumers' visual attention reduced commercial avoidance significantly. The farther away a person's gaze is from that of most of the other viewers, the more this person is likely to zap away. Therefore a commercial's power to concentrate, hold and direct visual attention is crucial to advertising effectiveness. By means of eye tracking, advertisers can see where they begin to lose people and (re)design the commercial accordingly. Attention is a scare resource but can be managed accordingly to reach the desired effects.

- ***Medium levels of visual complexity work best***
  Consumers' moment-to-moment decisions to continue or stop watching commercials also depended on the optimal amount of visual complexity in the commercials, independent of all other factors. That is, both under low and high levels of visual complexity, the likelihood that viewers would stop watching commercials was higher than under intermediate levels of visual complexity. The objective measures of pacing and GIF-compressed file size of each frame are easy to implement also in practice and can – supplemental to other quality indicators – further help to design commercials that work. •

FURTHER READING

Pieters, R., M. Wedel and J. Zhang (2007), "Optimal feature advertising design under competitive clutter", Management Science, 53 (11), 1,815 – 1,828.

Siddarth, S. and A. Chattopadhyay (1998), "To zap or not to zap: a study of the determinants of channel switching during commercials", Marketing Science, 17(2), 124 – 138.

Tse, A. C. B. and R. P. W. Lee (2001), "Zapping behavior during commercial breaks", Journal of Advertising Research, 41(3), 25–29.

Wedel, M. and R. Pieters (2008), "A review of eye tracking research in marketing", Review of Marketing Research, 4, 123 – 147.

KEYWORDS:

TV Advertisement, Zapping, Commercial Avoidance, Branding, Attention, Pulsing


1
PERCEIVING
surprised
2
FACILITATING
angry
HAPPY
disappointed
SHOCKED
3
UNDERSTANDING
CURIOUS
4
MANAGING
?!

A CLOSER LOOK AT EMOTIONAL INTELLIGENCE IN MARKETING EXCHANGE

Blair Kidwell, David M. Hardesty, Brian R. Murtha and Shibin Sheng

Emotional intelligence (EI) is important in many business contexts. Knowing how sales professionals use emotions to facilitate positive outcomes for their firms, themselves and their customers is particularly important for managing marketing exchanges. To leverage EI it is necessary to accurately measure it. Existing scales are of limited value and therefore a new scale to measure EI in marketing exchange is presented here. It focuses on EI related abilities in the specific context of marketing exchange and effectively demonstrates how EI interacts with sales, customer orientation, the extent of influence of a sales rep in an encounter, customer retention and cognitive ability. The new tool helps to diagnose individual levels of marketing exchange EI. It can be very useful for employee selection and designing specific sales training in order to improve exchange relationships and interactions between buyers and sellers, in particular.

THE AUTHORS

Blair Kidwell, Associate Professor of Marketing, b.kidwell@uky.edu

David M. Hardesty, Endowed Professor of Marketing, david.hardesty@uky.edu

Brian R. Murtha, Assistant Professor of Marketing, brian.murtha@uky.edu

all three Gatton College of Business and Economics, University of Kentucky, Lexington, USA

Shibin Sheng, Associate Professor of Marketing, School of Business, Adelphi University, Garden City, NY, USA sheng@adelphi.edu

This article is an adapted version of *Kidwell, Blair; Hardesty, David M.; Murtha, Brian R.; Sheng, Shibin* (2011): "Emotional Intelligence in Marketing Exchanges", Journal of Marketing, 75,1, 78 – 95, and is published with the permission of the American Marketing Association.

EI Revisited

Ever since Daniel Goleman introduced the concept of emotional intelligence (EI) in his first book in 1995, it has been a hot topic and its effects have been analyzed in a variety of business contexts (e.g., leadership, team-building and sales). Indeed, recent estimates indicate that 75 % of Fortune 500 companies promote EI, and that 90 % of top performers in virtually every industry have high EI. Emotional intelligence is the ability to acquire and apply knowledge from one's emotions, and from the emotions of others, to produce beneficial outcomes. Common wisdom on EI suggests that "more" of it is better than "less" in almost any situation. However, a closer look reveals that a thorough examination of the concept is necessary for diagnosing EI and analyzing work-related outcomes such as individual performance and organizational productivity.

EI in Marketing Exchange

Understanding and using emotions is particularly salient in marketing exchanges because it involves customers, suppliers and internal collaborators. The EI of salespeople, who are key players in managing exchange processes and business relationships with important stakeholders, is therefore a very relevant topic. Emotions constitute powerful psychological forces that can strongly influence sales professionals' behavior and performance. Whereas ***specific*** emotions in marketing encounters, such as fear and anxiety, cheerfulness and excitement, gratitude, anger and frustration or shame and guilt, have been investigated in the context of sales force, there is not much evidence on salespeople's ***ability*** to recognize and respond to their own and their customers' emotions. Being "emotionally intelligent" in marketing exchange means being able to use emotions to facilitate interactions with customers. EI can be described along four different dimensions, in general and in market exchange in particular.

Perceiving emotion is the ability to accurately recognize and appraise emotions. It involves awareness and the ability to interpret and differentiate emotions in oneself and in others. Specific to marketing exchanges,

perceiving involves recognizing emotions from facial expressions. For example, emotionally perceptive sales professionals are more likely to recognize when a customer is bored or excited, interested or confused, relaxed or annoyed. Such perceptions can provide information that salespeople can use to adapt their approaches and effect successful exchanges.

Facilitating (or using) emotion is the ability to access, generate and use emotions. It includes weighing emotions against one another and against other sensations and thoughts. It allows emotions to focus attention so that emotions can help to achieve certain goals. Specific to marketing exchanges, facilitating emotion involves knowing which emotions are appropriate in sales interactions. For example, sales professionals who more effectively use emotions in marketing exchanges will better perceive the customers' feelings, will know which emotions to display, and will be aware of how their emotions affect customers.

Understanding emotion is the ability to analyze complex emotions and form emotional knowledge. It involves reasoning and understanding emotional problems, such as knowing which emotions are similar and what they convey. Sales professionals high in emotional understanding are better equipped to know how emotions blend – how pride and joy may lead to elation or annoyance and anxiety can lead to anger – and how these emotions can change during exchanges. For example, salespeople are at a distinct advantage when they understand that anxious customers are likely to become frustrated.

» Salespeople with high EI exhibit behaviors consistent with customer orientation because they effectively perceive, use, understand and manage emotions in marketing exchanges. «

Finally, ***managing emotion*** is the ability to regulate one's own emotions and the emotions of others to achieve a desired outcome. In marketing exchanges, this dimension involves salespeople's ability to maintain composure in the presence of negative emotions and being able to positively influence customers' emotional responses. Salespeople proficient in managing emotion are also effective at increasing customer enthusiasm and positive evaluations of products and services, or alleviating frustration and anxiety for perplexed customers. Some salespeople may struggle with frustration and annoyance toward certain customers, but those skilled in managing emotion will control their negative emotions, and effect positive feelings that ultimately build customer rapport and create relationships based on goodwill.

EI Boosts Sales Performance

Indeed EI proved to have very strong effects on sales revenue directly and indirectly via marketing exchange variables. Sales professionals perform better if they are able to keep their emotions after a lost sale or poor presentation from spilling into subsequent customer interactions. They are more successful if they appeal to current emotional states to persuade customers. For example, if a customer is frustrated by complex product features, salespeople who can ease frustration will have distinct advantage over others who fail to perceive, facilitate, understand, and manage these emotions (see Box 1).

In the sample of real estate agents of Study 1, the EI dimensions of ***understanding*** and ***managing*** emotions proved to be of particular importance. Understanding and managing emotions are essential to selling complex high-involvement products, particularly for real estate agents who deal with transactions that take considerable time and effort. An agent can greatly benefit from empathizing and understanding the emotions that accompany the complex process of buying a home. If agents can lessen customers' fear and anxiety, they are likely to develop stronger customer relationships and ultimately increase sales.

For the insurance agents in Study 2, ***perceiving*** and ***facilitating*** emotion positively related to sales revenue. Obviously, the abilities to perceive, assimilate and use emotions to decipher how to best meet customers' needs may be particularly effective. Specifically, emotionally perceptive agents attend to facial expressions, recognize when and whether emotions resonate, and effectively discern the best services. For example, it is useful to know

that customers may feel fear and anxiety when they consider purchasing insurance but joy and relaxation when offered services that alleviate risks. Integrating and using perceptual information for effective communication and positive interaction is vital to creating interactions based on goodwill and positive emotions.

Further, Study 2 showed that EI not only influences sales volume but impacts the exchange between buyers and sellers in more complex ways via ***customer orientation*** and the ***manifest influence*** of a seller in an encounter, both being crucial aspects of customer interactions. ***Customer orientation*** assesses commitment toward meeting customers' needs; ***manifest influence*** assesses influence on customers and refers to changes in customers' decisions and behaviors because of sales professionals' participation.

Moderate and high levels of EI are necessary to enhance the impact of both ***customer orientation and manifest influence*** on performance. Salespeople with high EI exhibit behaviors consistent with customer orientation because they effectively perceive, use, understand and manage emotions in marketing exchanges. They better assess customers' needs, offer products that will satisfy them, describe products and services more effectively based on the customer's current emotional state, and avoid high-pressure selling that can result from poor social skills. High-EI salespeople more effectively influence customers because they recognize and understand their needs and can help find the best solutions, which leads to positive outcomes for the firm, the customer and the salesperson. Without EI, interpersonal skills suffer and attempts to influence may appear divisive and pushy.

The Beneficial Interplay of Emotional Intelligence and Cognitive Ability

Study 3 investigated interaction effects between EI and cognitive ability of sales persons. Not only EI influences sales performance but also cognitive ability like domain-specific knowledge toward customers, products or competitors. However, without combining ones cognitive abilities with at least a certain level of EI, they might not produce the desired effects. For instance, a sales professional who has high cognitive ability but low EI may be highly knowledgeable about product features, but may not perceive that the customer is confused and thus may lose the sale. Indeed, cognitive ability proved to have a positive impact on sales revenue and on customer retention only at moderate or high levels of EI.

{ *Box 1* }

THREE STUDIES ON THE EFFECTS OF EI IN MARKETING EXCHANGE

Study 1 was conducted among ***500 real estate agents*** (response rate 36 %) and had the objective of assessing salespeople's ability to perceive, use, understand, and manage emotions to influence sales revenue. The EIME measured marketing exchange-specific EI. In a follow-up survey, 69 agents completed a questionnaire containing the global EI measure MSCEIT. The company provided each agent's annual sales revenue and age, gender and years of sales experience served as control variables.

A random sample of ***300 insurance agents*** participated in ***Study 2*** (36 % response rate). The focus of this study was on the extent to which EI impacts customer orientation and manifest influence and how these two important marketing exchange variables interact with each other and sales revenues. In this study, only the EIME measure was applied. In addition to the control variables of Study 1 adaptive selling and self-efficacy (both measured with established scales for the constructs) were included.

Study 3 examined the complementary relationship between EI and cognitive ability on sales performance. ***300 agents from an insurance company*** were randomly selected (29 % response rate). In this study the EIME measure and the self-report measure (SREIS) were applied. The participating firm for each salesperson supplied annual sales results and agents provided the percentage of customers they had retained in the past 12 months to measure customer retention as a second dependent variable. To measure cognitive ability 8 items were carefully developed to provide moderately difficult questions that salespeople with higher cognitive ability would be likely to answer correctly. Correct answers were determined through the company. Additional control variables were sales experience and sales role (indicating the different sizes of the sales territory).

In all studies regression analysis was applied to determine the impact of EI on sales or one of the marketing exchange variables. To understand the impact of the individual dimensions of EI in each setting, a structural equation modeling approach utilizing PLS analysis was applied.

	MSCEIT	SREIS	EIME
Type of scale	ability-based	subjective self-report	ability-based
Domain of scale	general	general	specific
Number of dimensions	4	4	4
Number of items	141	19	15
Sample items:			
Perceiving	Indicate how much of each emotion is expressed by this picture/landscape:	By looking at people's facial expressions, I recognize the emotions they are experiencing.	Indicate how much "surprise" is expressed [in the picture to the left] (see Figure 1)
Facilitating	What mood(s) might be helpful to feel when meeting in-laws for the very first time?	When making decisions, I listen to my feelings to see if the decision feels right.	How useful might it be to feel "guilt" when attempting to persuade someone to make an expensive purchase?
Understanding	Natalie had never been more surprised in her life. But as she recovered a bit from the shock of the loss and realized she could gain some advantage from the situation if she planned carefully, she became_____.	I have the vocabulary to describe how most emotions progress from simple to complex feelings.	A customer was interested and ready to make a purchase. Later, he felt embarrassed and guilty. What happened in between?
Managing	Debbie just came back from vacation. She was feeling peaceful and content. How well would each action preserve her mood? Action : She started to make a list of things at home that she needed to do.	I can handle stressful situations without getting too nervous.	Bill is presenting the product well, although the couple is starting to look bored and disinterested. How well would the following behavior help Bill keep their interest and close the sale? *Behavior:* Bill should accept the fact that the couple probably won't make the purchase.

TABLE 1:
Overview of Common Measurement Scales of Emotional Intelligencee

How to Measure EI in Marketing Exchange

The results of the studies not only show how EI works in a marketing exchange context but also that not all the applied measurement instruments perform well. In general, EI is measured either by self-report measures or by ability-based measures. In self-report scales respondents evaluate themselves on specific EI dimensions. Such approaches are often inadequate because individuals tend to report their abilities inaccurately and they encourage socially desirable responses. Further, people are generally notoriously poor at reporting their emotions. Therefore self-reported EI inadequately assesses emotional skills. Not surprisingly, the associations are rather low between ability models and self-report, indicating that these approaches yield different information about the same individual.

Ability-based approaches actually test specific EI related skills and more accurately assess emotional abilities. Global measures of EI exist, but it can be questioned if they are suitable for measuring EI in a specific field like marketing exchange. Domain-general measures sacrifice specialization for generalization and often fail to overcome unique contextual distinctions within a domain. For example, knowing which emotions are useful when interacting with customers involves more specialized emotional abilities than managing emotions in general. A specific scale for a domain does not imply that those who are generally emotionally skilled cannot perform well in that particular field. However, assessing skills within EI that are of particular importance in a specific field can help identify unique emotional abilities that make individuals more effective. To overcome the weaknesses in measuring EI in marketing exchange, the authors developed and suggest a new instrument, the EIME scale. It consists of 15 items for the four dimensions of EI. For its development a standard procedure for insuring validity and reliability was applied.

Table 1 provides an overview of a widely used self-report EI scale (SREIS), a highly popular domain-general EI scale (MSCEIT) and the newly developed specific marketing exchange EI scale.

All three measures included in Table 1 were applied within the three studies (see Box 1) on EI in marketing exchange. The new EIME scale outperformed the other scales in explaining effects of EI in marketing exchange. Study 1 showed that EI, measured with EIME, had a significant effect when regressed onto sales revenue together with control variables and explained 15 % of the variance. When the MSCEIT measure was included in a second hierarchical regression analysis, no change appeared in explained variance, although EIME and MSCEIT were clearly correlated. Still, only EIME significantly predicted sales revenue. Study 3 showed that the SREIS self-report measures did not have a significant impact on customer retention or sales volume whereas the EIME measure showed a highly notable impact. EIME significantly predicted both customer retention and sales revenue beyond self-report EI, cognitive ability, self-efficacy, adaptive selling, sales experience and sales role. Therefore, the new EIME scale (see Figure 1) can be considered superior compared to the traditional approaches and is recommended for diagnosing and strengthening the emotional skills of the sales force.

Key Findings and Managerial Implications

> ***High EI salespeople add to the bottom line***
Emotional intelligence provides an important key for understanding how sales professionals interact with customers in ways that not only facilitate the interactions but also lead to positive outcomes for the firm, customer and salesperson. Beyond directly impacting performance, being able to attend to customers' needs (customer orientation) and influencing them (manifest influence) are more positively related to performance when individuals possess high EI. While cognitive abilities are important, they deploy their full potential only in combination with an at least moderate level of EI.

> ***Selection procedures should include EI***
Sales managers must select highly talented candidates from applicant pools, knowing that sales-force turnover affects recruiting and selection costs. Many selection procedures test cognitive ability and could easily include an EI assessment. The elaboration of EI dimensions in marketing exchange and the results of which dimensions are of particular importance in specific fields can be used as a guideline for integrating EI into selection procedures. Besides the positive effects on exchange outcomes, selecting individuals with high EI can have other benefits critical to performance such as better communication among coworkers, teammates, and supervisors; facilitation of positive work climates; enhanced citizenship behavior; reduced role conflict, and reduced turnover.

> ***A domain-specific, ability-based EI scale is superior in assessing EI in marketing exchange***
Measuring EI using a domain-specific assessment better helps to explain and predict EI effects in marketing exchange and sales. Older domain-general measures like the MSCEIT scale have a rather modest correlation with the domain-specific EIME measure and only limited capacity to predict in such specific domains as marketing exchanges. The same is true for self-report scales that are highly susceptible to falsification and invalid for assessing ability.

> ***Training for EI***
According to previous findings, people can learn emotional intelligence and therefore such training could help sales professionals improve their performance. Companies might assess EI to discern which dimensions are lacking and then focus training on overcoming EI weaknesses. For example, sales professionals scoring low on managing EI can be taught to better manage their own and customers' emotions. Those with at least moderate levels of cognitive ability may be the best candidates for focused EI training, as these individuals may have the most to gain. Those with low cognitive ability do not appear to benefit from EI training. •

» Ability-based approaches actually test specific EI related skills and more accurately assess emotional abilities. «

Figure 1:

EIME SCALE

(the figures behind each item show the expert scores)

Section A

In this section, we are interested in emotions expressed in facial expressions and pictures.
Please circle the answer that corresponds to the emotion(s) expressed in each face or picture.

1. Indicate how much "sadness" is expressed in the picture to the left:

1. Not at all present (.89)
2. Slightly present (.11)
3. Moderately present (.00)
4. Quite present (.00)
5. Extremely present (.00)

2. Indicate how much "surprise" is expressed in the picture to the left:

1. Not at all present (.00)
2. Slightly present (.00)
3. Moderately present (.10)
4. Quite present (.73)
5. Extremely present (.17)

3. Indicate how much "fear" is expressed in the picture to the left:

1. Not at all present (.76)
2. Slightly present (.24)
3. Moderately present (.00)
4. Quite present (.00)
5. Extremely present (.00)

Section B

In this section, we would like you to indicate how useful each emotion might be in response to the scenario that is presented.
How useful might it be to... (check column that applies for each question)

	Not at all Useful	Slightly Useful	Moderately Useful	Quite Useful	Extremely Useful
4. Feel "hostility" when interacting with an angry supervisor?	(.92)	(.04)	(.04)	(.00)	(.00)
5. Feel "anxiety" when determining the needs of a customer?	(.68)	(.28)	(.04)	(.00)	(.00)
6. Feel "guilt" when attempting to persuade someone to make an expensive purchase?	(.82)	(.14)	(.04)	(.00)	(.00)
7. Feel "frustration" when negotiating compensation issues with your supervisor?	(.70)	(.21)	(.09)	(.00)	(.00)

Section C

In this section, we would like you to circle the emotional response that is the most likely to be felt in the situations described below.

