PROGRAMMATIC, PROVEN

A Study of Optimal Media Spend and Sales Across the 200 Largest U.S. Brand Marketers
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INTRODUCTION

Programmatic has fundamentally changed the landscape for marketers by creating data-rich digital campaigns to target an audience. However, programmatic has typically been seen as a tertiary channel to other traditional forms of media like television, radio and even digital.

Advancements within programmatic and high consumer adoption of digital and mobile has raised questions like: “Does traditional media still provide the greatest yield or will a new media mix that leverages a greater focus on programmatic provide a higher ROI?”

For the second time in 2016, Rubicon Project has partnered with leading research firm, TFQ Strategy, to examine the value of programmatic and the direct impact it has on top and bottom line results.

We looked across $20 billion of spending by top U.S. brands, each with over $100 million in advertising budgets, and sought to uncover their particular opportunity to drive results by embracing programmatic advertising.

The research also looks into large advertising technology platforms like Facebook and Google – who have garnered a lion’s share of the digital investment – to see the impact they make in comparison to the rest of the programmatic marketplace. We answer the question: “Should large brands concentrate their spend only with these players and, if so, would they experience the greatest sales impact?”
METHODOLOGY

Rubicon Project and TFQ Strategy used proprietary media spending data from a sample* of campaigns across advertisers who spend $100 million or more on advertising in a year. In aggregate, these campaigns comprise $20 billion in advertising spending and $450 billion in sales. The research covered the period from 2014 to 2016.

The research is based on a media mix model combining granular advertising exposure data and actual sales revenue. We quantify the advertising impact on sales and optimize by media channel allocation and creative unit. Research was collected across eight industry verticals and media spend across formats including TV, radio, print, digital, and programmatic.

We used a comprehensive approach that considers CPMs, reach and the frequency potential of investing in each media lever. This was used to create predictive analytics for the impact changes and improvements in overall performance. The research was iterated through thousands of different scenarios to identify the optimal levels of investment per category and the resulting bottom line impact of those changes.

When looking at the potential impact of programmatic, we also researched the impact of spending solely on Google and Facebook and compared it to other programmatic options.

*Source: TFQ Strategy sampled actual media spend of the top 200 U.S. advertisers, the data derived from Nielsen (TV, Audio, etc.), GFK/MRI (print), Ad Server reporting and log files (digital) and TAB (OOH). The category samples are comprised of the following percentage of brand campaigns within each category: Auto 24%, CPG (Food) 8%, Retail 15%, QSR 8%, Entertainment 23%, Financial Services 10%, CPG (Beverage) 8%, and Beauty 5%.
PROGRAMMATIC BUYING IS PROVEN TO IMPACT BRAND SALES

Data-enabled, digital media buying is proven to increase revenue

DOUBLE (ON AVERAGE) THE INVESTMENT IN PROGRAMMATIC

After much examination, we uncovered the optimal portfolio mix that should yield the greatest sales and marketing ROI. The model shows that the largest brand marketers within the study, who reallocate budgets to, on average, double their investment in programmatic, could see a 6% increase in sales and a 22% increase in marketing return on investment. Given the size of the brands’ aggregate spend within the data set, this could represent, in aggregate, a $25 billion opportunity, a massive impact to brand top-line sales and return on marketing mix.
REALLOCATION TO PROGRAMMATIC IS SIMPLE
No need to ask your CFO for more money. To achieve an optimal allocation of advertising spend, large marketers should simply shift dollars between channels. We found the optimal allocation occurs if, on average, marketers decrease TV by 3%; radio by 1%; print by 1% and non-programmatic digital by 1%. This small shift will free up 6% that should be added to programmatic.

PROGRAMMATIC AND DIGITAL SHOULD COMPRISE A MEANINGFUL SHARE
Advertisers of all sizes have begun to adopt programmatic and digital alike. Interestingly, brands who spend $35 million or more should allocate 8% of their spend towards programmatic, trailing the relatively smaller budgets by only a few percentage points of spend allocation.

