Global Advertising Forecast

Winter Update
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Executive Summary

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Key Findings

- Globally, advertising revenues demonstrated their strongest growth since 2010 this year, as advertising sales reached $493 billion
- Global ad growth will slow noticeably in 2017, to +3.6%
- Social and search captured the bulk of dollar growth in 2016: $23 billion out of $26 billion
- TV ad sales resilient due to stronger pricing and cyclical events including sports and US elections
- Digital ad sales to surpass TV by 2017
- US ad sales grew nearly 7% to $180 billion, achieving its strongest growth in 12 years

Top Stories

1. **Globally, media owners advertising revenues grew by +5.7% in 2016, to $493 billion**. This is in line with our previous forecast (June 2016: +5.4%). The biggest contributors to growth were the US (+6.9%), China (+7.2%), Australia (+7.4%) and the UK (+5.2%). 2016's cyclical events (US elections, UEFA Football tournament, Olympic Games, Copa America) boosted ad sales despite lower-than-expected ratings.

2. **MAGNA forecasts global ad growth to slow to +3.6% in 2017**, due to economic and political uncertainty and the lack of cyclical events. That would be the lowest growth rate recorded in 15 years outside of the great recession in 2008-2009.

3. **Linear television advertising sales were resilient in 2016, growing by nearly +4%** to $186 billion, helped by cyclical events, as pricing inflation (CPM +8%) offset a decrease in ratings (-7% in the US, more moderate elsewhere). Advertising growth will, however, come to a halt in 2017 (-0.1%).

4. **Digital advertising sales (display, video, search, social) grew by +17%** to $178 billion while offline media sales (linear TV and radio, print, out-of-home) were flat (-0.3%) at $315 billion. Without the even-year booster than benefitted TV, traditional media would have been down by -2%.

5. **Digital-based ad sales will become the No.1 media category in 2017**, reaching a market share of 40% ($202 billion), compared to linear TV ad sales ($186 billion, 36%). From there, digital will grow to capture 50% of the market by 2021 ($299 billion) while linear TV will plateau at $195 billion (33%).

6. **2017 will also be the year when the majority of digital ad sales (52%) are generated by mobile impressions or clicks**, driven by the rapid growth in social and search usage on mobile devices.

7. **US advertising sales grew by nearly 7% this year to $180 billion**, the strongest growth rate in twelve years. Neutralizing the incremental spending generated by political and Olympic spend ($3.5 billion), 2016 ad growth would have been +5.1% this year; it will slow down to +3.9% in 2017.

8. The global advertising market is currently growing faster than what should be expected in the current economic environment. MAGNA believes that this is due to **social and search being fueled by untapped "below-the-line" marketing budgets**, and not just taken away from traditional media budgets.

9. **The advertising market is increasingly concentrated around a few formats and vendors**. The bulk of net market growth in 2016 ($26 billion out of $27 billion) came from digital ad sales. More specifically, almost 90% of the net dollar growth came from two ad formats only: search and social. In some markets, like Western Europe, search and social alone actually represented 110% of the net market growth, meaning that everything else combined (including online display and video) shrank last year. Finally, the two global media vendors dominating search and social, Google and Facebook, together control more than half (54%) of total digital advertising market (vs 44% a year ago).

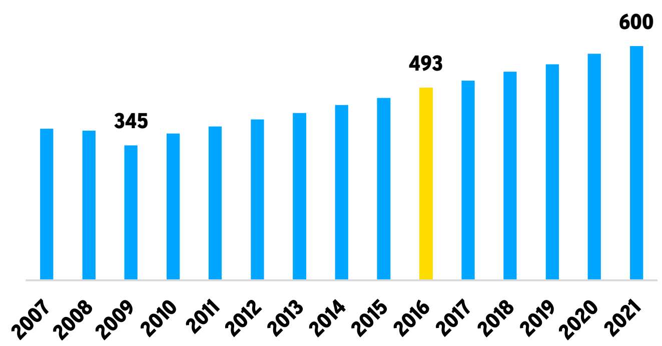
10. With digital-based ad sales approaching 40% of total sales in 2017 and projected to reach 50% by 2021, it is time to **diversify statistical categorizations and think in terms of future-proof formats or genres**, in addition to consumption platforms. Television, audio entertainment and print/news publishers are monetizing their content on digital and mobile platforms too. For instance, consolidating linear television (-1% CAGR over 2017-2021) and the various forms of digital video (cross-platform, cross-screen CAGR +33%) suggests a combined growth of +6% per year in the US.

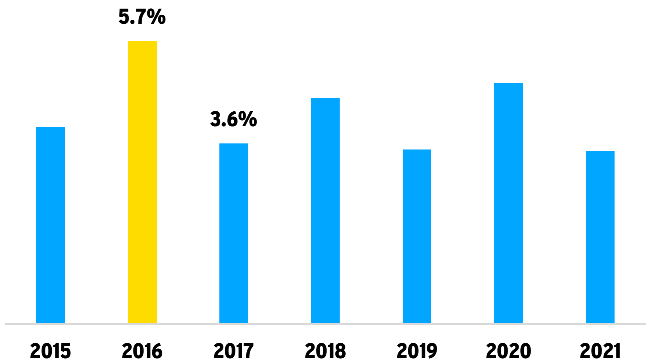
"Advertising sales were strong overall in 2016 and North America was the most dynamic region. The resurgence of television (+4%) did not come at the expense of digital (+17%). Both grew strongly this year because advertisers are funding social spend (+46%) and search spend (+17%) by reallocating below-the-line offline marketing budgets more than traditional branding mass media. At the same time, they had to face significant cost increases in television to maintain their share of voice and reach."

