



**QUARTERLY  
MOBILE INDEX**

Q1 2016



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 advertising.

In our QMI report for calendar Q1 2016, we have updated and added several key benchmarks for mobile advertising performance around pricing, volume and growth. Note that each report provides a quarterly snapshot, and directional data might not be comparable with prior quarter reports.

# IN Q1 2016, THE FOLLOWING FIVE KEY TRENDS HAVE EMERGED

**KEY TREND #1:** Android App Inventory Value Up Nearly 150% YOY, as Advertisers Seek to Target the Majority of Global Mobile Consumers

**KEY TREND #2:** For Premium Publishers, Mobile Web Represents the Majority of Mobile Traffic and Inventory, and a Significant Monetization Opportunity

**KEY TREND #3:** Average Mobile CPMs in the Americas and the EMEA Region Grew 30% and 64%, Respectively, Demonstrating Increasing Quality of Mobile Inventory on a Global Level

**KEY TREND #4:** Major Sporting Events Attracted Significant Spending in Mobile Private Marketplaces, Driving PMP Volume in the Sports Category Over 1000% YOY

**KEY TREND #5:** Programmatic is Improving Mobile CPMs, Driving Broader Mobile Advertising Growth

## What does this mean for publishers and advertisers?

**1. Mobile publishers and advertisers** need to recognize the **growing value of Android app ad inventory**. As Apple global iPhone sales slow to nearly flat growth in 2015, Android device manufacturers have focused on releasing higher-end smartphones designed to attract more affluent mobile consumers. This dynamic is having a positive impact on Android app ad inventory pricing, propelling prices closer to those of Apple app ad prices, which are still the highest among all mobile platforms.

**2. Premium publishers** should not forget that the **bulk of traffic and inventory on their sites originates from mobile web** (i.e. through mobile browsers, such as Safari and Chrome). Publishers should adopt dedicated

mobile web advertising strategies that involve better data integration for targeting and cross-platform private marketplaces (PMPs), which will in turn create better mobile web offerings for advertisers eager to target mobile consumers.

**3. The flight to higher quality inventory in mobile advertising** is perhaps one of the major trends shaping up in 2016. Average mobile CPMs across all mobile platforms have increased significantly year-over-year, demonstrating that publishers are creating higher-quality mobile inventory packages for advertisers that are in turn increasing mobile budgets to target increasingly mobile-obsessed consumers.

**4. Advertiser demand is shifting towards mobile private marketplaces (PMPs)**, which offer high-quality, targeted inventory packages, at scale. The transparent and user-friendly buying environment simplifies programmatic for media buyers, and preferred access to inventory allows agencies to pre-plan in advance of major media events, such as the Super Bowl, NCAA College Basketball tournament, UEFA Euro Cup and Summer Olympics, to target increasingly mobile-obsessed consumers.

