Do brands that grow advertise differently to those that do not?

Investigating spending and scheduling for brand growth.

Dissertation submission for the degree of Doctor of Philosophy

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August 2020

Acknowledgements

Without the support of many, I would not have been able to "*just keep swimming*" and complete this thesis. I would like to first thank my supervisors for their encouragement and guidance along this journey. I truly appreciate all of your support as a team and individually. From our face-to-face meetings, to our more recent Zoom meetings, I have always taken away great suggestions and direction to continue pushing forward. I am most appreciated of your support in particular when I stumbled close to the finish line. You showed empathy and encouraged me to get back up and finish the journey. To Nic, thank you for being my primary supervisor and always being available to chat when needed, whether it was over coffee, breakfast or with our dogs via Zoom. I've always been grateful knowing you were only a phone call away. To Rach, thank you for sharing your ideas and extensive knowledge to help shape this study. To Carl, thank you for working through the data challenges with me and uncovering some analysis genius in the later stages. Gin, thank you for knowing when to check on me and ensure I was keeping balance between thesis and life. I feel lucky to have had you by my side for all three research degrees.

Special thanks go to Steve for taking time to answer my (many) questions about R programming, and brainstorming solutions with me. I would also like to thank Emily and Holly for helping me to recode hundreds of brands, and to Aaron and Peilin for taking time to review the final lists. Without your help on this task, this project would not be possible. I would also like to thank my office buddies along the way. Ava, even though we spent more time sharing an office from a distance, it was always a pleasure when we were actually face-to-face. James, it was brief, but I enjoyed every minute being your 'office mum'. And to the new 'girl crew' thank you for seeing me through the last few steps of this journey and ensuring I had ample chocolate or cookie supplies.

To my bestie, Elissa, thank you for ensuring I made it to the end with your amazing *"PhD Survival Kit"*. It was very much appreciated and definitely helped get me through. You have been an amazing support through all of my studies, and I look forward to popping the bottle of champagne with you!

To my family, thank you for encouraging me in every step of this journey. Dad, you always work hard and do the best on every job. I admire this in you and have aimed to do the same with this thesis. Mum, your endurance and determination in life inspired me each day, in particular the tough days. I have tried to follow both your examples and I hope I have made you proud. Amanda, thank you for providing both giggles and support throughout all of my studies. You have watched me complete this journey, and now it is time for me to watch you on yours. Henry is one lucky little man to have you and Paul as parents.

To Marty, your motto of *"GSD"* and determination to reach your own goals inspired me to achieve mine. Thank you for being a part of this journey and ensuring I had ample chocolate and cuddles to see me through the good and the bad days. Your surprise breakfast dates and adventures with our fur-kiddies provided the much-needed mental breaks from *"GSD"*. And of course, to Steele and Sadie, thank you for keeping me company while working from home and ensuring I got out for walkies each day.

Declaration

I declare that this thesis presents work carried out by myself and does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university; to the best of my knowledge it does not contain any materials previously published or written by another person except where due reference is made in the text; and all substantive contributions by others to the work presented, including jointly authored publications, is clearly acknowledged.

Analyses calculated (or derived) based in part on data from The Nielsen Company (US), LLC and marketing databases provided through the Nielsen Datasets at the Kilts Center for Marketing Data Center at The University of Chicago Booth School of Business. Nielsen Ad Intel Digital Data is powered by Pathmatics and Nielsen.

The conclusions drawn from the Nielsen data are those of the researcher(s) and do not reflect the views of Nielsen or its licensors. Nielsen and its licensors are not responsible for, had no role in, and were not involved in analysing and preparing the results reported herein.

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ABSTRACT:

Market share stationarity is the norm in established categories and developed markets with growth (or decline) clearly the exception (Graham, 2009b). Nonetheless, growth targets remain common practice in business and marketing plans.

Advertising is a key scalable tool and one of the large budget items marketers have to help achieve growth. Yet there is limited generalisable evidence and knowledge to inform how much to spend on advertising and how to allocate budgets across media and time. The purpose of this study is to understand whether growing brands advertise differently to non-growing brands, with a focus specifically on advertising budgeting and media planning.