- Vincent Létang, EVP, Global Market Intelligence at MAGNA

Key Stats

- Of the 70 markets analyzed by MAGNA this year, **63 experienced advertising growth** this year and only seven (most notably Thailand) saw a decrease.
- The highest growth rate was recorded in **Egypt** and the **Philippines** (both 17%). Among the top 20 markets, the fastest-growing country remains India (+14%) followed this year by a recovering Russia (+8.8%).
- **The 17% growth in digital ad sales are entirely driven by mobile advertising (+47%)**, while desktop-based ad sales stagnated (0%) in 2016 and actually shrank in many markets. Mobile advertising accounts for 45% of total digital ads by the end of 2016 and will account for 52% by the end of 2017.
- Digital growth was driven by video formats (+35%) and social formats (+43%) while search remains the largest digital media format (+14% to 17.5 billion - 45% of total digital advertising) and banner ad sales declined (-5%).
- **North America remains the largest market,** growing +6.7% to $191 billion; it is projected to slow down to just +1.8% in 2017.
- **Western European** markets grew by nearly +4% for the third year in a row, to reach $100 billion. However growth was significantly lower in the second half and we expect 2017 sales to slow down to +2.4%. **Central and Eastern European** ad sales increased by +6.0% to $16 billion, as the Russian market recovered.
- **Asia-Pacific** media sales reached $148 billion (+5.3%) while recession-stricken **Latin America** managed to grow by +5.5% as the Summer Olympics helped its host country, Brazil.





Global Media Owner Advertising Revenues	2016 Size ($bn)	2016 Growth (%)	2016 Growth (bn)	Share of Total	2017 Growth	16-'21 CAGR
Grand Total (Global, All Media)	**493**	**5.7%**	**27**	**100%**	**3.6%**	**4.0%**
US	180	6.9%	12	37%	1.7%	2.9%
North America	191	6.7%	12	39%	1.8%	3.0%
Western Europe	100	3.9%	4	20%	2.4%	2.2%
Central & Eastern Europe	16	6.0%	1	3%	5.6%	4.9%
Latin America	23	5.5%	1	5%	6.2%	6.2%
Asia Pacific	148	5.3%	7	30%	5.4%	5.3%
Digital Ad Sales**	**178**	**16.9%**	**26**	**36%**	**13.3%**	**10.9%**
Search+Social**	123	23.5%	23	25%	17.0%	12.4%
Mobile***	80	47.5%	26	16%	31.4%	21.8%
Offline Ad Sales*	**315**	**0.3%**	**1**	**64%**	**-1.8%**	**-0.9%**
Linear Television*	186	3.8%	7	38%	-0.1%	1.0%
Print*	69	-9.1%	-7	14%	-9.4%	-9.0%
Radio*	29	-0.5%	-0	6%	-0.7%	-1.0%
OOH	31	3.3%	1	6%	3.7%	2.9%

*** Includes linear ad sales on legacy platforms (broadcast, paper). Excludes publishers ad sales on digital platforms.** includes ad sales on all digital platforms.*** includes ad sales from all digital formats on smartphones and tablets.**

Global Overview: 2016

Globally, net media owners advertising revenues grew by +5.7% in 2016, to $493 billion, up from +4.0% in 2015 and marginally above our previous forecast (+5.4% in June 2016). The 2016 growth was the strongest since 2010, which experienced a post-recession recovery of +8.8%.

This year's cyclical events (Elections and Copa America in the US, UEFA Football in Europe, Summer Olympics in Brazil,) generated incremental advertising spending and thus boosted media owner ad revenues compared to 2015 (when no such events took place). On a global basis MAGNA believes that this year's events accounted for 1% of extra growth.

"The 5.7% growth in 2016 was the result of digital ad sales growing by +17% while offline media ad sales (linear TV, print, radio, and out-of-home) were flat (+0.3%)"

The strongest growth came from North America this year (+6.7%), as the US market (accounting for 37% of global ad dollars) recorded its strongest growth rate in 12 years (+6.9%), while growth slowed down in many emerging regions. Then came Central and Eastern Europe (+6.0%), Latin America (+5.5%), Asia-Pacific (+5.3%) and Western Europe (+3.9%).

The 2016 growth was the result of digital ad sales growing by +17% while offline media ad sales (linear TV, print, radio, and out-of-home) were flat (+0.3%). If not for the incremental cyclical spend, benefitting mostly television, offline media sales would have decreased by approximately -2%, matching the 2015 performance.