8. Matthew works best when his supervisor lets him do things the way he believes is best. When his supervisor began to micro-manage his activities, Matthew felt _____.

1. pleased (.00)
2. disappointed (.00)
3. relaxed (.00)
4. frustrated (.92)
5. guilty (.08)

9. A man went into an electronics store feeling rested. Later, he felt anxious. What happened in between?

1. He was approached by an aggressive salesperson. (.78)
2. He saw an old friend that he hadn't seen in several years. (.00)
3. He was helped by a cashier whom he thought he recognized. (.00)
4. He found an alternative product that he liked almost as well. (.04)
5. He couldn't find the brand of cell phone he wanted. (.18)

10. A customer was interested and ready to make a purchase. Later, he felt embarrassed. What happened in between?

1. The customer received a brief phone call. (.00)
2. The customer realized he could not afford to make the purchase. (.88)
3. The customer realized that he should compare prices before making the purchase. (.00)
4. The customer said that he/she was not interested in making the purchase. (. 12)
5. The customer continued to search for more information about the product. (. 00)

11. Happiness is a combination of which group of three emotions listed below:

1. Envy, joy, pride (.00)
2. Pleasure, activeness, arousal (.10)
3. Joy, pleasure, satisfaction (.82)
4. Satisfaction, joy, excitement (.08)

Section D

In this section, we would like you to indicate how effective each action might be in response to the scenario that is presented.

Bill never received clear instructions about how to do his job. One day he found out he was reassigned to a supervisor who had a reputation for setting clear goals and objectives. Bill felt relieved and calm for the first time in a long while. How well would the following behaviors help Bill maintain his feelings?

12. Behavior: He could tell his new supervisor how much he didn't like the previous supervisor.
    1. Not at all effective (.79)
    2. Slightly effective (.17)
    3. Moderately effective (.04)
    4. Quite effective (.00)
    5. Extremely effective (.00)

A customer agreed to make a large purchase from you. Later, however, you found out that the customer never had enough money to make the purchase. How well would the following behavior help you reduce your disappointment?

13. Behavior: Call back the customer and yell at him for wasting your time.
    1. Not at all effective (.90)
    2. Slightly effective (.10)
    3. Moderately effective (.00)
    4. Quite effective (.00)
    5. Extremely effective (.00)

FURTHER READING

Brackett, Marc A. and John D. Mayer (2003), "Convergent, Discriminant, and Incremental Validity of Competing Measures of Emotional Intelligence", Personality and Social Psychology Bulletin, 29 (9), pp. 1.147 – 58. (SREIS)

Goleman, Daniel (1995), Emotional Intelligence, New York, NY: Bantam Books.

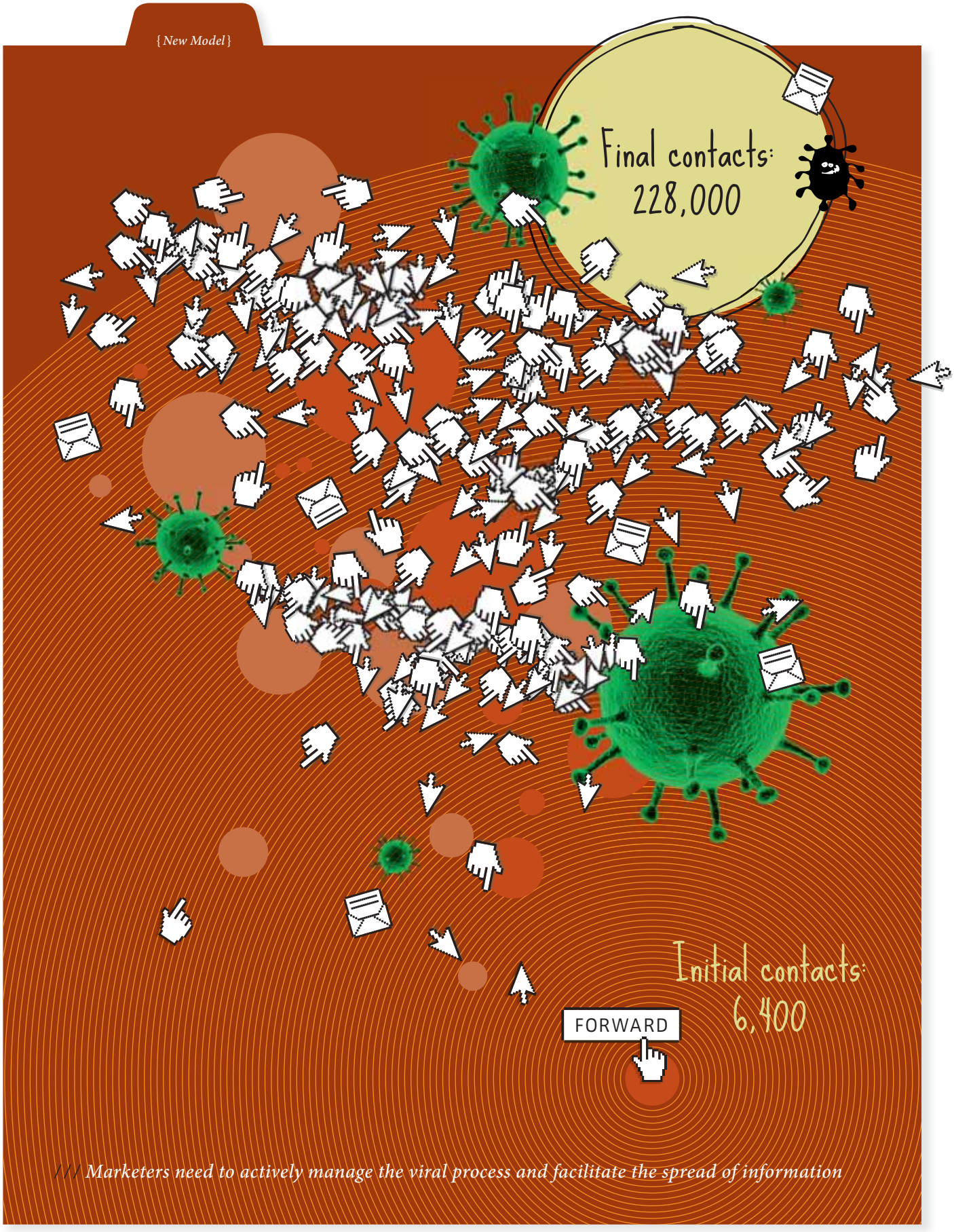
Mayer, John D. and Peter Salovey (1997), "What is Emotional Intelligence?" Peter Salovey and David Slusher, eds. Emotional Development and Emotional Intelligence: Implications For Educators (3 – 31), New York, NY: Basic Books.

Mayer, John D., Peter Salovey, David Caruso and Gill Sitarenios (2003), "Measuring Emotional Intelligence with the MSCEIT V2.0", Emotion, 3 (1), 97 – 105.

KEYWORDS:

Emotional Intelligence, Measurement, Scale, Marketing Exchange, Cognitive Ability, Sales Performance

{*New Model*}



/// Marketers need to actively manage the viral process and facilitate the spread of information

Seeding a Message to Harvest Reach
PREDICTING AND OPTIMIZING THE SPREAD OF ELECTRONIC WORD-OF-MOUTH

Ralf van der Lans, Gerrit van Bruggen, Jehoshua Eliashberg and Berend Wierenga

In a viral marketing campaign organizations stimulate customers to forward marketing messages to their contacts. To optimize a viral campaign it is necessary to predict how many customers will be reached, how this reach evolves, and how it depends on promotion activities. A new Viral Branching Model can provide these results. It is based on insights from epidemiology and the spread of viruses and was adapted to a marketing context and an electronic environment. The model is applied to an actual viral marketing campaign in which over 200,000 customers participated during a six-week period. The results show that the model quickly predicts the actual reach of the campaign and serves as a valuable tool to support marketing decisions related to online campaigns.

THE AUTHORS

Ralf van der Lans, Associate Professor of Marketing, Hong Kong University of Science and Technology, Hong Kong, rlans@ust.hk.

Gerrit van Bruggen, Professor of Marketing, Rotterdam School of Management, Erasmus University, gbruggen@rsm.nl.

Jehoshua Eliashberg, Sebastian S. Kresge, Professor of Marketing and Professor of Operations and Information Management, The Wharton School, University of Pennsylvania, eliashberg@wharton.upenn.edu.

Berend Wierenga, Professor of Marketing, Rotterdam School of Management, Erasmus University, bwierenga@rsm.nl.

This article is based on the version of *Van der Lans, Ralf; van Bruggen, Gerrit; Eliashberg, Jehoshua; Wierenga, Berend* (2011): „A Viral Branching Model for Predicting the Spread of Electronic Word-of-Mouth", Marketing Science, Vol. 29 (2), 348 – 365.

Tell a Friend ...

In October 2006, Unilever launched a 75-second viral video film ''Dove Evolution''. This campaign generated over 2.3 million views in its first 10 days, and three times more traffic to its website than the 30-second commercial aired during the Super Bowl. More recently, Comic Relief, a British charity organization, achieved 1.16 million participants in the first week after launching their viral game ''Let it Flow'' that promoted Red Nose Day, their main money-raising event. These two examples illustrate a new way of marketing communication in which organizations encourage customers to send emails to friends containing a marketing message or a link to a commercial website. Because information spreads rapidly on the internet, viral marketing campaigns have the potential to reach large numbers of customers in a short period of time. In a viral marketing campaign an organization develops an online marketing message and stimulates customers to forward this message to members of their social network. These contacts are subsequently motivated to forward the message to their contacts, and so on. Such campaigns are powerful because messages from friends have more impact than advertising messages. Not surprisingly many companies such as Microsoft, Philips, Sony, Ford, BMW and Procter and Gamble have gone viral. However, not all viral marketing campaigns are successful and due to competitive clutter, they need to become increasingly sophisticated in order to be effective.

Get Viral Marketing Campaigns Going

The ultimate goal of a viral marketing campaign is that the information spreads automatically ''by itself''. However, marketers need to actively manage the viral process and facilitate the spread of information. It needs to attract customer attention and interest (e.g., by providing videos, online games or other forms of interaction). Tools to easily forward emails to friends, such as ''Tell a Friend'' or ''Share Video'' buttons should facilitate

{*Box 1*}

MONITORING CONSUMER BEHAVIOR IN A VIRAL MARKETING CAMPAIGN

In order to manage viral marketing campaigns, marketers need to monitor the stages represented in Figure 1 for each individual customer. The following information should be recorded:

1. the source of the invitation
2. if and when a customer arrives at each stage of Figure 1
3. how many friends a customer invites.

This leads to a dynamic database in which each row represents a customer and in which corresponding variables are updated when a customer switches to the next stage. New rows are added when new customers are invited. Such a database can be automatically generated in real time during the process of a viral marketing campaign.

the viral process. Sometimes prizes or other monetary incentives are used to motivate customers to forward messages. Although increasing customers' motivation to forward messages to friends has a strong impact on the reach of the viral campaign, it is necessary to take initiatives to kick-start the campaign by seeding the message in most cases. In general, marketers can choose from three distinct categories to seed their viral marketing campaign:

Seeding emails are usually sent by the company itself or by a specialized marketing agency to customers who have given permission to receive promotional emails. Using this seeding tool, a marketer can target a specific group of customers that are potentially interested in the campaign. The design and content of the emails are crucial since customers easily categorize such emails as spam and quickly delete them. For this reason, seeding emails are expected to be less effective than viral emails sent by friends or acquaintances of the recipient.

Online advertising is another important seeding tool that marketers can use to influence the viral process. The effectiveness of online advertising may differ depending on the customers and the websites on which the ads are placed. Marketers can directly observe when a specific online ad generates a visitor to the viral campaign. Hence, the effectiveness of online advertising can be monitored accurately, and based on its performance marketers can decide to adapt their online advertising strategy. Because online ads may be perceived as less obtrusive than promotional emails, this seeding tool may be very attractive. Further, contracts where organizations pay for each click or guarantee a predetermined number of clicks to the campaign website are comparatively cost-effective.

Finally, besides online seeding tools, marketers may still use ***"traditional" offline advertising*** to seed their campaigns, like magazine and TV ads, package labels or coupons that refer to the website of the viral marketing campaign. However, offline seeding is less popular and expected to be less effective because customers cannot directly visit the campaign website by clicking a link.

Monitoring Campaigns

The appropriate strategic decision on the marketing activities depends on the spread of the process, especially during the initial period and the effectiveness of each marketing communication tool. Therefore, marketers need to closely monitor the spread of information in viral marketing campaigns. It is also important that marketers are able to predict the returns on their expenditures and thus how many customers they will reach (see Box 1).

It gets more and more common to measure the ROI and thus the effectiveness of all marketing campaigns no matter if they concern TV, print or event activities. Being able to measure the ROI of viral campaigns is an important step towards a profound discussion of its optimization and value.

How Consumers Participate in Viral Campaigns

As a starting point of a campaign, a customer receives an invitation from some source to participate, e.g. a viral email from a friend or of one of the seeding tools of a company. At the end of this stage, the customer decides with some probability to go to the second stage and

read the invitation with a certain probability to exit the campaign by deleting or ignoring the invitation. This probability depends on the source of invitation, as customers are less likely to open and read a seeding email from a company than a viral email from a friend. After reading the invitation, a customer decides to accept it with a certain probability by clicking a link to the landing page of the campaign website. After arriving on the landing page a customer decides to participate or not to participate. Participation may consist of watching a video, playing a game, and/or subscribing to a service. Finally, a customer decides to forward the message to a certain number of friends. Figure 1 summarizes this five-stage process that a customer may go through during a viral marketing campaign. The sequence of stages is quite generic for most viral marketing efforts and might have to be adapted to the specific structure of individual campaigns.

Obviously, the number of customers receiving an email is usually not the same as the number of customers who ultimately participate in the viral campaign. The probability of taking the respective next step depend on marketing activities such as the attractiveness of the subject line, the content of the invitation and the design and content of the website (see Figure 1).

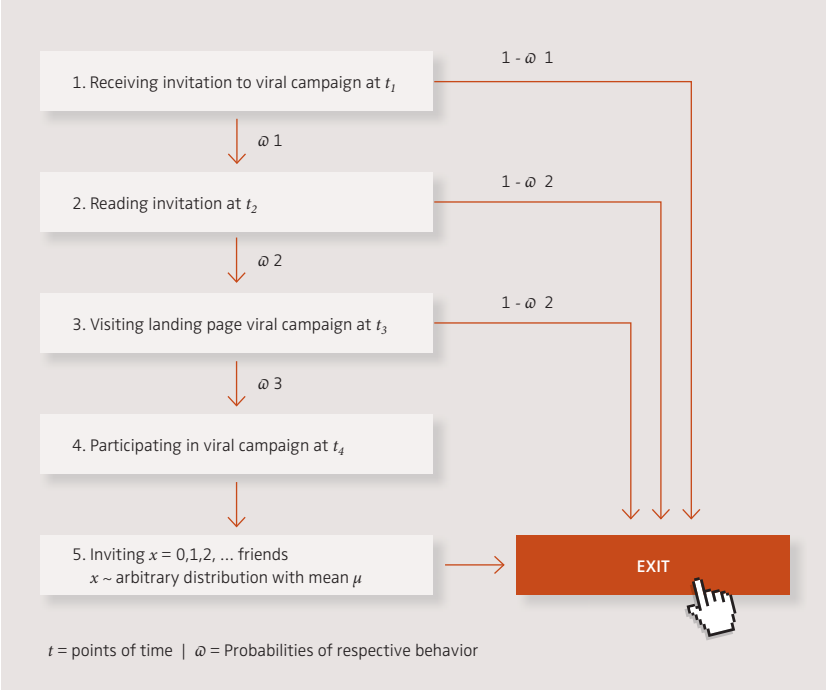


FIGURE 1:
Decision Tree to Participate in Viral Marketing Campaign

The Evolution of Viral Campaigns: Learning from Epidemics and the Spread of Viruses

To effectively manage a viral campaign it is helpful to be able to predict how many customers a viral marketing campaign will reach, how this reach evolves, and how it depends on marketing activities. To understand and model the spread of marketing messages in viral marketing, insights from epidemics about the spread of viruses as well as from biology on the growth of populations over time are useful.

In fact, messages may spread like a virus. An "infected" customer forwards a message to another customer, who may become "infected" as well by joining the campaign. Similarly, the spread of information can also be compared to the growth of families and populations over time. In this case, a female may give birth to children who may give birth to their children, etc. According to these insights, the number of customers should grow exponentially if the average number of "infected" friends exceeds one for each customer that joins the campaign. This average number is called the infection rate and plays a crucial role in the spread of viruses, growth of populations and therefore also in the reach of viral campaigns.

Because detailed data of viral processes has only recently become available, researchers traditionally used deterministic and aggregate level models (diffusion models, e.g., the Bass model) to describe the spread of viruses. They typically assume a specific process, but do not include actual information on this process at the individual level. Such information becomes readily available in viral marketing campaigns and can be used to describe the process accurately. Further, the Bass model, the most prominent "traditional" model in this field, especially in business, assumes that every customer who has adopted the product increases the probability of others adopting in each time period after adoption. However, in viral marketing campaigns customers only influence each other right after participation when they invite their friends.

