



The EU online advertising market Update 2017

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The EU online advertising market – Update 2017

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The EU online advertising market Update 2017

Christian Grece



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1. The EU online advertising market in 2016

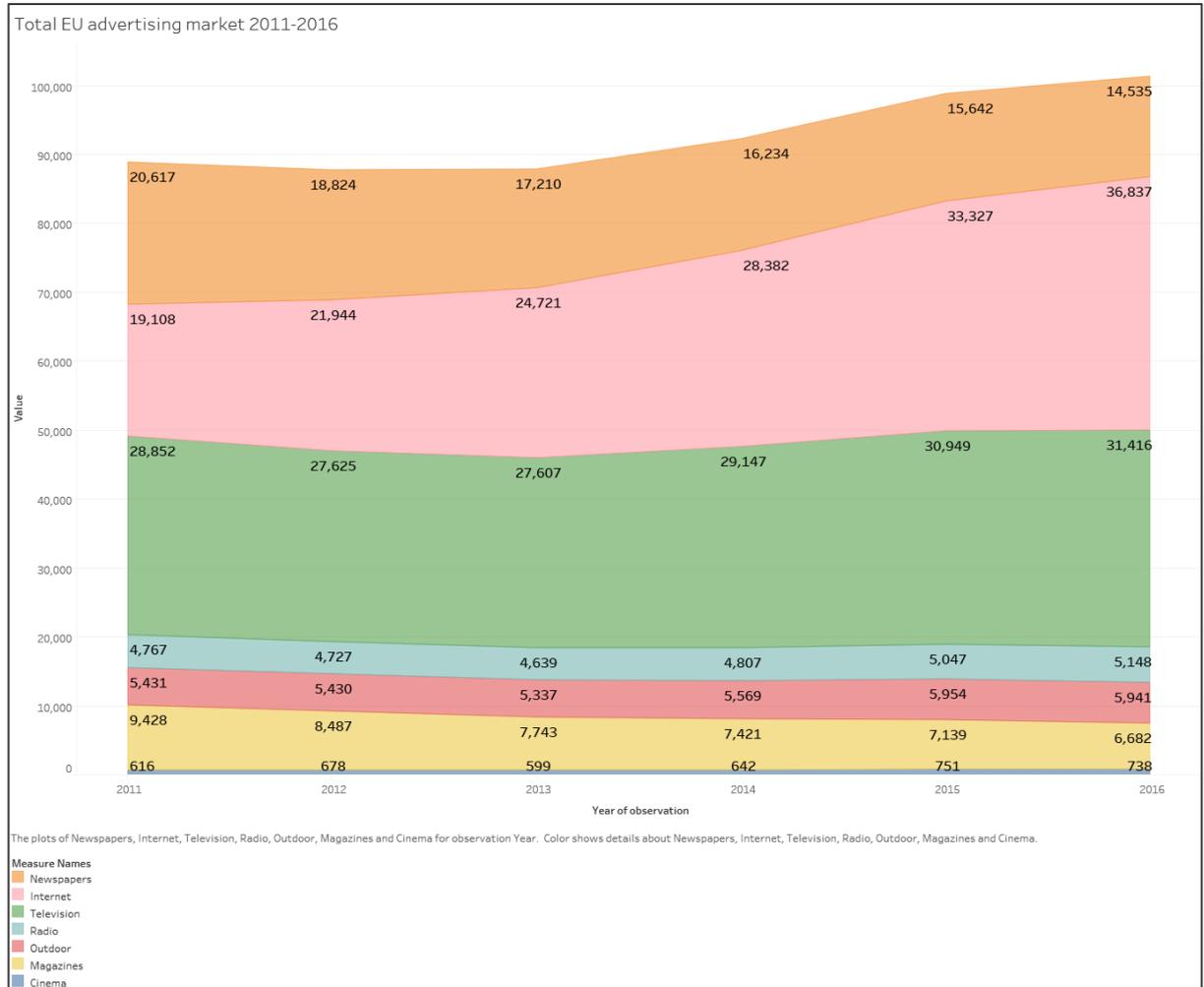
1.1. General overview of the EU advertising market in 2016

The online advertising market in the European Union (EU) took the lead for advertising expenditure in 2015, surpassing advertising spend (ad spend) on television (TV) for the first time.

The total advertising market grew by 14% in the period 2011 to 2016, from EUR 88.8 billion to EUR 101.3 billion (see Figure 1) mainly driven by online advertising, which almost doubled in that time period.



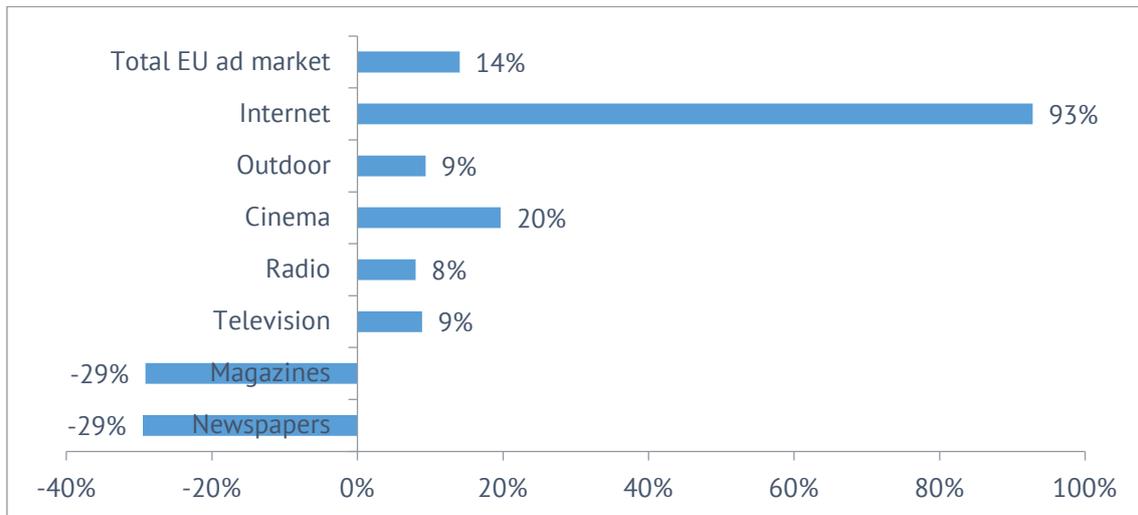
Figure 1 – The EU advertising market by media 2011-2016, in EUR million



Source: Warc



Figure 2 – Growth rates 2011-2016 by ad media, in %



Source: Warc

The increase by almost EUR 12.5 billion was mainly driven by online advertising, which grew by over 93% over the time period, cinema advertising, which grew by over 20%, TV (+9%), outdoor (+9%) and radio (+8%) (see Figure 2 and Table 1). The biggest losses came from advertising in magazines and newspaper, which fell by 29%, each in the same period.

However, when looking at the yearly growth rate 2015/2016 for these media categories, another picture emerges (see Figure 3). It appears that almost all media, except for online, radio and TV, experienced a decrease in ad spend and even TV and radio grew only moderately.

In the past years, online has become the driving force in the growth of the EU advertising market, as people spend more time online and less with other media (see Figure 4 for data on media consumption in Western Europe).

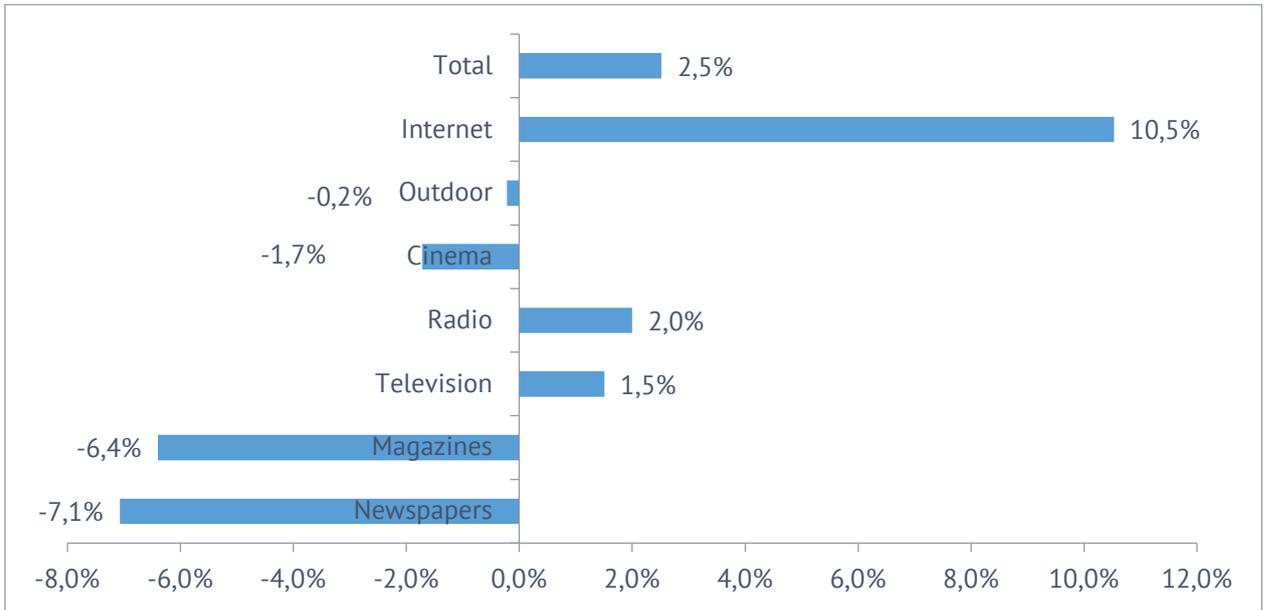
Table 1 provides an overview of the evolution of ad spend for the seven advertising categories tracked by Warc in the time period 2011 to 2016.

The United Kingdom remained the biggest advertising market in the EU, representing 24% of all ad spend in the EU in 2016 (see Table 2). With EUR 20.1 billion, Germany was the second biggest advertising market in the EU (20% of total EU ad spend), followed by France with EUR 13 billion (13%) (See Table 2 for a detailed overview of the total advertising market for each EU country).

From these figures, a general observation can be made: in recent years, online advertising has driven a large share of the growth of the EU advertising market. However, differences exist between countries when it comes to digital advertising, which are shown in section 1.3 with a focus on online and TV advertising by country. The next section offers the pan-European overview of the state of online and TV advertising in the EU.

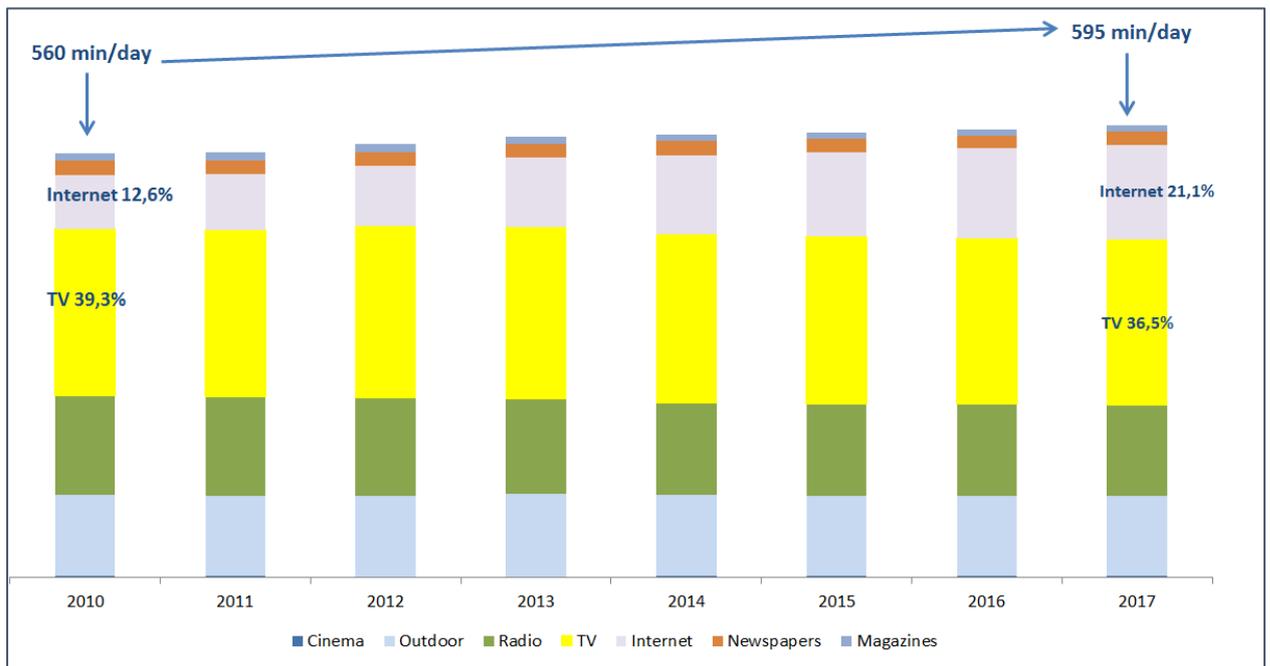


Figure 3 – Yearly growth rates 2015/2016 by ad media, in %



Source: Warc

Figure 4 – Average media consumption per user in Western Europe, minutes per day all media, 2010-2017



Source: ZenithOptimedia Media Consumption Forecasts 2015

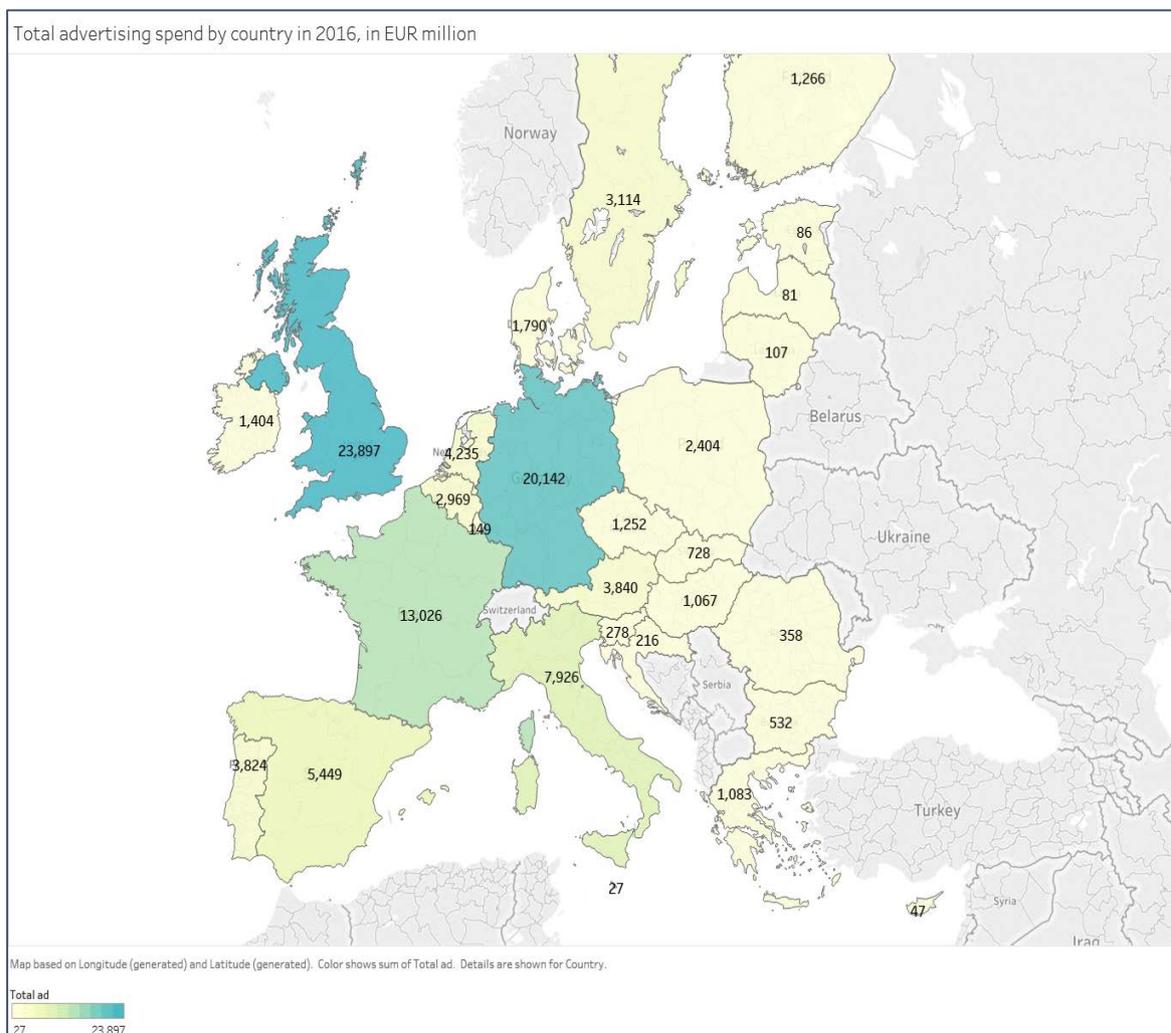


Table 1 – The EU advertising market 2011 – 2016, in EUR million and % for growth rates

	2011	2012	2013	2014	2015	2016	Growth 2011/2016	Growth 2015/2016	CAGR 2011-2016
Newspapers	20 616,8	18 823,8	17 209,9	16 233,7	15 641,6	14 535,4	-29%	-7,1%	-8,4%
Magazines	9 427,9	8 486,7	7 742,8	7 421,0	7 138,9	6 682,3	-29%	-6,4%	-8,2%
Television	28 851,9	27 624,9	27 606,5	29 147,0	30 949,3	31 415,8	9%	1,5%	2,2%
Internet	19 107,6	21 943,7	24 720,7	28 381,8	33 327,0	36 836,7	93%	10,5%	17,8%
Radio	4 766,5	4 726,8	4 638,5	4 807,1	5 047,1	5 148,0	8%	2,0%	1,9%
Cinema	616,4	677,6	598,9	642,3	750,6	737,7	20%	-1,7%	4,6%
Outdoor	5 431,4	5 429,7	5 336,6	5 568,8	5 954,2	5 941,1	9%	-0,2%	2,3%
Total EU	88 818,5	87 713,2	87 853,9	92 201,7	98 808,7	101 297,0	14%	2,5%	3,3%

Source: Warc

Map 1 – Total ad spend by country in 2016, in EUR million



Source: OBS on Warc

**Table 2 – Total advertising market in 2016 by country, in EUR million**

Country	Total advertising market 2016	Growth 2015/2016	Share of EU ad market
AT	3 839,9	6,0%	3,8%
BE	2 969,1	-2,6%	2,9%
BG	531,9	9,9%	0,5%
CY	46,9	7,3%	0,0%
CZ	1 252,3	23,7%	1,2%
DE	20 142,4	2,4%	19,9%
DK	1 790,0	1,9%	1,8%
EE	86,0	2,4%	0,1%
ES	5 449,3	10,4%	5,4%
FI	1 266,3	-0,7%	1,3%
FR	13 026,1	1,3%	12,9%
GB	23 897,3	-4,4%	23,6%
GR	1 082,7	7,6%	1,1%
HR	215,6	13,8%	0,2%
HU	1 066,5	40,3%	1,1%
IE	1 404,1	17,3%	1,4%
IT	7 926,3	4,7%	7,8%
LT	107,1	5,9%	0,1%
LU	149,3	4,7%	0,1%
LV	80,7	4,7%	0,1%
MT	27,2	1,9%	0,0%
NL	4 234,6	3,6%	4,2%
PL	2 403,8	1,0%	2,4%
PT	3 823,9	16,1%	3,8%
RO	357,9	12,9%	0,4%
SE	3 114,1	4,9%	3,1%
SI	277,7	14,7%	0,3%
SK	728,0	7,5%	0,7%
Total EU	101 297,0	2,5%	100%

Source: Warc



1.2. Online and TV advertising in the EU

The real question regarding online advertising is: to which degree will it challenge TV advertising, after having already dealt an almost fatal blow to traditional advertising formats in newspapers and magazines.

Figure 5 provides an overview of the evolution of ad spend on TV and online media. While TV advertising grew between 2011 and 2016 with a compound annual growth rate (CAGR) of 2.2%, online advertising grew with a CAGR of 17.8% as advertisers invested more in online formats to reach consumers in an increasingly fragmented audiovisual world. The yearly growth rates of the two media reflect this different dynamic (see Figure 6).