DATA-DRIVEN BRANDING REALLY WORKS

OPTIMAL ALLOCATION BY BUDGET LEVEL
Brand building using programmatic? Absolutely. Optimally, digital and programmatic should make up more than 20% of a large brand’s total spend. Comparatively, direct-response campaigns demand nearly 25% of spend allocation to programmatic and digital. This is not surprising given the ability to target and retarget consumers with relevant, tailored advertising.

THE POWER OF THE PROGRAMMATIC DOLLAR

![Brand Building vs Direct Response](chart)

In looking at the optimal allocation of programmatic, we examined the power of the programmatic dollar versus other channel investment options. Through our research we were able to find that for every dollar you spend in programmatic, you would need to spend $1.09 in TV, $1.11 in non-targeted digital media options, and $1.22 in print to match the power and impact of programmatic investment.

"By reallocating advertising budgets to double investment in programmatic, our data shows that brands will see a significant uptick in sales and marketing ROI, compared to those who do not. This is not about spending more, it’s about spending smarter — having the right mix of programmatic and digital ad spending is key to a balanced portfolio in today’s environment.

Harry Patz
Chief Revenue Officer
Rubicon Project"
SPENDING BEYOND THE MAJOR PLATFORMS
The best brand marketers spread investment outside of Google and Facebook

Research shows that those who spend outside the likes of Google and Facebook would see 3x the sales lift! While these companies have compelling product offerings, they cannot and should not be your only solution if you want the maximum potential impact. Brands who spend outside the walled gardens saw a 4.5% sales lift utilizing the wider landscape of programmatic marketplaces and media vs. 1.5% sales lift by utilizing Google and Facebook only.

Our research demonstrates that those large brands who allocated budget outside of Google and Facebook could achieve 3x improvement in the sales lift (4.5% sales lift) compared to using only those two (1.5% sales lift).
OPTIMAL COMBINED SPENDING ON GOOGLE AND FACEBOOK

Interestingly, when examining the impact that Google and Facebook drive as a share of digital and programmatic broken out separately, we find their share of programmatic to be dramatically lower than digital. In fact, when looking at marketers’ campaigns by branding objectives vs lower funnel, we see the Google/Facebook share of programmatic dollars were limited to about 13% and 11% respectively.

OPTIMAL COMBINED GOOGLE AND FACEBOOK SPEND SHARE

<table>
<thead>
<tr>
<th></th>
<th>BRAND BUILDING</th>
<th>LOWER FUNNEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital</td>
<td>35%</td>
<td>30%</td>
</tr>
<tr>
<td>Programmatic</td>
<td>13%</td>
<td>11%</td>
</tr>
</tbody>
</table>

OPTIMAL COMBINED GOOGLE AND FACEBOOK SPEND SHARE BY AGE TARGET

<table>
<thead>
<tr>
<th>Age</th>
<th>Digital</th>
<th>Programmatic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 18-34</td>
<td>37%</td>
<td>12%</td>
</tr>
<tr>
<td>Age 35-54</td>
<td>32%</td>
<td>14%</td>
</tr>
<tr>
<td>Age 55+</td>
<td>25%</td>
<td>11%</td>
</tr>
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PROGRAMMATIC SPENDING BY VERTICAL
Programmatic buying is not a one-size-fits-all across the industry

What works for the auto industry might not necessarily be the same for beauty buyers. Looking deeper into the data, we uncovered the optimal allocation of programmatic spend across eight major vertical categories. The proven power of programmatic is clear for retail, CPG and financial services, with relatively larger opportunities for targeting and use of data to drive sales. Entertainment tops the chart, likely capitalizing on the recent trove of consumer data coming in from on-demand and digital viewership.

In order for marketers to engage with consumers–especially the younger generation–most effectively, we as brands have to harness data and programmatic. This study proves it out in gold: topline sales impact and ROI potential.