Linear television advertising sales were resilient in 2016, growing by nearly +4% globally to $186 billion, due to the additional ad spend generated by cyclical events, as well as pricing inflation (CPM +8% on average) which offset a decrease in ratings (-7% in the US, more moderate elsewhere). Traditional television categories, such as CPG/FMCG, personal care, food and beverage, showed strong television spend this year. This was partly due to sports events encouraging beverage and automotive brands to increase their budgets on even years. In addition, some major CPG groups publicly stated their strategy to re-allocate more budgets into traditional television as digital formats had provided disappointed sales results. In fact, big TV categories had to increase their TV spend just to maintain their share of voice in a media that remains essential for reach and awareness goals, in an inflationary environment. In most cases, TV spend increases did not come at the expense of digital media spend, which continued to increase at a fast rate. If anything, it came at the expense of print and radio budgets.

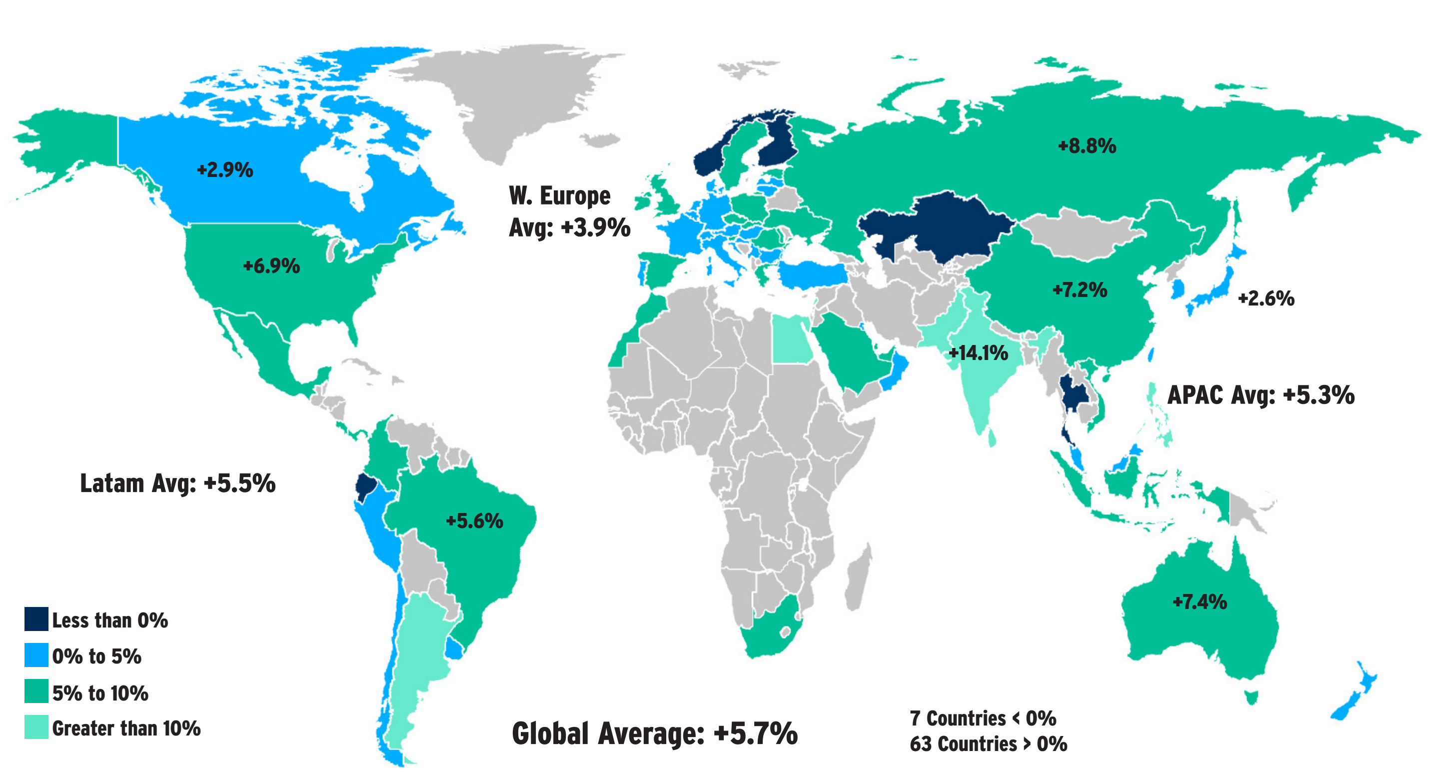
Global Overview: 2017

MAGNA forecasts media owners' net ad sales to slow down to +3.6% in 2017, due to the lack of cyclical events, and the economic and political uncertainty in several markets (Brexit process, new presidency in the US, general elections in Germany and France). That would be the lowest growth rate recorded in 15 years outside the great recession of 2008-2009.

We anticipate digital media sales to grow again by double-digits (+13%) while offline ad sales will shrink by 2%. Linear television and radio ad sales will be essentially flat (-0.1% and -0.9% resp.) while print ad sales will continue to decline (-9%) and out-of-home will maintain decent growth (+3.7%).

