Quarterly Mobile Index

Q3 2015

PubMatic

PubMatic's **Quarterly Mobile Index** (QMI) report was created to provide both publishers and advertisers with key insights into the mobile advertising industry.

ABOUT PUBMATIC'S QUARTERLY MOBILE INDEX (QMI)

By analyzing the billions of daily impressions that flow through our platform, we are able to observe real-time developments in the mobile space that allude to broader digital industry trends. We are committed to providing best-in-class mobile tools and services, and we believe that information sharing is crucial in aligning the digital industry towards best practices and ultimately growth in mobile.

In our first ever QMI report for calendar Q3 2015, we have established a baseline of benchmarks for mobile advertising performance around pricing, volume and growth. Five key trends have emerged in this report, specifically:

KEY TREND #1
Mobile CPMs are higher and growing faster than desktop CPMs.

KEY TREND #2
Significant growth opportunity lies in the Asia-Pacific (APAC) and Latin America (LATAM) regions, while sheer scale makes mature markets—North America and Europe, Middle East and Africa (EMEA)—highly attractive.

KEY TREND #3
Apple app ads are increasing the fastest in both price and volume, while mobile web inventory is still growing.

KEY TREND #4
Mobile optimization (i.e. developing mobile-friendly or "responsively-designed" sites that adapt to mobile viewing) is progressing rapidly and improving mobile web inventory quality.

KEY TREND #5
Private marketplace (PMP) CPMs are higher than non-PMP CPMs, by a factor of 5-6x for mobile PMP and 3-4x for desktop PMP.

What does this mean for publishers and advertisers?

1. Mobile monetization is increasing and improving, driving growth within digital media organizations across all major global regions. APAC and LATAM regions represent the fastest growing opportunities, but North America and EMEA represent the largest opportunities.

2. Mobile app inventory average price and volume are increasing, but mobile web inventory quality is improving due to mobile optimization (i.e. shift to mobile-friendly sites) and an industry shift to mobile "responsive" web design. High-impact mobile formats, such as video and rich media, will help publishers and advertisers continue to both grow revenues and command higher CPMs.

3. Private marketplaces (i.e. directly-sold inventory packages from publishers) are an attractive proposition for publishers and advertisers because of the premium, transparent environment, which commands higher prices for publishers, and higher-quality inventory for advertisers.

KEY TREND #1:

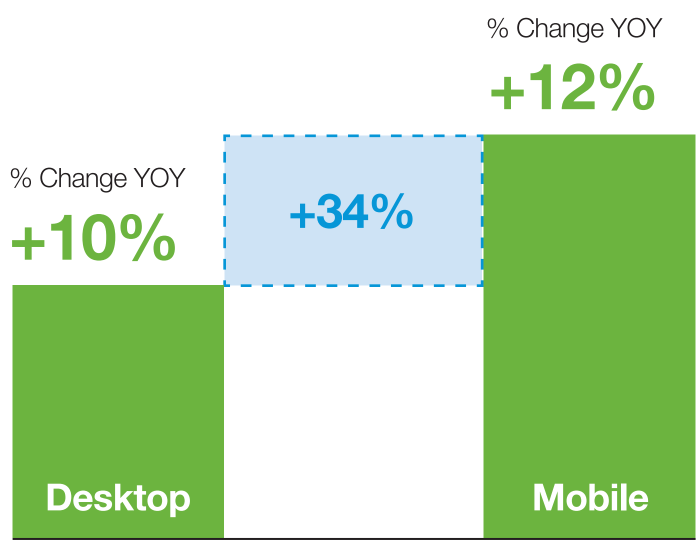
Mobile CPMs Are Higher and Growing Faster Than Desktop CPMs

With the increasing shift to mobile consumption, mobile CPMs have risen to higher average levels than desktop CPMs. Mobile CPMs in Q3 2015 were 34% higher than desktop CPMs. On a year-over-year basis, mobile CPMs also increased slightly more, 12%, than desktop CPMs, 10%. These trends demonstrate that mobile monetization can drive growth within publishing organizations.

In terms of mobile strategies, advertisers are steadily learning how to leverage data, including location and user ID, to better target consumers, which leads to more valuable mobile impressions. Advertisers are also taking advantage of the rapid increase in mobile video consumption and mobile rich media usage, two formats that have higher CPMs than static banners.