Mari Kim Novak
Chief Marketing Officer
Rubicon Project

OPTIMAL PROGRAMMATIC SPEND ALLOCATION

<table>
<thead>
<tr>
<th>Vertical</th>
<th>Allocation</th>
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<tbody>
<tr>
<td>AUTO</td>
<td>8%</td>
</tr>
<tr>
<td>CPG FOOD</td>
<td>10%</td>
</tr>
<tr>
<td>RETAIL</td>
<td>12%</td>
</tr>
<tr>
<td>QSR</td>
<td>7%</td>
</tr>
<tr>
<td>ENT</td>
<td>13%</td>
</tr>
<tr>
<td>FIN SERV</td>
<td>10%</td>
</tr>
<tr>
<td>CPG BEV</td>
<td>10%</td>
</tr>
<tr>
<td>BEAUTY</td>
<td>7%</td>
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</tbody>
</table>
OPTIMAL MEDIA MIX BY VERTICAL

In particular, when we examine the optimal media spend mix by channel for auto, CPG and beauty, we see some interesting implications. Take auto for instance, where geo-location plays an important role in driving results for local dealers. We see radio comprising a large share of overall advertising spend, which drives localized targeting.

For CPG, we see digital and programmatic comprising a significant share (while TV still dominates) as consumer brands have looked to connect with the consumer more directly through content and engagement strategies. For beauty, print still plays an important role, led by magazine advertisements. Although one might think that the younger consumer buys fewer print magazine subscriptions, this is not necessarily true. Younger audience still turn to print to confirm the trends they see on social media.
PROGRAMMATIC SPENDING BY AGE

Data favors the young

We live in a mobile-first world where young people are spending a whopping 90 hours per month on mobile apps*. Our research found that brands looking to reach these younger consumers should allocate digital and programmatic spending to comprise at least 30% of total marketing spend with half of that money focused exclusively on mobile.

OPTIMAL MEDIA SPEND BY AGE TARGET

To reach younger consumers, digital and programmatic should comprise at least 30%.

THE AGE DISPARITY FOR DIGITAL AND PROGRAMMATIC

*ComScore 2016
MOBILE’S SHARE OF THE TOTAL SPEND

When thinking about your mobile strategy, your marketing mix should be adjusted depending on the age group you are trying to reach. That said, data shows that mobile in-app should always make up the majority of your spend no matter the age group. In looking at the impact of unit allocation within mobile, we were able to see that mobile in-app and mobile web video produced the most impact for the campaigns while mobile banners lagged in importance.

For advertisers who invest in programmatic, the data clearly shows that proper allocation pays off for brands who shift 6% of their budget away from other more traditional mediums. Clearly, programmatic is showing significant revenue opportunities and return on marketing investment.

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Shelley Zalis
Chief Executive Officer
TFQ Research
Programmatic, Proven

**Programmatic Spending by Format**

Make sure to spread the same message in more than one way

Delving further into each vertical, we uncovered which formats drove the most audience engagement and sales. Take the beauty category for example, where mobile app was far more effective than mobile web advertisements. Even more, the spend allocation for beauty towards desktop video was larger than mobile video, although it is important to note that desktop CPMs are higher on average, which could drive this influence.

**Programmatic Share by Format Across Each Industry Vertical**

<table>
<thead>
<tr>
<th></th>
<th>Auto</th>
<th>CPG Food</th>
<th>Retail</th>
<th>QSR</th>
<th>ENT</th>
<th>FIN Serv</th>
<th>CPG BEV</th>
<th>Beauty</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOBILE VIDEO</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
<td>2%</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
</tr>
<tr>
<td>DESKTOP VIDEO</td>
<td>10%</td>
<td>5%</td>
<td>10%</td>
<td>5%</td>
<td>10%</td>
<td>5%</td>
<td>10%</td>
<td>5%</td>
</tr>
<tr>
<td>MOBILE BANNER</td>
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<td>15%</td>
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<td>DESKTOP BANNER</td>
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**For Beauty, Mobile In-App and Desktop Video Are Massive**

<table>
<thead>
<tr>
<th>Share of Mobile</th>
<th>Share of Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOBILE IN-APP</td>
<td>MOBILE VIDEO</td>
</tr>
<tr>
<td>MOBILE WEB BANNER</td>
<td>DESKTOP VIDEO</td>
</tr>
<tr>
<td>MOBILE WEB VIDEO</td>
<td>MOBILE BANNER</td>
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<tr>
<td>DESKTOP BANNER</td>
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VIDEO FREQUENCY FALLS SHORT
When it comes to video frequency, the number of video impressions served to a consumer was highly underrepresented. In fact, the optimal frequency should be doubled to achieve maximum sales impact. While video is highly influential, for lower-funnel campaign objectives, mobile and desktop banners are still utilized to drive sales effectiveness.