# KEY TREND #1:

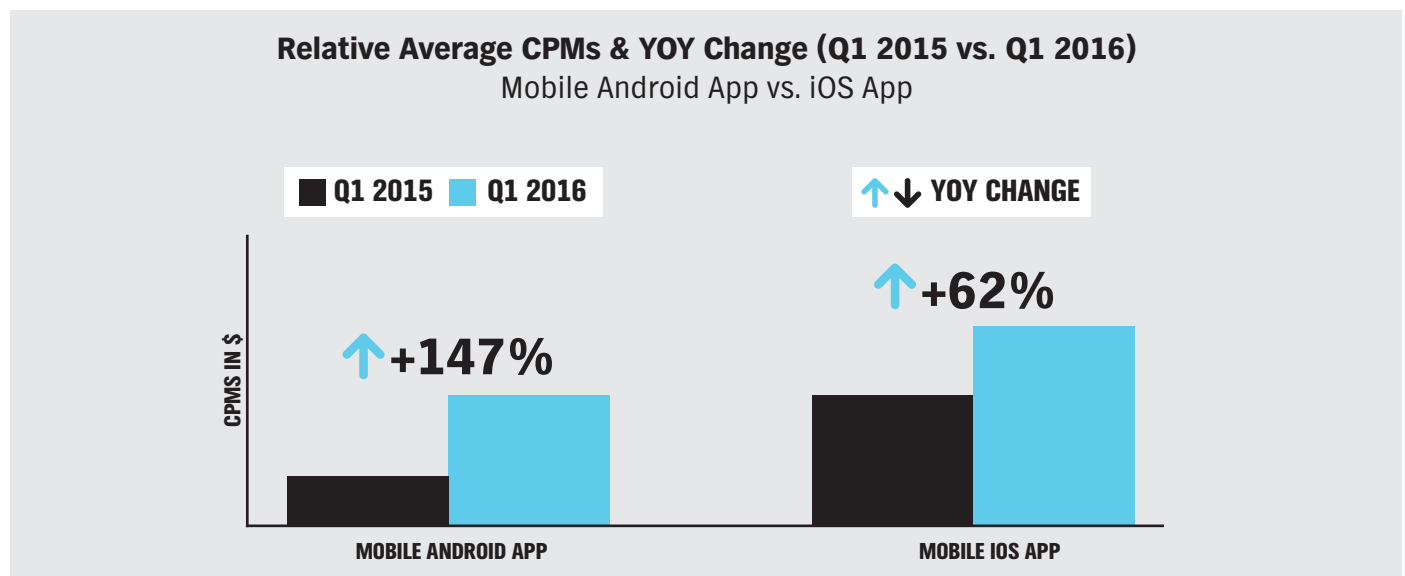
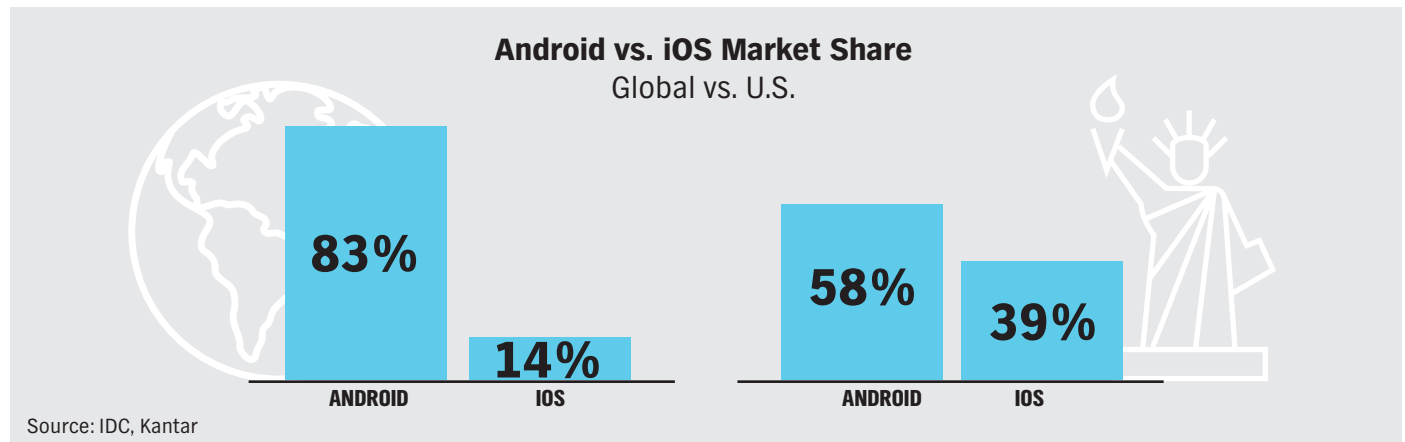
## Android App Inventory Value Up Nearly 150% YOY, as Advertisers Seek to Target the Majority of Global Mobile Consumers

Android app inventory prices grew the most in Q1 2016, up 147% year-over-year—compared to an increase of 62% for iOS app. While Apple app inventory still garners a higher price, Android app CPMs are catching up, demonstrating that Android app has become a more valuable platform for advertisers.

