RESEARCH WITHIN REACH

How competitor advertising can benefit your brand

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The online revolution has created new sales and advertising channels and mountains of data. It also can allow marketers to understand if and how retailers can benefit from competitor advertising.

Over the past decade the online revolution has resulted in an ever-growing trove of customer data for retailers. Whether selling items online or through bricks and mortar, or advertising using printed catalogues or paid digital, retailers must make sense of all this information to spend their limited marketing budgets wisely.

Understanding the effects of advertising in a multimedia environment with multiple sales channels is a complex challenge. Are there spill-over effects (cross-brand advertising elasticities) that allow one brand's advertising to increase or decrease the sales of another? Is digital media only better than traditional media for online sales? Is it better to compete head on with the same type of media?

In ground-breaking research, Professor Michael Smith and collaborators, Professors Peter Danaher and Tracey Danaher and Dr Ruben Loaiza-Maya from Monash University, have shown when a positive spill-over effect can occur and the most responsive market segments to the various advertising media.

Their paper, entitled "*Advertising Effectiveness for Multiple Retailer-Brands in a Multimedia and Multichannel Environment*" and published this year in the leading *Journal of Marketing Research*, meticulously tracks 4000 individuals over two years to gauge their responsiveness to multiple advertising media, including competitor advertisements, and the impact on sales.

"What sets this study apart is that we had data from a single company that owns three distinct but competing apparel brands," explains Professor Smith. "While managed by a parent company, each brand has its own identity and customer databases.

"We were able to access this rich data for 4000 individuals over two years, leading to millions of observations, and compare the effect on each individual from advertising for all three brands in three distinct media – printed catalogues, emails and online paid searches.

"Using recent developments in data science, we were able to quantify the impact of different advertising media on not just the focal brand but also its same-stable competitors, looking at different combinations of advertising exposure and its impact on instore and online sales, while identifying important customer segments in the process."

The picture that emerged provides insights into how to navigate advertising in an omni-channel world.

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The effect of own-brand advertising on instore and online sales

The researchers found that all three media (catalogues, emails and paid search) were effective, but how effective depended on the purchase channel.

Unsurprisingly, digital advertising was the best way to influence online sales.

"Emails and paid searches were found to be the most effective at boosting online sales, and emails were also found to be quite effective for instore sales," says Professor Smith. "This is good news because emails are almost costless."

While catalogues were the most effective at influencing instore sales, their high production costs led to a very low return on investment (ROI) of only 2 per cent. However, they can't be automatically dismissed because they were very effective in promoting a focal brand and useful for defending market share.

The response of customer segments to multimedia advertising

The research team identified a segment which was the most attractive to retailers – heavier buyers who utilised both instore and online channels and were responsive to all forms of advertising. This group contrasted with light buyers who were the least responsive to advertising.

For highly prized heavy buyers, the most effective advertising depended on the number of brands favoured by the buyer – and here the value of catalogues stood out.

"Where you have a brand-loyal customer, that is, a customer who preferred one brand over others, and that customer uses both instore and online purchase channels, catalogues were very effective," says Professor Smith.

"In such cases, catalogues had a healthy ROI of 97 per cent because they also stimulate online searches and website visits for this segment. If these pathways were ignored, the ROI would drop to 20 per cent."

Less loyal customers who favoured multiple brands through frequent online and instore purchasing were most susceptible to competitor emails.

"The effect of competitor emails here was to reduce the sales of the focal brand. This makes sense as the customer in this segment had no overwhelming loyalty to any particular brand," explains Professor Smith, adding that, yet again, catalogues made the situation more interesting.

"What we found was that catalogues had two effects on this group. Catalogues for large brands reduced the sales of other large brands, similar to the effect of emails.

"Catalogues for smaller brands, however, can have the reverse effect. They lifted online and instore sales for larger competing brands. A possible reason is that the three brands in our study were often located close to each other in a shopping centre, so visiting a mall in response to a smaller brand's catalogue can stimulate additional instore browsing for the larger brand."

Research by

Michael Smith

✉ mike.smith@mbs.edu

Michael Smith has held the Chair of Management in Econometrics at MBS since 2007.

A leading researcher in Bayesian statistics and business analytics, Michael is a past recipient of an Alexander von Humboldt Fellowship and an Australian Research Council Future Fellowship.

With a PhD from the Australian Graduate School of Management at the University of NSW, Michael has global experience including visiting positions at Ludwig Maximillian University in Munich, the Wharton School at the University of Pennsylvania, the McCombs School of Business at the University of Texas and London Business School.

Combining his responsibilities as the MBS Associate Dean of Research, Michael currently teaches Data Analysis on the part-time MBA and Financial Analytics in the Master of Business Analytics. He is a past director of the Business Administration and Analytics stream of the MBS doctoral program.

Multimedia advertising intensity and scheduling

As a general rule, marketers must take into account the advertising schedule of competitors when deciding on their ad spend. The growing use of digital and traditional media has made this task more difficult.

"When a pair of brands advertise intensively and simultaneously, sales for both brands are increased," observes Professor Smith. "However, there is evidence that brand managers can make further gains from their advertising spend by scheduling their ads away from competitors, especially with catalogues.

"Alternatively, at times, managers might wish to defend their brand's sales at the expense of a competitor, and email seems to be an ideal medium for achieving this."