The shift in the paradigm, from advertising in a mass media to individualised, targeted advertising relying on user data, as with the Internet, has also brought new challenges for advertisers and the platforms and services on which these adverts are placed - as the second and third chapters of this note show.

EU TV operators have started to form alliances, to compete with online ad giants Google and Facebook, which operate on a much larger scale and have a much larger user base. A pan-European alliance, the European Broadcaster Exchange (EBX), grouping ProSiebenSat.1, TF1, Mediaset (in Spain and Italy) and Channel 4 aims to share data and content and thus allow for pan-European advertising campaigns¹ on their services.

Such media alliances are becoming more common in Europe² as publishers (TV, newspapers/magazines and digital publishers) have realised that they need to join forces to compete with the Google-Facebook online advertising market duopoly.

The format of online advertising that competes most with TV advertising is display advertising, more specifically video advertising, as it permits storytelling and brand building - advertiser objectives difficult to fulfil with the basic banner ads that accompanied the emergence of the advertising-financed Web at its beginnings.

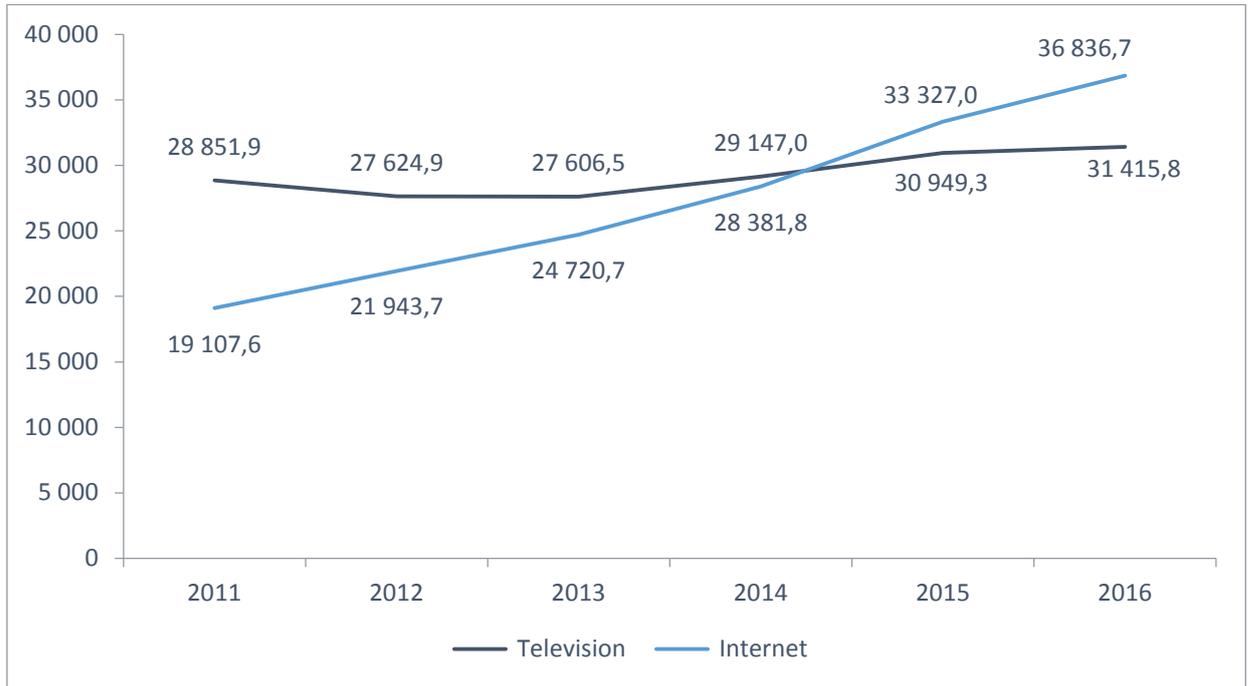
¹ See “Channel 4 in European TV ad alliance to take on Google and Facebook”, The Guardian 13th November 2017, available here:

<https://www.theguardian.com/media/2017/nov/13/channel-4-tv-ad-alliance-google-facebook>

² See “French publishers are joining forces to take on Google and Facebook”, Digiday UK 10 July 2017, available here: <https://digiday.com/media/french-publishers-joining-forces-take-google-facebook/> and “German publishers are joining forces against the duopoly”, Digiday UK 30 August 2017, available here: <https://digiday.com/media/german-publishers-joining-forces-duopoly/>

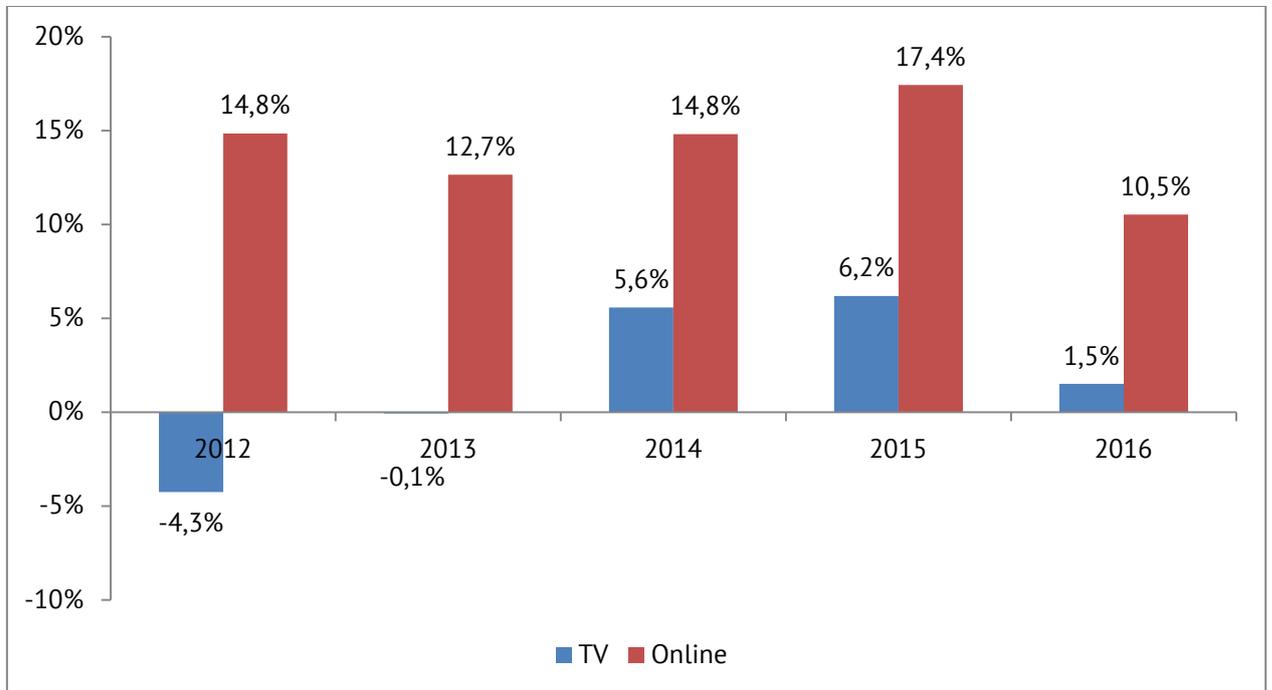


Figure 5 – TV and online advertising in the EU 2011-2016, in EUR million



Source: Warc

Figure 6 – Online and TV advertising yearly growth rates, in %



Source: Warc



1.3. Online and TV advertising by country in 2016

Online has surpassed TV advertising on a pan-European level but this does not mean that this is the case in each EU country. As always, the situation is quite different depending on the EU market – in some markets even newspaper and magazine advertising experienced a moderate increase in 2016 (Austria and the Czech Republic for example for newspaper advertising, Belgium and Hungary for magazine advertising).

The national advertising market depends on a variety of economic and even societal factors, and as EU countries differ, so do the advertising markets. The focus here however is only on the online and TV advertising markets.

■ Online advertising by country in the EU in 2016

On Map 2, total online advertising expenditure by country is shown. In the United Kingdom, advertisers spend almost as much on online ads as in the following three countries (Germany, France and Italy) combined. Another interesting fact is that Spain is not in the top five countries by online ad spend, with the Netherlands and Sweden taking fifth and sixth place, respectively.

This hints at differences in the digital economy and usage / content consumption by consumers; in several countries advertisers have shifted their advertising expenditure to online, to reach consumers.

Map 3 and Figure 8 show the differences in growth rates of the online ad market by country. While more mature markets such as the United Kingdom, Denmark and the Netherlands have a growth rate around or below the EU average of 10.5%, the highest growth rates are found in markets catching up with online advertising, such as Croatia, Bulgaria or Romania.

Map 4 shows these differences; the share of online out of total ad spend varies considerably. In Sweden (54%), the United Kingdom (53%) and Denmark 51%), online advertising already represents the major share of total media ad spend whereas in Bulgaria (8%), Luxembourg (8%) and Cyprus (6%), online advertising is still below the 10% cross-mark of total ad spend.

Cluster analysis 1 shows the growth rate of online advertising and the share online advertising represents out of total advertising for each EU country. From this, four distinct digital advertising clusters can be identified:



1. Digitally mature markets in which online advertising already accounts for more than 40% of the advertising market and which have a moderate/high growth of the online ad market: GB, DK, SE, NL and CZ (CZ is one of the high-growth markets for online advertising)
2. Almost digitally mature markets where online advertising represents 25%-35% of the total advertising market and which have moderate to high growth: FR, DE, IT, FI, PL, BE, IE and ES.
3. Catch-up markets for online advertising, with a digital ads share of 5% 25% and moderate to high growth: EE, PT, HU, LV, LT, SK, GR, AT, MT, LU, CY, SI, RO and BG.
4. One market where digital advertising is still catching up, but with explosive growth of 106% in 2016, over 2015: Croatia.

■ **TV advertising by country in the EU in 2016**

Map 5 lists the advertising spend for TV advertising for each EU country. The United Kingdom, Germany, Italy, France, Portugal and Spain were the biggest TV advertising markets in the EU in 2016.

When it comes to growth rates, the situations are very different depending on the market. While the overall EU TV ad market grew by only 1.5% in 2016, several markets experienced much stronger growth (see Map 6). Hungary's TV ad market experienced well-nigh unprecedented growth for TV advertising with 82%, while Portugal, Slovenia, Bulgaria, Romania and the Czech Republic also recorded TV ad market growth above 10%.

However, several markets registered a drop or stagnant growth in their TV ad markets: The United Kingdom's TV ad market decreased by -12%, Belgium's by -10%, Poland's by -3%, Sweden's by -2%, Finland's by -1%, Estonia's by -1%, Denmark's by -1% and Latvia's by -0.3%, while the France and Netherlands markets barely grew, at 1.1% and 0.4%, respectively.

Map 7 shows the importance of TV advertising by displaying the relative share of TV advertising out of the overall ad market, by country. On an EU level, TV advertising represented 31% of total ad expenditure.

In several countries, TV advertising still represented more than 50% of the total advertising market: GR, SK, HU, SI, PT, RO, CY and BG. The markets in which TV advertising had fallen below the 25%-mark - all except one (LU) more digitally mature markets - were: the United Kingdom, Germany, the Netherlands, Ireland, Finland, Sweden, Denmark and Luxembourg (where newspaper still accounted for 53% of the advertising market, and radio for 18%).

Finally, Cluster analysis 2 shows the five different clusters for TV advertising throughout the EU:



5. Markets relying mostly on TV for advertising – significant TV ad share >65%, above EU average growth: BG, RO, CY.
6. Markets in which TV is the main form of advertising - TV ad market share between 50% and 60%, moderate/high growth: SI, PT, SK, GR and HU (HU displayed explosive growth of more than 80% in 2016)
7. Markets with a significant TV ad share– TV ad market share between 35% and 50%, moderate/stagnant growth or even negative growth: IT, HR, LV, PL, ES, MT and LT.
8. More mature ad markets in which TV remains an important component of the media mix when it comes to advertising – TV ad market share between 20%- 35%, moderate/stagnant growth and/or negative growth: GB, DE, FR, BE, EE, FI, NL, IE, AT and CZ.
9. Markets where TV ad share is below 20%, moderate negative growth: SE, DK, LU

■ **Online and TV advertising compared**

Finally, this overview of each market situation for EU countries allows for the establishment of a panorama of countries in which online advertising has surpassed TV advertising.

The online advertising to TV advertising ratio (if ratio >1, the online ad market is bigger than the TV ad market) (see Map 8 and Figure 12) indicates the countries in which online advertising had surpassed TV advertising in 2016.

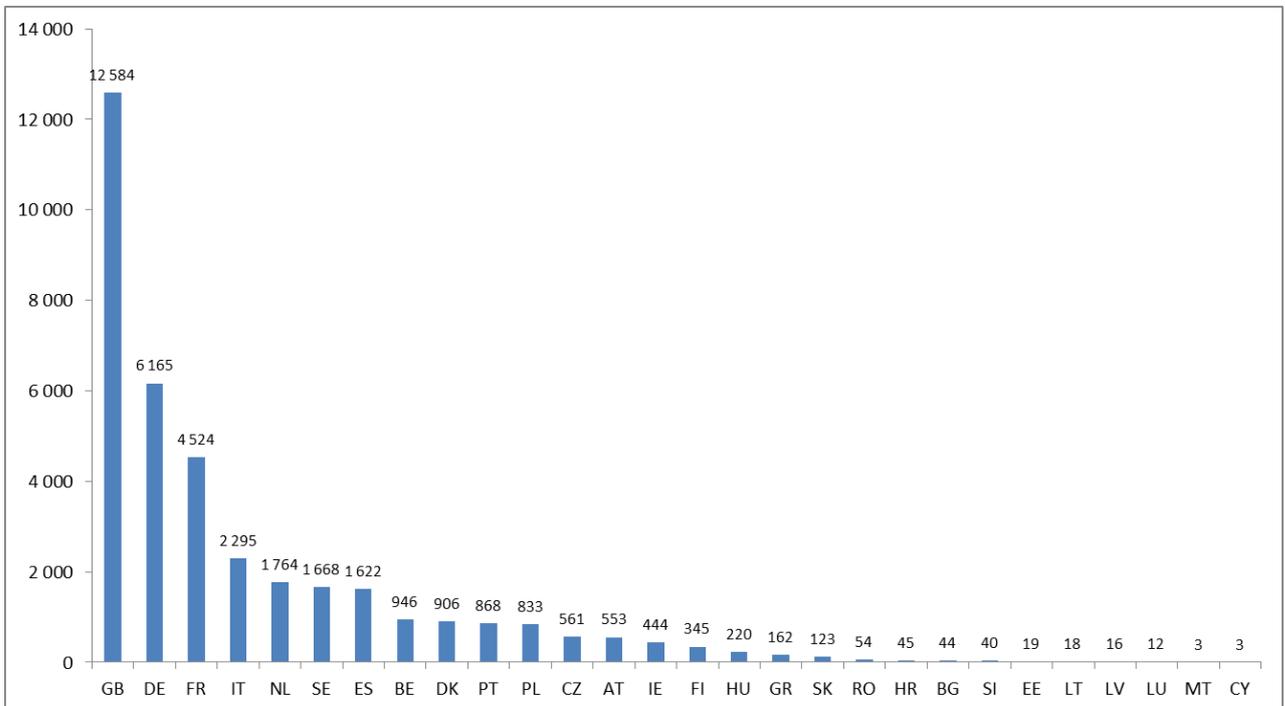
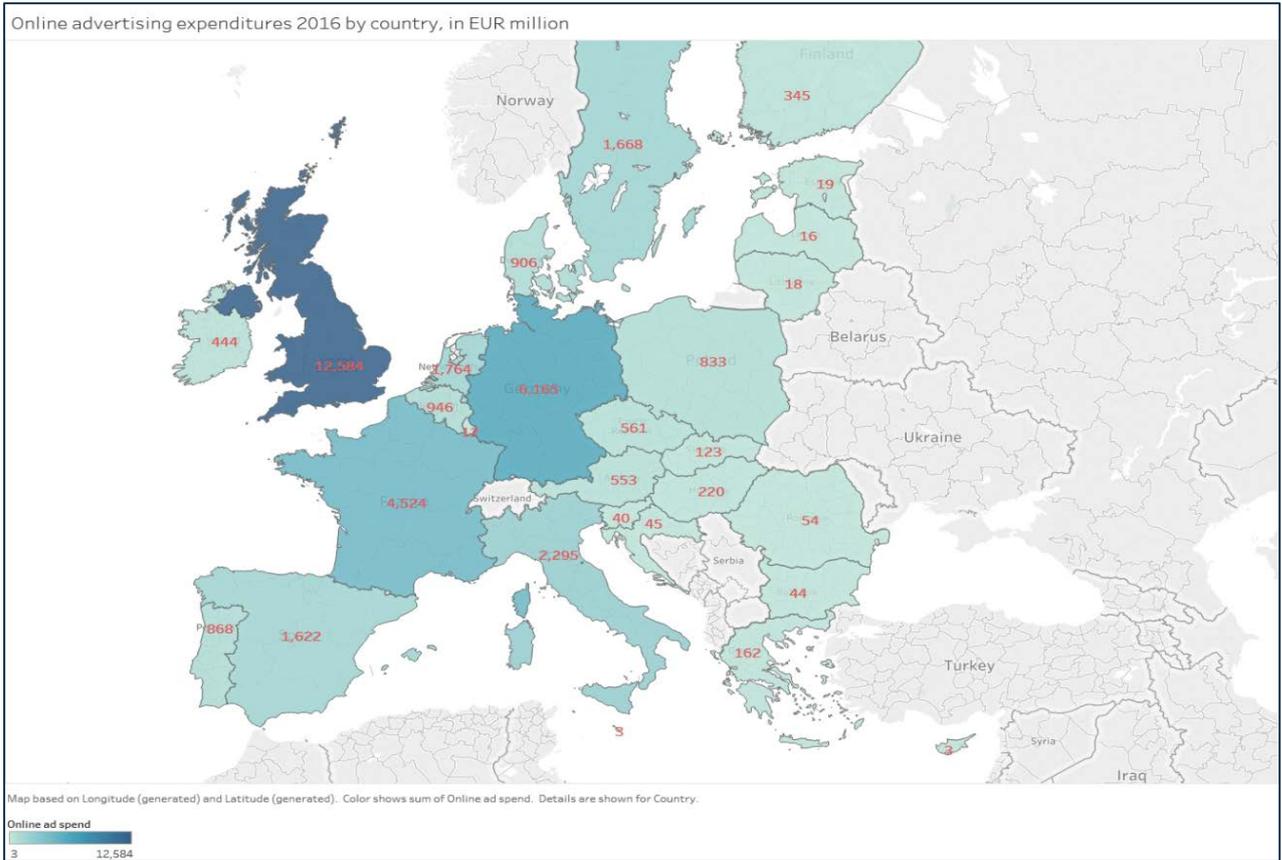
The 10 EU countries in which online advertising was the main advertising media, ahead of TV were, by order of magnitude of the difference between the online and TV ad markets:

DK, SE, GB, NL, CZ, IE, FR, DE, FI and BE.

In the remaining 18 EU countries, TV advertising still drew greater ad spend than online advertising; the question is, though: for how long will that still be the case? In some countries, such as LU, PL, ES and EE, online advertising could soon overtake TV advertising. At the same time, judging by the figures from the other markets, in several other countries it will take time before online advertising surpasses TV advertising (depending on a multitude of factors), notably AT, LV, HR, PT, LT, HU, SK, MT, GR, SI, RO, BG and CY.