Android's ascension can be attributed to two key factors. First, Android smartphone users outnumber iPhone users nearly six to one globally, according to IDC, and nearly two to one in the U.S., according to Kantar. Android represents the broadest consumer platform for global mobile advertisers. Second, Android device manufacturers have developed more advanced, higher-

end smartphones that are attracting affluent consumers who were once loyal to Apple iPhones. As a result, Android apps ads are becoming more attractive for advertisers trying to reach in-market consumers in a number of key ad categories.

Across both Android and iOS app, we are seeing a strong rise in CPMs primarily due to increasing advertiser demand for mobile app inventory, as buyers seek to target more engaged mobile app users. Mobile apps also offer an environment that fosters more interactive formats and better targeting through geolocation (i.e. latitude and longitude) and device ID data, which translates into higher value ad impressions.



## KEY TREND #2:

### For Premium Publishers, Mobile Web Represents the Majority of Mobile Traffic and Inventory, and a Significant Monetization Opportunity

Mobile app inventory, on both Android and iOS, attract higher CPMs compared to mobile web and desktop, primarily due to higher engagement and targetability on mobile apps. However, many publishers do not have large scale mobile app inventory to make a significant impact on their mobile ad revenues. For many premium publishers, the majority of mobile traffic that their sites attract originate from the mobile web (i.e. through mobile browsers, such as Safari and Chrome) and not mobile apps. Therefore, it is imperative for publishers to optimize their mobile web strategies through two key methods:

1. Publishers can add device ID or geolocation (i.e. latitude & longitude) to mobile web inventory to increase

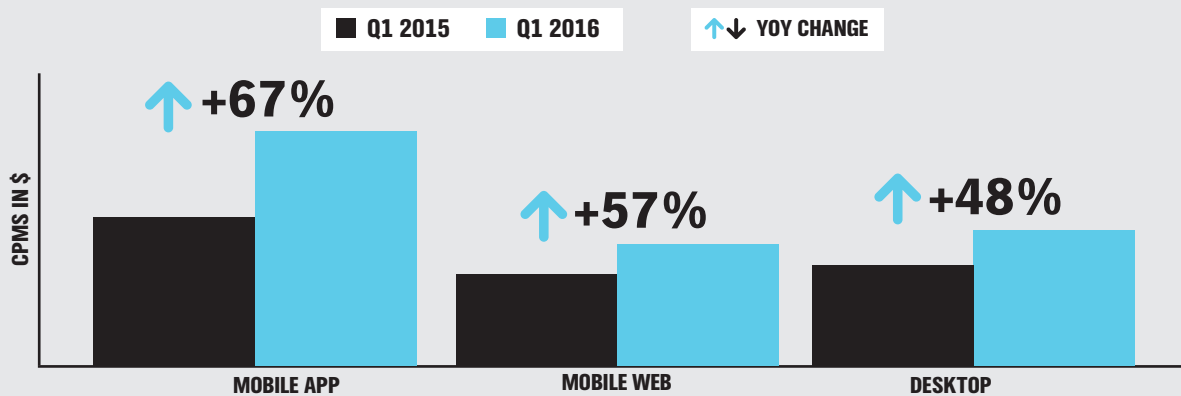
targeting capabilities. Better targetability can increase value of mobile web inventory significantly.

2. Publishers can bundle their mobile inventory into private marketplace (PMP) packages to make them cross-platform, which is more attractive to media buyers and typically attract higher prices than single-platform PMP packages.

Overall, publishers should work closely with programmatic partners to develop dedicated mobile web strategies and effectively monetize the bulk of mobile traffic coming to their sites.

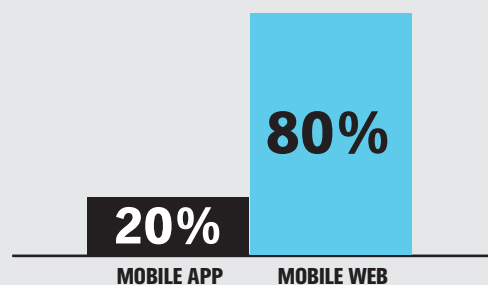
Relative Average CPMs & YOY Change (Q1 2015 vs. Q1 2016)