Therefore, disaggregate level or branching process models using individual-level information are expected to reflect the process more accurately. They assume that customers only influence each other right after partici-

FIGURE 2:
Spread of a Message in a Viral Marketing Campaign as a Branching Process

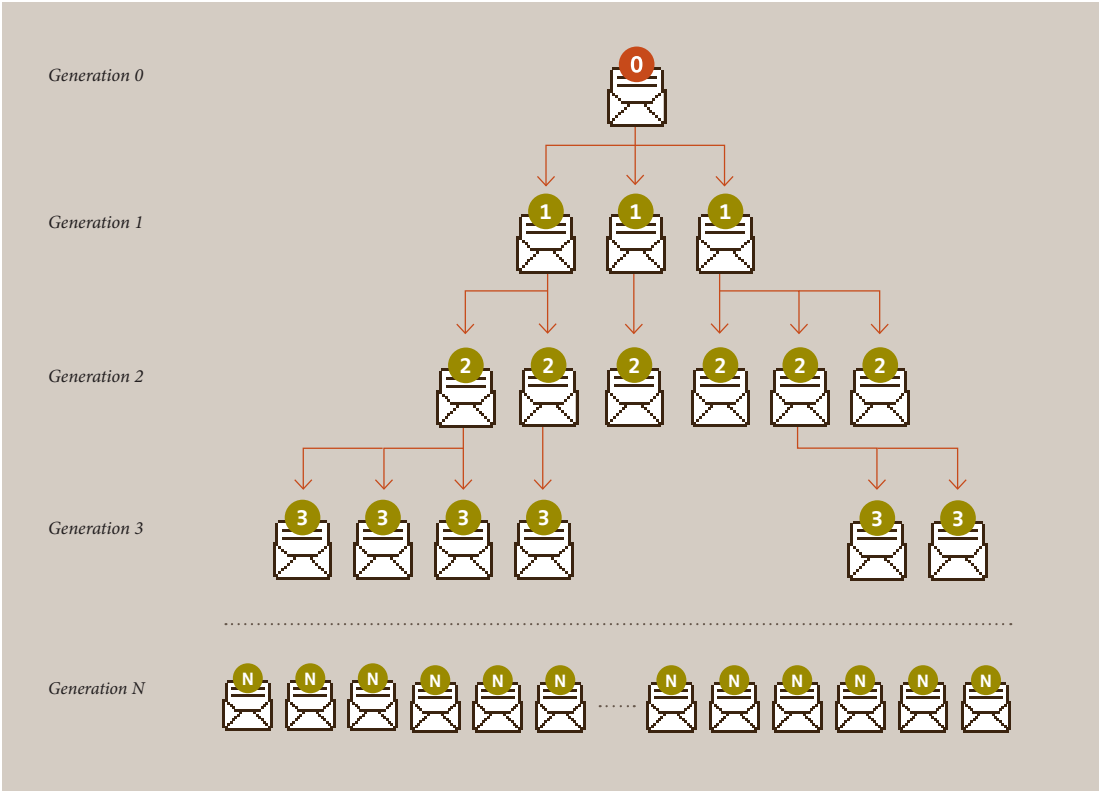
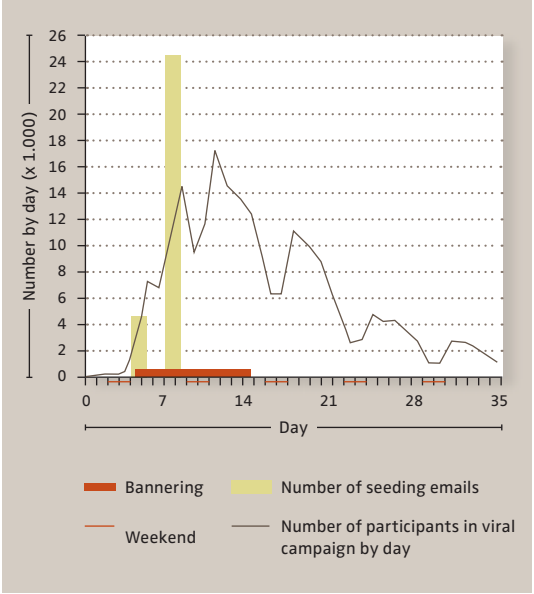


FIGURE 3:
Events and Number of Participants by Day During the Viral Campaign



pation by infecting a fixed number of others. Further, new information can subsequently be introduced into the calculations to infer the reach. Another advantage of using the underlying viral process is that parameters can be estimated based on larger quantities of data.

As a comparison, suppose a small campaign is online for ten days and generates a thousand customers. In this case, deterministic models such as the Bass model would have 10 observations to derive the underlying parameters, i.e. each day serves as one observation. In contrast, the parameters of the branching process are determined by one thousand observations as in this case customers are treated as the unit of observation. More interestingly, however, the parameters of branching processes have a one-to-one relationship with the underlying viral process. Hence, researchers get a much better understanding of why some campaigns are more successful than others.

Viral Marketing as a Branching Process

Figure 2 graphically depicts how information spreads according to a branching process adapted to the specifics of viral marketing campaigns. In this Figure, each email symbol corresponds to one customer in the viral marketing campaign. The viral process is started by one customer in generation 0, and grows rapidly in each subsequent generation. As becomes clear from this Figure, a viral marketing campaign contains two types of customers. First, there are customers who join the campaign as a result of seeding activities of the company. These customers (in Figure 1 there is only one such customer) initiate the viral process by forwarding an invitation to join the campaign by emailing some of their acquaintances. These acquaintances can become customers as well and they may forward an email to invite their friends to join the campaign who again might invite friends.

The key measure in such a branching model is the infection rate, which is the multiplication of the forward rate (the average number of invited customers), and the acceptance rate (mean probability that an invited person joins). Unlike in an epidemic, the infection rate in viral marketing campaigns is generally smaller than 1 which means that the spread of information dies out quickly as each customer generates on average less than one new customer. In such situations, marketers can use marketing tools to influence the viral process by either stimulating the infection rate or by increasing the number of seeded customers.

Developing a Viral Branching Model to Describe and Predict Reach

Although the standard branching model is useful to understand the underlying process in viral marketing campaigns, a more detailed model is needed to accurately describe and predict the actual spread of information. The model parameters are inferred from the individual level click stream data recorded in a dynamically generated database. Based on this daily data, expected results for the key figures of the campaign can be inferred and the number of participants over time can be predicted. The adapted model is characterized by the following characteristics.

{ *Box 2* }

CHARACTERISTICS AND KEY MEASURES OF THE MODEL

The model uses continuous-time Markov processes to predict the status of the campaign at a certain time in the future. Transition times from one state to another follow an exponential distribution. Differential equations determine the values of the interrelated states.

Observed data input

Time and number of seeding emails or banner clicks
Immigration: number of consumers that participate because of other sources

Observed Markov States at each time:
- Unopened seeding emails
- Unopened viral emails (from friends)
- Actual participants (step 4 in figure 1)

Process parameter

- Number of invited friends per participant (mean)
- Probability of accepting an invitation
- Transition time (time between receiving and opening emails)

Forecasting (calculation)

The formulas for the conditional expectation of customers receiving invitations (by seeding instrument or friend) and of actually participating can be used to calculate forecasts for the evolution of the campaign. The individual values can be taken from the dynamically generated database of the campaign. The calculations are easy to implement in a spreadsheet program like Excel.

{ *Box 3* }

PROMOTING FINANCIAL SERVICES IN A VIRAL CAMPAIGN

Campaign and promotion activities:

Customers participated in the campaign while playing a game during which they answered questions that led to a career profile. Then, in return for a guaranteed prize, participants could fill out an online form requesting personal information. After filling out this information, participants were informed that they could win bigger prizes if they invited one or more of their friends to the campaign by sending emails via the "send to a friend" button.

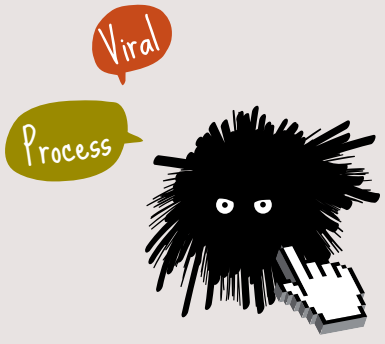
To seed the campaign, the organization bought 6,400 banner clicks to the campaign website. Of the 6,400 visitors, 2,200 people decided to participate in the viral campaign. Furthermore, the marketing agency sent 4,500 (wave 1) and 24,258 (wave 2, 3 days later) seeding mails, to customers who agreed to receive promotional emails.

The viral process:

These marketing activities and the resulting viral process resulted in a total of 228,351 participants by Day 36. Figure 3 summarizes the marketing activities around the viral campaign and the resulting number of participants by day over time. Figure 3 (page 36) shows that the daily number of participants grew rapidly in the first 11 days, after which it slowly decreased over time. The number of participants was lower at weekends, which is due to the fact that during these days customers read their emails less frequently compared to weekdays. Information on each participant was documented in a data set. The 228,351 lines contain the identity of the participant, the date of participation, the source of invitation, the date on which the participant received the invitation, the number of emails that were sent to friends, and how many of these friends already participated or were already invited.

On average, participants sent out over four (4.15) viral emails to friends. The probability that these friends started participating after receiving such an email was 0.26, on average. This led to an average infection rate of 1.08 at the start of the campaign and showed that this particular viral campaign was extremely successful. As the infection rate was larger than one, the number of participants grew exponentially. The proportion of emails sent to customers who had already received an invitation or already participated gradually increased over time. Consequently, at the end of the campaign the average infection rate was smaller than one and equaled 0.87, which means that the number of additional participants decreased over time as shown in Figure 3. However, the infection rate was still substantially higher than other campaigns.

The source of the email strongly influenced its effectiveness. The probability of participation after receiving an email from a friend (0.26) was substantially higher than the probability of participation after receiving a seeding email sent by a company (0.12). Interestingly, the probability of participation after a banner click was even higher than that of customers who received a viral email from a friend (0.34). The bannering approach seemed to benefit from a self-selection mechanism. People who clicked on a banner may have had an interest in the campaign and were then also more likely to participate and send viral emails to their friends. Still, 66 % of these customers decided not to participate and quickly left the campaign's landing page. The source of the email also affected the amount of time that people participate in the viral campaign. This was more than two times shorter when the email was received from a friend rather than from a company (1.64 days vs. 3.88 days during weekdays).



> Customers can participate at any moment in time. Transition times from one stage to another are variable and based on a stochastic distribution. As a result, the model can for instance capture the effect that customers read their emails less frequently during the weekend.

> Second, two different types of marketing seeding activities – banners and seeding emails – are introduced and can be tracked (e.g., the number of unopened seeding emails at each time).

> Third, the model not only counts the number of "infected" customers (i.e., customers who received emails but did not participate further or deleted the emails), but also the cumulative number of customers who actually participate by forwarding the message.

> Parameters are allowed to vary over time to reflect for instance the fact that a participant invites a friend who already received an invitation or already participated. When the campaign progresses, time probability for such instances increases and in turn the overall probability that recipients accept an invitation to participate in the campaign decreases (see Box 2).

Applying the Viral Branching Model in Practice

To test the model it was applied on a real life viral campaign to promote financial services. This campaign illustrates how the model can be used to forecast the reach of campaigns and how marketing decisions can be supported by "what-if analyses" or benchmarking (see Box 3, see Figure 3).

The viral campaign started on a Friday and was online for 36 days. On day 4, the number of participants grew rapidly due to marketing activities. On this day, the company sent 4,500 seeding emails and placed banners on websites that generated 200 participants each day for 11 consecutive days. On day 7, the company sent an additional set of 24,258 seeding emails to further promote the viral campaign.

Forecasting the Spread of the Campaign

All data from the 36 days of the campaign was compared to forecasts that used only the first part of the data. The Viral Branching Model was already able to predict the spread of the campaign quite accurately on day 7, when the campaign was still not fully seeded. After day

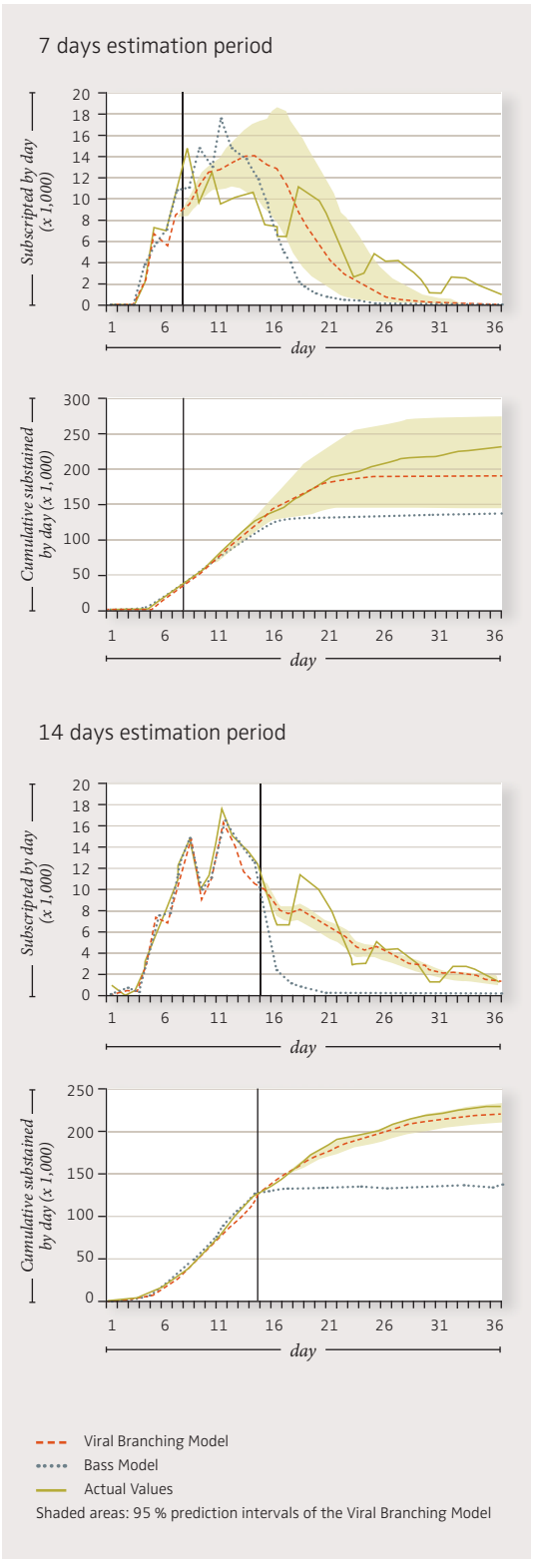
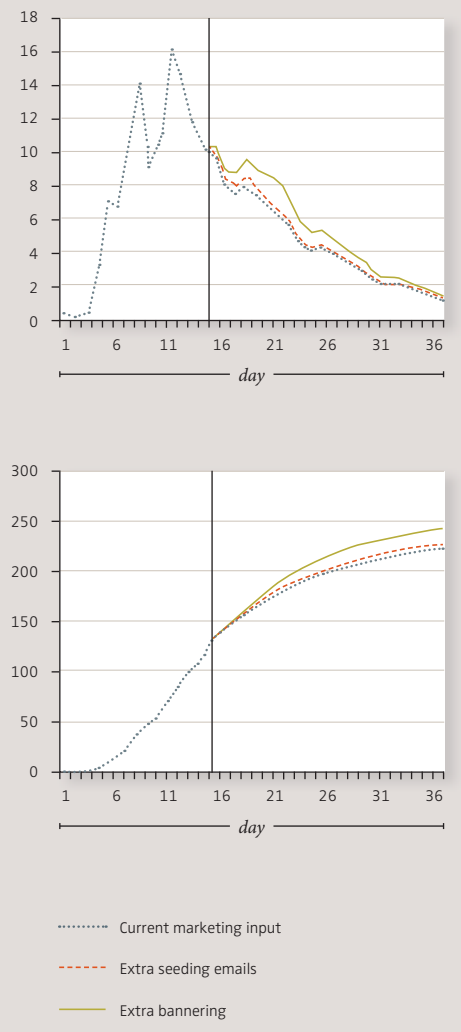


FIGURE 4:
Forecasting the Reach of the Campaign on Day 7 and Day 14

TABLE 1:
Predicted Effects of What-if Scenarios

Marketing activity on day 15	Predicted cumulative number of participants on day 36	Predicted number of additional participants	Predicted number of additional participants per click/seed
Actual marketing strategy	221,429	–	–
Extra bannering for one week: 10,000 clicks	242,595	21,166	2.17 participants/click
Extra seeding: 10,000 emails	227,640	6,211	0.62 participants/seed

FIGURE 5:
Results of What-if Analyses



14, the extended Bass model hugely under predicts at 134,682 whereas the prediction of the Viral Branching Model is 221,429, which is very close to the true ultimate level of 228,351 (see Figure 4). As a matter of fact, the Bass model was not able to accurately predict the number of participants at an early stage of the process, nor was a basic branching model that did not take into account the specifications of the adapted model. Both only start improving at the end of the campaign when the viral process has almost died out and does not attract many new customers. An extended version of the Bass Model starts to predict well only after day 21, the standard model only after day 28.

What-if Analyses: Estimating Marketing Tool Effectiveness

The Viral Branching Model does not only allow for predicting the spread of the viral marketing campaign over time, it also makes it possible to forecast the spread of alternative marketing. Thereby it can support decisions for modifying the campaign in order to reach their objectives. For example, a company might be interested in exploring the effects of two alternative marketing activities to spur on the reach of a campaign. Should they rather use 1) an additional 10,000 seeding emails or 2) an additional 10,000 click-throughs are bought. The seeding emails would be sent out on day 15 of the campaign, the banner would be online for one week from day 15 to day 22. Table 1 summarizes the effects of these two alternative marketing campaigns as of day 36 of the campaign (see Table 1).

The additional 10,000 seeding emails result in an additional reach of 6,211 participants. This means that on average 0.62 additional participants will be reached for

every seeding email. This is the number of people that directly participate by responding to the seeding email and indirectly through receiving a viral email with an invitation from a friend. It is remarkable that the effect of buying 10,000 additional banner clicks is substantially higher. This leads to an additional reach of 21,166 participants at the end of the campaign and means that the additional reach for every click is 2.17. Again, this is the sum of people who start participating directly after they have clicked the banner and subsequently invited contacts through viral emails. These effects originate from the different probabilities of participating after receiving a seeding email and after clicking on a banner. Once the rates of banner clicks and seeding emails are known, a company can determine which seeding method is most cost-effective. The company can also put a dollar value on a customer that participates (e.g. customer lifetime value) to determine if it is profitable to carry out a particular additional seeding. Figure 5 graphically shows the difference in the spread of the campaign if the two alternative scenarios are executed.

Benchmarking

Of course, the reach of a campaign will also depend on the quality of the mailing database and the email itself, the characteristics of the website where the banners are placed and the costs of these seeding tools. Comparing key measures of a campaign like seeding acceptance or forward rates can help to modify a campaign with the right lever by improving individual elements. Further, the switching probabilities from one step to the next in Figure 1 can easily be compared. Depending on where a bottleneck is identified, different activities could improve the situation. If, for example, the forward rate of a campaign falls behind others, it might help to facilitate forwarding or to offer incentives. If the acceptance rate is low compared to other campaigns, it might be more advisable to improve the content or headline of the email.