Map 2 and Figure 7 – Online advertising in 2016 by country, in EUR million



Source: Warc



Map 3 – Online advertising growth 2015/16 by country, in %

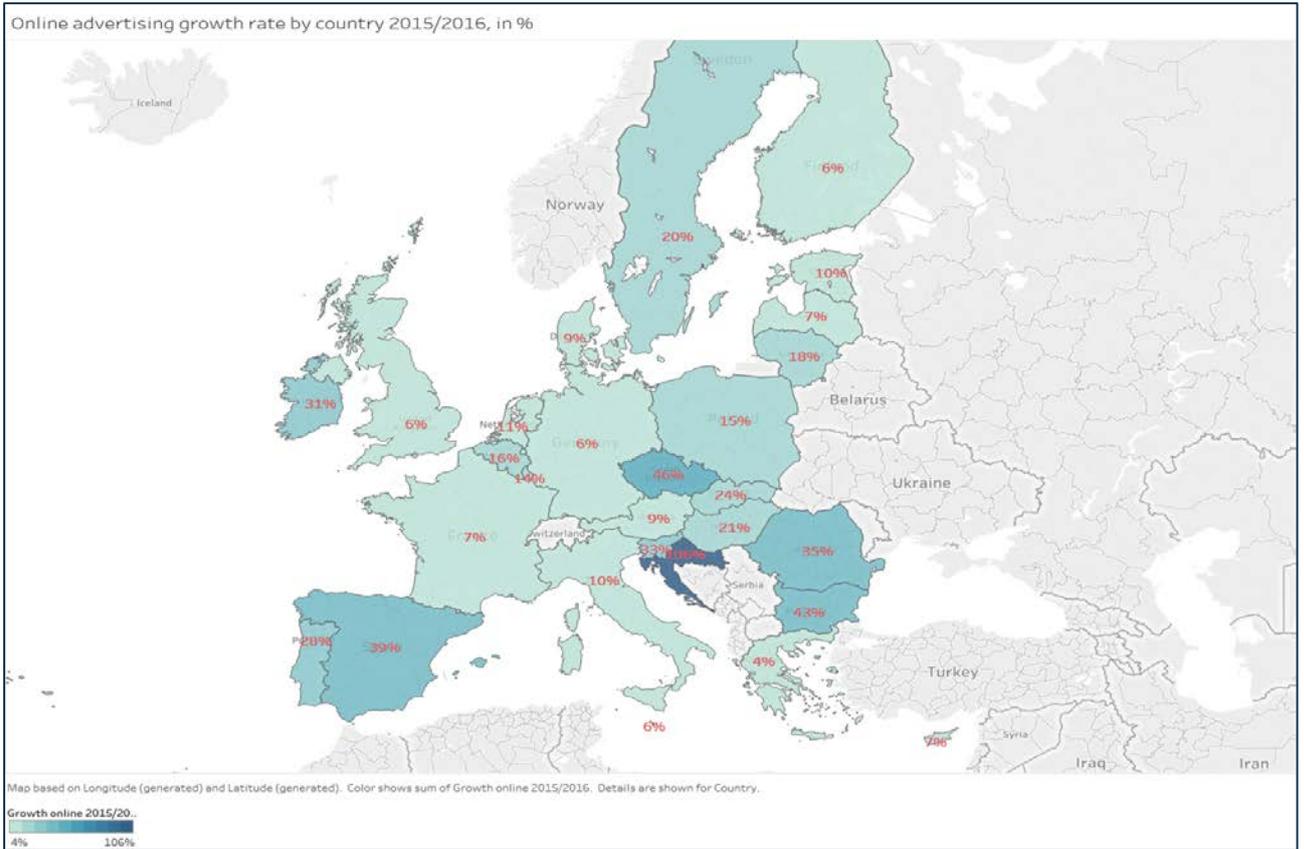
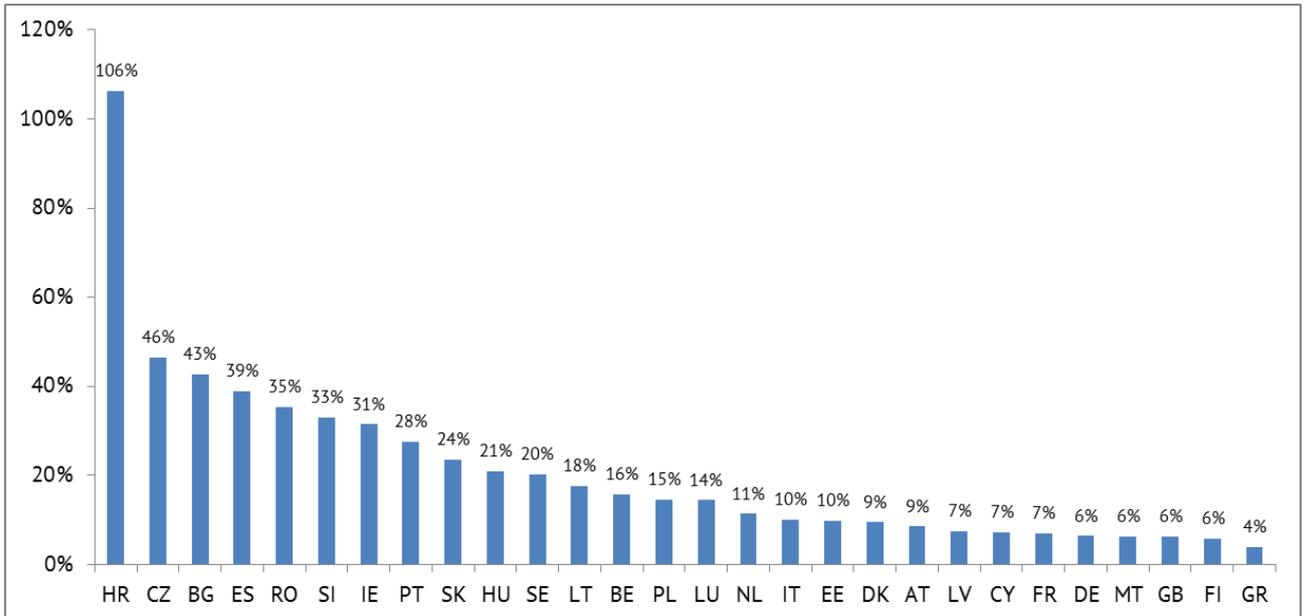


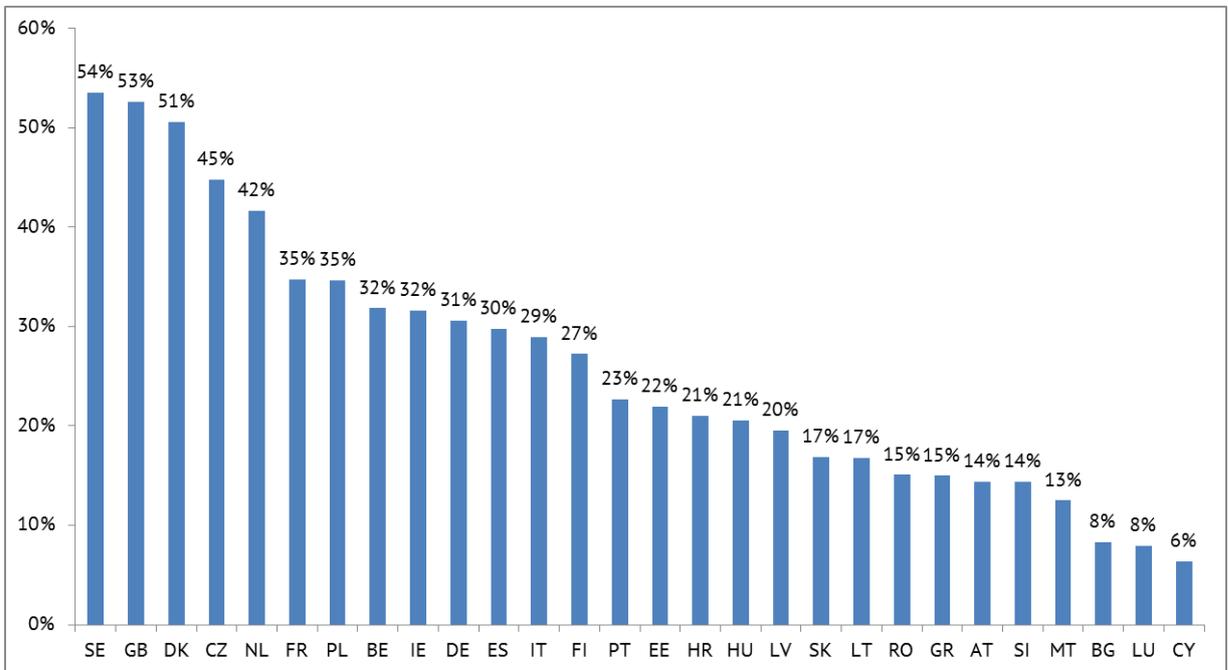
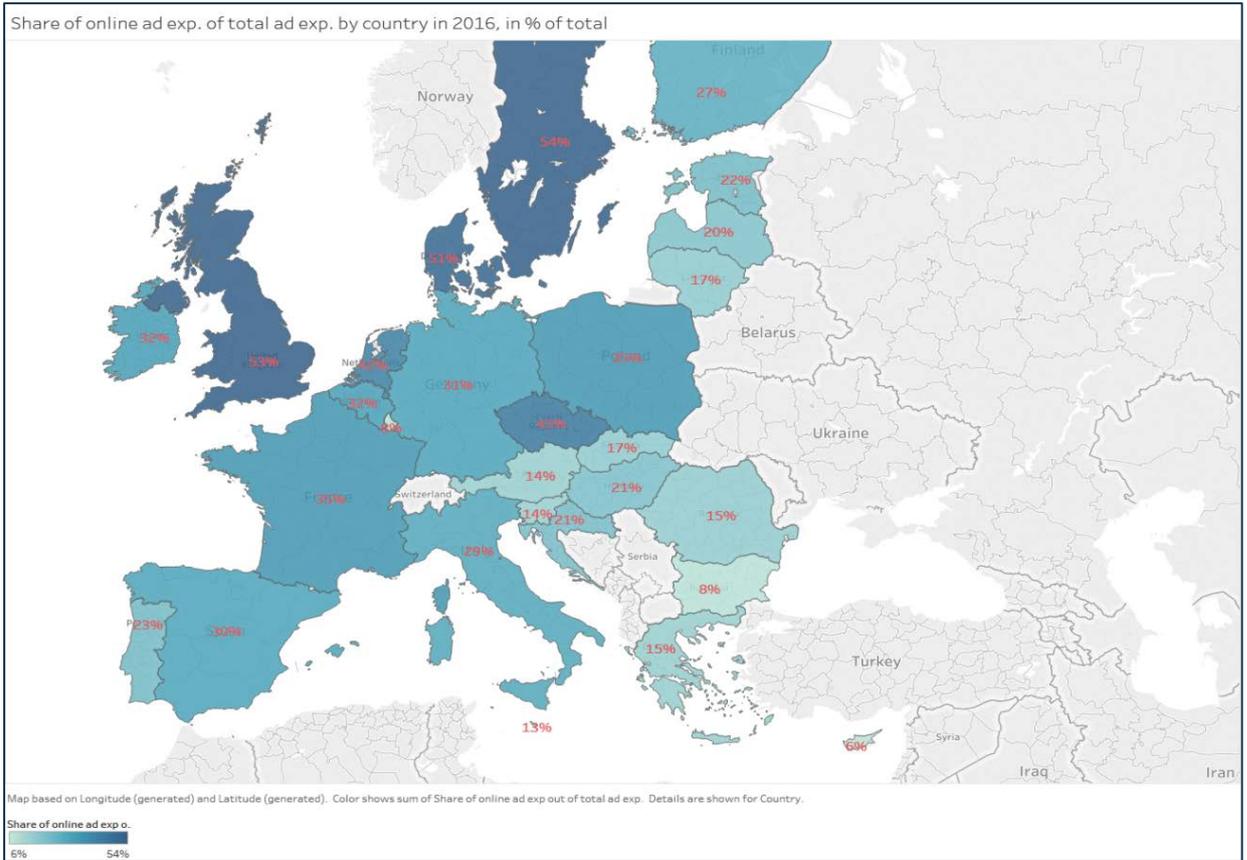
Figure 8 – Growth rates online ad market by country 2015/2016, in %



Source: Warc



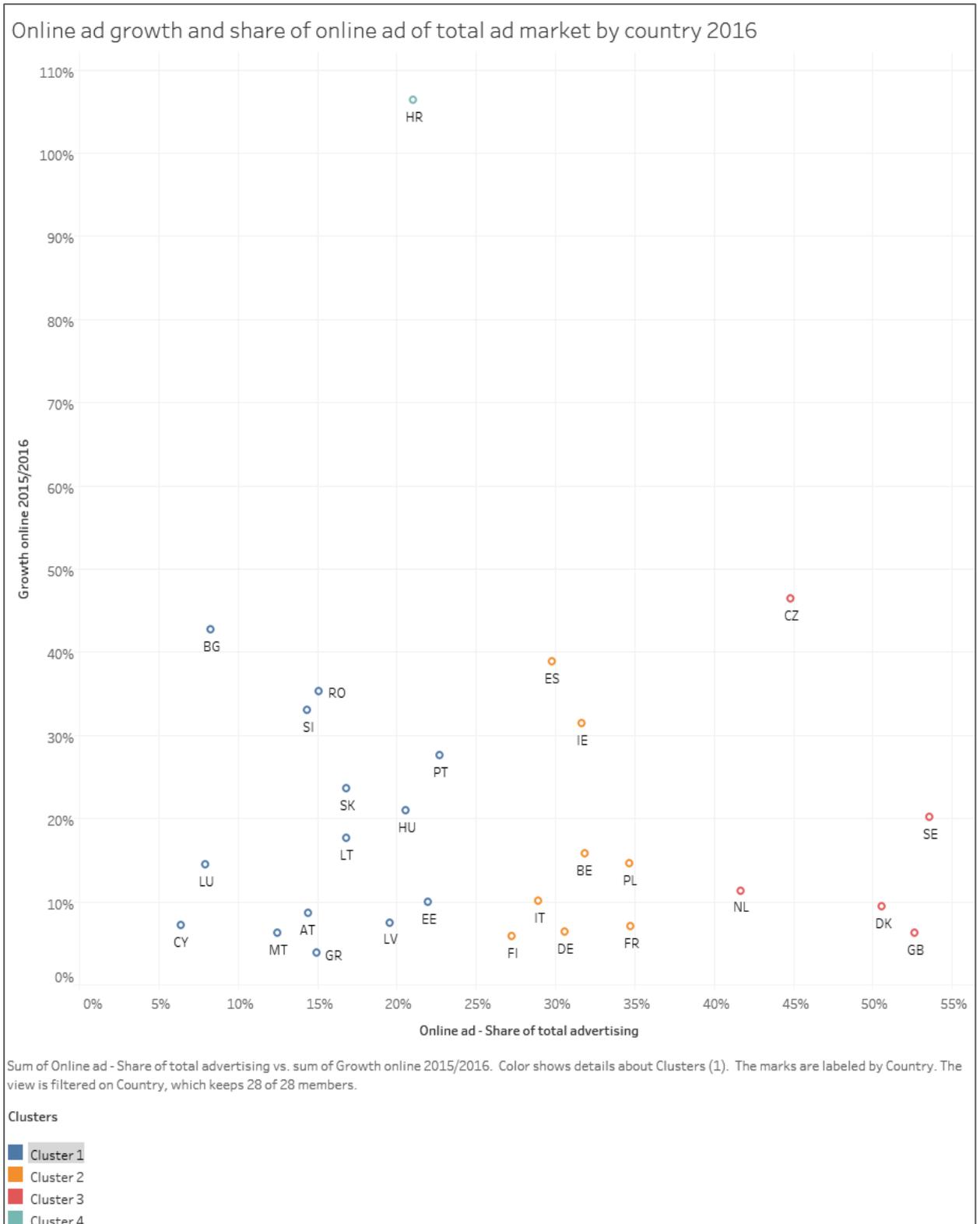
Map 4 and Figure 9 – Share of online advertising out of total advertising by country in 2016, in %



Source: Warc



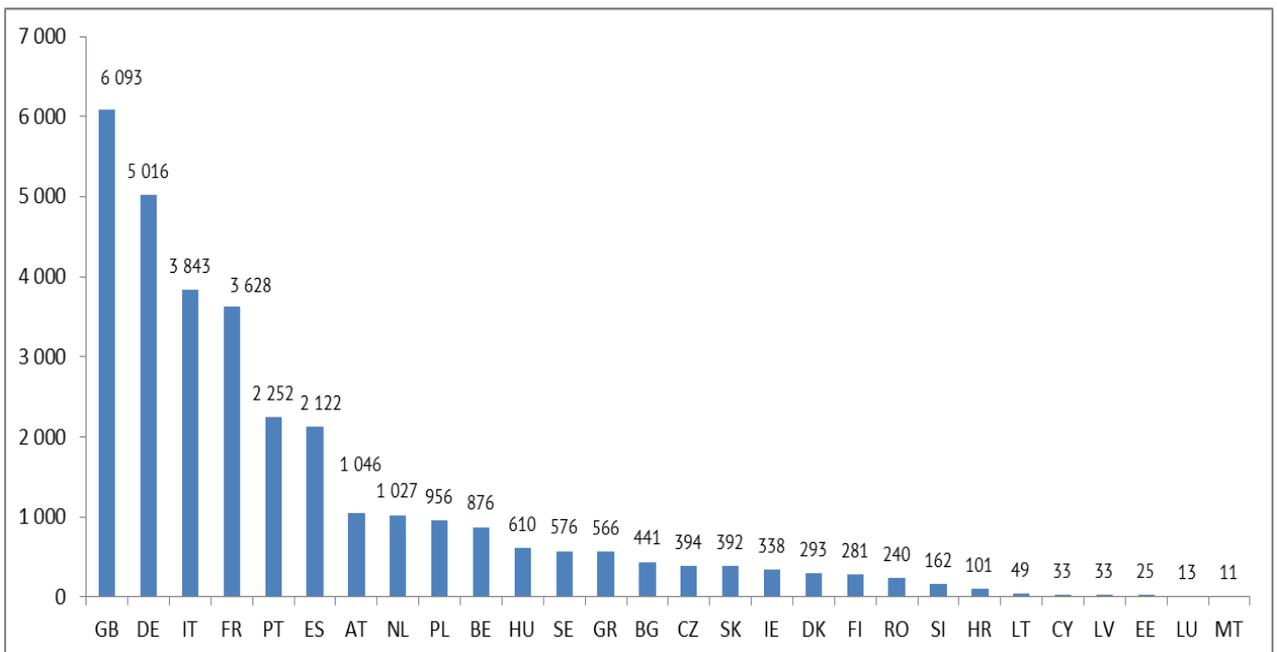
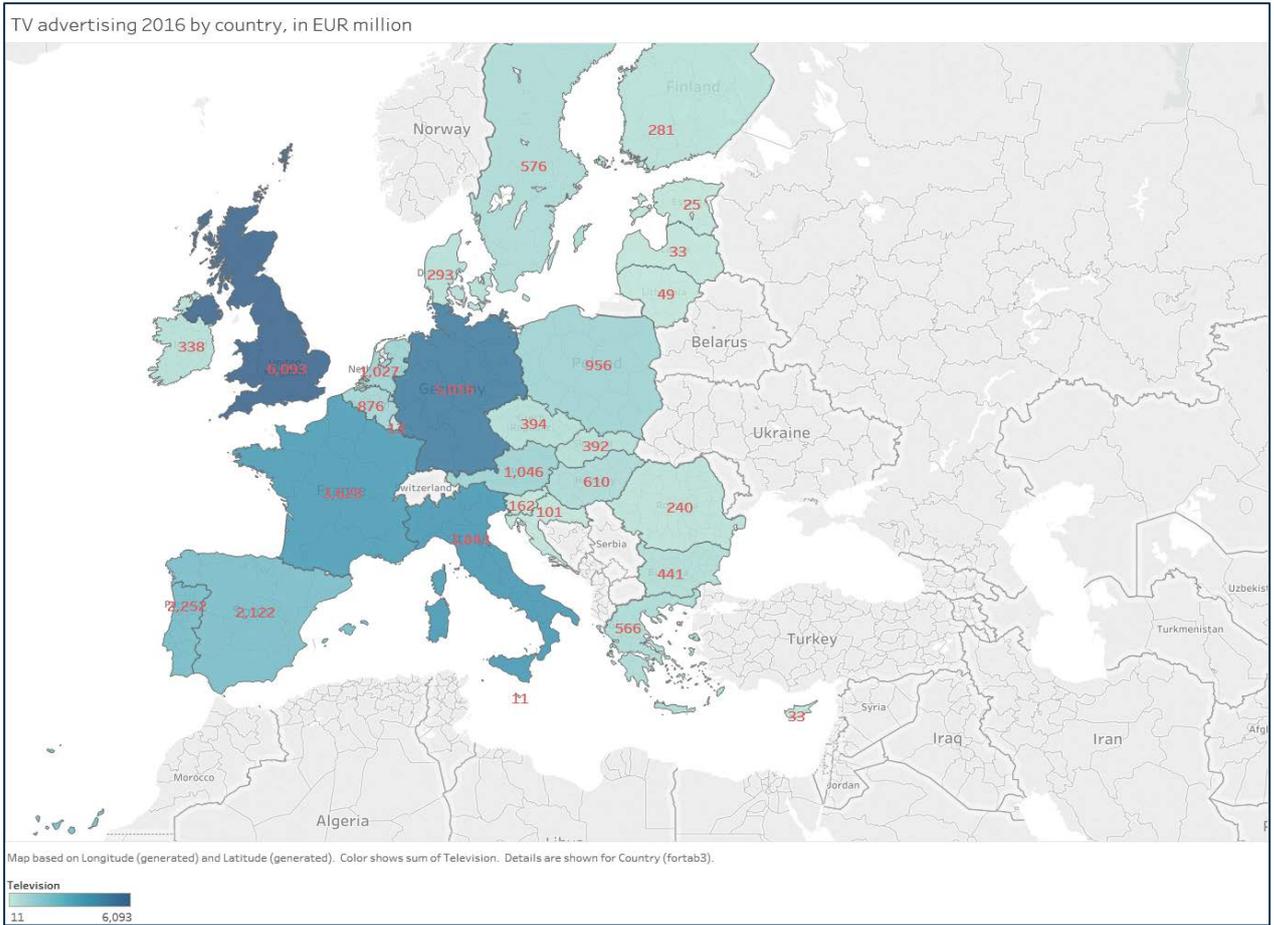
Cluster analysis 1 – Online ad growth and share of total ad market 2016