Q3 2015 Relative CPMs & YOY Change

Desktop vs. Mobile



KEY TREND #2:

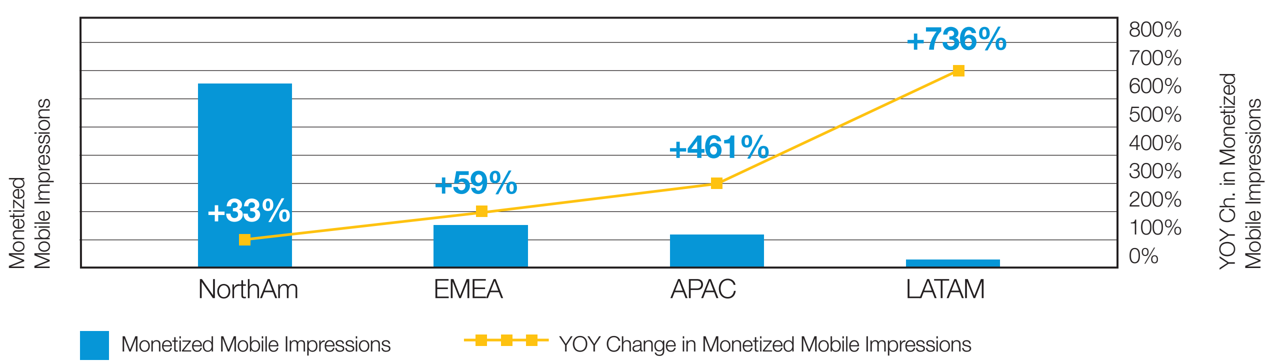
Significant Growth Opportunity Lies in APAC and LATAM Regions, While Scale Makes Mature Markets—North America and EMEA—Highly Attractive

Across global regions, we saw large increases in monetized mobile impressions in the Asia-Pacific (APAC) and Latin America (LATAM) regions. Growth in North America and Europe and Middle East (EMEA) is positive, but on larger base sizes, these growth rates are much lower compared to APAC and LATAM. On a CPM basis, EMEA showed the largest year-over-year gains, at 47%, while North America was also up, 17% year-over-year. APAC and LATAM CPMs were down, year-over year, largely due to triple-digit volume growth, which drove prices down to nominal (or market equilibrium) levels.

What this means for publishers and advertisers is that large growth opportunities in mobile exist in APAC and LATAM regions, as those consumers increasingly adopt mobile devices and consume more mobile content. Early phases of mobile advertising typically focus on app installs, which are heavily performance-based, but as brand advertisers come into the space, CPMs will rise. In the mature markets, EMEA—which more recently went through a growth phase and is starting to reach maturation—and North America, growth opportunities still exist, especially given high mobile Internet adoption rates and high income levels.

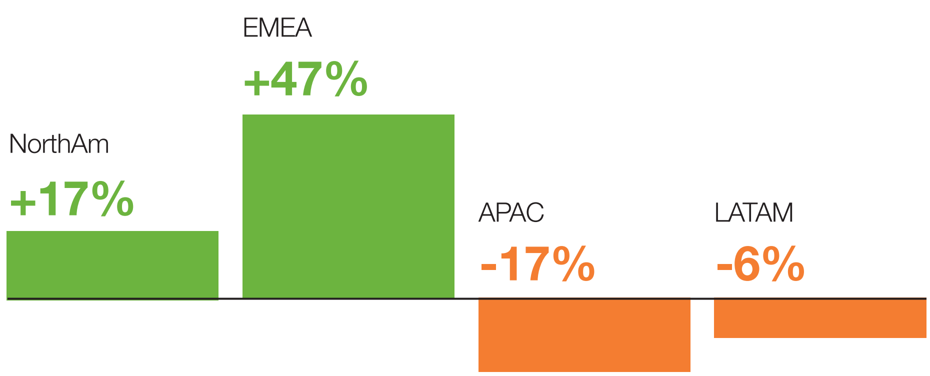
Q3 2015 Monetized Mobile Impressions & YOY Change

by Global Region



Q3 2015 YOY Change in Mobile CPMs

by Global Region



KEY TREND #3:

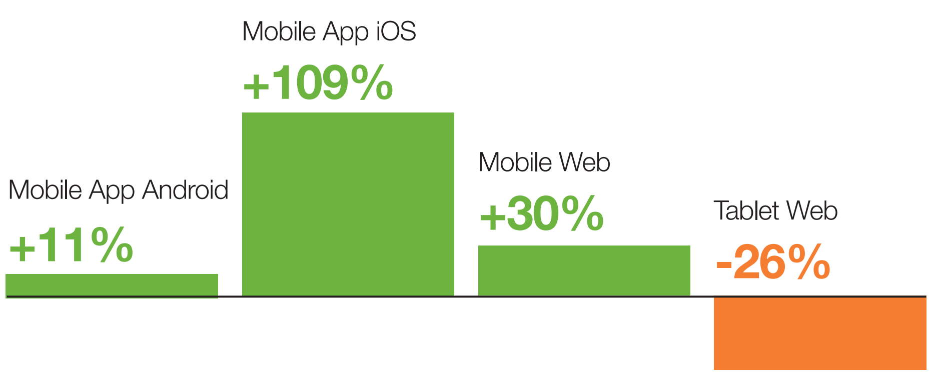
Apple App Ads are Increasing The Fastest in Both Price and Volume, While Mobile Web Inventory is Still Growing

Mobile consumption is shifting into apps (over mobile web) for greater functionality and a better overall user experience. In Q3 2015, publishers saw increases in Apple (iOS) app, mobile web and Android app CPMs, on a year-over-year basis. This is due to not only higher functionality of app ads, but also better targetability of consumers in the app environment. Tablet web CPMs are down, year-over-year, as many of those ads are just desktop ads viewed on tablet devices.

Volume was up across all mobile platforms in Q3, year-over-year, as advertisers continued to drive campaigns into mobile, but paid impressions were up the most in Apple (iOS) app inventory. What this means for publishers is that while app inventory can be high-value, mobile profitability can also come from mobile web inventory as mobile content consumption increases.

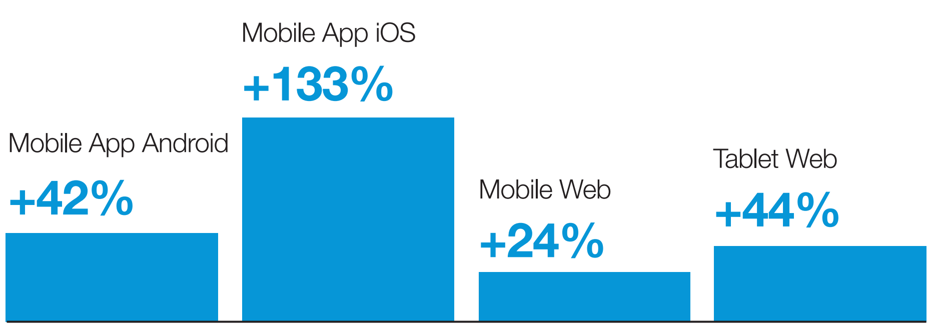
Q3 2015 YOY Change in Average Mobile CPMs

by Mobile Platform



Q3 2015 YOY Change in Monetized Mobile Impressions

by Mobile Platform



KEY TREND #4:

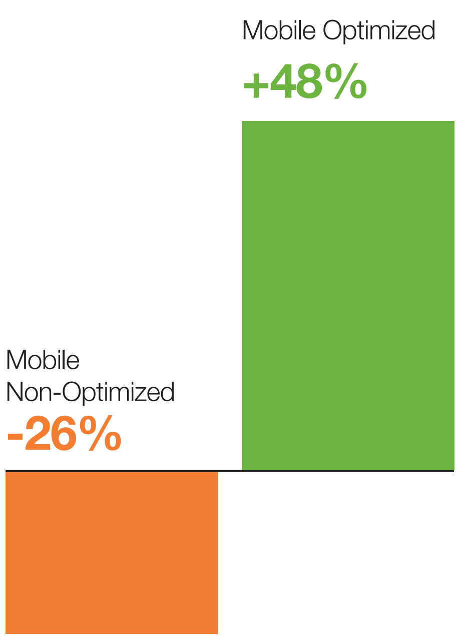
Mobile Optimization is Progressing Rapidly and Improving Mobile Web Inventory Quality

Mobile optimized sites (i.e. mobile-friendly or "responsively-designed" sites that adapt to mobile viewing, depending on screen size and page orientation) saw increases in price and volume, as advertisers increasingly demand high-quality mobile inventory. Viewability and legibility become issues when consumers are forced to view full desktop sites on mobile devices, and publishers and advertisers are adapting to solve those challenges. While volume was also up for mobile non-optimized ads, due in part to the overall rapid shift to mobile, CPMs for non-optimized (i.e. desktop-only sites) inventory are down.