North America, being the region with the heaviest cyclical shift (due to the $3.5 billion of incremental spend around Elections/Olympics in even years) will show the most significant slowdown in 2017: +1.8% (+1.7% in the US). Western European ad sales will slow down to +2.4% after three years of 4% growth. Central and Eastern Europe will continue to grow at a similar pace as 2016(+5.6%). Asia-Pacific will also maintain its current growth pace (+5.4%) while Latin America will accelerate amidst economic

Advertising Growth 2016



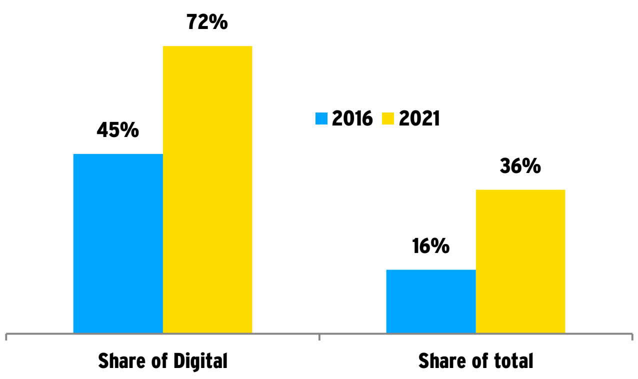
Digital Media

DIGITAL ADVERTISING GREW BY +17% THIS YEAR TO REACH $178 BILLION, AHEAD OF PRIOR EXPECTATIONS OF +15% GROWTH. DIGITAL GROWTH IN 2017 IS NOW EXPECTED TO REACH +13% (PREVIOUSLY: +12%). DIGITAL CONTINUES TO OUTPERFORM ALL OFFLINE-BASED MEDIA SALES, AND WILL SURPASS LINEAR TELEVISION EARLY NEXT YEAR TO BECOME THE LARGEST PORTION OF ADVERTISING BUDGETS. BY THE END OF 2017, DIGITAL AD SALES WILL REACH 40% MARKET SHARE, SURPASSING LINEAR TV IN 22 INDIVIDUAL MARKETS OF THE 70 MONITORED BY MAGNA. OF THE TOP 10 MARKETS, ONLY THREE (JAPAN, BRAZIL, INDIA) HAVE NOT REACHED THAT MILESTONE YET.

The continued double-digit growth for a segment that's now more than a third of total ad dollars means it is contributing essentially all incremental advertising spend dollars. The global advertising economy is expected to increase by $27 billion in 2016. Of that $27 billion, $26 billion is coming from increases in digital advertising. Digital will remain the driver of total advertising spending, with compound growth of +11% expected through 2021. This fast outpaces the expected growth rates for linear TV (+1%), newspapers (-8%), magazines (-11%), radio (-1%) and OOH (+3%). As a result, digital ad sales will grow to $299 billion by 2021, and will represent 50% of total advertising sales. This average varies significantly across the globe, with digital reaching 56% by 2021 in the United States, 59% in China, 65% in Australia, and just 25% in India.

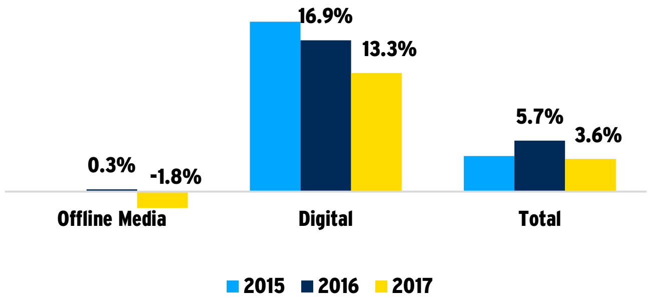
Within digital advertising, **mobile-based impressions and sales are the primary growth driver**. Globally, mobile advertising increased by +48% this year to reach $80 billion, or 45% of total digital advertising dollars. Growth is expected to remain robust in 2017 (+31%), when mobile will become the majority of digital advertising dollars for the first time. By 2021, mobile advertising will have increased to $215 billion, or 72% of total digital budgets. The fastest growing portions of the digital advertising economy are the formats that are most rapidly transitioning to mobile spend: social media, video, and search advertising. In fact, not only is mobile the largest contributor to digital advertising growth, but 2016 was the first time that there was no growth for desktop-based ad sales. One factor accelerating the shift to a mobile-centric digital market is the stagnation in desktop impressions caused by ad blockers while blockers are largely ineffective so far in the mobile, app-centric environment. Desktop ad sales will begin to shrink in 2017, and will be in permanent decline thereafter.

Mobile Advertising Penetration



Paid Search is the largest portion of digital advertising budgets, representing 50% of total digital spend globally in 2016. Growth has remained stronger than previous expectations, with an impressive performance from Google this year. Following 2016's +17% search advertising growth rate, we expect +13% growth in 2017, and a +10% CAGR through 2021 for search advertising. Increases in search spend are driven by new ad products and functionality, such as map search listings, expanded text ads, and custom audiences. The search market, as measured by MAGNA, is also growing this year as we now account for revenues generated by digital players outside the conventional search engine industry, when their ad product is functional similar and substitutable. This includes Alibaba's Pay for Performance business and it's likely we will see similar increases from non-core search players (such as Amazon) over the next five years. Finally, 2017 will see mobile search revenues (generated by clicks on smartphones and tablets) reach half of global search advertising sales, driven by location-based on-the-go search activity. By 2021, MAGNA forecasts that mobile search will represent 71% of total search advertising dollars.