Source: OBS on Warc



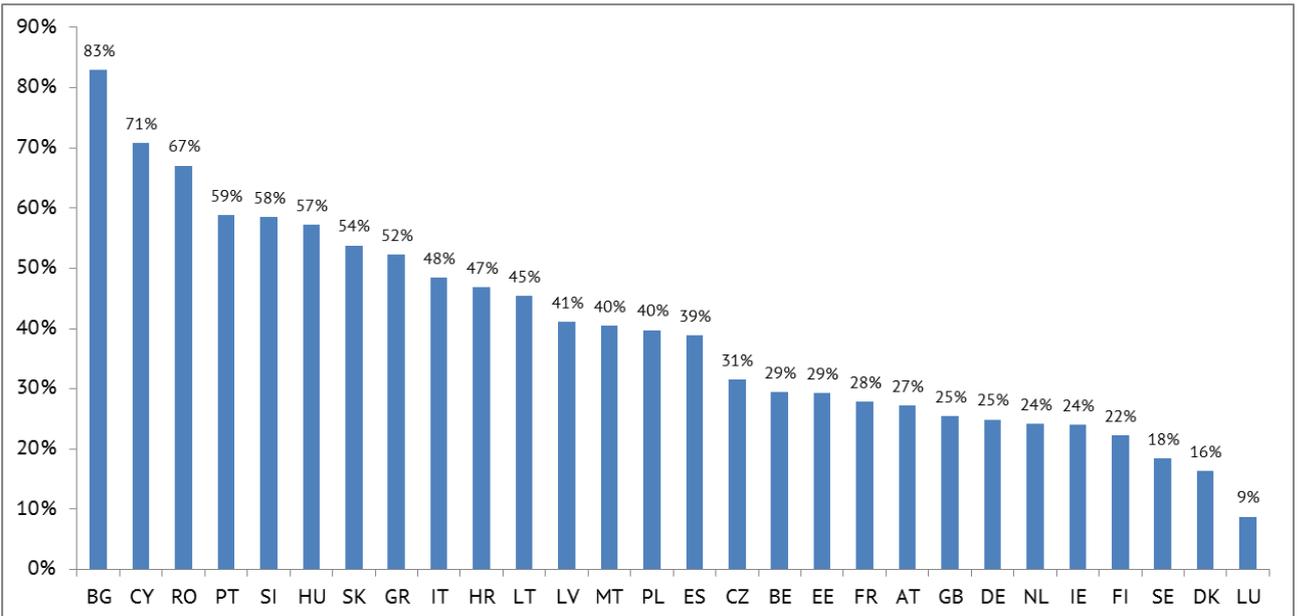
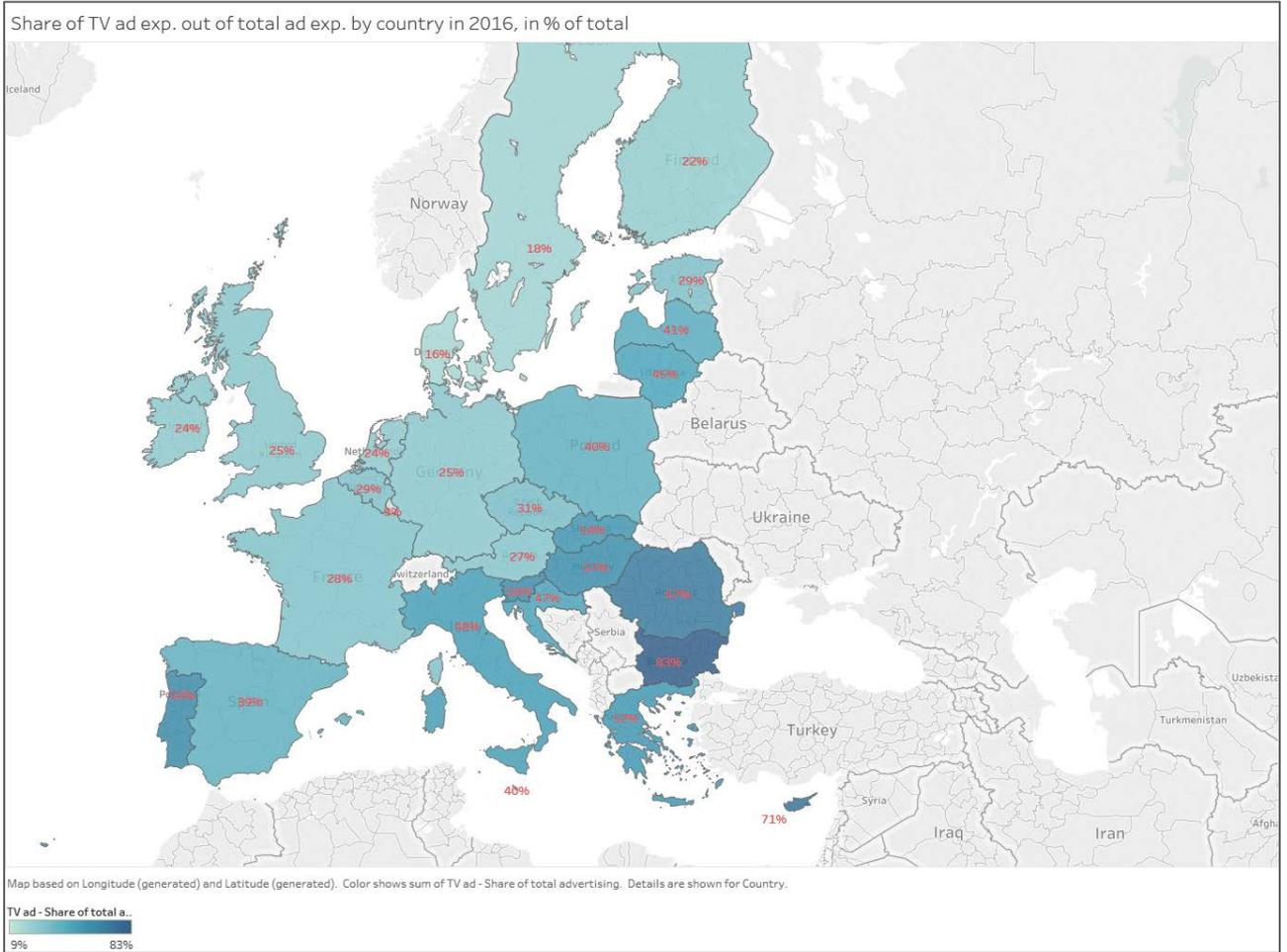
Map 5 and Figure 10 – TV advertising in 2016 by country, in EUR million



Source: Warc

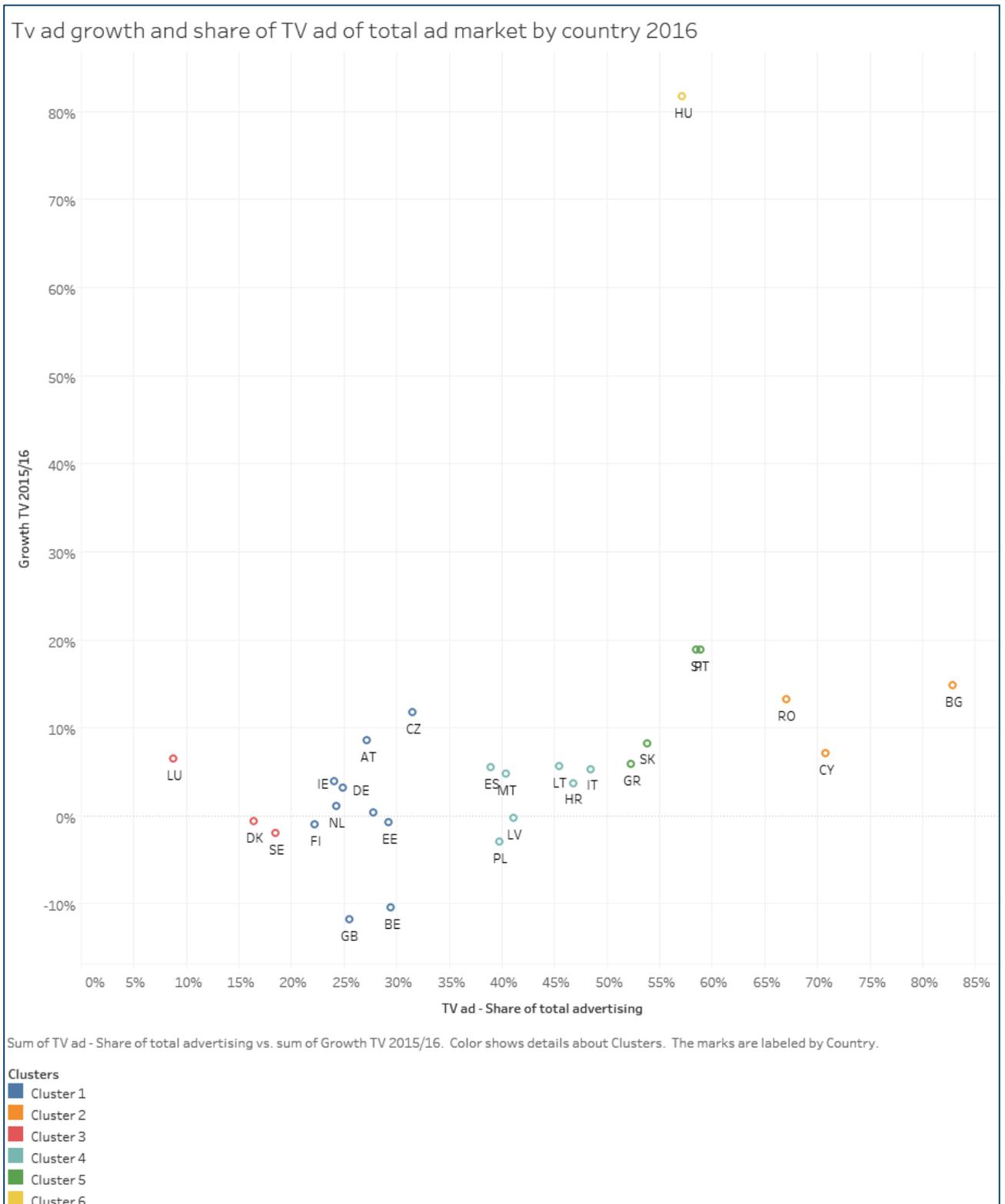


Map 7 – Share of TV advertising out of total advertising by country in 2016, in %



Source: Warc

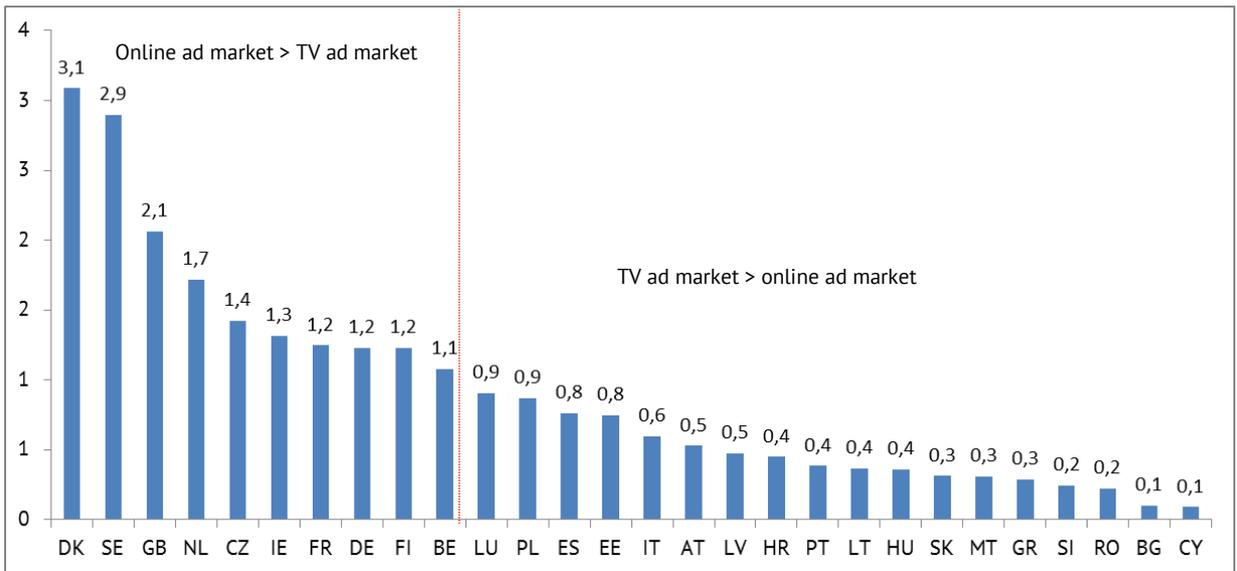
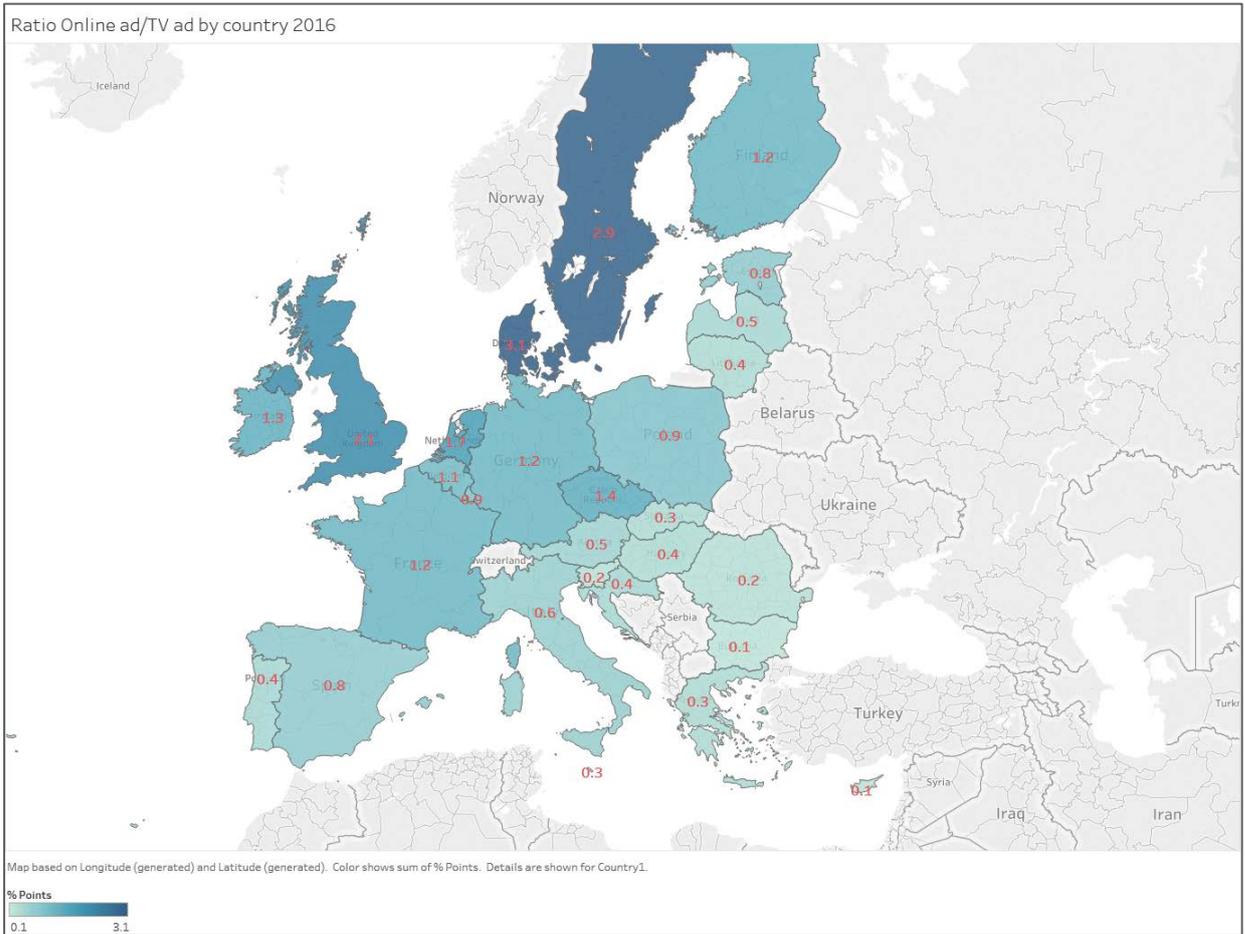
Cluster analysis 2 – TV ad growth and share of total ad market 2016