Mobile App, Mobile Web & Desktop



Q1 2016 Share of Volume (Monetized Mobile Impressions)

by Mobile Platform



## KEY TREND #3:

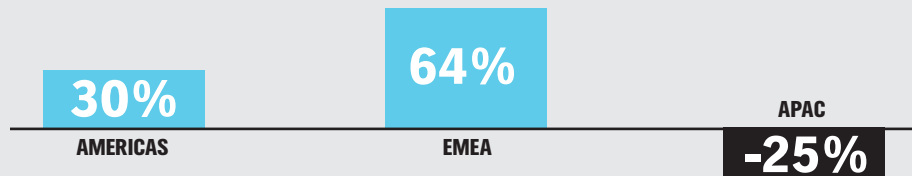
Average Mobile CPMs in the Americas and the EMEA Region Grew 30% and 64%, Respectively, Demonstrating Increasing Quality of Mobile Inventory on a Global Level

In Q1 2016, average mobile CPMs in the Americas (North and South America) and the Europe, Middle East and Africa (EMEA) region showed significant increases year-over-year, up 30% and 64%, respectively. This demonstrates that, in those markets, mobile inventory quality is increasing, which is driving price up. This flight to quality is important for both publishers and advertisers to understand, especially as consumers increasingly adopt ad blocking software. According to comScore and Sourcepoint, ad blocking rates in the U.S. and U.K. stand at 9% and 10%, respectively, with slightly higher rates in Canada and the rest of Europe. To combat ad blocking, both publishers and advertisers need to focus

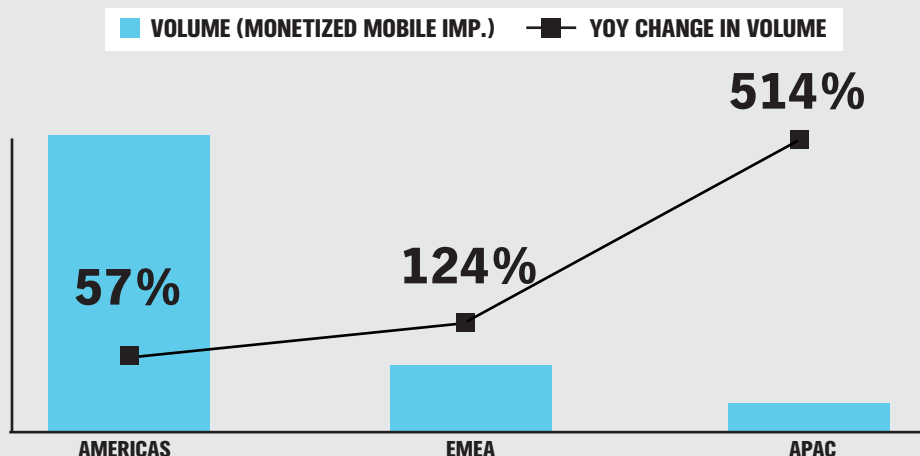
on providing consumers with higher-quality media experiences that incorporate premium advertising that is more interactive, less annoying and seamlessly coupled with content.

In terms of volume, the Americas remains the largest opportunity among all global regions, followed by EMEA and the fast-growing Asia-Pacific (APAC) region, which grew 514% in monetized impressions, year-over-year. This triple-digit growth offset the 25% decline in APAC prices, a typical economic dynamic in emerging regions as prices reach equilibrium levels.