Summary

Though viral marketing is becoming increasingly popular, it is difficult to predict the success of single campaigns. The viral branching model applied here is a new tool that does very well in predicting the evolution and reach of viral campaigns. Accurately estimating their evolution and reach can help to decide whether additional seeding activities are necessary, which alternatives perform best and how resources can be allocated in an efficient way. •

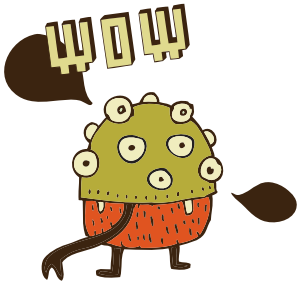
FURTHER READING

Bass, F. M. (1969), "A New Product Growth for Model Consumer Durables", Management Science, 15 (5), 215 – 227.

De Bruyn, A. and G. L. Lilien (2008), "A Multi-Stage Model of Word of Mouth Influence through Viral Marketing", International Journal of Research in Marketing, 25 (3), 151 – 163.

Phelps, J. E., R. Lewis, L. Mobilo, D. Perry, and N. Raman (2004), "Viral Marketing or Electronic Word-of-Mouth Advertising: Examining Consumer Responses and Motivations to Pass Along Email", Journal of Advertising Research, 44 (Dec), 333 – 348.

Watts, D. J. and J. Peretti (2007), "Viral Marketing for the Real World", Harvard Business Review, May, 22 – 23.



KEYWORDS:

Online Marketing, Viral Marketing, Word-of-Mouth, Reach, Branching Processes, Forecasting, Markov Processes

{ *New Method* }

Measuring Consumers' Willingness to Pay
WHICH METHOD FITS BEST?

Klaus M. Miller, Reto Hofstetter, Harley Krohmer, and Z. John Zhang

Gauging the maximum willingness to pay (WTP) of a product accurately is a critical success factor that determines not only market performance but also financial results. A number of approaches have therefore been developed to accurately estimate consumers' willingness to pay. Here, four commonly used measurement approaches are compared using real purchase data as a benchmark. The relative strengths of each method are analyzed on the basis of statistical criteria and, more importantly, on their potential to predict managerially relevant criteria such as optimal price, quantity and profit. The results show a slight advantage of incentive-aligned approaches though the market settings need to be considered to choose the best-fitting procedure.

Superior Pricing – Higher Profitability

Prices have a strong and immediate impact on company profits. Therefore pricing decisions are gaining more and more importance. One major challenge for successful pricing is estimating the perceived value of a product to its customers correctly, which involves estimating customers' willingness to pay (WTP). Usually, if consumers are interested in buying a product or service, there is a maximum tolerable price, depending on the value the product can generate. If the product is more expensive consumers won't buy, but if the product is at or below that threshold they will purchase. Gauging this maximum price or maximum willingness to pay (WTP) accurately is necessary to position a product or service among competing offers, to decide optimal price related segmentation of a market and for decisions about changing or modifying prices. An underestimation or poor differentiation of that price may lead to wasted profit potential whereas an overestimation may mean losing potential customers.

Measuring Consumer's Willingness to Pay (WTP)

However, determining consumer's willingness to pay is not an easy task. First, it is challenging for consumers to actually estimate a product's value or to know what they might be prepared to spend, especially if a product is fairly new. Second, the consumer might know but be unwilling to say. Consumers might answer strategically, hoping that a lower stated willingness to pay will result in lower prices. Or there might be social influence at work. Respondents might overstate the amount they would spend because of the self-image they would like to create. Others again might refuse to talk about this issue at all.

Not surprisingly, there are many ways for measuring WTP as accurately as possible. One major distinction between the approaches is whether WTP is measured directly or indirectly. In practice, some marketing researchers favor the direct approach, asking consumers directly to state their WTP for a specific product through, say, an

THE AUTHORS

Klaus M. Miller is Assistant Professor of Marketing at the Institute of Marketing and Management, University of Bern, Switzerland, miller@imu.unibe.ch.

Reto Hofstetter is Assistant Professor of Marketing at the Center for Customer Insight, University of St. Gallen, Switzerland, reto.hofstetter@unisg.ch.

Harley Krohmer is Professor of Marketing, Chair of the Marketing Department, and Executive Director of the Institute of Marketing and Management, University of Bern, Switzerland, krohmer@imu.unibe.ch.

Z. John Zhang is the Murrel J. Ades Professor of Marketing at the Wharton School, University of Pennsylvania, USA, zjzhang@wharton. upenn.edu.

This article is an updated version of *Miller, K.M./Hofstetter, R./Krohmer, H./Zhang, Z.J.* (2011), "How Should Consumers' Willingness to Pay Be Measured? An Empirical Comparison of State-of-the-Art Approaches", Journal of Marketing Research, 48(1), 172 – 184 and is published with the permission of the American Marketing Association.

{*Box 1*}

ONLINE SURVEY – INNOVATIVE CLEANING PRODUCTS FOR HIGH-TECH EQUIPMENT

In the survey, 1,124 Swiss consumers were randomly assigned to one of five different experimental groups. In the ***open-ended question format (OE) group***, each participant had to directly state his or her individual hypothetical WTP for the cleaning product.

In the ***BDM group***, we determined actual WTP by using a BDM mechanism that had been applied successfully before. Participants were told that they were obligated to buy the cleaning product at the randomly determined price if the price was less than or equal to their stated WTP. However, if the randomly determined price was higher, a respondent would not have to buy the product. This mechanism ensures that participants have no incentive to indicate a price that is higher or lower than their true WTP.

In the ***CBC group***, we used a computer-generated, choice-based, conjoint design. We gave each respondent seven choice tasks and told them to imagine that he or she had to choose in an online shop among the product alternatives "right here" and "right now." Each choice task contained four cleaning products (i.e., conjoint stimuli) and a none-purchase option. Each conjoint stimulus was described by five attributes which we obtained in a pre-test. Attribute levels varied systematically (see Table 2).

In the ***ICBC group***, the conjoint procedure was exactly the same as for the CBC group. In addition, participants were informed that their responses in the conjoint task would be used to infer their WTP for a product. They were further instructed that after the completion of the survey, the product with the attributes preferred by the most people would be produced. The BDM mechanism embedded in CBC procedure ensured that participants had an incentive to reveal their true preferences.

In the ***REAL group***, we collected real transaction data by asking each participant whether he or she would be willing to buy the cleaning product at a certain price displayed in an online shop. The test site used for the experiment was similar to the real online shop of our cleaning product manufacturer. For the sake of comparability, price levels in the online shop corresponded to the price levels in our conjoint treatments (CBC and ICBC group). The price levels were randomly assigned to the participants, and each price level had an equal chance of appearing in the online shop.

Then, a series of statistical analyses were applied to compare the data sets and obtain WTP estimates.

open-ended question format. Others prefer an indirect approach, where WTP is calculated based on consumers' choices among several product alternatives and a none-choice option. Another classification discerns if consumers' hypothetical or actual WTP is determined. Table 1 gives an overview of the nature of the different approaches and lists the state-of-the-art methods for each field.

The different approaches all have advantages and drawbacks concerning the difficulties of measuring WTP, as described before. Hypothetical methods tend to overestimate WTP when compared with actual WTP from BDM and ICBC. However, there are situations when actual WTP cannot be measured in a study, e. g., when the prices at stake are very high or when products are highly individualized. Further, applying incentive-aligned approaches may not always be feasible due to the availability of product-prototypes or survey subjects and due to legal restrictions on the types of marketing research one can carry out. On the other hand, giving the respondents choice alternatives rather than direct questioning should make it easier for them to gauge their real preferences and actual value of alternatives.

Testing What Works Best Compared to Real Purchase Data

Making the right decision of how to measure WTP involves evaluating the drawbacks and advantages of each approach for each research setting individually. The type of products and the research objectives need to be clear to make a good decision. Many prior studies have tested differences among these approaches for different product types, but have not compared their results to what is ultimately of most interest: consumers' real WTP.

This contribution focuses on this "gap" and assesses whether the four approaches presented in Table 1 are statistically different from real purchase data, and which of these methods may lead marketing researchers to better pricing decisions. In a large-scale experimental design and field test (Box 1), WTP was collected for a new and inexpensive cleaning product for high-tech equipment (e.g., computer keyboards) using the four approaches and compared to real purchase data obtained from an online shop. The "five-in-one study" allowed a comprehensive assessment of each approach's ability to capture mean WTP and WTP distributions as well as managerially relevant criteria, such as the ability to predict the optimal price, quantity and profit to be expected. It also helps to better understand the strengths and weaknesses of each approach.

RESULTS OF THE COMPARISON BETWEEN METHODS

Comparing the Average WTP

In the dataset, all methods produce valid outcomes in measuring consumers' mean WTP. However, relative to the real purchase data, CBC shows by far the largest hypothetical bias (as can be seen from the ratio of the measured WTP to the benchmark) followed by OE, ICBC, and BDM. Hence, for our case study of an inexpensive cleaning product we can say that BDM performs best (see Table 3).

We further assessed the differences between the various methods to measure consumers' WTP. Here, directly stated WTPs in BDM and OE differed significantly (Δ = CHF 2.06) and indirectly stated WTPs in CBC and ICBC differed even more (Δ = CHF 5.52). One reason for the much higher WTP estimates in CBC may be that there were many more none choices under ICBC. In the ICBC group, 19 % of the participants chose the none-choice option, whereas under hypothetical CBC only 5 % chose the none-choice option and this difference results in a much larger intercept between the prices under CBC, but the difference in price sensitivity is small.

To sum up, mean WTP analysis showed statistically unbiased results for all methods. Further, we found that both hypothetical methods (OE, CBC), however, are significantly different from their incentive-aligned counterparts. The comparison of the means of the hypothetical methods with the real purchase benchmark showed that for our case study of an inexpensive cleaning product, CBC was more biased in absolute terms than OE.

As a consequence, hypothetical CBC may be more appropriate if a manager is primarily interested in the relative utilities of product attributes and price and less in predicting the actual best price.

Comparing WTP Distribution across Methods

Mean WTP is very important for both value-auditing and the valuation of a public good (e.g., clean air or water). However, for product pricing decisions, even an accurate estimate of mean WTP may not be very helpful to the marketing researcher for identifying the optimal price(s). For instance, if the data covers different segments with different value perceptions between segments, but similar evaluations within the segments, the mean might be misleading. Therefore, it is necessary to consider the entire WTP distribution (see Figure 1) in assessing the performance of an approach, not just the mean.

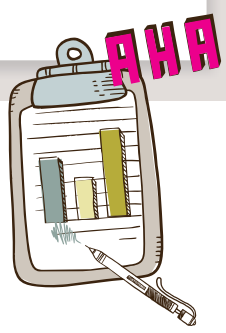
TABLE 1:
Overview of the Tested State-of-the-Art-Methods

Measuring Consumer's Willingness to Pay (WTP)		
	Direct Measurement (consumers state WTP directly)	**Indirect Measurement** (WTP is derived from several choice alternatives)
Hypothetical WTP (have no financial consequences for consumers)	**OE** Open-ended questions	**CBC** Choice-based conjoint analysis
	E.g. "What is the maximum you would be willing to pay to obtain X?"	WTP is calculated based on subjects' choices among several product alternatives and a none-choice option
Actual WTP (require real financial commitment, real purchases take place)	**BDM*** Incentive-compatible mechanism	**ICBC** Incentive-aligned choice based conjoint analysis
	A subject is obligated to purchase a product if the price drawn from a lottery is less than or equal to the subject's stated WTP	Subjects' WTP is inferred from their revealed preferences, they are also obligated to make a purchase using the BDM mechanism

* Becker, DeGroot, and Marschak (1964) mechanism

TABLE 2:
Attributes and Levels of the Cleaning Product Included in the Choice-Based Conjoint Analysis

Attribute	Levels	Number of Attribute Levels
Brand	CLEAN-A, CLEAN-B, CLEAN-C, CLEAN-D	4
Color	red, blue, green, yellow	4
Durability (Period of usage)	2 months, 4 months, 6 months, 8 months	4
Cleaning Power	Absorbs 90 % of dust & dirt, Absorbs 75 % of dust & dirt, Absorbs 60 % of dust & dirt	3
Price	CHF 1.59, CHF 4.79, CHF 7.95, CHF 11.10, CHF 14.30	5

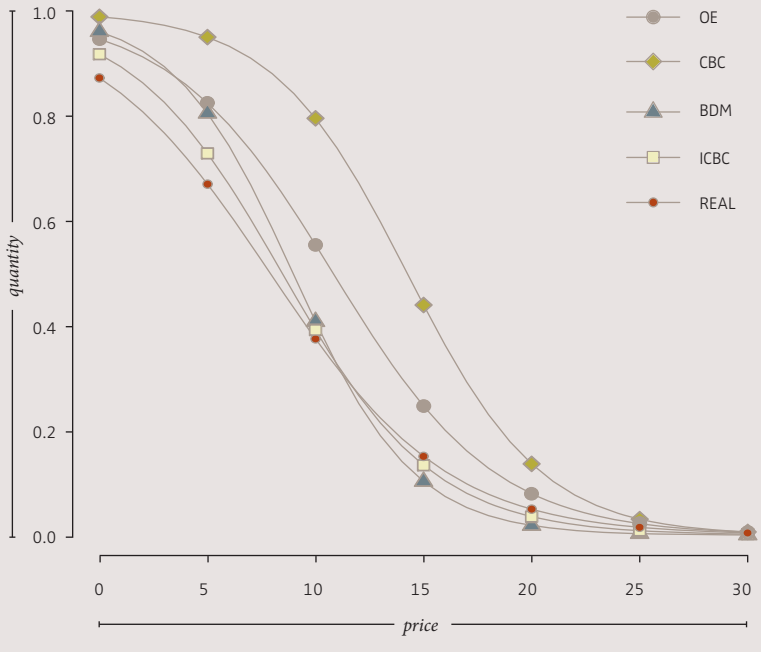


» The type of products and the research objectives need to be clear to make a good decision. «

TABLE 3:
Comparison of Mean WTP and Confidence Intervals Across Methods

Method	n	Mean (Swiss Francs)	Ratio HWTP or AWTP / Benchmark
OE	279	11.03	1.30
CBC	310	14.92	1.76
BDM	183	8.96	1.06
ICBC	151	9.39	1.11
REAL (Benchmark)	201	8.46	n.a.

FIGURE 1:
Demand Curves for Cleaning Products Dependent on Measurement Approach



The tests show that the demand curves of OE, BDM and ICBC are quite similar to the true demand curve from the real purchase data. However, significant differences in WTP distributions between CBC data and real purchase data could be observed. These results are consistent with the analysis of mean WTP values as discussed before. BDM tracks real demand best, followed by ICBC, OE, and CBC. It shows that even hypothetical methods can capture real demand well.

THE DIFFERENT APPROACHES AND BUSINESS DECISIONS

Do these differences matter for price-setting or sales forecasting, the ultimate test of a successful approach? An examination of how well each of these tools supports the business decision of choosing the profit-maximizing price can answer this question for the cleaning products in this study. First, the performance of the approaches in determining the demand curve within a range around the optimal price is compared. We then examine the ability of the different approaches to explicitly forecast the optimal price, quantity and profits.

Comparing Willingness to Pay Distributions Around the Optimal Price

The optimal price (CHF 8.50) and optimal price range based on market information (demand characteristics and costs) served as a starting point. Next, a confidence range for the optimal price of the real purchase data was constructed. Within this confidence range, we will find the optimal price with a probability of 95 %. Then comparing the WTP distributions from the various methods to the actual WTP within the confidence range produced the following results (see Figure 2). The diagrams show the optimal price and WTP along the demand curve of the real purchase data (filled circles) with WTP generated with the different approaches and the confidence ranges of each approach and the real data (each with dotted lines). The straight vertical line indicates the optimal price based on the real purchase data.

The WTPs from BDM overlap at any given price point in the range of the profit-maximizing price. In other words, the BDM data is very similar to the real purchase data. Further, partial overlaps can be observed for OE and ICBC distributions. However, CBC does not overlap at all in the relevant range for a pricing decision in our application. BDM shows the least deviation from the benchmark (Δ = .170), followed by ICBC (Δ = .661), OE (Δ = 1.840), and CBC (Δ = 4.376).

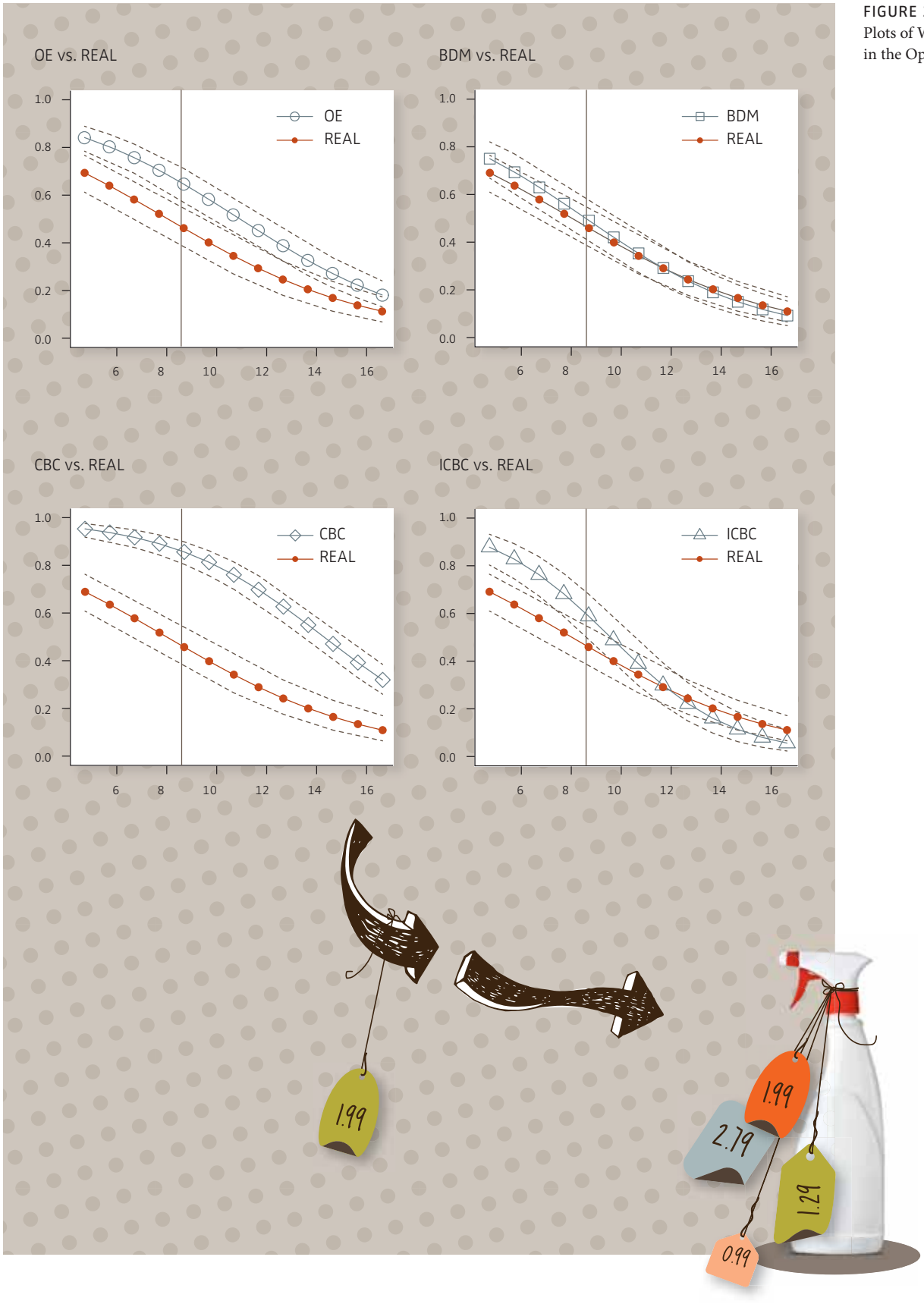


FIGURE 2:
Plots of WTP Distributions in the Optimal Price Range

Method	Optimal Price	Confidence Interval	Absolute difference to benchmark	Optimal Quantity	Confidence Interval	Absolute difference to benchmark	Optimal Profits	Confidence Interval	Absolute difference to benchmark
OE	9.681	[8.408, 11.353]	1.181	.576	[.466, .659]	.112	152,483.7	[134,948.4, 163,644]	45,978.6
CBC	11.494	[10.352, 12.837	2.994	.707	[.606, .777]	.243	225,799.3	[206,972.8, 237,568.7]	119,294.2
BDM	8.164	[6.782, 9.938	.336	.522	[.393, .617]	.058	114,459.9	[95,014.62, 125,842.5]	7,954.8
ICBC	7.925	[6.896, 9.342	.575	.652	[.523, .748]	.188	138,561.9	[120,520.8, 150133.3]	32,056.8
REAL	8.500	[6.872, 12.299	n.a.	.464	[.318, .602]	n.a.	106,505.1	[85,045.95, 123,140.7]	n.a.