Digital vs. Offline Growth



Social media is the second largest portion of digital budgets, and the fastest growing format. Advertising sales in social media (including video formats) increased by +46% globally in 2016 to $33 billion, similar to last year's +50% growth rate. Growth will remain high (+29%) in 2017. Social is the format that has transitioned most aggressively to mobile devices and apps, following a rapid shift in consumer usage. In 2012 (when Facebook introduced the first ads in its previously ad-free app), mobile-based ad sales were just 6% of social advertising spend globally; four years later, it is 81% of total social advertising revenues and by 2021, it will represent 94% of total social advertising spend. Social media growth has been driven by multiple factors, including the rise of social video, Facebook more effectively circumventing ad blockers in its desktop interface, and increased ad loads on Instagram.

The rapid rise of social video was perhaps the biggest game changer in the advertising industry in 2016. According to MAGNA estimates, video ad formats already account for nearly 15% of the social media advertising revenues. If consolidated with other forms of digital video ad sales (full episode players, YouTube and video ad networks), social video represents already 25% of digital video advertising. Behind the explosive growth of social video (+140% in the US to $2.1 billion this year) are mainstream consumer brands, previously spending very little with social media and attracted by the "best-of-both-worlds" promise (the creative impact of TV commercials, the targetability and accountability of social networks). Their social video effort has been funded partly at the expense of other digital video formats, and partly by new money.

Other Digital Video ad sales (including revenues from full episode players, YouTube and video ad networks, but excluding social video) grew by +27% globally this year, characterized by rapid increases in YouTube sales on a global basis, and positive growth for premium content on FEP platforms. The long tail of digital video is also re-energized with non-video-centric websites (e.g. news) running an increasing volume of "outstream" autoplay video commercials, frequently bought programmatically. Next year, digital video growth will remain around +27%.

Display banner ad sales are expected to shrink by -3% this year, marking the first full-year of negative growth on a global scale. While we expect mobile display advertising to continue to show positive growth through 2021, total display will remain negative through the end of our forecast period. Display has fallen out of favor with brands compared to other more exciting advertising formats. In addition, not only is there less demand overall, but there is also less banner display inventory as in-banner video and rising concerns about negative advertising experiences for consumers have reduced the total volume of display ad slots for sale.

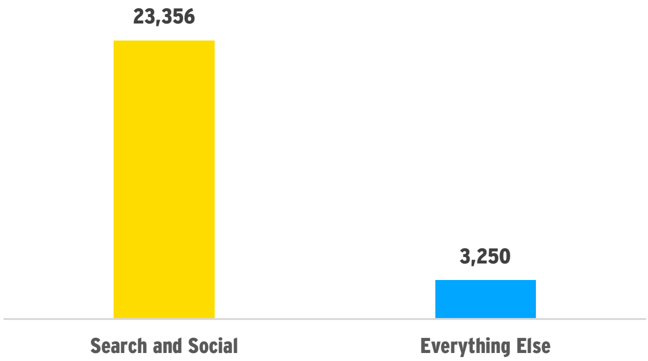
Digital Media (Continued)

Across display-related formats (static banners, rich media and video ads), **programmatic technologies and platforms remains a key driver of media-buying activity and innovation**. According to the MAGNA Programmatic Report, the volume of programmatic and automated digital media transactions will grow from $19 billion in 2016 to $42 billion in 2020. Programmatic transactions will grow to represent 57% of display-related transactions by that time. Growth in programmatic ad sales reached +27% this year, slowing down from 2015's +54% growth rate, as the industry continues to mature. While global growth rates are slowing somewhat, 2016's $4 billion of incremental programmatic dollars is similar to the $5 billion of incremental dollars transacted programmatically in 2015. The largest share of programmatic spend still comes from desktop banner display but by 2020, mobile and video will have expanded to represent the majority of the programmatic ecosystem. The United States remains the largest programmatic market in the world by a significant margin, representing half of all global programmatic spend. It is followed by China, Japan, and the United Kingdom.

Within digital, and indeed within the entire advertising economy, there's an **increasing dichotomy between two pay-per-performance ad formats, search and social, showing explosive growth**, while everything else, including digital display, is stagnating or declining. Search and social are providing an incremental $23 billion of total spend this year, equivalent to 88% of the global increase in advertising dollars ($27 billion). In some mature markets like Western Europe we even see search and social contributing to more than 110% of the net dollar growth, meaning that all other formats combined (digital or offline) is shrinking. It is notable that programmatic display-related spend, along with search and social spend, represent the general direction of brand activity. Advanced targeting data, post-campaign measurement efficiency, and ease of execution are just a few factors contributing to the growth in these formats.