Q1 2016 YOY Change in Average Mobile CPMs  
by Global Region



Q1 2016 Monetized Mobile Impression Volume & YOY Change  
by Global Region



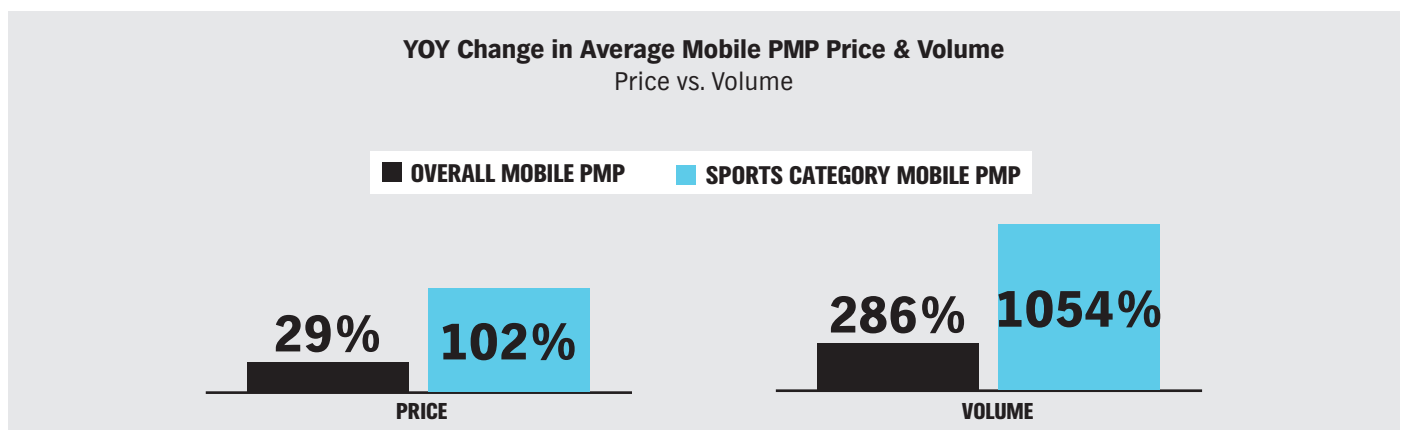
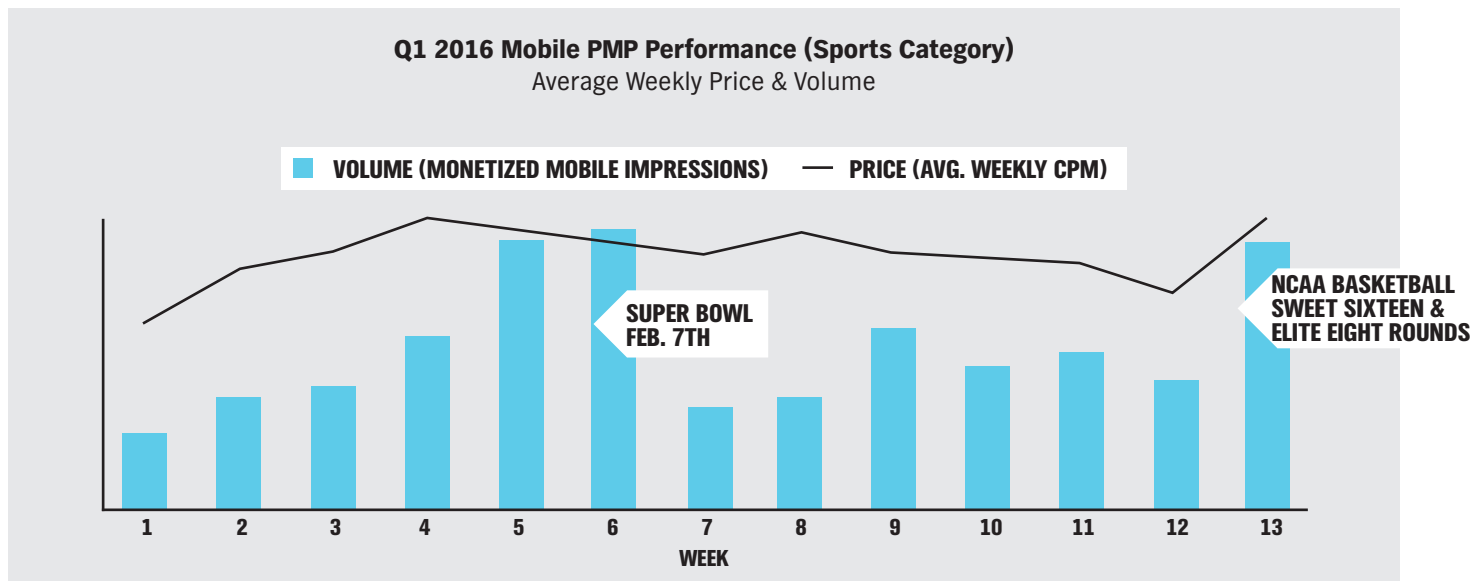
# KEY TREND #4:

## Major Sporting Events Attracted Significant Spending in Mobile Private Marketplaces, Driving Volume in the Sports Category Over 1000% YOY

This year's Super Bowl and NCAA College Basketball Tournament attracted large volumes of ad spend in mobile private marketplaces (PMPs), especially as advertisers focused on targeting increasingly mobile-fixated consumers who were following these exciting match-ups on their mobile devices. As a result, mobile PMP volume (monetized impressions) in the sports category grew nearly 300% from week 1 to week 6 (during the Super Bowl), with another similar spike in volume in week 13 (during the NCAA Basketball Sweet Sixteen and Elite Eight rounds). These trends demonstrate how advertisers and agencies are increasingly buying PMPs inventory packages to gain access to high-quality

inventory and the ability to pre-plan on large-scale campaigns, all in a transparent buying environment.

The continuing shift to PMP buying behavior has had a major impact on overall PMP volume and price. Mobile PMP price in Q1 increased 29% year-over-year, while volume increased 286% year-over-year. In the sports category, mobile PMP price in Q1 increased 102% year-over-year, while volume increased 1054% year-over-year, demonstrating that the sports has contributed greatly to the growth in mobile PMPs. Looking ahead to Q2 and Q3, this trend might continue through to the UEFA Euro Cup in June and July and the Summer Olympics in August.