PROGRAMMATIC SPENDING ON SOCIAL MEDIA
When considering your media spend on social, research clearly shows that mobile drives the lionshare of spend allocation. Interestingly, however, we found that mobile social spend was more impactful in determining lower funnel loyalty campaigns rather than brand building, top of funnel.

**PROGRAMMATIC SHARE BY FORMAT ACROSS EACH INDUSTRY VERTICAL**

**PROGRAMMATIC SPENDING ON SOCIAL MEDIA**
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IN SUMMARY

As consumer adoption of emerging digital platforms continues to rise, it becomes increasingly important that data-driven programmatic campaigns have a higher allocation of media budgets to achieve the greatest ROI. And focusing solely on Facebook and Google limits the effectiveness of your programmatic campaigns. Programmatic can’t be ignored if brands and media agencies want to stay competitive and glean success from data- and insights-driven, highly-targeted advertising. The shift is happening, the value is evident, and the need is now.

ABOUT RUBICON PROJECT
Founded in 2007, Rubicon Project’s mission is to keep the Internet free and open and fuel its growth by making it easy and safe to buy and sell advertising. Rubicon Project pioneered advertising automation technology to enable the world’s leading brands, content creators and application developers to trade and protect trillions of advertising requests each month and to improve the advertising experiences of consumers. Rubicon Project is a publicly traded company (NYSE: RUBI) headquartered in Los Angeles, California.

ABOUT TFQ STRATEGY – Advanced Insights For Business Growth
We are a team of insight, social and visualization strategists dedicated to contextualizing complex information and modeling into digestible bytes for forward-thinking business leaders and corporations. We are passionate about what we do and constantly strive to conceive and develop new techniques that leverage our knowledge and innovative thinking to meet the evolving needs of our clients.
**TERMS AND DEFINITIONS**

**TV** includes network and cable, local and national TV advertising. TV FEP is included in TV (due to the fact that separate CPMs are not always provided)

**Digital** includes video, display, high impact ad units across desktop and mobile purchased over I/O (Search is not included in this analysis)

**Programmatic** includes video, display, high impact ad formats across desktop and mobile purchased via a Demand Side Platform

**Facebook** includes FBX, Facebook and Instagram (includes Exchange based and I/O based buys)

**Google** includes DoubleClick Bid Manager, YouTube and Google Display Network (Search is not included in this analysis)

**Radio** includes terrestrial radio and satellite radio (web-based audio not included in this analysis)

**Print** includes magazines and newspaper paid advertising (does not include PR). Tablet versions of Print are included in print; banner/videos ads running on magazine/newspaper publishers websites are in digital

**ROI and Sales** are calculated using total revenue, not profit.

**Automotive** includes advertising spend to promote domestic and foreign automotive manufacturers advertising (does not include local dealer advertising)

**Consumer Packaged Goods – Food** includes advertising spend to promote consumable items typically purchased frequently

**Consumer Packaged Goods – Beverage** includes advertising spend to promote beverages items typically purchased frequently

**Retail** includes advertising spend to promote retailers across fashion, home electronics and home improvement with both physical and ecommerce sales channels

**Quick Service Restaurants** includes advertising spend to promote limited service restaurants

**Entertainment** includes advertising spend to promote advertising spend to promote attendance/purchase/viewership for movies, home entertainment and TV shows

**Financial Services** includes advertising spend to promote insurance, banking and credit cards

**Beauty** includes advertising spend to promote health and beauty products

**Brand Building v. Lower Funnel**: a configuration input from marketers based on their key KPI or campaign objective. E.g. A lower funnel campaign would be a coupon promo and an upper funnel or brand building might be a video campaign.
After much examination, we uncovered the optimal portfolio mix that should yield the greatest sales and return on marketing mix.