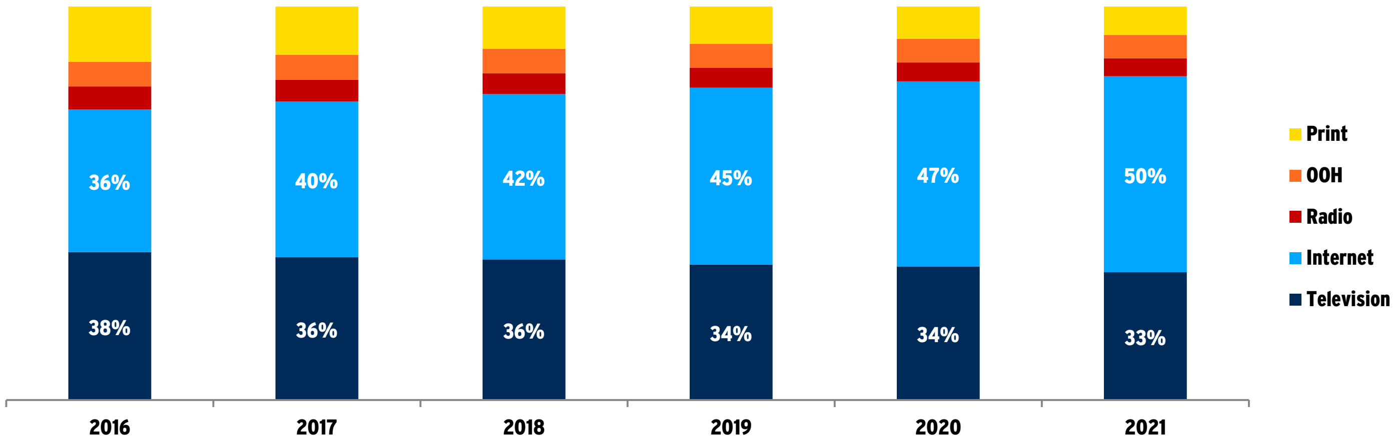
The fact that these two formats - social and search - are increasingly dominated by two global vendors, Google and Facebook, adds another layer of concentration in the advertising ecosystem. Together, these two digital behemoths represent just over half (54%) of global digital advertising.

Incremental Dollar Contribution 2016 ($ mm)



One final feature of the digital advertising economy to keep in mind is from where incremental spend is coming. In the past, digital spending growth was fueled by budget taken out of print and radio. More recently (from 2014), we started to notice digital growth fueled by television budgets too. Yet now, digital spend has grown to the point where there are not enough traditional media budgets left cannibalize and continue fueling today's robust digital growth rates. Therefore, it is increasingly clear that **digital growth is not just being fueled by budgets taken from print, radio and TV budgets, but also, and perhaps mostly, from "below-the-line" marketing budgets that are not monitored by MAGNA** but remain significant in most markets, such as SEO, in-store marketing, direct mail or promotional budgets. Incremental spend is coming in from outside the "media" ecosystem (mostly to fuel the growth of pure digital formats (search and social), and therefore growing the pie of what MAGNA defines as media in this study, rather than re-allocating from within.

Global Market Shares by Media Type



United States

IN THE US, MEDIA OWNERS' ADVERTISING SALES GREW BY $12 BILLION DOLLARS IN 2016 (A GROWTH RATE OF +6.9%) TO REACH $180 BILLION, INCLUDING POLITICAL AND OLYMPIC AD SPEND (P&O). IT TOOK ALMOST 10 YEARS FOR THE MARKET TO FINALLY CATCH UP WITH ITS PRE-RECESSION LEVEL, WHICH WAS $169 BILLION IN 2007. THE 2016 RATE OF GROWTH WAS ITS STRONGEST IN 12 YEARS, WHEN 2004 AD GROWTH HIT +7.1%. WITHOUT THE $3.6 BILLION OF INCREMENTAL ADVERTISING SALES DRIVEN BY POLITICAL AND OLYMPIC SPEND THIS YEAR, THE MARKET WOULD STILL HAVE GROWN BY +5.1% COMPARED TO +4.3% IN 2015. THIS SIGNIFIES THE STRONGEST RATE IN MORE THAN A DECADE (SINCE 2005) FOR UNDERLYING GROWTH.

The growth in 2016 was in large part due to a **very strong first half** (+6.3% excluding P&O), while we observed a noticeable slowdown in the second half (+4.0%), primarily coming from national TV.

Linear national television ad sales grew by +2.8% to $44.1 billion in 2016, or +1.1% when excluding the half-billion incremental revenues generated by additional spend by some categories around the Olympics (typically beverage, finance, automotive). A main theme throughout 2016 was the continuation of elevated scatter prices, which initially occurred in the second half of 2015. In the first half of 2016 these premiums more than offset ratings declines as national television posted quarterly growth rates that were among the best seen in years (overall 1H16 was up +4.3% YOY). The second half of the year is presenting more challenges, however, including much higher comparables from 2015 (2H16 is estimated at -2% YOY).

"Advertising sales in the US grew by +6.9% in 2016, the strongest rate of growth in 12 years."

On a full-year basis and aggregating all networks, MAGNA estimates that the 3% growth in national TV ad revenues was a combination of -5% in volume (ratings) and +8% in pricing (CPMs). High inflation in national TV is caused by robust demand from mainstream consumer brands in CPG categories desiring the reach and impact on sales that national TV campaigns can measurably deliver, while inventory continues to shrink quarter after quarter.