Notes: Quantity scaled from [0,1], n.a. = not applicable

* The gray-shaded cells indicate that the confidence interval of the specific measure overlaps with the confidence interval of the corresponding benchmark measure obtained from the real purchase data. Hence, shaded areas imply no statistical difference between the estimated measure and the benchmark.

TABLE 4:
Overview of Estimates for Optimal Price, Quantity and Profit Across Methods

Comparing the Ability to Forecast Optimal Price, Quantity and Profits

Here the optimal price, quantity, and profit based on the real purchase data served as a benchmark for the performance of the individual approaches to measure consumers' WTP. The results of this analysis are summarized as follows:

> All methods seem to be equally able to forecast the ***optimal price***. All measures overlap with the confidence interval of the real data.

> For the ***optimal quantity***, only CBC performs significantly worse. Interestingly, the point estimates for the optimal price and quantity from OE and CBC do not fall in the confidence intervals generated with other methods for the respective measures, although the confidence intervals do overlap slightly.

> The findings for ***optimal profits*** paint a different picture. While forecasts from hypothetical approaches (OE and CBC) produce different results from the benchmark, those from incentive-aligned approaches do not. However, the absolute deviations from the benchmark are large for all approaches, especially for the hypothetical approaches. Therefore, managers should treat optimal profit estimates based on hypothetical data with care as these market research results may lead to significant economic differences. Finally, a rank order shows the following results: BDM yields the least deviation followed by ICBC, OE, and CBC for all three-point estimates (see table 4).

These findings suggest that in our application, the incentive-aligned methods are better able to forecast not only optimal price and quantity, but also profits. However, surprisingly, this analysis shows that hypothetical methods are also effective for forecasting optimal price and quantity, despite generating hypothetical bias.

» The BDM data is very similar to the real purchase data. «

Key Findings

> ***Incentive-aligned approaches performed best***
The results suggest that an incentive-aligned approach may be a more preferable choice for researchers and practitioners. However, this may not be true for all types of products (see next point). Further, other factors may limit the application of incentive-aligned approaches. For example, reasons such as cost, the unavailability of product-prototypes or survey subjects and legal restrictions as previously discussed.

> ***Type of product and purchasing context matter***
OE can outperform CBC in estimating mean WTP and WTP distribution, as well as making pricing decisions for an inexpensive, frequently purchased, non-durable product category like our cleaning product. According to previous findings, however, CBC may perform better when a product is less unique and faces more competing products, unlike the cleaning product in this study. Thus, indirect approaches such as conjoint analysis may be better suited for the product category where a more extensive decision process is involved (e.g., a digital camera) while direct approaches are less suitable for infrequently purchased products, and more suitable for offerings absent of any explicit competitive offering (e.g., products without any or only few direct competitors).

> ***Hypothetical bias might be less relevant***
Focussing on hypothetical bias in evaluating conjoint approaches is perhaps irrelevant for most marketing applications. Our analysis shows that even if a particular approach generates biased mean WTPs, and even if the estimated demand curve is different from the actual demand curve, the approach may still be useful in guiding marketing researchers to good pricing decisions. In particular, hypothetical CBC can be appropriate if managers are primarily interested in the relative utilities of product attributes and price and less in predicting the actual best price. If the research objective is to estimate WTP in relation to other product attributes, then OE and CBC can deliver valuable insights, despite some obvious concerns about the hypothetical nature of these approaches. •

FURTHER READING

Anders Gustaffsson, Andreas Herrmann, and Frank Huber, eds (2003): Conjoint Measurement. Methods and Applications, Berlin: Springer

Orme, Bryan K. (2003), "Which Conjoint Method Should I Use?" Sawtooth Software, ResearchPaper Series.

Voelckner, Franziska (2006), "An Empirical Comparison of Methods for Measuring Consumers 'Willingness to Pay", Marketing Letters, 17 (2), 137 – 149.

Wertenbroch, Klaus and Bernd Skiera (2002), "Measuring Consumers' Willingness to Pay at the Point of Purchase", Journal of Marketing Research, 39 (2), 228 – 241.

KEYWORDS:

Market Research, Pricing, Demand Estimation, Willingness to Pay, Hypothetical Bias

{Case Study}

budget decision

/// Dynamic budget optimization outperforms rules of thumb

Dynamically Allocating the Marketing Budget
HOW TO LEVERAGE PROFITS ACROSS MARKETS, PRODUCTS AND MARKETING ACTIVITIES

Marc Fischer, Sönke Albers, Nils Wagner and Monika Frie

Marketing budget decisions are critical and should be fact based rather than intuitive. Profit can be improved by better allocating a fixed budget across products or regions. The Excel-based decision support model presented in this article makes it possible to determine near-optimal marketing budgets and represents an innovative and feasible solution to the dynamic marketing allocation budget problem for multi-product, multi-country firms. The model accounts for marketing dynamics and a product's growth potential as well as for trade-offs with respect to marketing effectiveness and profit contribution. It was successfully implemented at Bayer, one of the world's largest firms in the pharmaceuticals and chemicals business. The profit improvement potential in this company was more than 50 % and worth nearly EUR 500 million in incremental discounted cash flows.

THE AUTHORS

Marc Fischer, Professor of Marketing and Services, University of Cologne, Germany, marc.fischer@wiso.uni-koeln.de

Sönke Albers, Professor of Marketing and Innovation, Kühne Logistics University, Hamburg, Germany, soenke.albers@the-klu.org

Nils Wagner, Ph.D. candidate, Germany, wagner.nils@gmx.com

Monika Frie, formerly Head of Global Business Support, Bayer AG, Berlin, Germany, friemonika@aol.de

The article is an adapted version of *Fischer, Marc; Albers, Sönke; Wagner, Nils; Frie, Monika* (2011): "Dynamic Marketing Budget Allocation across Countries, Products, and Marketing Activities", Marketing Science, Vol. 30, No. 4, 568 – 585.

Rule of Thumb Marketing Budgeting is Common

Determining the marketing budget has been of paramount importance to marketers for many decades. Global players such as Procter & Gamble spend billions of dollars on advertising per year. Nevertheless, marketing practitioners frequently use rules of thumb when it comes to determining marketing budgets. By far the most often used budget rules across regions and industries are the "percentage-of-sales", "objective-and-task", and "affordability" method. In addition, budget decisions are often based on gut instinct and the negotiations skills of individual managers. Consequently, politics and individual opinions tend to shape the decision process instead of fact-based discussions. Obviously, these rules and practices bear the risk of results far away from the optimal profit-maximizing budget.

Challenges of Optimal Budget Allocation

The global annual marketing budget of a company is usually set in the previous year, i.e., it is fixed. If companies offer a broad product portfolio to customers from various countries and use a variety of communication channels they need to break down the fixed annual budget into expenditures across countries, products and communication activities. For many firms this task requires determining individual budgets for hundreds of allocation units. As a result, firms face a complex decision problem: they need to allocate a fixed budget across a multitude of allocation units by evaluating the impact of these investment decisions on future cash flows. Since marketing expenditure is immediately recognized as cost on the income statement but its total impact on sales often only unfolds fully in future periods, it needs to be evaluated in terms of an investment decision and based on the principle of marginal returns. Technically speaking, management needs to solve a dynamic optimization problem for an investment portfolio under a budget constraint. This management challenge recurs on a regular basis as marketing budgets are set annually.

Consequently, a new allocation approach was developed. In a first step, a theoretical solution is presented that provides important insights into how individual budgets should be set so that they account for differences in profit contribution, marketing effectiveness, and growth

BOX 1:
Constrained Dynamic Profit Maximization Problem

$$\sum_{\text{Time } t} \text{Discount factor}_t \left[\sum_{\text{Countries } k} \sum_{\text{Products } i} \text{Profit contribution}_{kit} \times \text{Unit sales}_{kit} - \sum_k \sum_i \sum_{\text{Activities } n} \text{Marketing expense}_{kint} \right] \rightarrow \text{Max!}$$

Discounted net value of product portfolio

where Unit sales = f (life cycle, marketing expense, etc.)

Restrictions

(1) $\sum_k \sum_i \sum_n$ Marketing expense$_{kint}$ = Total Budget$_t$
(2) Marketing effects decay at a constant rate over time
(3) Boundary conditions (e.g., positive marketing budgets)

BOX 2:
Optimal Solution

$$\text{Optimal budget}_{kint} = \frac{\text{Optimal allocation weight}}{\sum_{\text{Countries } k} \sum_{\text{Products } i} \sum_{\text{Activities } n} \text{Optimal allocation weight}_{kint}} \times \text{Total budget}_t$$

$$\text{Optimal allocation weight}_{kint} = \frac{\text{Profit contribution}_{kit} \times \text{Optimal unit sales}_{kit} \times \left[\text{Optimal mktg elasticity}_{kint} + \text{Optimal growth elasticity}_{kit} \right]}{1 + \text{Discount rate} - \text{Marketing carryover}_{kin}}$$

BOX 3:
Heuristic Allocation Weight

$$\frac{\text{Last period's marketing elasticity}}{1 + \text{Discount rate} - \text{Marketing carryover}} \times \text{Profit contribution margin (\%)} \times \text{Last periods' revenue} \times \frac{\text{Expected revenues in T periods}}{\text{Last period's revenues}}$$

1 (Discounted) long-term marketing effectivenesse

2 Size of profit contribution

3 Growth potential (T = Planning horizon)

potential. In a second step, a near-optimal allocation rule is derived from that solution which addresses the demand for simple allocation rules by practitioners. It can be used with a spreadsheet. While easy to understand and implement, the heuristic goes beyond widespread budgeting rules such as the "percentage-of sales".

Developing a Dynamic Budget Allocation Approach

According to previous findings the profit improvement potential from a better allocation of a total marketing budget is much higher than from optimizing the total budget. Therefore the approach does not tackle how to determine the overall budget but how to allocate a fixed budget that is constant over the planning horizon. The model provides a solution for an international firm that offers a broad portfolio of products to customers from different countries, using different marketing tools or activities to promote its products (e.g., classical advertising, below-the-line activities, personal selling, etc.). The portfolio is composed of products that differ in their life-cycle stage and the firm wishes to maximize the discounted total profits of its portfolio.

Specifically, the model integrates and trades off information about

- the size of the business,
- the profit contribution margin,
- the (short-term) effectiveness of marketing investments,
- the carryover-effect of marketing investments,
- the growth potential,
- and the time value of money.

In the model, sales are represented by a general growth function (a product life cycle) and the response of marketing investments. The growth function describes the evolution of new product sales over time and is assumed to be influenced by marketing investments. The effect of marketing investments is determined by a marketing stock that arises from previous investments and depreciates over time (decay factor) plus the marketing investments in the current period. Based on these specifications, the discounted net value of the product portfolio is maximized. Box 1 shows the formulation of the maximization problem and its restrictions in mathematical terms.

The optimal solution considers dynamics in two different ways. First, it incorporates the dynamic effects of building and leveraging the marketing stock, which is reflected in the marketing carryover coefficient. Second, it accounts for the growth potential of a product that is related to marketing investments as reflected in the growth elasticity.

The growth elasticity measures the power of marketing to shape the life cycle. Hence, based on prior evidence it is assumed that the growth process is not predetermined but can be influenced by the level of marketing expenditure in different phases of the life of a product. In particular, marketing investments in the growth potential of a new product have a strong impact on future cumulative sales and discounted cash flows. On the basis of a parametric growth model, it can be demonstrated in the subsequent case study how the optimal solution favors shifting marketing resources to young products so that they can leverage their endogenous growth potential. The optimal solution is based on the principle of relative attractiveness of an allocation unit to get a share of the total marketing budget. The idea is to calculate the optimal allocation weight for a product, as an example, and relate this weight to all allocation weights of the portfolio. This share is proportional to the profit contribution margin, current sales, marketing budget elasticity and growth multiplier. Box 2 explains how the optimal allocation weights for individual countries, products and marketing activities can be determined in detail.

» The profit improvement potential from a better allocation of a total marketing budget is much higher than from optimizing the total budget. «

Implications for Budget Allocation

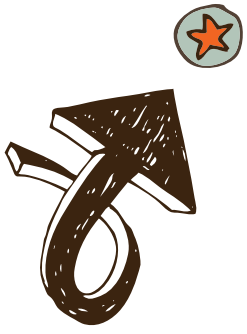
The optimal solution (Box 2) provides a number of intuitive insights into the allocation problem.

> The optimal budget for a product relative to other products increases with its contribution margin and its sales base.

> Similarly, the larger a product's long-term marketing effectiveness for a certain activity, the higher its optimal budget.

> The long-term marketing effectiveness is composed of the short-term sales elasticity, the discount rate, and the marketing carryover. Consequently, if long-term marketing effectiveness is larger across all activities of a product compared to other products, the total budget for that product increases.

> Finally, the sales growth elasticity varies over the life cycle. It is largest at the beginning when most of the sales are yet to come. Hence, the potential impact of marketing expenditure on future cash flows is greatest at this stage, which is why young products get a higher allocation weight and thus a larger share of the total budget.



» The effectiveness of detailing and other marketing activities varies substantially across the different therapeutic areas. «

Because of the growth potential of a new product the optimal marketing budget might even be higher than revenues at the beginning of its life. Therefore the solution may suggest spending money on products that involve a temporary loss in such a case.

Adapting the Approach for Practical Application

For managers it is more transparent and easier to use an allocation rule instead of a numerical solution of such a model. Therefore, an allocation heuristic is derived directly from the theoretical solution that produces near-optimal budgets, is easy to understand for managers and can be implemented in a simple spreadsheet. Basically, the proposed heuristic is a simple proportional rule that integrates relevant information from three areas:

> the long-term effectiveness of marketing investments in the focal product,
> the profit contribution of the focal product,
> and the focal product's growth expectations.

Box 3 shows how the allocation weights are determined using the simplified decision rule. Data for the carryover coefficient, sales elasticity, and the growth multiplier are not readily available but must be estimated.

Current values of revenues are available from last year and the contribution margin is a target figure decided by management. The growth potential is calculated as a multiplier that divides expected revenues in 5 years (planning horizon) by the current revenue level. By this, products get a greater share of the total budget as long as they are expected to grow. In contrast, when they are expected to turn into their decline stage their budget is reduced.

By definition, the heuristic solution is likely to differ from the optimal solution, but it should not deviate too much to be useful. The performance of the heuristic was tested in an experimental simulation study and found to provide very good results which even improve after several planning cycles and in some cases converge to the optimum if applied consecutively.

Although the tool was applied to prescription drugs (see below), it is suitable for many other industries, such as consumer durables, consumer packaged goods, etc. In all these markets, rich information is available at the aggregate product level that allows the calibration of market response models.

PRACTICAL APPLICATION IN THE PHARMACEUTICAL INDUSTRY: THE BAYER CASE

Company Background and Challenge

Bayer is one of the world's leading companies in the pharmaceuticals and chemicals business sector. As of 2008, the company had EUR 32.9 billion sales and around 108,600 employees (Bayer 2009). The company invests substantial resources in marketing and sales activities. Total marketing and selling expenditures were EUR 7.6 billion (~23.1 % of total sales) in 2008. Bayer consists of three major business areas, Healthcare being the largest area in terms of sales (contributing almost 50 %). Within Healthcare, the Primary Care Unit (EUR 3.1 billion) is the largest within the prescription drug business (EUR 10.7 billion). The unit operates in four separate competitive market environments or therapeutic areas, respectively: *diabetes, hypertension, infectious diseases and erectile dysfunction.*

The challenge for the management was to find a balance in the allocation of marketing resources that trades off the size of the business, the growth expectations, and eventually the effectiveness of marketing expenditure. The main objective was to improve the process and results of annual budget allocation in order to maximize discounted profits from the product portfolio over a planning horizon of five years. The implementation of the allocation tool was targeted at the five main European countries which contribute the largest share to total sales. The application was developed in the period 2005-2006 and budget recommendations for 2007 were derived.

At that point in time the three therapeutic areas *diabetes*, *hypertension* and *infectious diseases* represented established areas which are in their saturation stage. Due to the aging of the population in industrialized societies and innovative new product introductions they are, however, expected to continue to grow at moderate rates in the future. The biggest challenge for Bayer in these areas is to keep its market position. Existing and new drugs by other global players are the main competitors for the Bayer drugs.

In contrast, the market for the treatment of erectile dysfunction is a new category that was pioneered by Pfizer with its Viagra brand in 1998. Bayer and Eli Lilly followed in 2003 with the introduction of their brands Levitra and Cialis. This market is still growing and does not face generic competitors yet.