Source: OBS on Warc

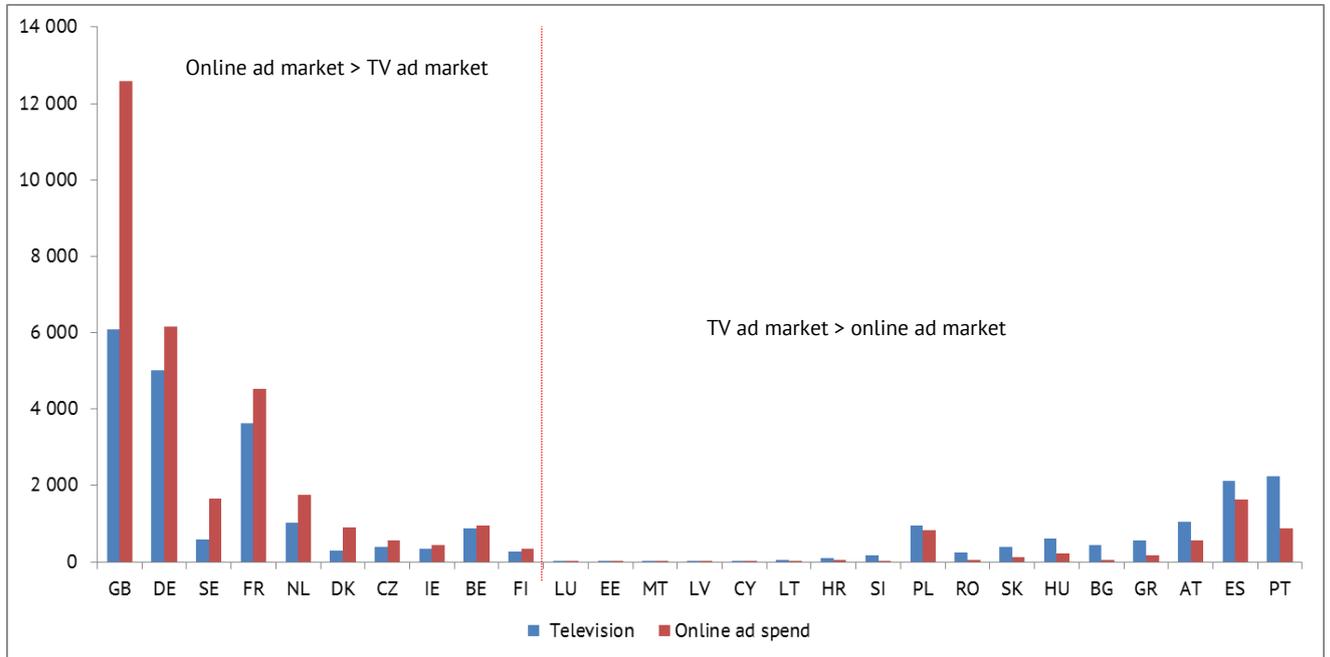


Map 8 – Ratio online advertising to TV advertising by country 2016, in units



Source: OBS on Warc

Figure 12 – Comparison online and TV advertising by country, in EUR million



Source: OBS on Warc



Table 3 – Summary – Online and TV advertising

Country	Online ad spend 2016	Growth 2015/2016	Online ad - Share of total advertising	TV ad spend 2016	Growth 2015/16	TV ad - Share of total advertising	Ratio online/TV ad
AT	553,0	8,6%	14%	1 045,6	8,6%	27%	0,5
BE	945,7	15,8%	32%	875,8	-10,4%	29%	1,1
BG	44,1	42,7%	8%	440,9	15%	83%	0,1
CY	3,0	7,1%	6%	33,2	7%	71%	0,1
CZ	561,1	46,4%	45%	394,2	11,7%	31%	1,4
DE	6 164,8	6,4%	31%	5 015,7	3,1%	25%	1,2
DK	905,7	9,5%	51%	293,4	-0,7%	16%	3,1
EE	18,9	9,9%	22%	25,2	-0,8%	29%	0,8
ES	1 622,4	38,8%	30%	2 121,9	5,5%	39%	0,8
FI	345,1	5,9%	27%	281,2	-1,1%	22%	1,2
FR	4 523,8	7,0%	35%	3 628,2	0,4%	28%	1,2
GB	12 583,5	6,2%	53%	6 092,6	-11,8%	25%	2,1
GR	162,2	3,8%	15%	566,1	5,9%	52%	0,3
HR	45,4	106,4%	21%	100,9	3,7%	47%	0,4
HU	219,5	20,9%	21%	610,1	81,7%	57%	0,4
IE	444,3	31,4%	32%	337,7	3,9%	24%	1,3
IT	2 295,0	10,1%	29%	3 842,7	5,3%	48%	0,6
LT	18,0	17,6%	17%	48,7	5,6%	45%	0,4
LU	11,9	14,4%	8%	13,1	6,5%	9%	0,9
LV	15,8	7,5%	20%	33,2	-0,3%	41%	0,5
MT	3,4	6,2%	13%	11,0	4,8%	40%	0,3
NL	1 764,1	11,3%	42%	1 026,7	1,1%	24%	1,7
PL	832,9	14,6%	35%	955,6	-3,0%	40%	0,9
PT	868,1	27,6%	23%	2 252,2	18,8%	59%	0,4
RO	54,0	35,3%	15%	240,0	13,2%	67%	0,2
SE	1 668,4	20,2%	54%	575,8	-2,0%	18%	2,9
SI	39,9	33,0%	14%	162,4	18,8%	58%	0,2
SK	122,7	23,6%	17%	391,7	8,2%	54%	0,3
Total EU	36 836,7	10,5%	36,3%	31 415,8	1,5%	31%	1,2

Source: OBS on Warc

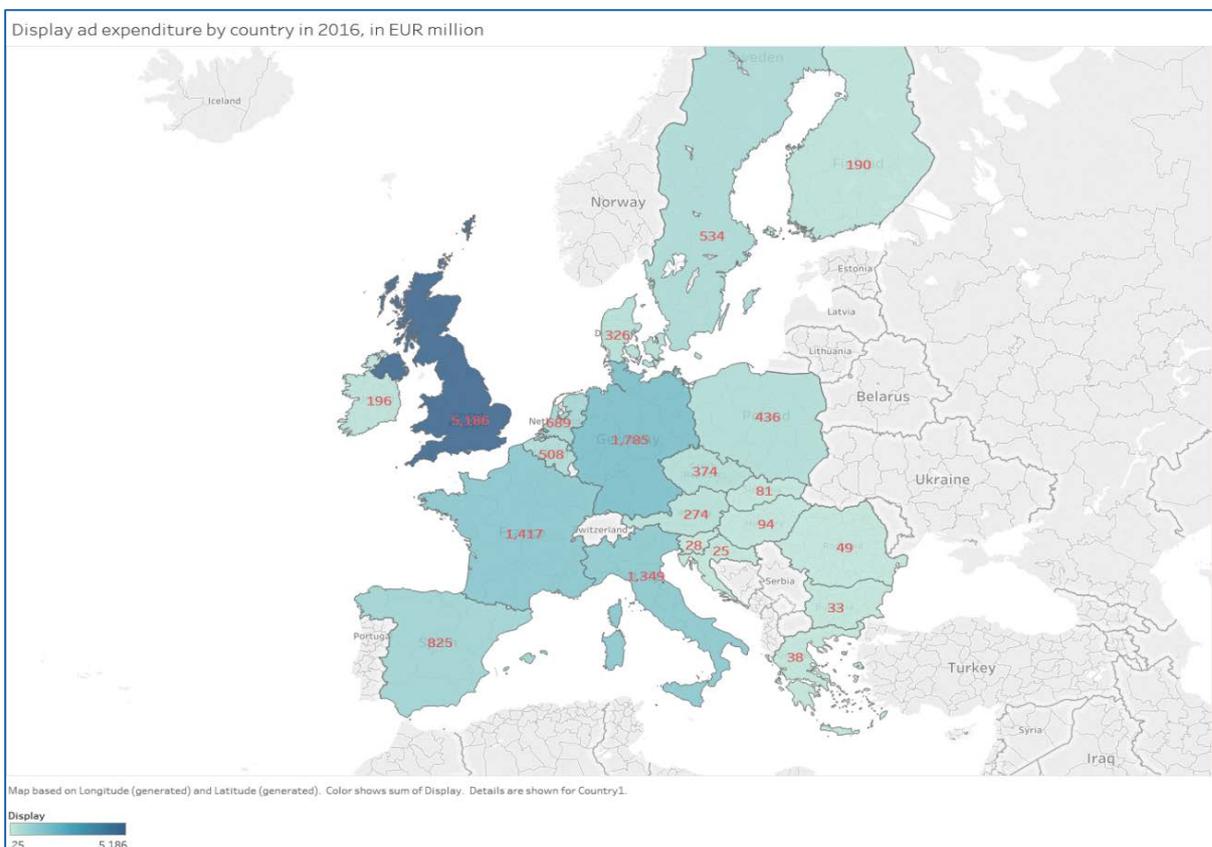


1.4. Video advertising in 20 EU countries

Warc does not publish information about the three different types of online advertising: paid-for-search, display, and classifieds & directories advertising. This is why for this section, IAB Europe's data published in the IAB/IHS Adex Benchmark 2016 report³ is used.

The category of interest for this report is display advertising (which comprises video advertising), the second biggest category of digital advertising in the EU (data for only 21 EU countries) with advertising expenditure of EUR 14.4 billion (see Map 9 and Table 4). Unsurprisingly, the biggest online advertising markets in 2016 were also those with the highest advertising expenditure for display and video advertising.

Map 9 – Display advertising in 21 EU countries in 2016, in EUR million



Source: IAB Adex Benchmark/IHS

³ See « IAB Europe report: "AdEx Benchmark 2016 – The definitive guide to Europe's online advertising market", IAB Europe 29 June 2017, available here: <https://www.iabeurope.eu/research-thought-leadership/resources/iab-europe-report-adex-benchmark-2016-the-definitive-guide-to-europes-online-advertising-market/> (registration necessary)



Table 4 – The 3 categories of online advertising by country, in EUR million

Country	Paid-for-search	Display	Classifieds and Directories	Total	Growth
GB	6 874,4	5 186,1	2 032,1	14 092,6	13,4%
DE	3 073,0	1 785,0	1 091,9	5 949,9	6,4%
FR	1 893,0	1 416,5	865,5	4 175,0	7,0%
IT	747,0	1 349,0	199,0	2 295,0	10,1%
NL	755,0	689,0	245,0	1 689,0	11,3%
ES	783,4	825,0	14,0	1 622,4	22,3%
SE	845,3	534,3	223,9	1 603,5	21,8%
BE	164,7	507,7	273,4	945,8	6,2%
DK	416,3	326,3	163,0	905,6	9,6%
PL	280,7	436,4	115,9	833,0	14,6%
CZ	170,9	374,4	15,5	560,8	25,3%
AT	185,4	273,5	99,0	557,9	11,5%
IE	219,0	196,3	29,0	444,3	31,4%
FI	109,0	190,1	45,9	345,0	5,8%
HU	86,9	93,5	36,3	216,7	22,5%
GR	97,5	37,7	3,6	138,8	11,5%
SK	27,4	81,3	14,0	122,7	23,9%
RO	5,9	48,7	-	54,6	36,9%
HR	12,3	25,1	8,0	45,4	17,7%
BG	10,1	33,4	0,7	44,2	22,9%
SI	9,5	27,5	3,0	40,0	33,2%
Total EU 21	16 766,7	14 436,8	5 478,7	36 682,2	12,1%

Source: IAB Adex Benchmark/IHS



■ Video advertising in 20 EU countries

20 EU countries reported video advertising - all the countries from Table 4 except the Slovak Republic (see Map 9). The total spend by advertisers on video advertising in these 20 countries, in 2016, was EUR 2.7 billion, with total growth of 21%. Video is increasingly seen by brands as a meaningful format online, which helps build brands and allows for storytelling (not really possible with other display formats such as banner or rich media ads).

Therefore, unsurprisingly, video advertising grew strongly in most markets (see Map 11). The countries that saw video ad spend grow strongest were Slovenia, Ireland, Croatia, Denmark and Italy. On the other hand, in digitally more mature markets such as the United Kingdom and France video advertising grew in line with overall digital advertising growth at 12%, and in countries in which online advertising still had room to grow - Greece, Hungary and Poland - video advertising experienced moderate growth, with only 1% in Poland.

As an increasing number of publishers and their digital outlets invest in video content, the supply of video advertising inventory is increasing as well. Furthermore, traditional broadcasters are increasingly proposing joint digital and linear advertising campaigns to their clients, and are therefore making more of their premium video content available in the digital space. Finally, another driver of video advertising is the ever-increasing use of social platforms, on which video is becoming the main attraction. Facebook's "video first" strategy⁴ is evidence of the platforms' recognition of this.

Also, the bulk of growth in the online ad ecosystem is now coming from mobile advertising as advertising on desktops shrinks; this is in line with increased use by consumers of the mobile, rather than the fixed, Web embodied by desktop. In 2017, mobile and video advertising were the main drivers of online ad growth in Europe, as IAB/IHS illustrated in their first-semester report on online advertising in Europe⁵. In the first semester of 2017, mobile display ads grew by 45.9% while desktop display ads shrank by 1.4%.

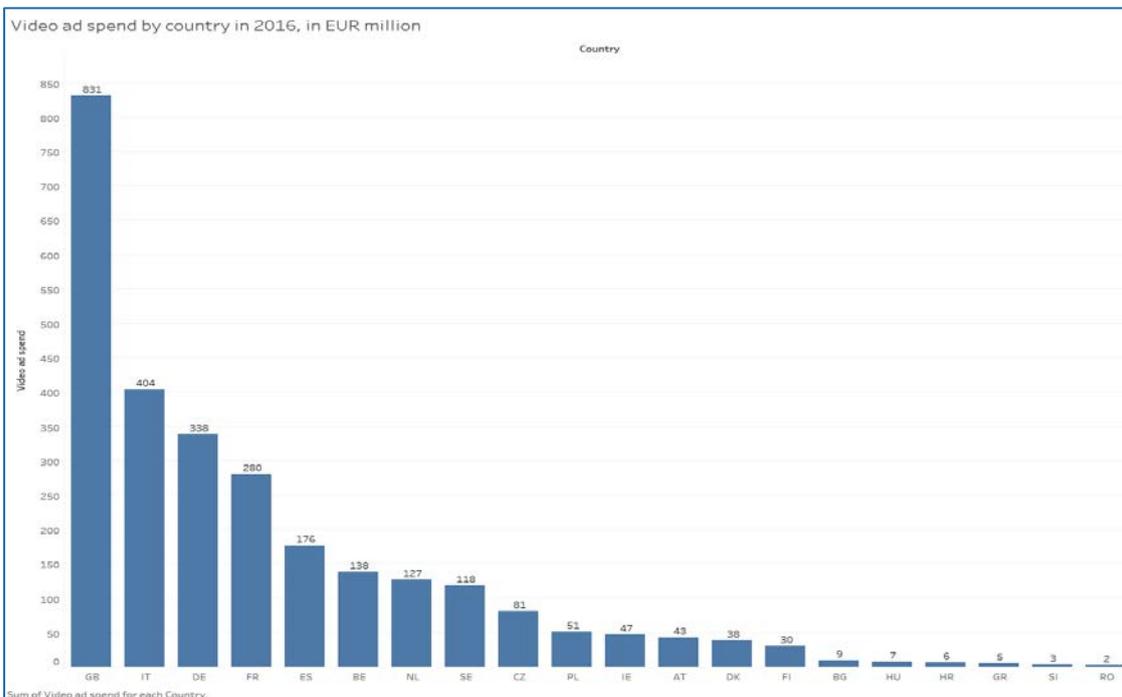
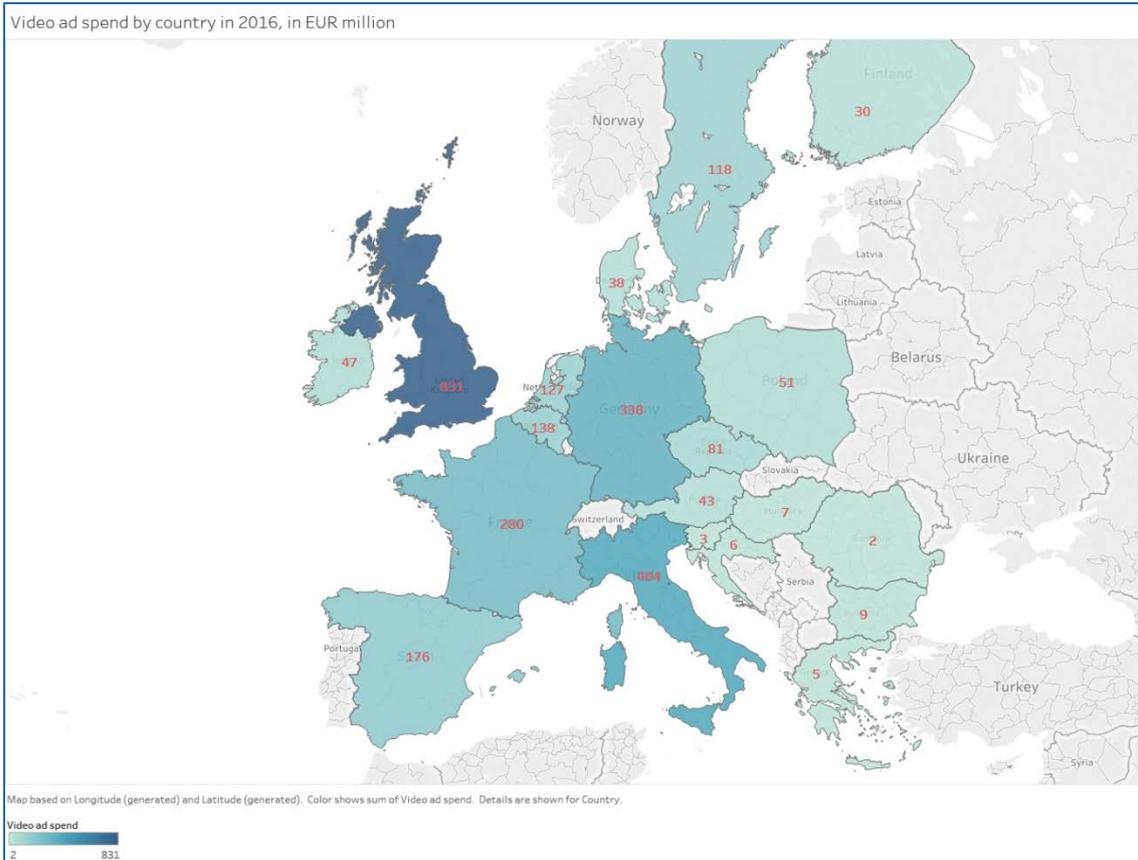
In summary, video advertising appears set to continue to grow as users, services and advertisers place a more prominent focus on video, consumers on their content consumption and advertisers on their brand advertising campaigns. The rise in online video ads, and online display ads in general, has also driven the profile of the transaction mechanism for buying ads: programmatic advertising - which has both rendered possible the increase in ads on the Web but has also had unforeseen side-effects.

⁴ The Hollywood Reporter, "Mark Zuckerberg Details Facebook's 'Video First' Strategy", 2 January 2017, available here: <https://www.hollywoodreporter.com/news/facebook-shares-up-revenue-growth-970957>

⁵ See <https://www.iabeurope.eu/research-thought-leadership/resources/iab-europe-study-adex-benchmark-h1-2017-online-advertising-continues-double-digit-growth/>



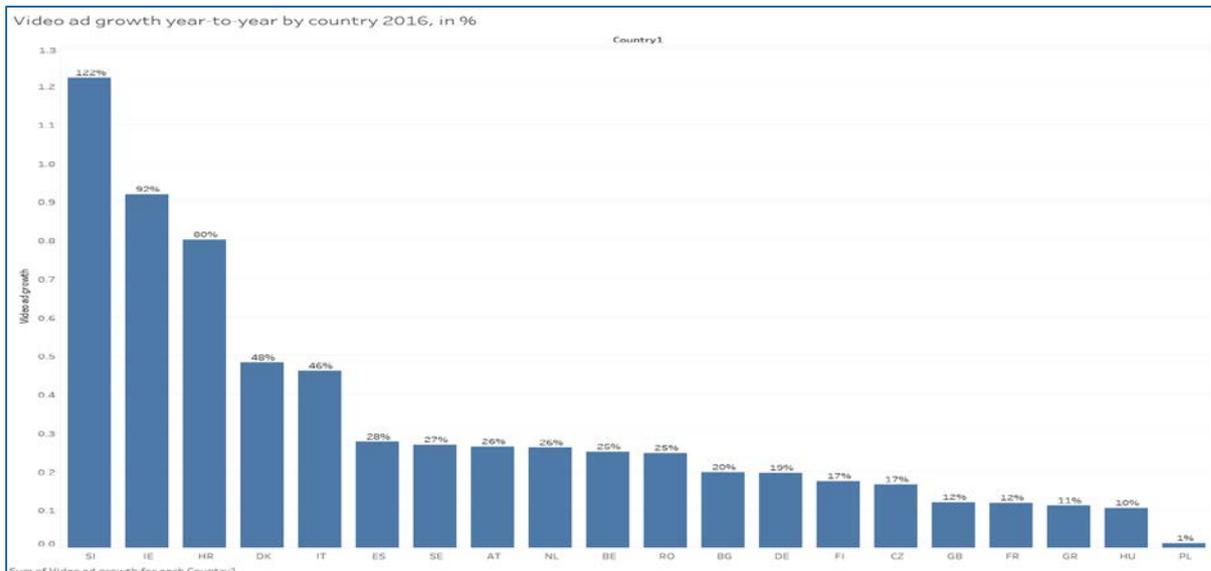
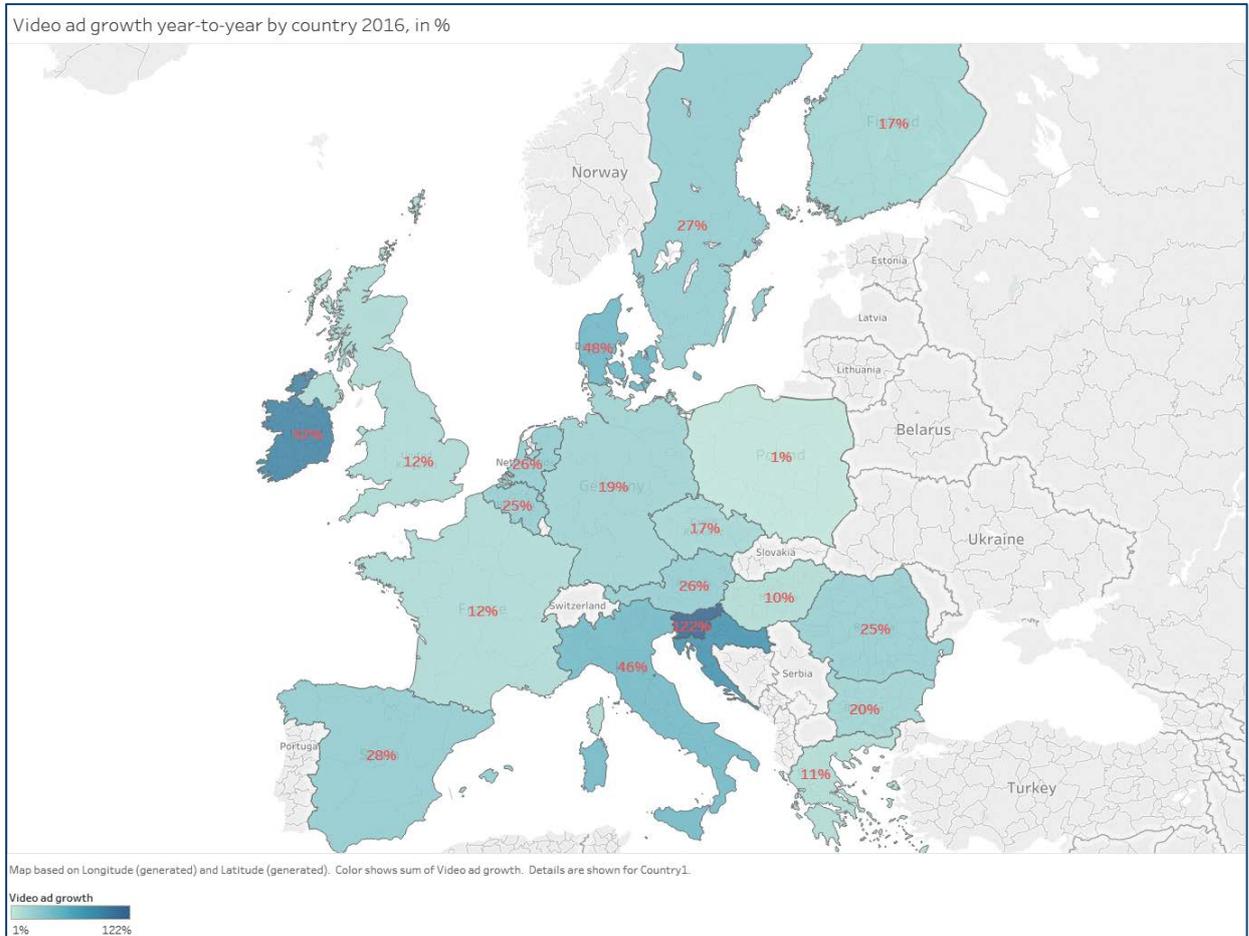
Map 10 – Video advertising spend by country in 2016, in EUR million