2016 was indeed the year when the last program genre that seemed to guarantee stable reach and ratings for linear television, began to suffer from the erosion in viewing that has already affected every other program genre in the last six years. The Olympics, taking place every four years on basically the same format, proved an interesting indicator of long term viewing trends: the 2016 primetime live ratings were down -33% for adults 18-49. According to NBC, adding online streaming views would only mitigate the cross-screen decline to the 20% range. All other "tentpole" events (e.g. award ceremonies) and major league games (e.g. NFL) were also significantly down, suggesting 2016 was a tipping point in media consumption: not only did audiences veer away from linear viewing on traditional platforms, but they start showing less interest for traditional television formats altogether: what most people consume on their computers, tablets or phone is often not the event's simulcast or replay, but only the highlights. Instead of watching the full four hours of the Olympic ceremonies or the Super Bowl, they might watch ten minutes of highlights, reducing the opportunities for ad insertions.

NBCU reported Olympics ad sales worth $1.2 billion this year, the same number as 2012, of which MAGNA estimates $605 million were incremental to the television industry on a full-year basis, and the rest were taken from other networks or other months. As a bigger portion of those sales went through digital platforms, the national linear broadcast incremental revenue was lower than four years ago, at $520 million.

Local television ad sales grew by +11.3% to $23.4 billion, but it would have been flat if excluding an estimated $2.9 billion in P&O sales. The 2016 election cycle proved disappointing for local media and for local television that usually gets the bulk of political advertising spend. Earlier in the year, it was hoped that 2016 would beat 2012 to provide the biggest bonanza ever for local television but the presidential campaign (that typically accounts for one-third of total political spend in election years) proved disappointing. While Hillary Clinton spent a similar amount as Barack Obama did four years before, the GOP candidate Donald Trump, either by choice or lack of funding, spent significantly less than Mitt Romney in 2012. Overall, we believe that the incremental political revenue for local TV was flat in 2016, at $2.9 billion. The fact that the bigger spender lost this time might be bad news for local television looking forward, as it creates a precedent for wining without outspending one's rival, by relying instead on social media and 'free' news airtime. Most analysts point to a questionable use of television by the Clinton campaign (wrong message, wrong locations), rather than a dip in the intrinsic efficiency of local television.

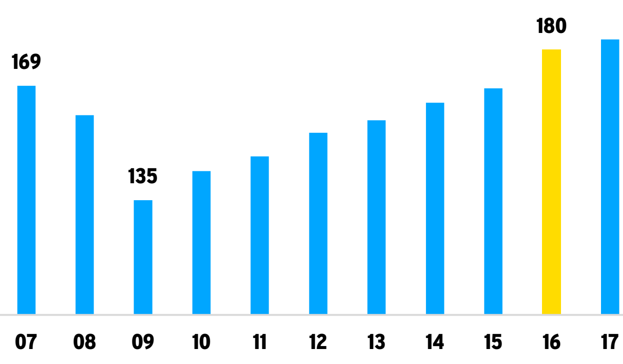
Digital ad sales (display, video, search, social) grew by +18% in 2016 and became the largest media platform in the country, at $70.3 billion (39% of total ad revenues), ahead of television (local and national, including P&O) at $67.4 billion (37.4%). Meanwhile the offline ad sales of traditional media categories (television, print, radio and OOH on their legacy linear platforms) grew by +0.9% including P&O or -2.0% when excluding P&O (compared to -2.7% in 2015).

The main drivers of digital advertising growth this year were **social media** (+48% including social video formats), other digital video formats (+24%), and paid search (+19%). Advertising sales generated by mobile-based impressions or clicks now account for 47% of total digital spend in 2016 and will account for more than half (55%) by 2017. Desktop growth is now negative, on the other hand, declining by -2% this year and by -5% in 2017. **Social video** (the advertising sales generated by video ad formats within social networks) **was a key driver and game changer in 2016**: MAGNA estimates that ad sales grew by +142% to $2.1 billion. Social video now represents 13% of social media ad sales and 23% of total digital video if we aggregate it with other digital video platforms (full episode players, YouTube, video networks).

Print media advertising sales (which excludes digital revenues from publishing companies) decreased by -10% this year (daily newspapers -11% to $12.4 billion, magazines -9% to $8.5 billion). The continued erosion was again caused by a long term decline in print readership that is not compensated by CPM inflation (daily newspapers +5%, magazines +2%) as big print categories (retail for dailies, personal care and beauty for magazines) diversify their budget towards digital formats. Even when factoring in the digital advertising revenues of traditional print publishers (+7% to $6.1 billion in 2016), total print advertising is still declining (-7% to $27 billion) as pure digital formats and pure digital vendors get the bulk of digital growth.

Radio's linear advertising sales (excluding digital revenues) declined -3% in 2016 in line with the 2015 performance. Traditional radio still faces stiff competition from digital media in local markets but its reach remains high, with some radio network news and talk shows performing well in 2016. This was driven by an elevated interest from listeners, especially regarding

US Advertising Revenues ($ Billion)



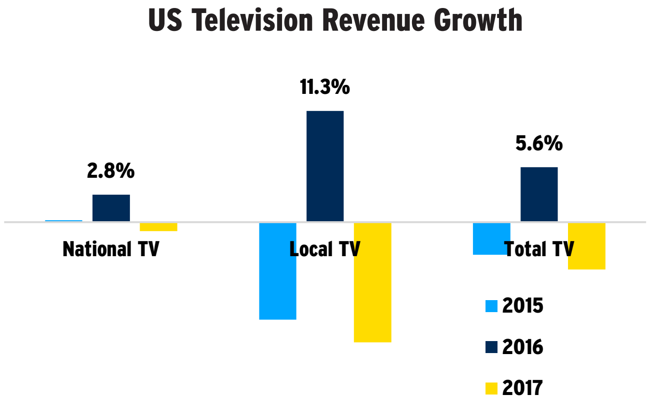
United States (Continued)