» A product with high marketing effectiveness but a low profit contribution level could get a lower budget than a product with a a high level of profit contribution but lower marketing effectiveness. «

Data and Model Estimation

To obtain relevant input information such as sales elasticities and growth parameters, the authors estimated a market response model for each product market. Quarterly marketing and sales figures at product level of the previous 10 years (1996-2006) were available. The market response model is a mathematical representation of how sales evolve over time and react to marketing and other investments. Estimating the parameters of this model from the observed sales time-series provides the data input to compute marketing elasticity and other input data, which are not observed. Bayer management helped to identify the relevant subcategories and competitors within each therapeutic area by country. Subcategories range from 12 for Anti-infectives to one for Erectile Dysfunction. Products range from 15 for the Erectile Dysfunction area and 306 for the Hypertension area. Table 1 gives an overview of the key input variables used to calibrate the heuristic allocation tool (see Table 1).

Method	Antidiabetes		Hypertension		Erectile dysfunction		Antiinfectives	
	Mean	SD	**Mean**	SD	**Mean**	SD	**Mean**	SD
Unit sales in thousand standard units	**16,319**	20,674	**11,891**	16,649	**1,008**	649	**5,291**	8,004
Elapsed time since launch in years	**14.50**	12.69	**10.00**	7.42	**2.75**	1.91	**12.25**	10.45
Order of entry (Median)	**3**		**4**		**2**		**3**	
Price in EUR per standard unit	**.16**	.26	**.50**	2.96	**7.00**	.48	**2.01**	1.97
Marketing stock variables								
Detailing at general practitioners in thousand EUR	**22,519**	36,566	**64,595**	87,134	**55,026**	30,326	**44,259**	34,930
Detailing at specialists in thousand EUR	**2,081**	4,068	**8,803**	13,701	**14,498**	12,771	**10,380**	11,353
Detailing at pharmacies in thousand EUR	**588**	1,453	**1,930**	3,039			**1,766**	2,598
Professional journal advertising in thousand EUR	**149**	341			**458**	502	**165**	295
Meeting invitations in thousand EUR	**730**	2,030	**1,361**	3,062	**3,884**	2,481	**471**	837
Other marketing expenditures in thousand EUR			**2,558**	9,278	**3,912**	4,404		
# of countries	5		5		5		5	
# of subcategories	6		10		1		12	
# of products	104		306		15		100	
# of observations	2,398		7,908		233		2,916	

Notes: All units and EUR figures are on a quarterly basis.

TABLE 1:
Overview of Input Variables for the Heuristic Allocation Tool for Bayer

Each therapeutic area is specified as a double-log sales response function that accommodates nonlinear and interaction effects. Marketing mix data in each area was reflected by including marketing stocks (a combination of all marketing expenditure types) for Bayer and its competitors (in total), own and competitive prices and brand/quality effects. A double-log market response model was used to ensure diminishing marginal returns and get estimated parameter values associated with marketing-mix variables that correspond to elasticities, which indicate the effectiveness of the specific activities. An elasticity is a dimensionless measure of the relative change of a dependent variable, such as sales, divided by the relative change of an independent variable, such as the marketing budget. Thus, if sales increase by 5 % when the marketing budget is increased by 20 %, the elasticity is 5 %/20 % = 0.25. It can be compared across products, countries and marketing instruments. Further, the model incorporates a number of control variables that have been shown to impact sales of pharmaceuticals, like order of entry, country or seasonal effects and asymmetric life cycle functions. In-sample model fit and predictive validity were very good across all four therapeutic areas.

The effectiveness of detailing and other marketing activities varies substantially across the different therapeutic areas. In general, they worked best in the Erectile Dysfunction category, which is not surprising as this category was the youngest category and still in its growth phase. In detailing, visiting general practitioners appears to work better than detailing at specialists and pharmacists. However, considering that specialists only account for a share of approximately 20 % in Diabetes and around 27 % in Hypertension, segment-specific specialist detailing effectiveness is 4 – 5 times higher. These findings are consistent with findings from other pharmaceutical studies. Own price effects were significant, but price changes did not have strong effects. The impact of competitive marketing expenditure was negative across all therapeutic areas although it was not always statistically significant. An earlier market entry was favorable, as expected. Seasonal effects were only relevant to Antiinfectives, which experience a high season in autumn and winter.

The Bayer Implementation

To ensure that management can easily use the allocation formula in everyday business life, the authors developed an Excel-based Decision Support Tool. The tool provides budget scenarios and their implications for the development of market shares and profits over five years and produces a recommendation for the allocation of the total marketing budget. It uses input data at the quarterly level.

The heuristic rule requires an allocation weight for each marketing spending category and each drug to be computed. Input data have been obtained either from econometric analysis or internal records. The plausibility of input data, especially the estimated sales elasticities, has been extensively discussed with different groups of managers in several workshops (global marketing, market research, product management, sales management, controlling, etc.).

Following the needs of management, the tool was extended in two ways. First, a threshold for product budgets was included because of internal setup costs that are fixed at the product and marketing-activity level. Second, manual adjustments to budgets recommended by the heuristic were made possible. By this feature, management could account for exogenous restrictions to budget setting, e.g., to counter competitive attacks in a predetermined way. In addition, it enabled management to investigate the effects of budget scenarios on market share and profit as well as on the recommended budgets for other products and marketing activities. The tool is easy to use and flexible enough to adapt to varying conditions of decision making. The effort to develop and implement the budget allocation tool had significant impact on managerial decision making.

Impact on Managerial Decision Making

> ***Providing Structure to the Allocation Problem***

Obviously it is a challenging task to allocate a total budget across six spending categories for 36 drugs that are marketed in different countries and therapeutic areas. The suggested allocation heuristic gives structure to this complex decision problem. It specifies that information and data from three fields are necessary (data on the long-term effectiveness of marketing, information on a product's contribution to profit and growth potential of the product).

> ***Providing Solutions to the Problem***

The allocation rule suggests that these three fields of information are to be combined in a multiplicative fashion so that the budgets are proportional to these three information pieces. Implications from this rule are straightforward.

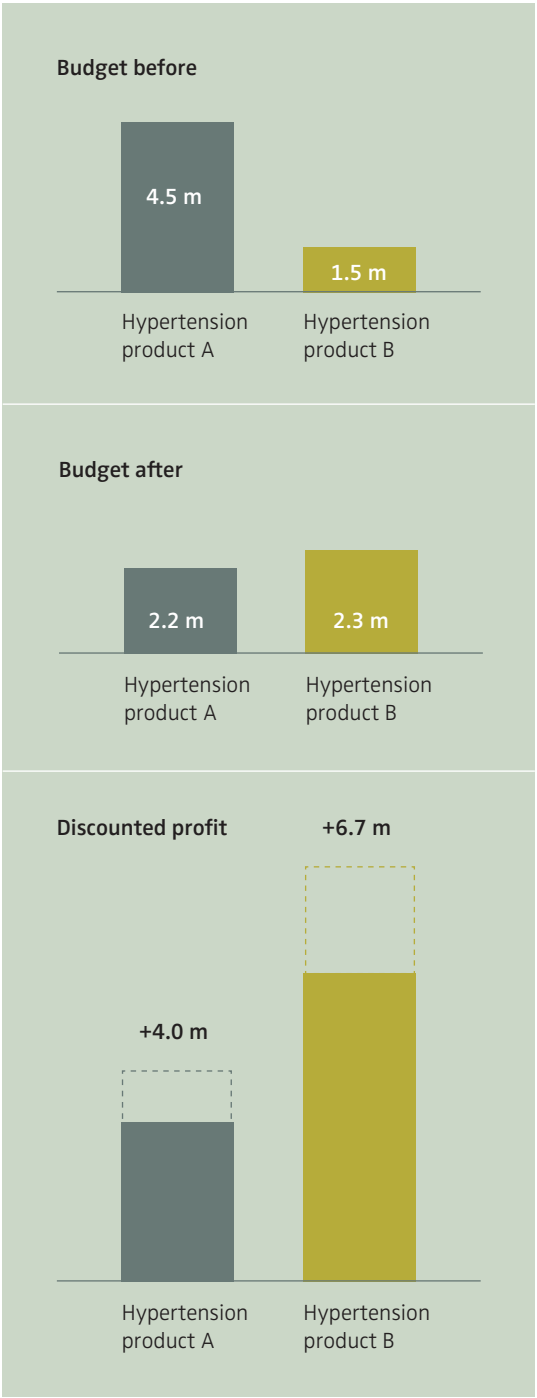
(1) Products that generate more incremental sales with the same budget should get a larger slice of the total budget. Of course, relative incremental sales tend to decline as sales and budgets increase due to saturation effects.

(2) Products with a higher level of profit contribution generate more financial resources to cover their own marketing expenditure and contribute more to overall profits.
(3) Marketing should support growing and not declining products and shift resources over the life cycle.

The rule also teaches that the drivers of a product's near-optimal budget share interact with each other, i.e., synergies exist between them. Finally, it makes the trade-offs in budget allocation transparent. For example, a product with high marketing effectiveness but a low profit contribution level could get a lower budget than a product with a high level of profit contribution but lower marketing effectiveness. Even though that product's spending is less effective it may still contribute more to overall profit because of its larger sales base.

» The allocation tool adds an independent perspective and its recommendations are fully fact based. «

FIGURE 1:
Example of Budget Re-Allocation Across Products in EUR



> ***Understanding the Limitations of Separate ROI Analysis.*** Profit calculations with the allocation tool quickly revealed the limitations of comparing incremental ROIs that result from raising/decreasing marketing expenditure for individual products and marketing activities. First, separate ROI analyses for individual marketing activities do not consider synergies between marketing activities nor do they consider the trade-offs that exist with respect to potential profit improvements by other products and activities. Further they do not inform about the optimal magnitude of budget changes for products and activities, given a fixed total budget. All three requirements are met by the allocation heuristic in one step.

> ***Organizational Impact***
Although the allocation tool is not the only source used by Bayer to generate budget options, it has significantly improved the efficiency and quality of the decision process. Because of its transparency and top down perspective, the allocation tool ameliorates the decision process that often appears emotional and inefficient. Since it is strictly based on a range of verifiable input information it adds an independent perspective and its recommendations are fully fact based. The budgeting-project contributed substantially to an organizational transformation that eventually resulted into the creation of a completely new marketing intelligence unit called Global Business Support. This unit supports global marketing management and sales including the global management board with tools, results, and recommendations for a more efficient and effective use of marketing resources.

> ***Last and Most Important: Financial Impact***
The tool enables its users to simulate the financial impact of different budget allocation options. By analyzing the simulation results, it provides transparency about the impact of different assumptions on financial results. Figure 1 shows an example of the budget-shift recommendations of the model in the hypertension market. A budget shift between the two products implying an overall budget reduction can cause increased profits for both products.

Based on the year 2007, the simulation suggested an increase in discounted profits of 55 % over the next five years due to an optimized allocation. This is worth EUR 493 million. In contrast, changing the overall budget by 20 % promised a profit impact of less than 5 %. Even if only a small portion of this increase can be realized, the additional profit for a business unit, such as Primary Care with EUR 3 billion worldwide sales, is substantial.

Actual profit improvements are hard to evaluate. First, management did not completely follow the suggested reallocation by the tool for several reasons (e.g., varying personal experiences, concerns about errors in some data from third party data providers). Second, activities by competitors and exogenous influences on market dynamics impact profit results. Nevertheless, the business area Bayer HealthCare reports an increase in EBIT of 12 % (EUR 273 million) compared to a 4 % revenue increase for 2008 (Bayer 2009). Although there is no validation from a field test, these results are consistent with prior observations that reallocation really focuses on the bottom line.

Conclusion

The innovative budgeting allocation approach provides a simple but comprehensive heuristic that accounts for dynamics in marketing effects and product growth. Allocating a budget proportionally to the size of the business (sales and profit contribution margin), the effectiveness of the marketing activities (short-term elasticity and carryover coefficient), and the growth potential of the product (growth multiplier accounting for time discounting) revealed substantial profit improvement potential compared to a simple allocation dominated by rules of thumbs, separate ROI analysis for different products or subjective evaluations. It is suitable for many other industries, including consumer durables and consumer packaged goods, provided that rich information is available at the aggregate product level. •

FURTHER READING

Albers, Sönke, Murali K. Mantrala, and Srihari Sridhar (2010), "Personal Selling Elasticities: A Meta-Analysis", Journal of Marketing Research, 47 (5), 840 – 853.

Fischer, Marc, Peter S. H. Leeflang, and Peter C. Verhoef (2010), "Drivers of Peak Sales for Pharmaceutical Brands", Quantitative Marketing and Economics, 8 (4), 429 – 460.

Hanssens, Dominique M., Leonard J. Parsons, and Randall L. Schultz (2001), Market Response Models: Econometric and Time Series Analysis. 2nd ed., Boston et al.: Kluwer Academic Publisher.

Tull, Donald S., Van R. Wood, Dale Duhan, Tom Gillpatick, Kim R. Robertson, and James G. Helgeson (1986), "'Leveraged' Decision Making in Advertising: The Flat Maximum Principle and Its Implications", Journal of Marketing Research, 23 (1), 25 – 32.

KEYWORDS:

Marketing Budget, Optimization, Resources, Allocation, Case Study

{*Jeff Cooper*}

ABOUT CEREAL PARTNERS WORLDWIDE (CPW S.A.)

Cereal Partners Worldwide (CPW S.A.) is a successful 50/50 joint venture between Nestlé S.A. and General Mills Inc.

It is one of the world's leading breakfast cereals producers. Realizing over CHF 2 billion in sales, Cereal Partners Worldwide has a strong portfolio of over 50 brands – including the Fitness® franchise, Cheerios®, Chocapic® and Nesquik® – and sales in over 130 countries worldwide. The company operates in seven regions covering Europe, the Middle East & Africa, Latin America, Asia and Oceania, with strong positions in emerging markets such as Russia and Brazil.

Headquartered in Lausanne, Switzerland, Cereal Partners Worldwide has 14 factories and employs over 4,000 people all over the world.

Cereal Partners Worldwide was set up in 1989 to produce and sell ready-to-eat breakfast cereals worldwide outside of the United States and Canada. By leveraging the strengths of its two partners, the company has achieved strong growth and market share development over the past 20 years.

THE INTERVIEWER

The interview was conducted in December 2011 by Alain Jolibert, Professor of Marketing Research, University of Grenoble, France, and member of the editorial board of MIR.

ABOUT JEFF COOPER

Jeffrey S. Cooper has held the position of Global Director of Consumer Insights of Cereal Partners Worldwide since 2009. Before, he was Head of Consumer Insights for the Oceania Region and lived in Australia for a few years. His team is responsible for all aspects of consumer research and syndicated data management.

He graduated from Northwestern University, Illinois, USA, in 1985, where he studied Political Science and Psychology. In 1989, he earned his Master's degree at the Thunderbird School of Global Management, Arizona, USA.

In 1989, Jeff started his career at Hershey Foods Cooperation as an export manager and research analyst. In 1995, he transferred to General Mills where he was responsible for consumer insights management for a range of divisions. After working as Director of Global Marketing Research for Avon Inc. for one year he returned to General Mills in 2006.

MIR TALKS TO JEFFREY S. COOPER, DIRECTOR OF CONSUMER INSIGHTS OF CPW – CEREAL PARTNERS WORLDWIDE, A JOINT VENTURE BETWEEN NESTLÉ AND GENERAL MILLS

Interview by Alain Jolibert

The cereal industry is characterized by heavy competition and a pressure to reinvent itself to meet changing consumer lifestyles and retail environments. Jeff Cooper, Director of Consumer Insights of CPW, one of the world's biggest players in cereals, offers some interesting information on how to keep this business growing in a difficult market environment.

MIR: *The global economy is facing turbulent times and companies are confronted by rapidly changing business conditions. What are the key challenges in the food industry in this climate?*

JEEFF COOPER: Right now there are two very strong challenges. On the one hand, you have consumers who are in financial straits. In Europe, consumers are not necessarily getting increases in their salaries and feel that their savings are at risk. The unsolved currency situation and adverse economic forecasts make consumers very tight with their money and very cautious regarding their spending.

On the other hand, we deal with retailers who react to this situation with promotions like "buy one, get one free" or even "buy one, get two free". So one of the main challenges is to find ways to decrease cost and increase value.

MIR: *How do you cope with the economic crisis in Europe?*

JEFF COOPER: It is a very tricky issue. On the consumer side we really need to make sure that we are delivering value and informing consumers that this is what they are getting. One aspect of this is offering value packs and being very clear in the labeling, for example, "20 % free". But we also spend a great amount of time trying to improve the nutritional credentials of our products, to increase the value inherent in our brands and products. Quite honestly, I think that the nutritional quality of our products is better than anyone's. Plus there is certainly a lot of legislation with regard to sodium and sugar. In the UK they have a sodium pledge. We made commitments to reduce sodium and to reduce sugar. We want to communicate all the nutritional things that we are doing so consumers can see the value we offer.

MIR: *Many Swiss-based companies suffer from the recent currency developments. How do you handle any problems arising from the sharp appreciation of the Swiss franc?*

JEFF COOPER: Well this is where our corporate headquarters are, so for the most part the exchange rate hurts when you are translating market profits back to the center. The translation creates a bit of a squeeze, but every company with its headquarters here has the same problem.

From a manufacturing standpoint it's not as much of a problem because we do not manufacture here in Switzerland. I don't know exactly how many plants we have, but we have a couple in France, one in Portugal, a couple in the UK and one in Poland. So the exchange rate is mostly euro to euro because factories located in Europe serve mostly Europe.

MIR: *Product innovation is a key factor in mature markets like cereals. Is your product innovation more long or short-term oriented?*

JEFF COOPER: Both: long term and short term. There are things that we are doing short term, for example in terms of renovating products for health and nutrition reasons, like more whole grain or more fiber. We do that routinely, as best as we can and as long as we are maintaining the taste and flavor acceptance of the consumer.

There are other things we are also doing on a short-term basis involving flankers. To give you an example, in Russia we extended the ***Nesquik***

brand and introduced what is called ***"Nesquik Alphabets"***. This was not a grand strategic move, but it did provide something for the sales force to rally around. We used it to leverage distribution and to increase our presence on the shelf. It provided incremental volume. So this was practical, if you will, and we do things like this on a relatively routine basis.

Then, there are of course more strategic projects that are of a bigger or broader scale and take years to develop. In South-West Europe and Mexico we are just launching a version of what we call ''pillows''. Pillows are basically filled products with a cereal outside and some sort of cream filling of chocolate or vanilla inside, for example. This product is launching in Italy right now and we will see how it goes. We did a lot of consumer testing and consumers really liked it. Kids like the combination, because they like Nesquik and they also like the pillows.

MIR: *Many grocery brands face heavy competition from retailer brands. How do you position your brand to compete against private labels?*

JEFF COOPER: In most of Europe, retailer brands, like the Carrefour home brand or Tesco home brand are about half the price of our products, but we still outsell them. Obviously there are consumers who are seeing the value that we are offering.