Source: IAB Adex Benchmark/IHS



Map 11 – Video advertising growth by country in 2015, in %



Source: IAB Adex Benchmark/IHS





2. The online display advertising ecosystem: Programmatic advertising, challenges and outlook

2.1. The functioning of the programmatic advertising market for display advertisements

The online advertising market and more specifically the functioning of the programmatic advertising market, its players and main figures were the focus of a report released in April 2017 by the EAO⁶.

Programmatic advertising is the automated process of buying, selling and placing advertisements, without human interaction in the transaction process. The main advantage of programmatic advertising is that this buying and selling process can be performed at scale (see Figure 13). On the Web, consumers have access to an abundance of content, and since publishers and platforms want to monetise the attention consumers direct at this almost unlimited reserve of content, there is also an abundance of advertisements.

However, human interaction is needed to create the rules for the buy and sell side, define the profiles that are going to be targeted, and define the price limits of auctions when ads are sold through a real-time bidding mechanism or prices when ads are sold on a fixed price exchange. But with regard to the amount of transactions, it appears no longer possible for humans to intervene in each transaction; this is why programmatic advertising has been adopted largely in the online ecosystem, be it by advertisers, publishers, platforms or ad tech players.

This also means that neither ads nor their placement alongside content are checked by human eyes. This process is left to algorithms, artificial intelligence and other checking and placing systems.

⁶ Grece C., “The online advertising market in the EU – Update 2015 and focus on programmatic advertising”, European Audiovisual Observatory April 2017, available here : <http://www.obs.coe.int/documents/205595/264625/2016+-+The+online+advertising+market+in+the+EU+%28C.+Grece%29.pdf/07d6fc16-4888-4b1c-89a8-ff19b2f0eea7>



As recent news about ads placed next to harmful content⁷, or political ads, demonstrates, this process is not yet perfect and can create serious challenges for ad tech players, publishers and platforms.

Often programmatic advertising is perceived to involve only ads sold through a bidding process. However, this is only one part of programmatic advertising. Actually, four types of programmatic transactions exist, defined on the basis of prices (fixed or through auctions) and advertising inventory (reserved or unreserved, based on the content alongside which the ad will be displayed).

Ads are targeted towards users based on their individual profiles which are built up throughout their journey on the Web. Individual profiles are built by collecting data on the user: age, gender, location, interests and many more criteria and data points.

Thus, programmatic advertisements have allowed targeted advertisements on an individual level, based on the profile of each user rather than on a broad basis centred around assumptions about visitors to a specific website (contextual advertisements)⁸. The aim of advertisers is to display the right advertising message in front of the right audience at the right time.

We have all already been confronted with an ad for a product or service that we have interacted with on the Web, through our mobile applications; basically, this is programmatic advertising. Why do these ads appear to pop into view every time we are on the Web?

In essence, the advertiser has noted the interest of the consumer in one of its products or services, and has then bid for, or bought, ads on the websites or in the applications the consumer is visiting, to convince him/her to buy the product/service (and for now, even if the consumer has already bought the proposed product or service).

The delivery of the ad is mainly performed through an ad network, which uses an ad server, to deliver and target the advertisements to consumers. The ad network is responsible for distributing the advertisement in front of the targeted consumer, through the use of its ad server.

The buying and selling of advertisements and advertising inventories occurs on an ad exchange, where the seller (publisher, platform) and the buyer of ad inventories exchange in a matter of seconds relevant information to allow the placement of an ad in front of a potential consumer.

The latest report published by IAB/IHS on programmatic advertising, “European Programmatic Market Sizing 2016”, in September 2017⁹, noted that programmatic

⁷ “Google’s bad week : YouTube loses millions as advertising row reaches US”, The Guardian 25 March 2017, available here: <https://www.theguardian.com/technology/2017/mar/25/google-youtube-advertising-extremist-content-att-verizon>

⁸ For more detailed information on the process and functioning of programmatic advertising, players, different market places and ad networks in programmatic advertising, please refer to the report quoted above.

⁹ https://www.iabeurope.eu/wp-content/uploads/2017/09/IAB-Europe_European-Programmatic-Market-Sizing-2016-report_FINAL.pdf.



advertising generated EUR 8.1 billion in 2016, up on 2015 by 42.7% (see Figure 14). The programmatic mechanism has quickly become the main transaction mechanism for online display ads transactions, with 50.1% of European digital ad spend being spent through a programmatic transaction mechanism, (see Figure 15). The main share of programmatic transactions is found in Western Europe with EUR 7 501 billion whereas the transaction mechanism has still room for growth in CEE with EUR 610 million in 2016 (see Figure 18).

Finally, online video ads represented 17% of ad spend on programmatic advertising (see Figure 16), and mobile ads 34%, (see Figure 17). Programmatic online video ad spend generated EUR 1.3 billion in 2016, an increase of 155.1% according to the report (see Figure 19), and programmatic mobile ad spend EUR 3.5 billion, up on 2015 by 87.8%. As of 2016, 46.5% of all video ads were bought through a programmatic transaction mechanism, up from only 22.8% in 2015 (see Figure 20).

This sudden rise of programmatic transactions for video ads reflects the increase in available video ad inventory; as consumers increasingly migrate online for video consumption, this creates more occasions for advertisers to reach these consumers with video ads.

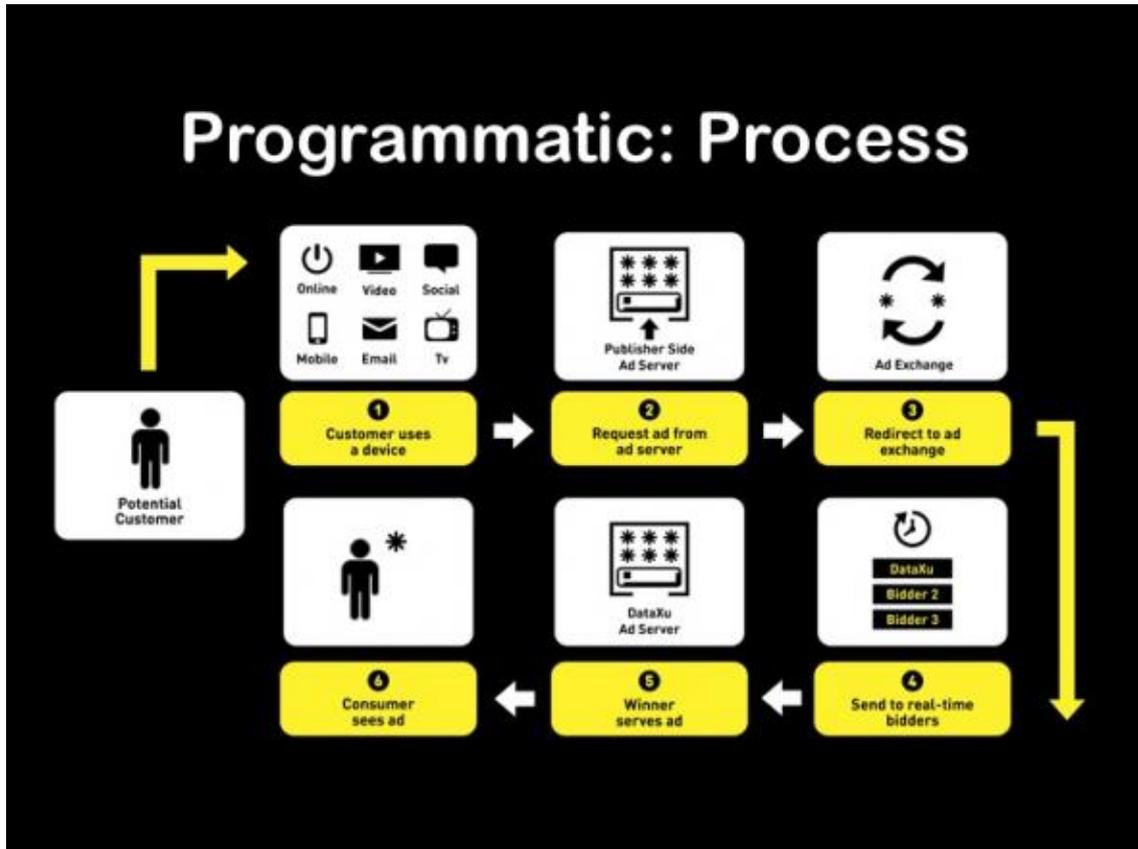
Advertisers and publishers have invested more heavily into video ads and video content to satisfy the appetite of the European audience for online video content. The resultant creation of more occasions to place a video ad is reflected in the figures for 2016 on video advertising and the use of programmatic transaction mechanisms for the purchase and sale of video ads and video ad inventory.

Programmatic buying had become the main transaction mechanism for online ads in Europe in 2016. However, the significant automation of the transaction process in terms of buying and placing ad inventory and ads has led to challenges in the programmatic advertising ecosystem: the risk of placing ads next to harmful/unsuited content for brands, and the risk of distributing harmful/unsuited ads for platforms and ad tech players.

This impact of the programmatic transaction mechanism on content and advertisements distributed on the Web, in particular the two main user platforms for advertising-financed videos - Facebook and Google's YouTube - is the subject of the following section.