"Brand managers can make further gains from their advertising spend by scheduling their ads away from competitors."

$$p(\theta,\alpha|y) \propto \underbrace{p(y|\theta,\alpha)}_{\text{Response Model}} \underbrace{p(\alpha|\theta)}_{\text{Random Effects}} \underbrace{\pi(\theta)}_{\text{Prior}}$$

$$\underbrace{p(\theta,\alpha|y)}_{\text{Augmented Posterior}}$$

$$y^*_{ibct} = \alpha'_{ibc} z_{ibct} + \beta'_{bc} x_{ibct} + \varepsilon_{ibct}$$

$$L(\omega) = Ep_\zeta \left(\log h(a(\zeta,\omega)) - \log q_\omega (a(\zeta,\omega)) \right)$$

$$\nabla_\omega L(\omega) \approx Ep_\zeta \left[\left(\frac{\partial \psi}{\partial \omega} \right)' (\nabla_\psi \log h(a(\zeta,\omega)) - \nabla_\psi \log q_\omega (a(\zeta,\omega))) \right]$$

Application of findings

The research by Professor Smith and his colleagues rebuts any assumption among marketing managers of very little spill-over from cross-brand advertising.

"I think we've shown that there can be strong positive spill-over effects using our data from three retail brands. It seems likely that this can also be the case in other circumstances, such as in the airline and hotel industries, where it's common for one company to hold multiple brands," says Professor Smith.

"Moreover, even in industries where multiple brands are not owned by the same parent company the principles may well still hold."

Skills marketing managers need today

Over the past decade, the global digital advertising budget has surpassed traditional media. Professor Smith and his colleagues' findings will reassure advertising managers who have invested in digital channels at the expense of traditional media.

However, their research also demonstrates that with the growth of customer databases, the task of a marketer has become increasingly complex.

"There is the big data revolution, where companies are collecting enormous datasets on their customers' behaviour at the individual level. And then there is the data science revolution, where data scientists develop new ways to extract information and value out of this data," explains Professor Smith.

"The big data and data science revolution go hand-in-hand, and businesses must harness both to extract the most value."

Analytics and the future of business

Professor Smith's contribution to his latest research paper is part of a larger research agenda that pushes the frontier of data science. By taking the big data that is available and applying complex algorithms, made possible by computing advances, data scientists can now solve problems that were unimaginable before.

"What this research shows is the power of analytics to investigate at an individual level the impact of interactions that businesses have with customers. It allows you to better segment your customers and interact with them in a more nuanced and targeted way.

"I've been in this field for over two decades, and the advances over that time have been extraordinary. I've worked on new algorithms that can be used for risk management in the electricity markets, the pricing of ancillary services for flight bookings, such as in-flight meals and seat selection, and the processing of fMRI brain scans that produce 60 million observations, which are used for medical intervention. All these things—and many more—are linked by data science correctly dissecting and processing datasets of ever-increasing size.

"Increasingly, businesses need to collect, maintain and harness their customer data. This means extracting value from it using analytics, not just reporting on it. Doing this correctly will be a source of competitive advantage that will help determine which businesses are successful in the future."

More information

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Bogaçhan Çelen
Associate Dean, Faculty

b.celen@mbs.edu

Andrew Ramadge
Media and Communications Director

a.ramadge@mbs.edu

Our faculty

Yalçın Akçay
Professor of Operations Management

Tomohiro Ando
Professor of Management

Pat Auger
Associate Professor of Marketing

Caron Beaton-Wells
Deputy Dean

Gerardo Berbeglia
Associate Professor of Operations

Boğaçhan Çelen
Professor of Economics

Vivek Chaudhri
Associate Professor of Strategy

Graeme Cocks
Associate Professor of Operations

Douglas Dow
Professor of Business Strategy

Jody Evans
Associate Professor of Marketing

Sven Feldmann
Associate Professor of Economics

David Frankel
Professor of Economics

James Frederickson
Professor of Accounting

Deshani Ganegoda
Associate Professor of Management

Carol Gill
Associate Professor of Organisation
Behaviour

Ian Harper
Dean

Glenn Hoetker
Professor of Business Strategy

Simon Holcombe
Academic Director, Masters of
Business Analytics

Karen Jehn
Professor of Management

Andrew John
Professor of Economics

Ujwal Kayande
Professor of Marketing

Jill Klein
Professor of Marketing

Brandon Lee
Associate Professor of Business
Strategy

Kwanghui Lim
Associate Professor of Strategic
Management

Chris Lloyd
Professor of Statistics

Pete Manasantivongs
Senior Fellow

Worapree Maneesoonthorn
Associate Professor of Statistics and
Econometrics

Geoff Martin
Professor of Strategy

Nadia Massoud
Ian Potter Professor Chair of Finance

Isabel Metz
Professor of Organisational Behaviour

Nico Neumann
Assistant Professor and Fellow,
Centre for Business Analytics

Burak Oc
Assistant Professor of Organisational
Behaviour

Mara Olekalns
Professor of Management
(Negotiations)

Don O'Sullivan
Professor of Marketing

Jennifer Overbeck
Associate Professor of Management

Onur Özgür
Assistant Professor of Economics

Robyn Rodier
Senior Fellow, Accounting and
Business

Gary Sampson
Adjunct Professor of International
Trade

Kannan Sethuraman
Associate Professor of Operations
Management

Amanda Sinclair
Professorial Fellow

Michael Smith
Chair of Management (Econometrics)

Keke Song
Associate Professor of Finance

Nam Tran
Academic Director, MBA Programs

David Trende
Associate Professor of Accounting

Hugh Williams
Enterprise Fellow

Sam Wylie
Principal Fellow

Leon Zolotoy
Associate Professor of Finance

CAMPUS LOCATIONS:

HEAD OFFICE
CARLTON
200 Leicester Street
Carlton VIC 3053
Australia

T: +61 3 9349 8788

ABN 80 007 268 233 CRICOS 00116K

KUALA LUMPUR
Unit A-22-8 Menara UOA
BangsarJalan Bangsar Utama
Bangsar Kuala Lumpur 59000
Malaysia

CONNECT WITH US

@MelbBSchool

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