» What retailers care for is growing the category and we talk to them about what we can do to grow it. «

We need to keep that value fresh in their minds and we have to always keep that value new. What can we tell them? We are always looking for new elements for our brands, generally around health or nutrition but sometimes taste. Taste is obviously huge and in the last few years we have also done things like adding more chocolate flakes or more chocolate. Because at the end of the day, if it doesn't taste good, they don't really care, how healthy it is and it will not sell.

MIR: *And what about price?*

JEFF COOPER: We do not compete on price alone. We want to be competitive because prices are part of the value equation. Specifically, we target value-added products. Concerning nutrition, we aim to have the best nutritional value possible, no matter if it would be for adults or for kids. We strive to provide products that offer substantial inherent value and we want to price fairly.

MIR: *Which arguments do you use in your negotiations with retailers offering private labels? Why should they still keep your premium brands?*

JEFF COOPER: Actually, we prefer the term retailer brands. They are brands. Tesco, for example, is a very powerful brand. They act like brands, they have certain pricing tiers and the retailers support their brands. They spend real money on product quality. The quality is indeed very good and has improved immensely. We routinely do blind product testing. We still win, but it is getting harder and harder to stay ahead of them.

Brands play a role in the category too. The cereal category is variety seeking by nature. You want to offer variety to consumers. They do not want to buy the same thing over and over. The fact that somebody goes from our ***Chocapic*** brand over to ***Kellogg's*** is a fact of life. Obviously we want that they choose our brands more often than others, but there needs to be variety in a repertoire. Each individual in the household has their own preferred set. Some are enjoyed by everybody in the family, others are very personal.

MIR: *Are your brands in danger of being delisted at the cost of retailer brands?*

JEFF COOPER: Sometimes hard discounters want to freeze out premium brands. We provide them with a lot of information, showing them what they are losing because there are people who only buy premium brands. What retailers care for is growing the category. That's their primary interest and we talk to them about what we can do to grow the category. Our brands play a role and the retailer brands play a role as well. So do shelving principles, facings and merchandising techniques. They all play different roles in different markets.

MIR: *Do you provide them with some kind of facing organization?*

JEFF COOPER: Yes, certainly. We have huge shopper centers. ***Nestlé*** has been very good at developing these shopper centers where we can bring retailers in. This is a real retail environment, a live thing, where we can actually show them: ''Here is what we are thinking and this is what your store might look like''. The dialog that happens as a result is much richer than when you do a PowerPoint presentation. It brings ideas to life.

MIR: *Where are these shopper centers located?*

JEFF COOPER: Nestlé has one in Paris, there is one in the UK and there are some others elsewhere, I don't recall where exactly.

MIR: *How do you cooperate with retailers in countries where you do not have these centers?*

JEFF COOPER: In some markets it is still pretty much a paper approach, in some others we work with virtual shopping experiences. There are companies like ***Fifth Dimension*** and ***Red Dot Square*** who create virtual shopping worlds. The objective of creating such real experiences is to move up the level of engagement of the retailer: If the retailer is more engaged you are going to increase the dialog, the ideas will flow, and the acceptance of your ideas will be better.

Understanding retailers' wants and needs is just as important as understanding consumers' wants and needs. There is a lot of concern about profits, but they also have growth strategies and other strategies that go beyond simply wanting to get the lowest price. They have images that they want to project and we need to understand what those are.

When, for example, Walmart approaches us and says they want sustainability, you have to discuss how your brand can be part of their sustainability efforts and talk to them about what you do in term of sustainability.

MIR: *I am sure consumer insight management plays a crucial role in creating value in your products. How do you proceed? What is your emphasis?*

JEFF COOPER: In fact, I am very fortunate to work on consumer insights in a company like CPW. I actually come from the General Mills side of the joint venture where consumer insight isn't just appreciated, it is actually right in the center. Consumer insight is discussed in every meeting with marketing and R&D, no question. We always need to bring in fresh insights and new ways of seeing things. We are very much consumer champions. We place the consumer at the heart of everything, always start with the consumer. Business reality then shapes and moulds what the final execution will be, whether it is a new product or an ad or whatever. Everything starts with the consumer who is involved every step of the way.

» We place the consumer at the heart of everything, always start with the consumer. Business reality then shapes and moulds what the final execution will be. «

MIR: *Have the new technologies changed your ways of working with consumers?*

JEFF COOPER: We are doing a lot more co-creation with consumers both on advertising and products than five years ago. Ten years ago you would go and sit in a focus group and would say ''Here, what do you think?'' and would take back the information and change the product. Now we have online communities that will last for a few weeks. We put a product out and they exchange ideas there. Then we give it to another group and they play with it for a while and then give it back again. That's the way people communicate nowadays. People sitting around on a porch and talking is not the reality anymore. Now, everybody is on Facebook. Social networks are therefore one of our bigger emphasis areas. You want to talk to people where they are.

MIR: *Can you give us some examples of your activities for collecting insights in social networks?*

JEFF COOPER: For instance, for a while we did some stuff with teens who were blogging about one of our brands. And we are utilizing all sorts of social networks in order to gather information. Another example are fan pages. We have fan pages on some of our brands but we did not create them, someone else did. And there, you don't even have to ask questions, they are already telling you. You can just follow what is going on. We are following online chatter and we are listening.

» If we can make good connections that other people do not, that creates points of difference. «

MIR: *How do you listen to your fans in online chatter?*

JEFF COOPER: Well, there are tools out there for helping to listen. We use a tool by a company called ***Radian 6***. Basically you can go through what is being searched, what is being said on blogs, what is being said on these web pages. You kind of listen to what the chatter is. And actually, it is less about listening to the chatter on your brands but more on the chatter on topics. So if you are interested in what is said about sodium, you know when it comes up. What do people say about sodium? Are they tying it to cereals? How do they relate it to cereals? You get a feel for what is being said out there on the net.

MIR: *Do you create your own brand communities as well?*

JEFF COOPER: We create some brand communities, but we do not want to keep them going continuously. We tend to do them for a defined period of time because we want to maintain engagement. We want fresh information and consumers are not that interested in a fan page of just any packaged good as they may be for ***Coca-Cola*** or ***Nescafé***. We run brand communities for a couple of weeks or months and actively engage people in a kind of co-creation conversation. We no longer say: "Here's what we have got. What do you think?" You sort of throw a question out there and after a couple of weeks, ideas flow on and on. Some consumers are really engaged in this and may be talking about a cereal idea or fiber or whatever you ask. Maybe they don't have anything to say today but all of a sudden they see something in the store and like it and then they start talking and somebody else loves this idea and sparks another idea. This is better than a focus group where you ask people: "Be creative now!" It just doesn't work like this.

MIR: *Are there any long-term trends in consumer behavior that are relevant for your business?*

JEFF COOPER: There are some long-term trends concerning health and nutrition. For example, the gluten issue can be seen as a long-term trend. In the US, just last weekend, the Herald Tribune wrote about what General Mills is doing with respect to gluten-free products. There is a huge population with celiac disease. I think in the US there are 33 million who cannot eat wheat and almost everybody has a degree of wheat allergy. All of a sudden somebody realized that there are a lot of people out there who need gluten-free products. In some cases we did not even have to reformulate the product, we just had to talk about it and communicate it more. "Gluten free" was really kind of taking off. Sales just jumped and this is part of a broad trend.

MIR: *How do you to detect such trends?*

JEFF COOPER: We are very fortunate in CPW. We are owned by two very large companies Nestlé and General Mills who have great resources when it comes to trends. They have trend departments who are actively looking at what is being said in journals, what is being said in books or what is going on from the consumer stand point. They do all this listening and they are speaking to experts. They act as connectors. They connect you to the trends, they connect you to all sorts of experts and inform you which resources you can use or which people to meet if you are interested in a certain development. They are actually resource experts.

MIR: *How do you collect and create marketing intelligence in your company?*

JEFF COOPER: The value of our insight generation is not the sample or questionnaire design. Even writing the analysis is not the value. What I am expecting from my managers is their ability to connect the business issues and questions to the consumer. It is much more a matter of thinking and being very good in asking the right questions. We know which market research supplier can best answer certain questions. We have good relationship with them and we tend to be very clear about how we want things communicated.

MIR: *So you cooperate with some supplier for consumer insight generation?*

JEFF COOPER: We do our copy testing with IPSOS on adults and we happen to use GfK for kids. Both relationships are more than 10 or 12 years old. This does not mean that we have not reviewed them. I have already done three review processes with them; I want to make certain that I am still happy and that there is not something better and the suppliers are very aware that they need to keep up and that we are always looking for the best of the best.

But I believe in having a very cooperative relationship with our suppliers. We want to have a business model tailored to our needs and to have a fair value for them too. Therefore we look at their processes and question things we do not value. I do not want to take away the profit, but I want to lower the cost. I want to eliminate waste in their system. I have somebody I use in the UK for product testing. They were spending hours and hours doing something that I did not even look at. I asked them to stop doing it and reduce the cost of it in the price. That makes them more competitive and I am much more likely to stay with them. They actually very much welcome us looking at their processes and they can certainly apply it to other clients as well.

MIR: *Well, there are quite a few players involved in insight generation and strategy formulation. How is it organized? Who is responsible for what?*

JEFF COOPER: We are working in a cross-functional environment. CI managers are working with the teams, with the marketing directors, marketing managers and R&D people and collectively they create the strategies and communicate them out. Things are going back and forth, then. Tomorrow, for example, I will be spending the entire day going through the long-term plans that each of the brand teams is going to present. This is one of the check points to see where they are going. The strategies are theirs. They are the ones that are closest to the business.

MIR: *How do you cooperate across regions?*

JEFF COOPER: We have global brands which are actually managed out of this office. Globally, the brand strategies are set by our teams' input from the regions. There are aspects they will take on strongly and other aspects that have to be adapted, but the regions do not change the overall strategy. Regions have the flexibility to fit strategies to their needs and in a feedback process we get to know what is working and what isn't.

Research actually happens at various levels. We have research teams who are integrated into brand teams and they do research in various markets. The UK carries out a lot of its own research, Australia and many other markets do a lot of their own research as well. We have research professional in those markets. Within regions there are certain principles we have agreed upon as a research community. There are approaches and techniques we consider best practice, but there are instances or regions where our global best practice does not work. We provide guidance but we change and evolve and re-evaluate things all the time.

MIR: *Before coming to an end, let's move to a different topic: how do you select your people for Consumer Insights Management. What type of background do you expect?*

JEFF COOPER: In fact, there is no set profile. I have somebody working for me who has a background in anthropology. She was studying Native-American rituals and became interested in studying consumers. In consumer research she needs the same skills and the same questioning mind set. My background is in psychology, others have a background in business.

To me the background per se is not so important. What I want is somebody who can think. I do not really care if they know statistics or not, but I do care if they can think and draw conclusions. A good CI person can synthesize, tell a story and take a stand, that's what counts.

However, most of the Consumer Insights team have an MBA. The actual background also depends on the country's schooling system. In France, for instance, there is a great focus on engineering. But I need an engineer who thinks broadly. We need people taking a large variety of information from a large variety of sources and somehow make connections. If we can make good connections that other people do not, that creates points of difference.

MIR: *Well, I think this makes a good concluding statement! Thanks very much for this interesting conversation. Good luck and we wish you many interesting insights in the coming years.* •

{ *Deutsche Zusammenfassung* }

Zappen oder Dranbleiben: WIE MAN DIE MARKENBEKANNTHEIT MIT TV-WERBUNG STEIGERT, OHNE ZUSCHAUER ZU VERLIEREN

Thales Teixeira, Michel Wedel und Rik Pieters

Den ausführlichen Artikel in englischer Sprache finden Sie auf Seite …

… 14.

Nach wie vor fließt sehr viel Geld in die Fernsehwerbung. In Zeiten steigender Kosten pro Blickkontakt und zunehmenden Zappings wird es aber immer wichtiger zu verstehen, welche Faktoren zur Abwendung von Werbespots führen. Um den Kontakt mit der Marke zu optimieren, benötigen Kommunikationsmanager Informationen darüber, wie sie die Aufmerksamkeit der Zuschauer erreichen können – und zwar während der gesamten Dauer eines Werbespots. Die vorliegende Studie überprüft, welche Gestaltungselemente eines Fernsehspots das Wegzappen fördern oder verhindern.

Eine groß angelegte Blickverlaufsstudie mit 2.000 Teilnehmern und 31 untersuchten Werbespots ergründete allfällige Vermeidungsmuster. Die beobachteten Variablen beinhalteten Merkmale wie Präsenz, Größe oder Position der gezeigten Marke (Markenname oder Logo), die visuelle Komplexität der Darstellung sowie die Fixierungen im Blickverlauf, mit denen die Konzentration der Aufmerksamkeit gemessen wurde. In weiterer Folge wurden Experimente mit modifizierten Spots durchgeführt, um Optimierungsmöglichkeiten zu ergründen.

Die Studienergebnisse und deren Implikationen können folgendermaßen zusammengefasst werden:

> ***Konzentrierte Aufmerksamkeit hält die Zuschauer bei der Stange***
> Die Fähigkeit eines Spots, die Aufmerksamkeit der Zuschauer auf bestimmte Bildelemente zu konzentrieren, reduziert unabhängig von allen anderen Faktoren das Vermeidungsverhalten. Je weiter weg der Blick eines Beobachters vom Großteil der restlichen Blicke ist, desto höher ist die Wahrscheinlichkeit dafür, dass der Zuschauer wegzappt. Die Bündelung und Konzentration der visuellen Aufmerksamkeit ist also ein Schlüsselfaktor für die Effektivität der Werbung. Die Dokumentation der Blickverläufe zeigt auf, an welcher Stelle des Spots die Aufmerksamkeit abzugleiten beginnt und wo eine Umgestaltung sinnvoll wäre.

> ***Ein mittleres Komplexitätsniveau bewährt sich am besten***
> Die spontane Entscheidung wegzusehen hängt auch von der visuellen Komplexität des Werbespots ab. Sowohl sehr geringe als auch sehr hohe Komplexitätsgrade erhöhen die Wahrscheinlichkeit für ein Wegschalten. Optimal ist also ein mittleres Komplexitätsniveau.

> ***Eine pulsierende Markenpräsenz reduziert das Zappen***
> Kommunikationsmanager stellen Marke und Logo gerne sehr prominent dar, um die Markenbekanntheit zu steigern. Die starke Präsenz der Marke kann diese Ziele aber insofern gefährden, als sie das Zappen begünstigt. Isoliert betrachtet, erhöhen Name und Logo das Wegschalten. Wenn die Präsenz der Marke aber auf mehrere Frequenzen aufgeteilt und die Marke immer nur kurz – also „pulsierend" – gezeigt wird, erreicht man durchschnittlich um 8 bis 10 % geringere Wegschaltraten bei in Summe gleich langer Markenpräsenz. Die Verteilung von Markenelementen über die gesamte Dauer des Spots ist deshalb eine einfach durchführbare Umsetzungsstrategie, die unter Umständen sogar noch nach dessen Fertigstellung angewandt werden kann. •

Schlüsselbegriffe:
TV-Werbung, Spotgestaltung, Zapping, Aufmerksamkeit, Blickverlauf

{Deutsche Zusammenfassung}

Emotionale Intelligenz in Geschäftsbeziehungen: KONZEPT, MESSUNG UND EINSATZ IM AUSSENDIENST

Blair Kidwell, David M. Hardesty, Brian R. Murtha und Shibin Sheng

Emotionale Intelligenz (EI) ist in vielen Bereichen des Wirtschaftslebens von Bedeutung. Für die Gestaltung von Geschäftsbeziehungen ist es wichtig zu erkennen, wie Verkaufsmitarbeiter Emotionen einsetzen, um positive Ergebnisse für sich selbst, ihre Unternehmen und ihre Kunden zu erzielen. Das ganze Potenzial von EI kann allerdings nur ausgenutzt werden, wenn klar ist, was genau EI im jeweiligen Kontext bedeutet und wie sie messbar ist.

In Geschäftsbeziehungen versteht man unter EI die Fähigkeit, Emotionen zu nutzen, um den Austausch günstiger zu gestalten. Insbesondere die folgenden vier Dimensionen dienen der näheren Beschreibung von EI sowohl generell als auch speziell für Marketinginteraktionen:

Das ***Wahrnehmen*** von Emotionen ist die Fähigkeit, diese zu erkennen und zu bewerten, also ein gewisses Maß an Empathie zu entwickeln. Im Verkauf ist insbesondere die Interpretation von Gesichtsausdrücken relevant.

Das ***Handhaben*** von Emotionen bezieht sich darauf, vor allem die eigenen Emotionen zu regulieren und sie zu nutzen, um z. B. in Verkaufsverhandlungen passende Stimmungen zu erzeugen.

Das ***Verständnis*** von Emotionen bezieht sich auf deren Analyse und die Interpretation wahrgenommener Emotionen. Für Verkäufer ist es z. B. wichtig zu wissen, dass Unsicherheit häufig Frustration bedingt.

Das ***Steuern von Emotionen*** betrifft schließlich die Fähigkeit, nicht nur die eigenen, sondern auch die Emotionen des Austauschpartners gezielt in Hinblick auf ein gewünschtes Ergebnis zu steuern und z. B. positive emotionale Kundenreaktionen aktiv hervorzurufen.

Die Autoren entwickelten eine neue Skala zur Messung der EI und verwendeten sie in drei unabhängig voneinander durchgeführte Studien im Versicherungs- und Immobilienbereich. Daraus ergaben sich die folgenden Erkenntnisse:

Schlüsselbegriffe:
Emotionale Intelligenz, Geschäftsbeziehungen, Vertrieb, Verkaufsgespräche

> ***Die neue, an den Kontext angepasste EI-Skala (EIME) eignet sich am besten zur Messung von EI in Austauschbeziehungen***
> Eine Messung der vier an die Verkaufssituation angepassten Dimensionen der EI funktioniert bestens. Die Ergebnisse anderer Skalen (z. B. MSCEIT), die EI allgemein und ohne Anpassung an die speziellen Bedeutungen von EI im Kontext von Austauschbeziehungen messen, korrelieren hingegen nur schwach mit den Ergebnissen der neuen EIME-Skala. Für Diagnose und Wirkungsprognose von EI im Verkauf sind sie also weniger geeignet. Ebenso wenig geeignet sind Skalen, die auf der Selbsteinschätzung der eigenen EI basieren. Sie sind wenig valide und anfällig für Falschangaben.