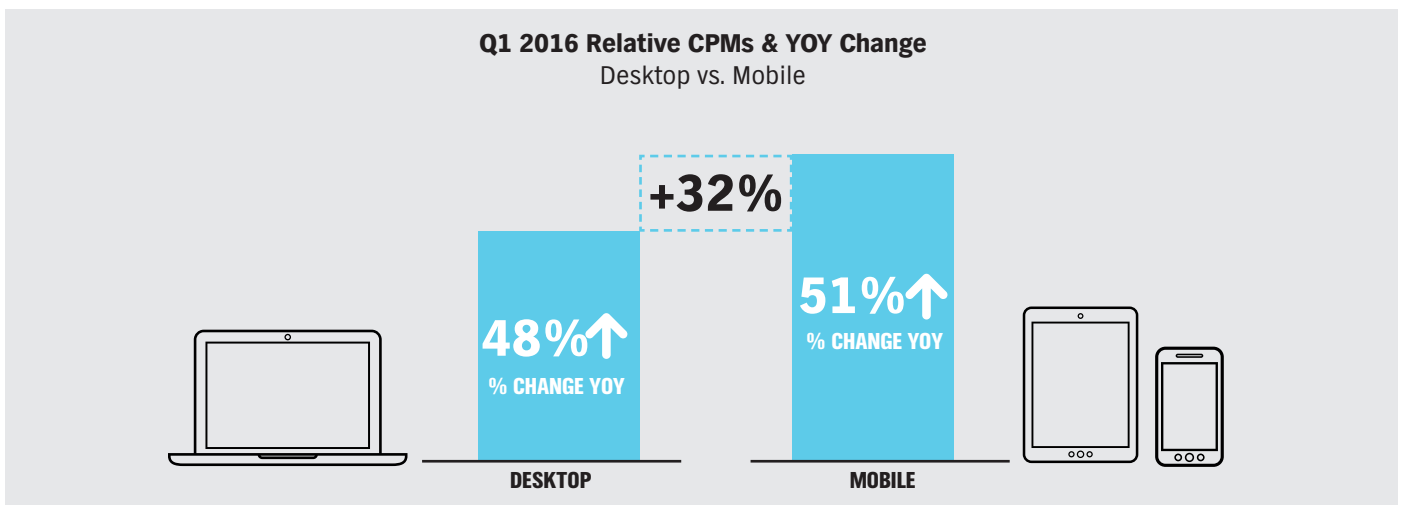
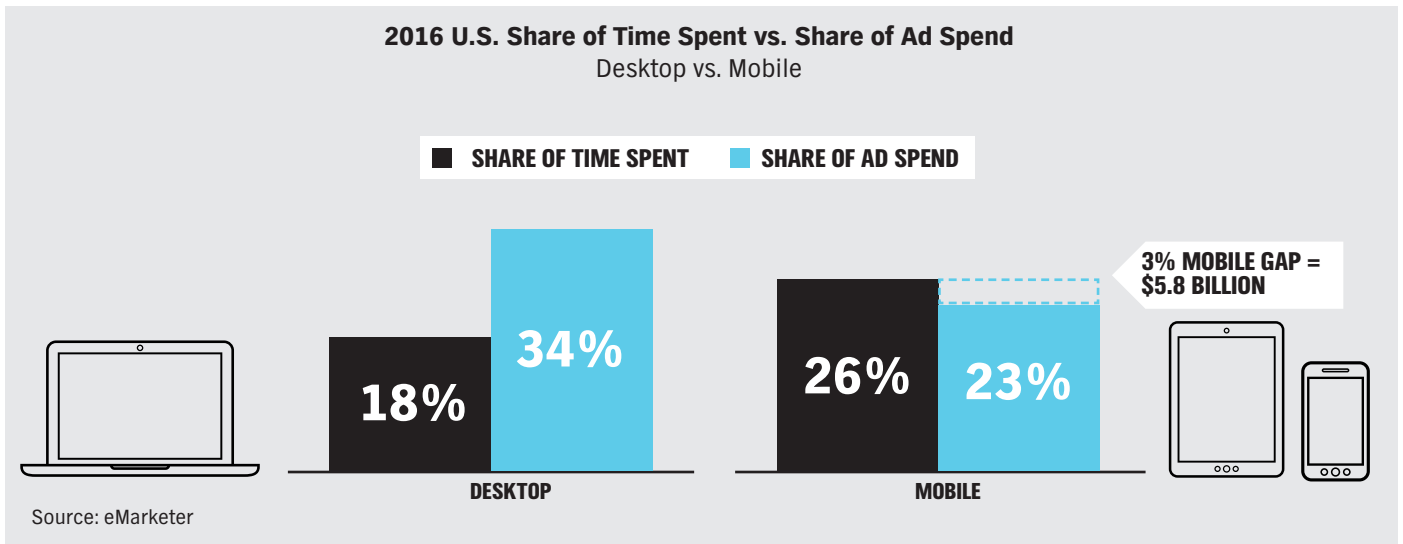


# KEY TREND #5:

## Programmatic is Improving Mobile CPMs, Driving Broader Mobile Advertising Growth

Programmatic platforms are driving higher CPMs for mobile publishers. This is helping to close the “mobile gap,” or discrepancy between the share of ad spending in mobile (compared to total media) and the share of time spent with mobile (compared to all media), which is expected to be 3% of ad spending in the U.S. in 2016, representing a \$5.8 billion gap in ad spending. By comparison, on the more mature desktop platform, the percentage of ad spend far exceeds the percentage of time spent.

According to PubMatic’s platform data, average mobile CPMs in Q1 2016 were 32% higher than average desktop CPMs and grew faster year-over-year, up 51% for mobile CPMs, compared to 48% for desktop CPMs. This demonstrates how programmatic is driving growth in the global mobile advertising industry. With major growth expected in global mobile ad spending over the next few years (according to eMarketer), PubMatic data supports the notion that the mobile gap will continue to narrow on a broader global level.





## QMI Methodology

PubMatic's yield and data analytics team analyzes billions of impressions on a daily basis, utilizing the company's best-in-class analytics capabilities. The Q1 2016 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. Data is from calendar year Q1 2016, i.e. January 1, 2016 through March 31, 2016. "Monetized impressions" are defined as impressions that were sold through the PubMatic platform, and "CPM" is defined as the cost per one thousand monetized impressions.

## About PubMatic

PubMatic is the leading marketing automation software company 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 for the fourth consecutive year in 2015. The company has offices worldwide, and is headquartered in Redwood City, California.

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