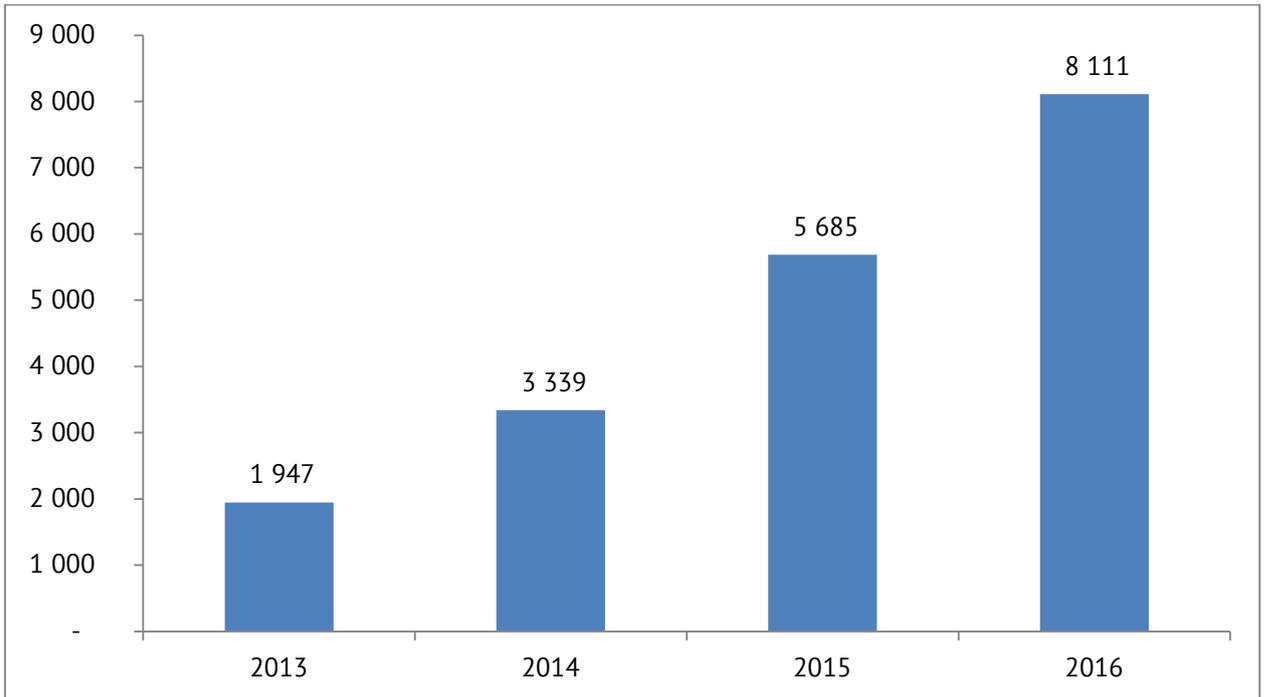


Figure 13 – Schemas: Programmatic advertising process



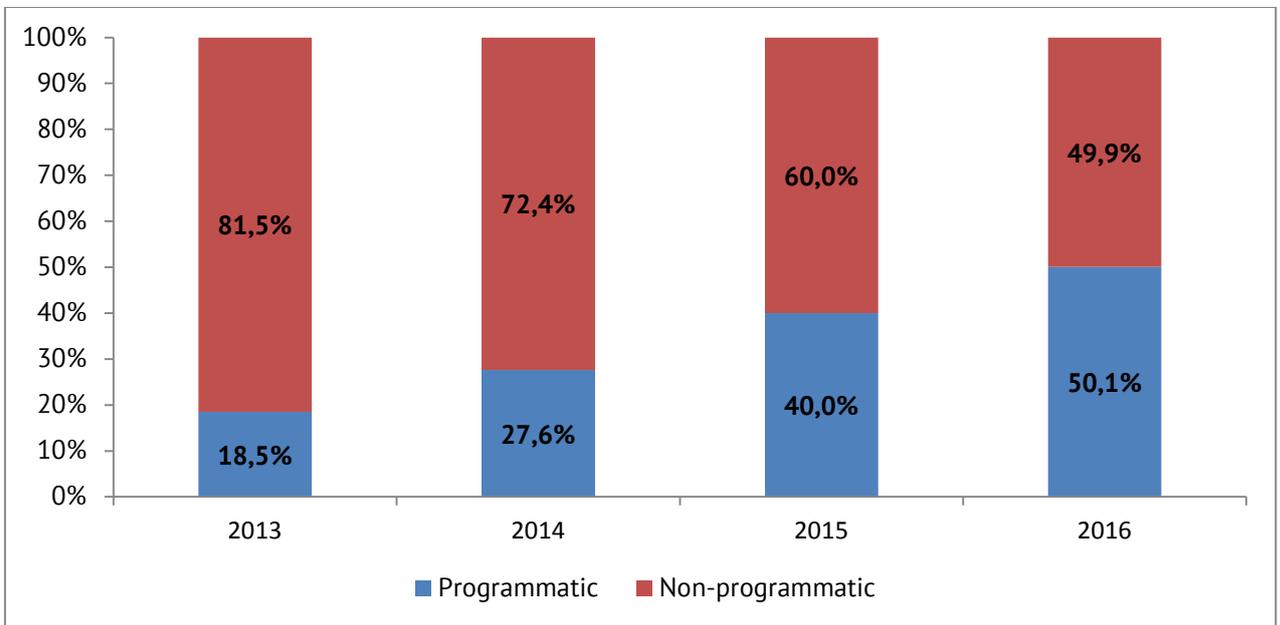
Source: The Guardian and AgencyChief

Figure 14 – European programmatic advertising ad spend, in EUR million



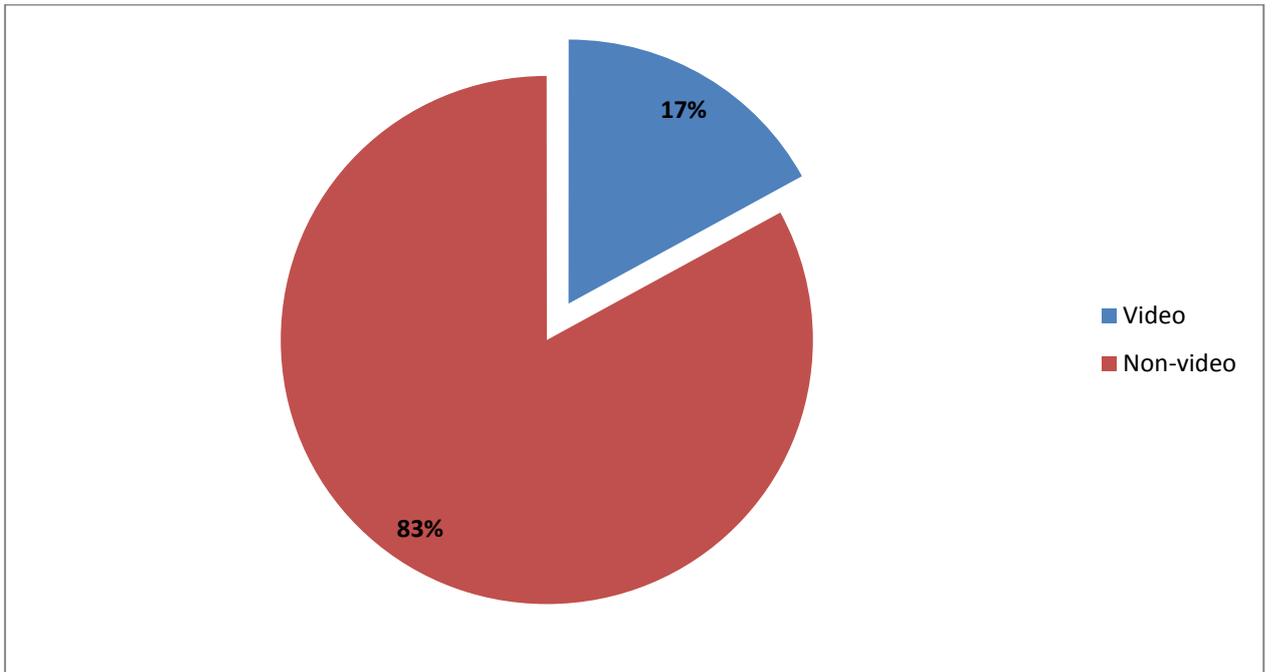
Source: IHS Markit and IAB Europe

Figure 15 – European digital ad spend by transaction mechanism



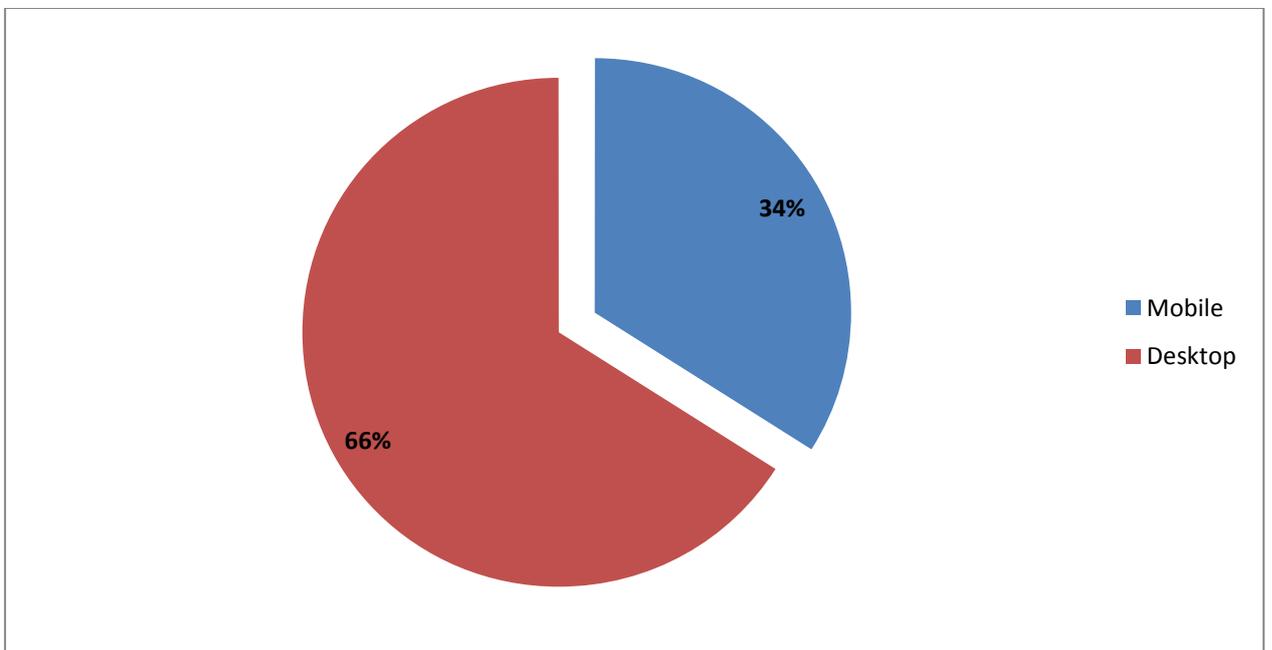
Source: IHS Markit and IAB Europe

Figure 16 – Programmatic ad spend share: Video and non-video, in % of total



Source: IHS Markit and IAB Europe

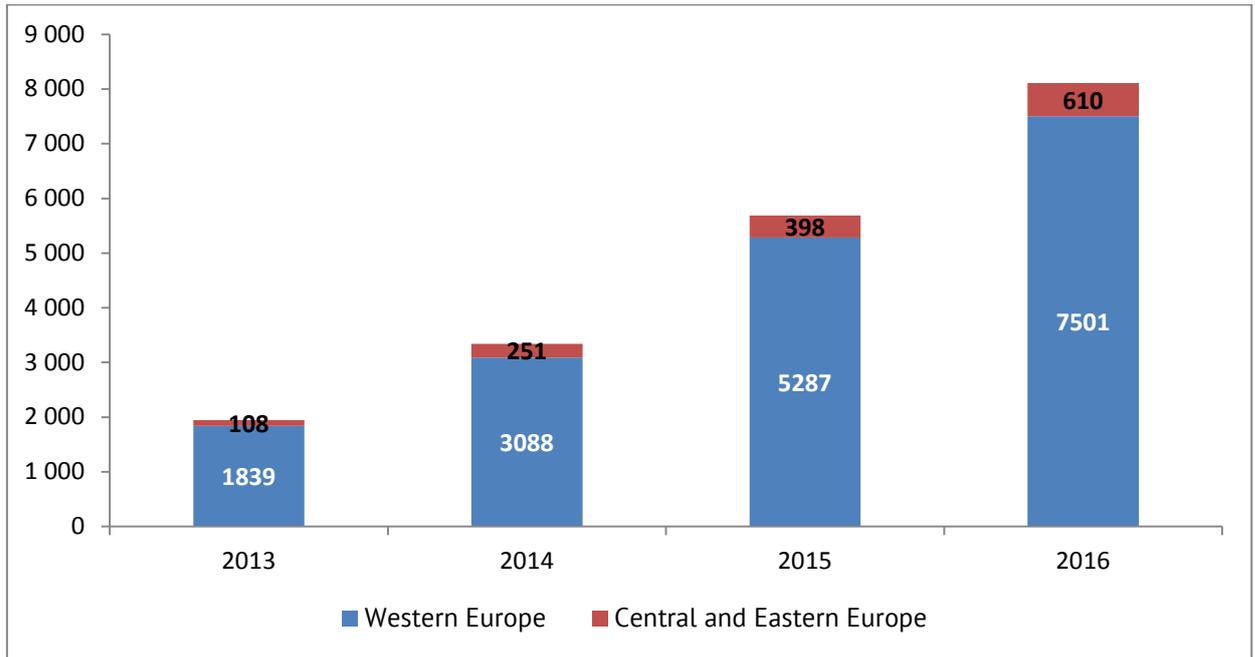
Figure 17 – Programmatic ad spend share: Mobile and desktop, in % of total



Source: IHS Markit and IAB Europe

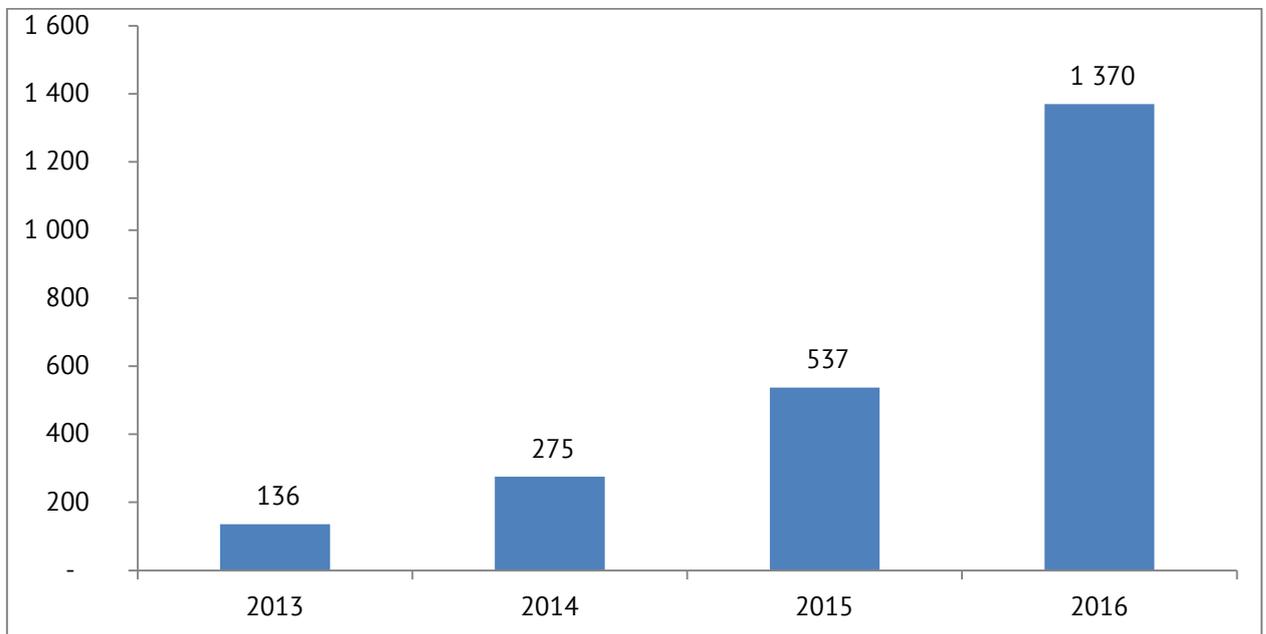


Figure 18 – Share of programmatic advertising Western and Central/Eastern Europe, in EUR million



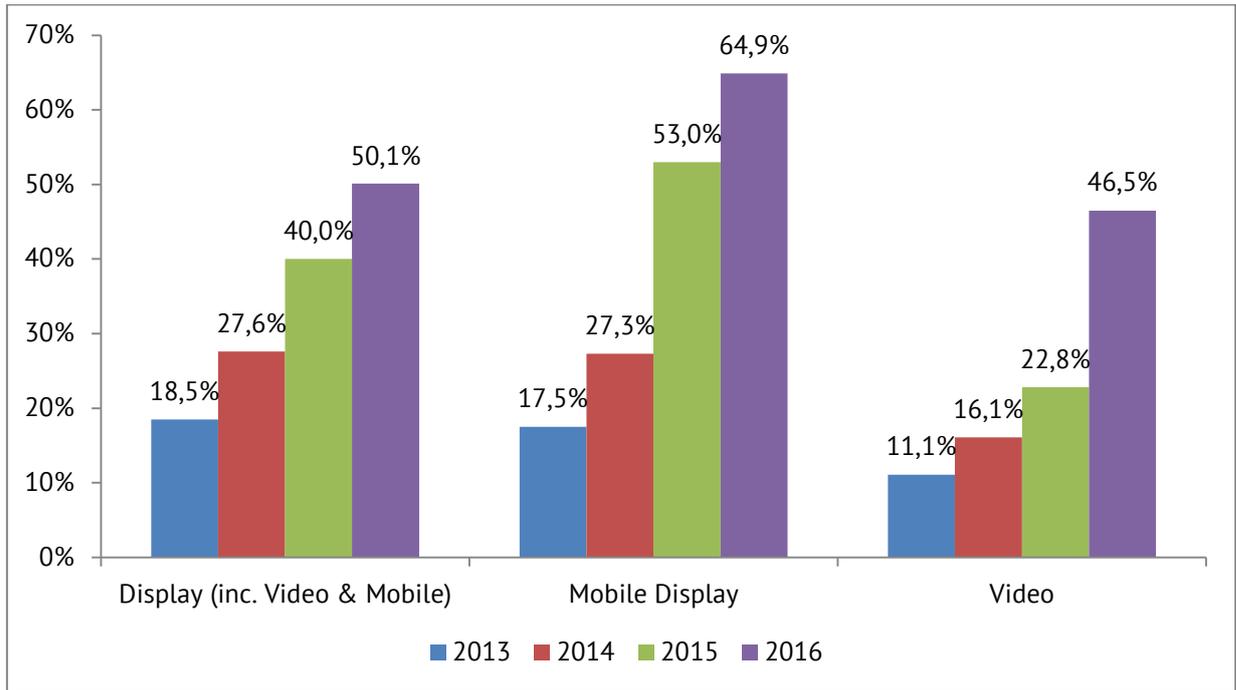
Source: IHS Markit and IAB Europe

Figure 19 – Programmatic video ad spend



Source: IHS Markit and IAB Europe

Figure 20 – Programmatic share of format spend, in % of total



Source: IHS Markit and IAB Europe



2.2. Programmatic advertising: an abundance of content and advertisements, a lack of control?

In this section, the author's views are expressed. As the digital advertising ecosystem is complex and ever-changing, some remarks and conclusions may not be true at the date of publishing of the report or thereafter. Therefore, the veracity of the findings and remarks should be cross-checked against the latest developments in the online advertising market.

Also, the recent upheavals concerning fake news, propaganda, and harmful content on platforms such as Facebook and Google's YouTube are drawing more government attention to the effects and functioning of the online advertising market, especially the display advertising market (video) and the programmatic transaction mechanism. Changes and adjustments will surely be implemented over time, so the findings in this section concern only developments until October 2017.

In the traditional ad buying process, for traditional media (TV, newspapers, magazines, radio) but also for digital media, a human exchange exists between the buyer and seller of ad spaces. This human exchange allows for control and editorial control; the ad space buyer knows where and in which programme his ads will be placed, the seller of ad spaces knows at least what kind of advertisement will be placed in their available ad inventory.

In the online space, content is abundant, as are advertisements. Before programmatic advertising emerged, most online ads were still bought the traditional way, with a human exchange between buyers and sellers. The explosion of content has led to an explosion of available ad inventory and thus programmatic advertising has emerged in order to allow the selling of available ad inventory.

But since 2016, disturbing news has emerged, first of ads being placed next to harmful/objectionable content (hate speech, propaganda, violence, racism, fascism, anti-Semitism, fake news, misinformation, deceptive content ...) on video sharing platforms such as YouTube¹⁰¹¹¹², then of harmful/political advertisements on Facebook, Twitter and other online platforms/services¹³ aimed at manipulating public opinion in elections

¹⁰ See "Google Accused Of Making 'Profit From Hatred' As Major Advertisers Pull Out From YouTube", Forbes 17 March 2017, <https://www.forbes.com/sites/emmawoollacott/2017/03/17/google-accused-of-making-profit-from-hatred-as-major-advertisers-pull-out-from-youtube/#4c3097f175ad>.

¹¹ See "Google's YouTube Has Continued Showing Brands' Ads With Racist and Other Objectionable Videos", The Wall Street Journal 24 March 2017, <https://www.wsj.com/articles/googles-youtube-has-continued-showing-brands-ads-with-racist-and-other-objectionable-videos-1490380551>.

¹² See "Google Exec Apologizes for YouTube Ads Run Against Hate Speech, Terrorist Videos After U.K. Backlash", Variety 20 March 2017, <http://variety.com/2017/digital/news/google-apologizes-youtube-ads-hate-speech-videos-uk-1202012040/>.

¹³ See "It's not just Google's problem: Brands struggle to keep online ads away from offensive content", CNBC 20 March 2017, <https://www.cnbc.com/2017/03/20/google-online-advertising-adjacency-problem.html>.



(mainly in the United States¹⁴ and the United Kingdom¹⁵, but other countries, such as France¹⁶ or Germany¹⁷, are also worrying about the manipulation of public opinion and voters through targeted online advertisements).

Other news related to online advertisements concerned discriminatory advertisements (Facebook for example allowed or is still allowing advertisers to exclude minority groups in the targeting of ads¹⁸) or advertisements directed at hate groups, like anti-Semites¹⁹ (Facebook allowed advertisers to target a group of users classified as “Jew Haters”).

From these news reports, it quickly became evident that the automation of ad buying combined with the automation of the moderation and control of content can spiral out of control and allow the propagation of harmful and/or objectionable content on platforms and ad networks.

The volume of content uploaded to YouTube and Facebook every minute has become uncontrollable for uniquely human eyes; this is why these companies rely on the automation of control mechanisms, by employing algorithms, artificial intelligence and other techniques and technologies to weed out undesirable content.

While the two companies do also employ human moderators, their task is mainly to intervene after a video, post or picture has been flagged as harmful content by users - post-moderation of sorts. Even then the guidelines for human moderators do not appear to be clear and moderators are overwhelmed with the volume of content, “*which means they often have just 10 seconds to make a decision*”²⁰, as The Guardian reported²¹. YouTube faces the same problem with more than 400 hours of video uploaded every minute in 2015 (and this has certainly increased since) and disturbing or harmful content which can propagate on its service unnoticed for years²².

¹⁴ See Divisive Russian-backed Facebook ads released to the public, The Guardian, 1st November 2017, <https://www.theguardian.com/technology/2017/nov/01/facebook-ads-russia-us-election-fake-news-released-public>

¹⁵ See *Senior Tory Asks Zuckerberg About Brexit-Related Russian Ads*, Bloomberg 24th October 2017, <https://www.bloomberg.com/news/articles/2017-10-24/lawmaker-asks-facebook-for-detail-on-brexit-related-russian-ads>

¹⁶ See *Facebook targets 30,000 fake accounts in France*, CNN 21st April 2017, <http://money.cnn.com/2017/04/14/media/facebook-fake-news-france-election/index.html>

¹⁷ See *Facebook Allowed Questionable Ads in German Election Despite Warnings*, ProPublica 18th October 2017, <https://www.propublica.org/article/facebook-allowed-questionable-ads-in-german-election-despite-warnings>

¹⁸ See *Discriminatory ads still get through on Facebook, investigation finds*, CNN 21st November 2017, <http://money.cnn.com/2017/11/21/technology/facebook-ads-discriminatory-renting-propublica/index.html>

¹⁹ See *Facebook allowed advertisers to target 'Jew haters'*, The Guardian 15th September 2017, <https://www.theguardian.com/technology/2017/sep/14/facebook-advertising-jew-hater-antisemitism>

²⁰ See *Revealed: Facebook's internal rulebook on sex, terrorism and violence*, The Guardian 21st May 2017, https://www.theguardian.com/news/2017/may/21/revealed-facebook-internal-rulebook-sex-terrorism-violence?CMP=share_btn_tw

²² See *YouTube Is Addressing Its Massive Child Exploitation Problem*, BuzzFeed News 22nd November 2017, https://www.buzzfeed.com/charliewarzel/youtube-is-addressing-its-massive-child-exploitation-problem?utm_term=.npM9oJbNp#.gmxYAmG04



The same problem these services face in the moderation of uploaded content applies also to the moderation of advertisements as they are bought and placed automatically on the services' platforms or on publishers' websites if they are using their ad network (in 2017, almost every publisher relied on the services of dominant Google and Facebook to reach their audience, on the fixed or mobile Web²³).

As seen above, there are actually two issues relating to online advertisements on digital platforms and in ad networks, both emanating from the loss of human oversight and therefore editorial control over the ads being placed and the content being uploaded:

1. Advertisements placed next to harmful/objectionable content.
2. Harmful/objectionable advertisements being allowed into ad networks and then being targeted at users on platforms, publishers' websites, or in other digital venues (such as mobile applications) next to content.

1. Advertisements placed next to harmful/objectionable content – Brand safety

In general, platforms benefit from the limited liability regime for Internet service providers as per the e-Commerce directive. This regime sets forth exemptions from liability for information society services when they host or transmit illegal content that has been provided by a third party.

As seen above, the rise of questionable content on platforms has however led to an increased sense by governments and lawmakers that platforms should better police the content on their services, as the impact of digital information on our societies has intensified with the increased consumption by citizens of online content – which has become, for younger generations, the main source of information and news²⁴.

Our societies are no longer disconnected from the online world, and false information or hate speech spread online have concrete impacts on our societies. Therefore, as societies, we increasingly expect these platforms to moderate their services and eliminate content not allowed in more regulated audiovisual sectors.

However, with regard to the huge amount of content uploaded per minute to the major services and platforms, human intervention appears no longer possible. As Google's Chief Business Officer told Bloomberg News, "*The problem cannot be solved by humans and it shouldn't be solved by humans*"²⁵.

²³ See *Publishers are wary of Facebook and Google but must work with them*, The Economist 11th November 2017, <https://www.economist.com/news/business/21731194-new-concessions-social-media-firms-are-unlikely-help-publishers-much-publishers-are>

²⁴ See *Social media 'outstrips TV' as news source for young people*, BBC 15th June 2016, <http://www.bbc.com/news/uk-36528256>

²⁵ See *Google Updates Ads Policies Again, Ramps Up AI to Curtail YouTube Crisis*, Bloomberg Technology 3rd April 2017, <https://www.bloomberg.com/news/articles/2017-04-03/google-updates-ads-policies-again-ramps-up-ai-to-curtail-youtube-crisis>



WPP Group's CEO Martin Sorrell had a different opinion, for CNBC²⁶:

"They can't just say look we're a technology company, we have nothing to do with the content that is appearing on our digital pages," Sorrell said. He added that, as far as placing advertisements was concerned, they have to be held to the same standards as traditional media organizations...

"The big issue for Google and Facebook is whether they are going to have human editing at this point ... of course they have the profitability. They have the margins to enable them to do it. And this is going to be the big issue – how far are they prepared to go?" Sorrell said, adding they needed to go "significantly far" to arrest these concerns.

Of course, online players are employing new technologies such as artificial intelligence, machine learning, robots and algorithms²⁷ to weed out undesirable content but for now the process is still perfectible²⁸. Artificial intelligence and machine learning could be the solution to the harmful content problem, but for now not even Google has been able to train its robots correctly to not allow any harmful content on YouTube and its services²⁹, as videos are difficult to control through a machine only.