Interestingly, when examining the impact that Google and Facebook drive as a share of digital and programmatic buying, brands have seen significant increases in sales. In aggregate, this could represent a $25 billion opportunity, a massive impact to brand budgets to, on average, double their investment in programmatic, could see a 6% increase in sales and a 25% of spend allocation to programmatic and digital. This is not surprising given the ability to target and effectively reach the right customers with minimal waste.

Data-enabled, digital media buying is proven to increase revenue. Interestingly, when examining the impact that Google and Facebook drive as a share of digital and programmatic buying, brands have seen significant increases in sales. In aggregate, this could represent a $25 billion opportunity, a massive impact to brand budgets to, on average, double their investment in programmatic, could see a 6% increase in sales and a 25% of spend allocation to programmatic and digital. This is not surprising given the ability to target and effectively reach the right customers with minimal waste.

We live in a mobile-first world where young people are spending a whopping 90 hours per month on digital. In looking at the impact of unit allocation within mobile, group you are trying to reach. That said, data shows that mobile in-app should always make up the majority of your spend no matter the age group. In looking at the impact of unit allocation within mobile, group you are trying to reach. That said, data shows that mobile in-app should always make up the majority of your spend no matter the age group.

Data favors the young. The best brand marketers spread investment outside of Google and Facebook. The proven power of programmatic is clear for retail, CPG and financial services, with top-line sales and return on marketing mix. The best brand marketers spread investment outside of Google and Facebook. The proven power of programmatic is clear for retail, CPG and financial services, with top-line sales and return on marketing mix.

What works for the auto industry might not necessarily be the same for beauty buyers. Looking deeper into the data, we uncovered the optimal allocation of programmatic spend across eight major vertical categories. The proven power of programmatic is clear for retail, CPG and financial services, with top-line sales and return on marketing mix. What works for the auto industry might not necessarily be the same for beauty buyers. Looking deeper into the data, we uncovered the optimal allocation of programmatic spend across eight major vertical categories.

Programmatic spending on social media proves effective as well. When it comes to video frequency, the number of video impressions served to a consumer was highly frequently, and $1.22 in print to match the power and impact of programmatic investment. Programmatic spending on social media proves effective as well. When it comes to video frequency, the number of video impressions served to a consumer was highly frequently, and $1.22 in print to match the power and impact of programmatic investment.

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When it comes to moving beyond the major platforms, the data shows that most large advertisers are utilizing programmatic to complement Google and Facebook, with a configuration input from marketers based on their key KPI or campaign objective. E.g. Brand Building v. Lower Funnel:

- **Beauty** includes advertising spend to promote health and beauty products
- **Insurance** includes advertising spend to promote insurance, banking and credit cards
- **Retail** includes advertising spend to promote retailers across fashion, home electronics and home improvement with both paid and organic search
- **Consumer Packaged Goods - Beverage** includes advertising spend to promote beverages items typically purchased
- **Travel** includes advertising spend to promote attendance/purchase/viewership for travel
- **Automotive** includes advertising spend to promote auto components
- **Art & Entertainment** includes advertising spend to promote entertainment, music, entertainment
- **Medical** includes advertising spend to promote medical products and services
- **Pet** includes advertising spend to promote pet products
- **Finance** includes advertising spend to promote financial products
- **Gaming** includes advertising spend to promote gaming
- **Real Estate** includes advertising spend to promote real estate
- **Education** includes advertising spend to promote education
- **Sports & Recreation** includes advertising spend to promote sports and recreation
- **Food & Drink** includes advertising spend to promote food and drink
- **Education** includes advertising spend to promote education

Programmatic spending by format includes:

- **Digital** includes network and cable, local and national TV advertising TV FEP is included in TV (due to the fact that separate
- **Print** includes print; banner/videos ads running on magazine/newspaper publishers websites are in digital
- **Google** includes DoubleClick Bid Manager, YouTube and Google Display Network (Search is not included in this analysis)
- **Facebook**
- **Programmatic spending by age** shows that digital and programmatic spending to comprise at least 30% of total marketing spend with half of that

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