This study has its foundations in the seminal work of Jones (1990) who described an empirical relationship between Share of Voice (SoV) and Share of Market (SoM) to help determine advertising budgets; commonly referred to as the Advertising Intensiveness Curve (described in this study as the 'AI relationship'). Jones (1990) concluded from the AI relationship that larger brands could afford to underspend relative to their size to maintain SoM, while smaller brands needed to overspend. Subsequent research has demonstrated the AI relationship holds across numerous conditions (Hansen and Christensen, 2005, Danenberg et al., 2016, Danenberg, 2008, Jayson et al., 2018).

Despite the growing evidence-base related to the AI relationship, gaps in knowledge are still evident. This thesis replicates and extends the advances of Jones' work by Hansen and Christensen (2005) and Danenberg and colleagues (2016, 2008). Hansen and Christensen (2005) confirmed that the AI relationship is negative/downward sloping at the aggregate level and more critically they demonstrated the AI relationship is unique to each category and market, with considerable variation across categories. Danenberg et al., (2016, 2008) drew similar conclusions and was the first to link departures from the AI relationship (in terms of over, neutral or underspending) to growth and decline. However, the generalisability of findings from these studies remain in question due to limitations in the scope of data.

This thesis provides important contributions to the progressing knowledge in this field. Hansen and Christensen's (2005) study focused solely on TV advertising between 1985 to 1990. This study extends the evidence to advertising across seven media and to 11 new categories not previously investigated. This thesis also contributes the first replication of the departures from the AI relationship research of Danenberg et al., (2016, 2008), extending knowledge to 23 new categories in a new country.

Beyond how much to spend, marketers have many other decisions to make to effectively plan their media spend. The importance of advertising is to primarily act as a simple reminder. Referred to as 'nudging', the exposure to advertising can affect a consumers buying propensities by refreshing and reinforcing the existing links in memory, or in some cases to build new links (Ehrenberg et al., 2002, 1997, 1974b, McDonald, 1997).

Advertising has been shown to have the greatest effect when exposure is close to the next purchase occasion (Reichel and Wood, 1994, Wood, 2009, Roberts, 1999, McDonald, 1969, 1997). For advertisers this presents a challenge as it is well-established that buying behaviour is stochastic and brand purchases for an individual category buyer appear 'as-if random' with respect to timing and the brand(s) selected (e.g. Goodhardt et al., 1984). This makes the timing of targeting potential category customers difficult and is where choosing the right scheduling pattern plays an important role.

Using a continuous approach to advertising planning can increase the chance of encountering consumers close to their next 'as-if' random purchase decision. Past research has shown support for the use of continuity scheduling, even when other scheduling approaches demonstrated greater effects (Gijsenberg and Nijs, 2019) as it best matches evidence relating to how brands grow.

This research, therefore, also investigates how media decisions related to scheduling can impact brand growth. Specifically, the study investigates how growing and non-growing (stable and declining) brands allocate their budgets across media, how many weeks each brand is on-air, and the use of continuity versus bursting strategies for scheduling.

The research takes a primarily descriptive approach through replication, extension and original contribution. Drawing on data from the Nielsen Kilts Consumer Panel and Ad Intel databases, the sales and advertising spending for brands across 24 CPG categories from 2010 to 2015 in the US were explored. The Consumer Panel database documents the purchases of 61,000 households (on average per year), making it some 60 times larger than panels of prior studies (Hansen and Christensen, 2005). The Ad Intel database covers advertising spend across seven media (TV (incl. Network and Spot TV), Magazine, Internet, Radio, Outdoor, Newspaper and Cinema) capturing over $34 billion in advertising spend for the 655 brands analysed. TV advertising represented the dominant media with 66% of spend on average across the 24 categories, compared to Magazine, the next largest media with 27% of spend on average.

This thesis confirms the AI relationship continues to hold across new conditions. For 223 observations of the AI relationship (24 categories over six years), 74% displayed a negative/downward slope in line with the seminal work by Jones (1990) and extensions by Hansen and Christensen (2005) and Danenberg et al. (2008, 2016). This pattern held across individual media, different advertising intensities (High Voice and Low Voice categories), different market types (Competitive and Oligopoly) and 16 categories. There were, however, exceptions to the pattern, with 18% of observations displaying a positive/upward slope and 7% displaying a flat slope. These results provide further evidence in support of prior conclusions that brands must understand the individual AI relationship for their category and market (Hansen and Christensen, 2005, Danenberg, 2008, 2016).