When it comes to the types of mobile-specific, "optimized" creatives, publishers and advertisers are seeing the most success with video pre- and post-roll and rich media, as well as full-screen mobile interstitials, which optimize real estate on smaller mobile screens.

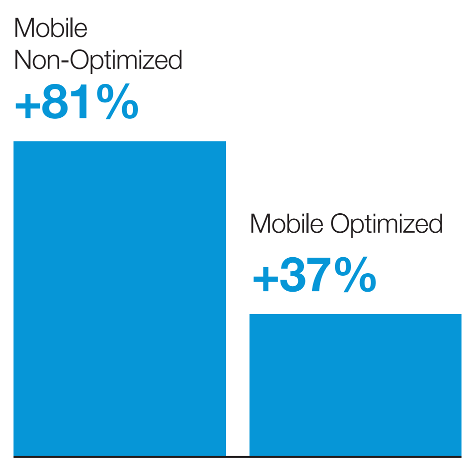
Q3 2015 YOY Change in Average Mobile CPMs

Mobile Non-Optimized vs. Mobile Optimized



Q3 2015 YOY Change in Monetized Mobile Impressions

Mobile Non-Optimized vs. Mobile Optimized



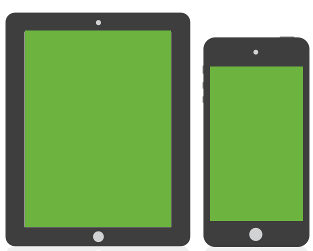
KEY TREND #5:

Private Marketplace CPMs Are Higher Than Non-PMP CPMs, by a Factor of 5-6x for Mobile PMP and 3-4x for Desktop PMP

In Q3 2015, mobile private marketplace (PMP) inventory saw an average of nearly 500% higher CPMs than non-PMP inventory, while desktop PMP inventory saw an average of nearly 300% higher CPMs than non-PMP inventory. Why is this happening? Private marketplaces, or directly-sold inventory packages from publishers, tend to attract higher CPMs due to the transparent nature of the buy, as well as the access to high quality inventory—which otherwise might only be available through direct deals. PMP inventory also can provide a high level of engagement on premium sites that are well-suited for valuable brand marketing campaigns. This makes a strong case for publishers that are considering selling inventory on private marketplaces.

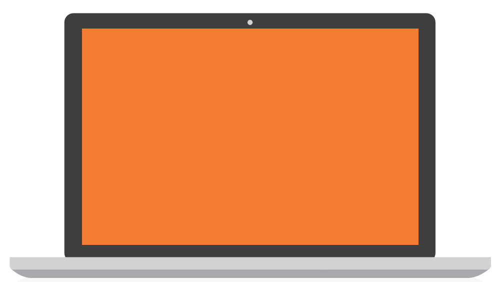
Q3 2015 Mobile PMP Inventory saw

400-500% higher CPMs



Q3 2015 Desktop PMP Inventory saw

200-300% higher CPMs



QMI Methodology

PubMatic's data team analyzes billions of impressions on a daily basis, utilizing the company's best-in-class analytics capabilities. The Q3 2015 QMI incorporates impression, revenue and CPM data from these daily reports to provide a high-level glimpse of key trends within the mobile advertising industry. "Monetized impressions" are defined as impressions that were sold through the PubMatic platform, and "CPMs" are defined as cost per thousand monetized impressions.

About PubMatic

PubMatic is the leading marketing automation software platform for publishers. Through real-time analytics, yield management, and workflow automation, PubMatic enables publishers to make smarter inventory decisions and improve revenue performance. Focused on serving the needs of premium publishers, PubMatic inspires buyer confidence by providing flexibility in audience discovery and planning media campaigns through its Media Buyer Console and APIs. The company's marketing automation software platform provides a global roster of comScore publishers with a single view into their advertiser relationships across every screen, every channel and every format. PubMatic was ranked by Deloitte as one of the fastest growing companies in the US Internet sector for the third consecutive year in 2014. The company has offices worldwide, and is headquartered in Redwood City, California.

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