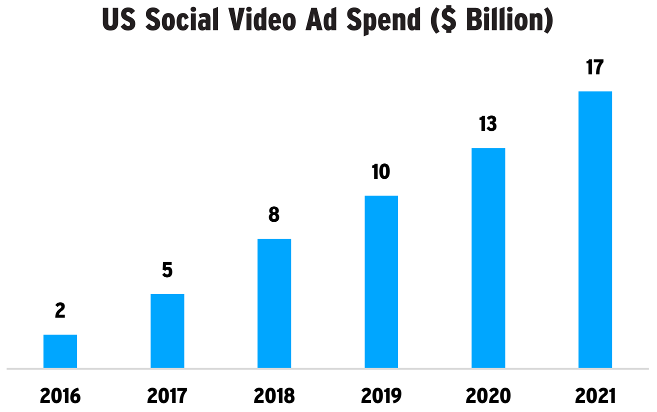
an eventful election cycle. Factoring in the advertising sales of traditional radio broadcasters and audio streaming pure players (a combined +19% to $2.6 billion), total audio advertising was in fact flat (-0.2% to $16.6 billion).

Out-of-home advertising sales increased by +3% to $7.6 billion driven by digital OOH sales (+14%). DOOH growth is driven by new digital screens, sometimes converted from traditional paper-and-paste to digital - specifically in the transit and street furniture environments – and delivering increased monetization for any given site. This growth is partially offset by traditional OOH spending slowing down to +0.8% and cinema growing by only +1.0% in 2016 due to strong comparables from 2015 and a decline in impressions sold to national advertisers. In 2017, OOH spending will again increase by about +3% on DOOH growth of +11.7%, and cinema growth of +3.8%, again offset by traditional OOH growth of +0.5%. DOOH will be boosted by new inventory such as the hundreds of new digital bus shelters installed by JCDecaux in New York City.

In 2017, MAGNA forecasts media owners' advertising revenues to grow by +1.7%, or by +3.6% if neutralizing the (lack of) elections and Olympic Games.

National TV ad sales will decrease by -0.9% (+0.7% excluding P&O). Local TV will decrease by -12% (-1.7% excluding P&O). Digital media sales will increase by +14% (social and video +26%, search +14%). Meanwhile print and radio ad sales will decrease by -14% and -3% respectively and OOH ad revenues will grow by 3%.





US Media Owner Advertising Revenues	2016 Size ($bn)	2016 Growth (%)	2016 Growth (bn)	Share of total	2017 Growth	16-'21 CAGR
Traditional Media (offline sales)	**110**	**0.9%**	**1**	**61%**	**-5.9%**	**-3.6%**
National TV (incl. P&O)	44	2.8%	1	24%	-0.9%	-0.6%
National TV (excl. P&O)	43	1.1%	0	25%	0.7%	-0.2%
Local TV (incl. P&O)	23	11.3%	2	13%	-12.2%	-3.7%
Local TV (excl. P&O)	21	-0.2%	-0	12%	-1.7%	-1.6%
Print	21	-10.3%	-2	12%	-14.2%	-15.2%
Radio	14	-3.1%	-0	8%	-3.4%	-3.7%
OOH and cinema	8	3.3%	0	4%	3.2%	2.9%
Digital Ad Sales	**70**	**18.0%**	**11**	**39%**	**13.6%**	**10.6%**
of which Mobile	33	54.2%	12	18%	34.5%	22.8%
of which Desktop	37	-2.1%	-1	21%	-4.7%	-7.8%
of which Social	16	48.2%	5	9%	26.3%	17.0%
of which Search	35	18.6%	5	19%	14.1%	10.3%
Grand Total (incl. P&O)	**180**	**6.9%**	**12**	**100%**	**1.7%**	**2.9%**
Grand Total (excl. P&O)	**177**	**5.1%**	**9**	**100%**	**3.6%**	**3.3%**

About MAGNA

MAGNA is the centralized IPG Mediabrands resource that develops intelligence, investment and innovation strategies for agency teams and clients. We utilize our insights, forecasts and strategic relationships to provide clients with a competitive marketplace advantage.

MAGNA harnesses the aggregate power of all IPG media investments to create leverage in the market, negotiate preferred pricing and secure premium inventory to drive maximum value for our clients. The MAGNA Investment and Innovation teams architect go-to-market investment strategies across all channels including linear television, print, digital and programmatic on behalf of IPG clients. The team focuses on the use of emerging media opportunities, as well as data and technology-enabled solutions to drive optimal client performance and business results.

MAGNA Intelligence has set the industry standard for more than 60 years by predicting the future of media value. The MAGNA Intelligence team produces more than 40 annual reports on audience trends, media spend and market demand as well as ad effectiveness. To access full reports and databases or to learn more about our subscription-based research services, contact forecasting@magnaglobal.com.

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