Taking a longitudinal approach across six years to investigate the effects of different spending behaviours as per the AI relationship, this study found that *consistent* overspending brands tended to grow. SoM increased by 19% on average[1], in line with the findings of Danenberg et al., (2008, 2016). Generally, across conditions (advertising intensity and market type, also budget size and the category's specific AI relationship slope) overspending brands increased SoM more than neutral and underspending brands.

Further investigation was conducted to determine the likelihood of brands achieving the 'average' SoM change, identifying the proportion of brands that did in fact grow (or decline) for the different spending behaviours. Overall, results showed irrespective of spending behaviour (over, neutral or underspending), SoM remained stable over the long-term for the majority of brands (between 72-81% across conditions). Of the brands which consistently overspent, only 14% grew in SoM by more than 2.5 percentage points from 2010 to 2015, and only 15% of brands that consistently underspent, declined.

When investigating how brands allocate their budgets across media a clear trend was evident across conditions; growing brands tend to allocate more budget to TV than non-growing brands. The average z-scores across all categories, for large and medium budgets, High Voice and Oligopoly categories showed growing brands had greater allocations to TV than their category average, and more than non-growing brands. There were only two exceptions to this pattern. Growing and declining brands in Low Voice categories both allocated more to TV than the category average. Whereas, declining brands in Competitive categories allocated more than the category average to TV, while growing brands allocate in line with the category average. Adding the lens of how budgets were allocated across time, growing brands were on-air for more weeks with TV than their category average across all conditions. Non-growing brands had fewer weeks on-air with TV than growing brands (reflected in negative or lower positive z-scores).

Scheduling results first revealed that the vast majority of brands are inconsistent with how they distribute spend year-to-year; only three brands (of 195) used the same scheduling approach across all six years, and only a further 10 brands were consistent in five years. After grouping brands according to the scheduling approach they used most often across the six years, results showed more growing brands use a continuity approach in three or more years, than declining brands. Across conditions, this pattern was relatively consistent, except in Low Voice and Oligopoly categories, where more declining brands use continuity (than growing brands).

[1] Figure reflects average across brands after two very large deviations (over 1000%) were removed.

Empirical evidence from this study demonstrates links between spending behaviours and brand growth, yet also highlights that few brands achieve this. Results, relating to budgeting using the AI relationship, do demonstrate setting an appropriate budget is only one piece of the puzzle to brand growth. Advertisers are recommended to draw on the AI relationship for their specific category and market when making budgeting decisions. Furthermore, advertisers are encouraged to monitor the annual AI relationship, as well as understand the AI relationship across time.

For brand growth, the use of high reach media is supported, in particular TV. Where unaffordable, the next highest reaching media that can be afforded is recommended. A focus on achieving more weeks than the category average on low reaching media is discouraged, even when it delivers more weeks on-air overall (across all media). It is not suggested that advertisers ignore low reaching media altogether, rather they are encouraged to use it wisely. For example, additional media should aim to reach consumers who are difficult to reach with the main media being used, for example light TV viewers (Ceber, 2010, Ceber et al., 2011).

Finally, this study also makes an important and original contribution by developing a new operationalisation and definition of continuity, which will be useful in scheduling research and practice. Typically described as 'even spending' (Gijsenberg and Nijs, 2019), existing definitions of continuity have a relatively hard rule of equal amounts allocated across every week of the year. The definition of continuity developed in this study takes into account both the number of weeks of advertising and the weekly spends in each of those weeks. Thus, it emphasises consistent weeks of advertising across a year, but also gives marketers room to vary weekly spend allocations, for example where categories have clear seasonal peaks and troughs, or where media prices may fluctuate at different times of the year. Brands are recommended to have advertising on-air for 39 weeks or more per year with relatively equal levels of spend (using a benchmark of Coefficient of Variance (CoV) one or below).

This empirical evidence drawn from 195 brands across 24 categories should provide marketers with confidence to make accountable media planning decisions which are linked to long-term brand growth.