> ***Verkaufsmitarbeiter mit hoher EI erzielen bessere Ergebnisse***
> Die Untersuchung der emotionalen Intelligenz ermöglicht ein größeres Verständnis dafür, wie die Interaktion von Verkaufsmitarbeitern mit Kunden besser funktioniert und zu vorteilhafteren Ergebnissen für alle Beteiligten führen kann. Personen mit hoher EI erzielen einerseits bessere finanzielle Ergebnisse, schneiden aber auch bei der Kundenorientierung und der Fähigkeit, auf Kundenbedürfnisse einzugehen und Kundenentscheidungen zu beeinflussen, besser ab. Kognitive Fähigkeiten sind auch wichtig, sie kommen aber erst voll zur Geltung, wenn die Person gleichzeitig über ein Mindestmaß an EI verfügt.

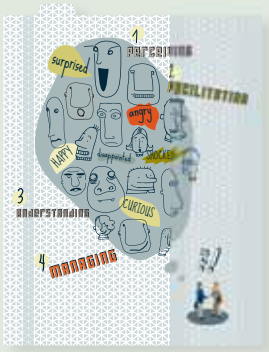
Aus den Ergebnissen folgt:

> ***Die Auswahlkriterien von Mitarbeitern sollten EI beinhalten***
> Bei der Einstellung von Mitarbeitern für den Verkauf sollte nicht nur auf kognitive, sondern auch auf emotionale Fähigkeiten geachtet werden. Die Ausgestaltung der EI-Dimensionen für den Kontext der Austauschbeziehungen im Rahmen der EIME-Skala und deren Ergebnisse können gut als Leitlinie für die Integration in Auswahlprozesse verwendet werden.

> ***EI sollte ein fixer Bestandteil in Ausbildungsprogrammen sein***
> Eine EI-Statuserhebung kann wertvolle Aufschlüsse über möglichen Verbesserungsbedarf und entsprechende Schritte im Rahmen der Aus- und Weiterbildung liefern. •

Den ausführlichen Artikel in englischer Sprache finden Sie auf Seite …

… 24.



{ *Deutsche Zusammenfassung* }

Botschaften streuen – Reichweite ernten
PROGNOSE UND OPTIMIERUNG VON VIRALEN KAMPAGNEN

Ralf van der Lans, Gerrit van Bruggen, Jehoshua Eliashberg und Berend Wierenga

Den ausführlichen Artikel in englischer Sprache finden Sie auf Seite …

… 32.

Eine virale Kampagne ist dadurch charakterisiert, dass relativ wenige Kunden mit Werbebotschaften konfrontiert werden und diese anschließend mehr oder minder selbstständig an andere Kontaktpersonen weiterleiten. Auch wenn es das Ziel einer solchen Aktion ist, dass sich die Botschaft quasi von selbst verbreitet, müssen Marketingmanager unterschiedliche Instrumente einsetzen, um die Kampagne loszutreten und in Schwung zu bringen. Für eine optimale Steuerung ist es weiterhin notwendig abzuschätzen, wie viele Kunden insgesamt erreicht werden können, wie sich die Reichweite im Lauf der Zeit entwickelt und wie stark diese Entwicklung von den eingesetzten Marketinginstrumenten abhängt.

Ein neues virales Verzweigungsmodell auf Basis von zeitkontinuierlichen Markov-Prozessen mit exponentiellen Übergangswahrscheinlichkeiten ist in der Lage, diese Fragen zu beantworten. Es basiert auf Erkenntnissen der Epidemiologie und der Verbreitung von „echten" Viren und wurde für einen elektronischen Marketingkontext adaptiert. Das Modell wurde bei einer realen viralen Kampagne eingesetzt, bei der innerhalb von sechs Wochen letztendlich mehr als 228.000 Personen teilnahmen. Zuerst wurden dabei per Bannerwerbung nur 6.400 Interessenten kontaktiert und gebeten, das dort offerierte Gewinnspiel im Zusammenhang mit einem Finanzdienstleistungsservice auch an ihren Bekanntenkreis weiterzuleiten, was in 2.200 Fällen dann geschah. Damit war ein viraler Prozess angestoßen, der sich bis zur Endreichweite von 228.000 Kontakten ausdehnte.

Die Überprüfung der Prognose- und der Ist-Ergebnisse der Kampagne stellen dem Modell ein gutes Zeugnis aus. Bereits zu einem deutlich früheren Zeitpunkt als andere Diffusionsmodelle (z. B. das bekannte Bass-Modell) leistet es eine gute Vorhersage der letztendlichen Reichweite. Damit liefert es wertvolle Informationen für die zu treffenden Entscheidungen bei einer Onlinekampagne. Besonders hilfreich ist die Möglichkeit, Benchmarks mit anderen Kampagnen zu vergleichen und alternative Promotionsinstrumente zu evaluieren.

Schlüsselbegriffe:
Onlinemarketing, Virale Marketingkampagnen, Mundpropaganda, Reichweitenprognose, Verzweigungsmodell

Benchmarking

Schlüsselgrößen bei einer viralen Kampagne sind z. B. Akzeptanzraten (wird die Nachricht überhaupt geöffnet?) und Weiterleitungsquoten. Der Vergleich solcher Größen ermöglicht zielgerichtete Modifikationen, Verbesserungen und das Betätigen der richtigen Hebel. Mögliche „Flaschenhälse" im Prozess können identifiziert und beseitigt werden. Wenn z. B. die Weiterleitungsquote hinter vergleichbaren Aktionen zurückbleibt, könnte man zusätzliche Incentives für das Weiterleiten entwickeln und anbieten. Wenn hingegen die Akzeptanzrate zu niedrig ist, wäre es ratsamer, am Inhalt oder den Überschriften der Botschaft zu arbeiten.

Wenn-dann-Analysen: Effektivitätsvergleiche unterschiedlicher Instrumente

Das Modell ermöglicht eine Reichweitenprognose für den Einsatz unterschiedlicher Marketingoptionen. Dadurch erleichtert es Entscheidungen darüber, wie Instrumente modifiziert und die Ziele einer Aktion am besten erreicht werden können. Ein Unternehmen könnte z. B. sowohl zusätzliche Bannerwerbung als auch zusätzliche Initial-E-Mails zur Ankurbelung einer Kampagne erwägen. Da die Teilnahmewahrscheinlichkeiten für die beiden Instrumente bereits bekannt sind, kann das Modell die jeweils zu erreichenden Reichweiten prognostizieren. Das effizientere der beiden Instrumente kann eindeutig identifiziert und ausgewählt werden. Zusätzlich kann z. B. auf Basis eines erwarteten Kundenwertes oder -ertrags abgeschätzt werden, ob sich die Investitionen in zusätzliche Kontakte rechnen oder bis zu welchen Investitionssummen sie profitabel sind. •

{ *Deutsche Zusammenfassung* }

Wie misst man die Zahlungsbereitschaft am besten? EIN METHODENVERGLEICH

Klaus M. Miller, Reto Hofstetter, Harley Krohmer und Z. John Zhang

Der richtige Preis spielt für den Erfolg einer Leistung am Markt und für die Ertragssituation eine Schlüsselrolle. Das richtige Abschätzen der maximalen Zahlungsbereitschaft für ein Produkt ist notwendig, um dieses am Markt bestmöglich zu positionieren, entsprechende Marktsegmente zu bilden oder eine optimale Preisstruktur zu entwickeln. Dementsprechend gibt es zahlreiche Ansätze, um Zahlungsbereitschaften möglichst treffsicher zu erheben. Vier der gängigsten Ansätze wurden in dieser Untersuchung verglichen und realen Zahlungsbereitschaften gegenübergestellt. Anhand dieser Benchmarks können die Stärken und Schwächen der folgenden vier Messansätze gut analysiert werden:

- OE (offene Fragen, hypothetische, direkt gemessene Zahlungsbereitschaft)
- CBC (Choice-Based-Conjoint-Analyse, hypothetisch, indirekt gemessen)
- BDM-Mechanismus (anreizkompatibler Bietmechanismus, direkt gemessen)
- CBC (anreizkompatible Choice-Based-Conjoint-Analyse, indirekt gemessen)

Die Gegenüberstellung ergibt folgende Ergebnisse:

- ***Anreizkompatible Ansätze funktionieren am besten*** ... jedenfalls für die Art von Produkten in dieser Studie (ein Reinigungsprodukt mit vergleichsweise geringer Komplexität und relativ niedrigem Preis). Für andere Produkttypen muss das nicht unbedingt genauso gelten. Zusätzlich ist es nicht immer möglich, anreizkompatible Methoden einzusetzen. Nicht durchführbar sind sie insbesondere dann, wenn es noch keinen Prototyp für das Produkt gibt, die nötigen Budgets nicht verfügbar sind oder die gesetzlichen Rahmenbedingungen eine Anwendung nicht zulassen.
- ***Die Art des Produktes und die spezifische Kaufsituation beeinflussen die Nützlichkeit unterschiedlicher Ansätze*** Für Preisentscheidungen bei niedrigpreisigen und häufig gekauften Gebrauchsgegenständen erzielt OE bessere Ergebnisse als CBC bezüglich der Schätzung der durchschnittlichen Zahlungsbereitschaft. Allerdings zeigen ältere Studien, dass CBC besser bei alltäglicheren Produkten und einer hohen Dichte an vergleichbaren Angeboten funktioniert. Indirekte Ansätze sind besser geeignet für Produktkategorien, deren Kaufentscheidung ein intensiver Entscheidungsprozess vorausgeht (z. B. bei einer Digitalkamera). Direkte Methoden sind für nur selten oder unregelmäßig gekaufte Produkte weniger geeignet. Für sehr spezifische Angebote ohne vergleichbare Alternativen am Markt (keine oder wenige direkte Mitbewerber) sind sie es dagegen sehr wohl.
- ***Der Messfehler bei der hypothetischen Messung ist für die Preisentscheidung nicht so relevant*** Hypothetische Messmethoden fordern vom Probanden die Beurteilung hypothetischer Leistungen, mit denen er noch keine persönlichen Erfahrungen hat. Solche Methoden tendieren dazu, die Zahlungsbereitschaft zu überschätzen, und liefern Nachfragekurven, die von den tatsächlichen Mustern abweichen. Eine genaue Analyse zeigt aber, dass dieser systematische Messfehler für die meisten Marketinganwendungen gar nicht so relevant ist und die Ergebnisse trotzdem hilfreich für die Preisentscheidung sind. Vor allem dann, wenn sich Manager hauptsächlich für die relativen Nutzenwerte der einzelnen Eigenschaften und weniger für die Prognose des letztendlich besten Gesamtpreises interessieren, liefern CBC oder OE wertvolle Hinweise. •

Den ausführlichen Artikel in englischer Sprache finden Sie auf Seite ...

... 42.

Schlüsselbegriffe:
Preisbereitschaftstests, Preisfindung, Zahlungsbereitschaft, Conjoint Measurement, BDM-Verfahren

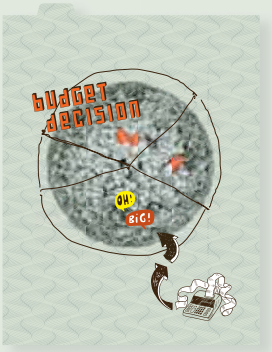
{ *Deutsche Zusammenfassung* }

Dynamische Marketingbudgetierung: MEHR ERTRAG DURCH DIE SIMULTANE OPTIMIERUNG VON SCHLÜSSELFAKTOREN

Marc Fischer, Sönke Albers, Nils Wagner und Monika Frie

Den ausführlichen Artikel in englischer Sprache finden Sie auf Seite …

… 50.



Die Zuteilung eines der Höhe nach vorgegebenen Budgets auf unterschiedliche Marketinginstrumente, Marktsegmente und Regionen ist eine zentrale Herausforderung für eine Marketingleitung. Eine Entscheidung sollte die Marktposition eines Produktes, dessen erwartetes Marktwachstum und die Effektivität der geplanten Aktivitäten berücksichtigen. Die Herausforderung besteht darin abzuschätzen, wie sich budgetäre Verschiebungen letztendlich auf das Gesamtergebnis auswirken, und dementsprechend eine Lösung zu finden, die den Ertrag optimiert.

Im Rahmen eines neu entwickelten Budgetierungsansatzes wurde ein einfaches, aber umfassendes Modell entwickelt, das die dynamischen Effekte berücksichtigt, die sich aus den Marketingaktivitäten und den Wachstumsentwicklungen einzelner Produkte ergeben. Die Anwendung wurde bei der Bayer AG im Bereich der rezeptpflichtigen Medikamente in den fünf absatzstärksten europäischen Ländern getestet und für die Budgetierung des Jahres 2007 eingesetzt. Im mathematischen Modell wird die Dynamik der Verkaufsentwicklungen durch Wachstumsfunktionen (Produktlebenszyklen) und deren Reaktionen auf Marketinginvestitionen beschrieben.

Die Wachstumsfunktion beschreibt die Absatzentwicklung der Produkte im Zeitverlauf. Die Auswirkungen der Marketinginvestitionen ergeben sich einerseits aus einem Marketingfundament, das aus vergangenen Marketingaktivitäten hervorgeht, deren Wert im Zeitverlauf abnimmt und andererseits aus den geplanten Marketinginvestitionen für die laufende Periode, deren Einfluss auf den Absatz aus den entsprechenden Erfahrungen der letzten Jahre abgeleitet wird. Unter Berücksichtigung dieser Faktoren wird dann ein diskontierter Nettoertrag des Produktportfolios für die nächsten Jahre maximiert.

Das Instrument ist eine einfache und flexible Tabellenkalkulationsanwendung, die an unterschiedliche Rahmenbedingungen der Entscheidungssituationen angepasst werden kann. Das Instrument verbessert die Entscheidungsfindung des Managements in vielfacher Weise:

- Es hilft bei der Strukturierung des Allokationsproblems, indem es die für die Lösung notwendigen Informationen genau spezifiziert.
- Durch seine Transparenz und den konsequente Top-down-Zugang verbessert es den Entscheidungsprozess und liefert objektive, faktenbasierte Empfehlungen.
- Im Gegensatz zu einzeln durchgeführten ROI-Analysen können Wechselwirkungen und Synergien unterschiedlicher Allokationen gut erkannt werden.
- Die mathematische Lösung steigert den Gesamtertrag.

Die Ergebnisse liefern im vorliegenden Fall folgende Empfehlungen:

(1) Produkte mit höherem Grenzumsatz auf Marketingstimuli sollten einen höheren Budgetanteil erhalten.
(2) Produkte mit einem höheren Ertragsbeitrag generieren höhere finanzielle Rückflüsse zur Abdeckung von Marketingausgaben und tragen mehr zum Gesamtertrag bei. Deshalb ist das optimale Budget für sie höher.
(3) Produkte, die sich im Produktlebenszyklus in der Wachstumsphase befinden, sollten in der Budgetierung überproportional berücksichtigt werden.
(4) Produkte, deren Marketing zwar effektiv, aber deren Ertragsbeitrag vergleichsweise niedrig ausfällt, sollten geringere Budgets zuerkannt bekommen als Produkte mit hohem Ertragsbeitrag und niedrigerer Marketingeffektivität. Trotz der geringeren Effektivität der eingesetzten Mittel tragen sie dann mehr zum Gesamtertrag bei.

Eine Simulation des Geschäftsfeldes der rezeptpflichtigen Produkte auf Basis der Zahlen von 2007 ergäbe durch den Einsatz des Optimierungstools eine Steigerung des diskontierten Ertrags von 55 % über die folgenden fünf Jahre. Das entspräche einem Wert von 493 Mio. EUR. Wenn man im Vergleich dazu das Gesamtbudget um 20 % erhöhen würde, käme man auf einen Mehrertrag von lediglich 5 %. Auch wenn real nur ein kleiner Teil der Ertragssteigerungen realisierbar sein sollte, ist der mögliche Zugewinn für jedes Geschäftsfeld beträchtlich.

Die Anwendung eignet sich für unterschiedlichste Branchen wie Konsum- oder Verbrauchsgüter. Voraussetzung für den Einsatz ist allerdings das Vorhandensein von entsprechendem Datenmaterial auf Produkt- oder Kategorienebene. •

Schlüsselbegriffe:
Marketingbudget, Optimierung, Marketingressourcen, Budgetallokation, Fallstudie

NEXT ISSUE PREVIEW

THEMES

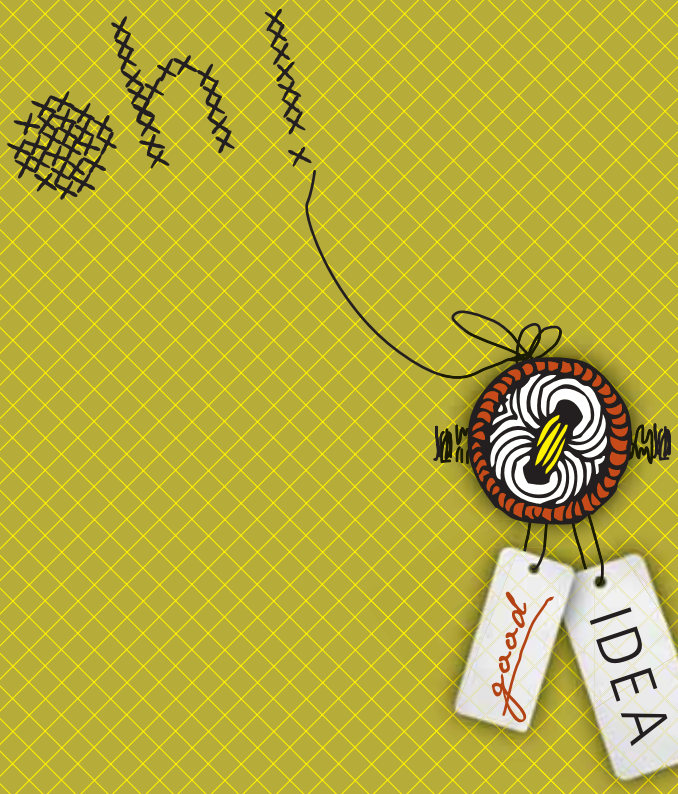
Sibling Rivalry:
Estimating Cannibalization Rates for Innovations
Harald J. van Heerde, Shuba Srinivasan and Marnik G. Dekimpe
/ / /

Jetstar Airways –
How Modeling Guided the Brand Migration Strategy of a Low Cost Carrier
Peter Danaher, John Roberts, Ken Roberts and Alan Simpson
/ / /

When Is Enough Enough?
Balancing on the Fine Line in Multichannel Marketing Communications
Andrea Godfrey, Kathleen Seiders and Glenn B. Voss
/ / /

To Close or not to Close?
Assessing the Impact of Outlet Closures on Retail Chains
Hans Haans and Els Gijsbrecht
/ / /

GfK MIR Vol. 4, No. 2, 2012 is forthcoming in November 2012


good
IDEA