Most recently, tech companies have collaborated to share a database of digital signatures of 40 000 terrorist videos and images in order to keep extremist content off their platforms. Facebook stated in a blog post that its automated systems were able to spot 99% of ISIS and Al Qaeda-related content, which the platform removes before it is flagged by users, and that in some cases the content was not even uploaded and published on the platform³⁰. Twitter said it removed 99% of terrorist posts without flagging by users and YouTube said the company removed 83% of all terrorist-related content..

In the future, artificial intelligence might block the uploading of harmful video content but it is still a challenge for one of the most technologically advanced companies worldwide, Alphabet's Google:

²⁶ See Facebook, Google need to 'step up' control of their platforms, says WPP's Martin Sorrell, CNBC 20th March 2017, <https://www.cnn.com/2017/03/20/china-development-forum-sir-martin-sorrell-of-wpp-on-fake-news-google-facebook.html>

²⁷ See Google says its robots are better than humans at spotting extremist YouTube videos, The Telegraph 1st August 2017, <http://www.telegraph.co.uk/technology/2017/08/01/google-says-robots-better-humans-spotting-extremist-youtube/>

²⁸ See The Hidden Laborers Training AI to Keep Ads Off Hateful YouTube Videos, Wired 21st April 2017, <https://www.wired.com/2017/04/zerochaos-google-ads-quality-raters/>

²⁹ See Google's AI Hasn't Passed Its Biggest Test Yet: Hunting Hate, Bloomberg Technology, 31st March 2017, <https://www.bloomberg.com/news/articles/2017-03-31/google-s-ai-hasn-t-passed-its-biggest-test-yet-hunting-hate>

³⁰ See Tech Companies Identify, Remove 40,000 Terrorist Videos, Images, Bloomberg 4th December 2017, <https://www.bloomberg.com/news/articles/2017-12-04/tech-companies-identify-remove-40-000-terrorist-videos-images>



As stated in Bloomberg's report on Google's artificial intelligence advances to curb hate speech on YouTube³¹:

"Computer scientists doubt technology alone can expunge offensive videos. We're not there yet where we can, say, find all extremist content," said Hany Farid, a Dartmouth professor and senior adviser to the Counter Extremism Project, which has repeatedly called on YouTube to tackle this problem. He recommends companies like Google and Facebook Inc. deploy more human editors to filter content. "Machine learning, AI is nowhere near that yet," he said. "Don't believe the hype."

[...]

"In AI, Google has even developed its own hardware, called TensorFlow Processing Units. It recently offered a \$30 000 prize for researchers to use its cloud and TPUs, or similar AI tools, to accurately label YouTube videos. Google researchers have applied machine learning software to classify images and audio inside videos for years (is that video tagged as a Prince song really Prince?), while improving recommendations and ad performance. Another part of Alphabet -- a group called Jigsaw -- is using AI tools in other ways to curb hate speech online.

In a memo to aggrieved YouTube advertisers last week, the company said its machine learning algorithms will improve the precision and classification of videos. However, it also warned that with the volume of content involved this can never be 100 percent guaranteed.

Classifying what we hear and watch online, together at once, "is a problem that is essentially open", said Zadeh. "Probably, Google is doing it right now."

He's probably right. At a conference Google hosted in February, Jeff Dean, head of Google's "Brain" AI research unit, spoke about his team's advances. "The next big domain is video," he said."

For now, the only solution to this problem appears to be a combination of human intervention with help from trained robots. But even in this case, there is no guarantee that no harmful content will exist on an online platform. What does this mean for advertisers?

Brand safety has become a global problem³², and advertisers are eager to protect their brands. As long as online video services and platforms are not in a position to moderate 100% of the content that is uploaded to their services, advertisers and/or their agencies should track and control more where their advertisements are placed, facing which content. Google took a first step by blocking ads from channels with fewer than

³¹ See *Google's AI Hasn't Passed Its Biggest Test Yet: Hunting Hate*, Bloomberg Technology, 31st March 2017, <https://www.bloomberg.com/news/articles/2017-03-31/google-s-ai-hasn-t-passed-its-biggest-test-yet-hunting-hate>

³² See *Google Admits Brand Safety Is a Global Problem*, AdAge 20th March 2017, <http://adage.com/article/special-report-advertising-week/google-admits-brand-safety-problem/308344/>



10 000 views³³ but even this was not enough to weed out undesirable content with algorithms and artificial intelligence³⁴, as the recent discussions on disturbing children's videos - some with views in the millions - on YouTube demonstrates³⁵.

The problem mainly comes from programmatic ad transactions, where the ad inventory is not defined beforehand (often the advertiser does not know exactly where their ads will be shown in the case of open auctions / open exchanges and programmatic transactions with non-reserved ad inventories).

Google and Facebook are communicating, after the ad issue upheavals, that they are giving advertisers tools to better control the placement of their advertisements^{36,37}, allowing them to exclude sites, channels and topics from the placement of their advertisements³⁸ in order to safeguard their brands' reputation. As long as the situation is not resolved, advertisers and their agencies should control more where their ads are placed^{39,40} and also take responsibility for their advertising campaigns⁴¹ and ad placements.

In November 2017, yet another upheaval around harmful videos, this time concerning comments under children's videos on YouTube, was sparked. Advertisements appeared next to what appeared to be paedophile comments⁴². This had as a consequence that yet again advertisers pulled their advertisements from YouTube⁴³. In response, YouTube's CEO Susan Wojcicki announced the hiring of more than 10 000 moderators and reviewers of content that could violate the company's policies⁴⁴ while developing its

³³ See *YouTube Blocks Ads From Channels With Fewer Than 10,000 Views*, The Wall Street Journal 6th April 2017, <https://www.wsj.com/articles/youtube-blocks-ads-from-channels-with-fewer-than-10-000-views-1491508809>

³⁴ See *YouTube's big problem has always been its algorithm, not kids programming*, Polygon 7th November 2017, <https://www.polygon.com/2017/11/7/16620400/youtube-algorithm-kids-programming>

³⁵ See *On YouTube Kids, Startling Videos Slip Past Filters*, The New York Times, 4th November 2017, https://www.nytimes.com/2017/11/04/business/media/youtube-kids-paw-patrol.html?_r=0

³⁶ See *Google announces new brand safety controls for display & video advertisers*, Marketing Land 21st March 2017, <https://marketingland.com/google-announces-new-brand-safety-controls-display-video-advertisers-209768>

³⁷ See *Facebook Pitches Brand Safety Ahead of Video Ad Push*, The Wall Street Journal 13th September 2017, <https://www.wsj.com/articles/facebook-pitches-brand-safety-ahead-of-video-ad-push-1505309401>

³⁸ See *Controls for where ads are shown*, Facebook Business, <https://www.facebook.com/business/help/1926878614264962>

³⁹ See *Brand Safety: Don't Just Take YouTube's Word for It—Verify It*, Online Video.net, 9th September 2017, <http://www.onlinevideo.net/2017/09/brand-safety-dont-just-take-youtubes-word-verify/>

⁴⁰ See *Google in Europe - Improving our brand safety controls*, Google 17th March 2017, <https://blog.google/topics/google-europe/improving-our-brand-safety-controls/>

⁴¹ See *Ad Agencies and Accountability*, *Stratechery* 20th March 2017, <https://stratechery.com/2017/ad-agencies-and-accountability/>

⁴² See *YouTube Faces Fresh Backlash After Ads Appear Near Pedophile Comments*, The Wall Street Journal 24th November 2017, <https://www.wsj.com/articles/youtube-faces-fresh-backlash-after-ads-appear-near-pedophile-comments-1511532337>

⁴³ See *YouTube adverts fund paedophile habits*, The Times 24th November 2017, <https://www.thetimes.co.uk/article/youtube-adverts-fund-paedophile-habits-fdzfmqlr5>

⁴⁴ See *Google to hire thousands of moderators after outcry over YouTube abuse videos*, The Guardian 5th December 2017, <https://www.theguardian.com/technology/2017/dec/04/google-youtube-hire-moderators-child-abuse-videos>



machine learning and artificial intelligence capacities to help automatically flag harmful content.

The news from YouTube’s CEO, Susan Wojcicki, followed a steady stream of negative press surrounding the site’s role in spreading harassing videos, misinformation, hate speech and content that is harmful to children.

Wojcicki said that in addition to an increase in human moderators, YouTube is continuing to develop advanced machine learning technology to automatically flag problematic content for removal. The company said its new efforts to protect children from dangerous and abusive content and block hate speech on the site were modeled after the company’s ongoing work to fight violent extremist content.

“Human reviewers remain essential to both removing content and training machine learning systems because human judgment is critical to making contextualized decisions on content,” the CEO wrote in a blogpost, saying that moderators have manually reviewed nearly 2m videos for violent extremist content since June, helping train machine learning systems to identify similar footage in the future.

In recent weeks, YouTube has used machine learning technology to help human moderators find and shut down hundreds of accounts and hundreds of thousands of comments, according to Wojcicki⁴⁵.

This illustrates again the difficulties tech firms and even tech giants such as Google are facing in policing the content uploaded to their platforms and services, be it terrorist-related, or hate or other harmful content.

For now, a mix of human moderation, and machine learning and artificial intelligence, appears to be the response by these players. As the companies, members of the Global Internet Forum to Counter Terrorism⁴⁶, stated in a joint blog post:

“We recognize that our work is far from done, but we are confident that we are heading in the right direction. We will continue to provide updates as we forge new partnerships and develop new technology in the face of this global challenge.”

2. Harmful/objectionable advertisements placed next to content

Such cases mainly concern political advertisements and their impact on societies and elections. Advertisements are regulated under most legal frameworks, which define what acceptable advertisements are and for which products and services advertisements may appear .

So it is at the EU level, with the AVMSD, which provides a definition of commercial communications and suggests a graduated approach for linear and ODAVMS. Basic rules of a qualitative nature apply to all forms of communications, including any general ban

⁴⁵ Idem

⁴⁶ See *Update on the Global Internet Forum to Counter Terrorism, 4th December 2017*, <https://www.blog.google/topics/google-europe/update-global-internet-forum-counter-terrorism/>

regarding incitement to hatred based on race, sex, religion or nationality. Member States can provide for stricter rules.

For other platforms, which are not AVMS (YouTube, Facebook, etc.) there is no such ban under the e-Commerce directive, but some conditions are stipulated: advertising shall be clearly identifiable as commercial communication; the natural or legal person on whose behalf the CC is made shall be clearly identifiable; promotional offers, where permitted, shall be clearly accessible and identifiable, etc.

Content-wise, platforms are subject to other transversal directives, such as the tobacco advertising directive, which regulates tobacco advertising and promotion in the printed media, on radio and in information society services; the directive concerning Medicinal Products for Human Use, which regulates the advertising of medicinal products in AVMS and information society services, etc.

Facebook and Google have been placed under intense scrutiny in the United States over ads considered political propaganda and misinformation aiming to influence the presidential election. As a first step, the Federal Election Commission obliged online services to disclose the origin of political ads⁴⁷.

However, it is not clear if even Facebook – in addition to other services - knows who is really buying ads on its services. In the US, some Congress members are calling for increased action against online platforms, through regulation⁴⁸ and application of the same scrutiny that is applied to advertisements on TV.

The discussions about political and potentially harmful online ads have just begun to start in the USA and in Europe. But at the same time these platforms are also facing an increasing amount of advertisements, correlated with the increase in content and therefore of ad inventory (the more content, the more opportunities to place advertisements next to it).

Should there be increased human intervention, and therefore more control and moderation, for advertisements? If yes, is it humanly feasible, with the ever increasing amount of content and ads on these platforms?

The question of the lack of control and transparency regarding algorithms certainly also play a role in the case of programmatic advertising, as advertisements are placed next to content by an algorithm often kept secret by platforms.

For now, the matter is still developing amid the increased scrutiny from governments in Europe and in the US; however, concrete actions limiting the spread of harmful advertisements have yet to be implemented globally.

⁴⁷ See *Facebook Unveils New Political Ad Disclosure Rules To Combat Election Meddling*, Forbes 27th October 2017, <https://www.forbes.com/sites/kathleenchaykowski/2017/10/27/facebook-unveils-new-political-ad-disclosure-rules-to-combat-election-meddling/#350950ac745b>

⁴⁸ See *Should Washington begin regulating Facebook? Some lawmakers say yes.*, NBC News, <https://www.nbcnews.com/news/us-news/should-washington-begin-regulating-facebook-some-lawmakers-say-yes-n823491>



2.3. Outlook and challenges on the online advertising market

(The section hereafter was also published in the IRIS 2017-2 “*Commercial communications in the AVMSD revision*”⁴⁹ and written by the author of this report)

The growth is not shared equally among players in the advertising ecosystem. The transition from advertising in a linear, analogue world, where mass-advertising was the norm, towards the digital space, where individualised advertising is king, has also shifted the balance of power for players competing for the same advertising budgets. The appearance of global players on the advertising scene has escalated the competition for advertising budgets and is forcing traditional national media players in Europe and elsewhere to adapt to the changes in order to remain relevant in the digital world, a space where the rules are different from the pre-internet era and where other competitive advantages are needed to succeed.

Of course, legacy advertising sectors such as linear TV will not disappear overnight, but the transition from a digital- to a mobile- and in the future to an Artificial Intelligence and cloud-first ecosystems is well under way, in advertising and in other sectors of the digital economy, and this shift will bring further digital disruption.⁵⁰

The industry is realising that the days of a market equilibrium, where most of the competition was fought out between national players on a national market, are over and that the digital transformation of our societies is giving birth, on the one hand, to new “winners”, often in a “winner takes all”⁵¹ configuration enabled by network effects, and, on the other hand, to more “losers”. According to Zenith,⁵² in 2016, two companies, Google Inc. and Facebook Inc., already had a 20% share of the global advertising market (all advertising, not only digital), and their share and impact on the global advertising market is on the rise.

Although it is challenging to compete in a market where two companies generate most of the growth and dominate the landscape,⁵³ national players are finding ways to adapt to the new competitive context in the United States and in Europe, for example through:

⁴⁹ <http://www.obs.coe.int/documents/205595/8682894/IRIS+Plus+2017-2+Commercial+communications+in+the+AVMSD+revision/783f02df-ff10-447c-a144-43b70b19b218>

⁵⁰ See *The economic essentials of digital strategy – A supply and demand guide to digital disruption*, McKinsey Quarterly, March 2016, <http://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/the-economic-essentials-of-digital-strategy>.

⁵¹ See *Investing in a ‘Winner Takes All’ Economy*, The Wall Street Journal, 9 April 2017, <https://www.wsj.com/articles/investing-in-a-winner-takes-all-economy-1491790561>.

⁵² See *Google and Facebook bring in one-fifth of global ad revenues*, The Guardian, 2 May 2017, <https://www.theguardian.com/media/2017/may/02/google-and-facebook-bring-in-one-fifth-of-global-ad-revenue>.

⁵³ In 2015, Google and Facebook took between 75% and 85% of all new online advertising spending, according to the *Internet Trend report* by Mary Meeker of Kleiner Perkins Caufield & Byers <http://www.kpcb.com/blog/2016-internet-trends-report>. See also *Advertising: Facebook and Google build a duopoly*, Financial Times, 23 June 2016, <https://www.ft.com/content/6c6b74a4-3920-11e6-9a05-82a9b15a8ee7?mhq5j=e1>.



- the adoption, slowly and reluctantly, by TV channels of programmatic - automatic – advertising;
- the acquisition⁵⁴ of, or investment⁵⁵ in digital video platforms and services;
- experimentation with shorter and new advertising formats;
- diversification into e-commerce⁵⁶ or new forms of digital entertainment such as e-Sports⁵⁷ (e-Sports generated USD 280 million in advertising globally, an amount which is expected to rise to USD 1 billion by 2021 according to IHS⁵⁸).

Will these innovations and changes by European media players be sufficient to adapt to changing content consumption patterns by the audience; increased fragmentation between platforms, services and devices; and an abundance of content as never seen before? Only the future will tell, but the challenges traditional media companies face to find a sustainable business model which will thrive in the online world and resist further innovations in the media field are daunting for most players.

Other pressing concerns linked to matters of public interest and consumer safety are also coming under the spotlight in the digital advertising ecosystem; these include so-called “brand safety” issues, which refer for example to advertising spots inserted next to extremist videos on YouTube⁵⁹ or in fake news sites.⁶⁰ Other issues, such as advertising fraud and the measurement of the viewability of advertising spots, or the increased rejection by consumers of the interruptive nature of online advertising through the use of advertising blockers,⁶¹ also constitute new challenges for publishers.⁶²

⁵⁴ Such as the acquisition by RTL Group of the Multi-Channel Network and digital content creator BroadbandTV in June 2013 for USD 36 million. See *RTL Takes Control of BroadbandTV with \$36 Million Investment*, Variety, 26 June 2013, <http://variety.com/2013/digital/global/rtl-takes-control-of-broadbandtv-with-36-mil-investment-1200501849/>

⁵⁵ Such as TF1’s and Mediaset’s into ProSiebenSat.1’s multichannel network Studio 71. See *France’s TF1 and Italy’s Mediaset Join Collective Digital Platform Studio71*, Variety, 12 January 2017, <http://variety.com/2017/digital/news/frances-tf1-and-italys-mediaset-join-collective-digital-platform-studio-71-1201958865/>

⁵⁶ ProSiebenSat.1 has bought 40 e-commerce firms since 2012 at a total cost of EUR 1.1 billion. See *Investors struggle to figure out ProSieben’s digital strategy*, Reuters, 6 June 2017, <http://www.reuters.com/article/us-prosieben-media-strategy-analysis-idUSKBN18X22L>.

⁵⁷ Such as the acquisition in 2015 by Modern Times Group of ESL, the largest e-Sport organization worldwide, for EUR 78 million. See *Swedish media house buys world’s largest eSports company*, Engadget, 7 January 2015, <https://www.engadget.com/2015/07/01/esports-mtg-acquires-esl/>.

⁵⁸ See *Global Market for Esports Video is Booming, with China Leading the Way*, IHS Markit Reports, Business Wire, 9 May 2017, <http://www.businesswire.com/news/home/20170509005380/en/Global-Market-Esports-Video-Booming-China-Leading>.

⁵⁹ See *YouTube Hate Videos Haunt Advertisers on Google*, Bloomberg, 23 March 2017, <https://www.bloomberg.com/news/articles/2017-03-23/youtube-hate-videos-snare-ikea-ads-as-google-crisis-spans-europe>.

⁶⁰ See *Advertisers Try to Avoid the Web’s Dark Side, From Fake News to Extremist Videos* The Wall Street Journal, 18 June 2017, <https://www.wsj.com/articles/advertisers-try-to-avoid-the-webs-dark-side-from-fake-news-to-extremist-videos-1497778201>.

⁶¹ Between 20.9% (United Kingdom) and 29% (Germany) of internet users are using Ad Blockers in Europe according to eMarketer, *Ad Blocking Losing Steam in EU-3*, eMarketer, 7 June 2017, <https://www.emarketer.com/Article/Ad-Blocking-Losing-Steam-EU-3/1015974>.

⁶² See *As Ad Blocker Use Grows, Publishers Face New Challenges*, eMarketer, 26 June 2017,



The following paragraphs explain the current challenges in online advertising in more detail. It is not an exhaustive assessment on the state of the online advertising sector but rather a survey of the most pressing challenges facing the industry.

■ The emergence of a digital duopoly

In 2016, it became an accepted fact that the online advertising sector was a duopoly, dominated by two tech firms, Google Inc. (Alphabet) and Facebook Inc. According to various studies, the two companies represented up to 85% of all digital advertising growth in 2016⁶³ and were expected to continue to dominate the sector. Other studies show that they even represented all digital advertising growth in the United States by capturing 99% of digital ad growth in 2016.⁶⁴

Their scale and reach, through a large user base⁶⁵ and therefore ownership of large amounts of personal data on individual users, give them a major competitive advantage; one with which national media companies can hardly rivalise. Why is that the case? Advertising is the business of trading consumers' attention, captured by websites and services through their content offering videos, social networks, news, etc., against the advertisers' payments for the placement of advertising messages.⁶⁶ Advertisers therefore flock to the services which best capture the attention of consumers – social networks, video sharing sites and, to a lesser extent, digital publishers of all sorts. As people spend more time online, increasingly on mobile devices,⁶⁷ advertisers logically follow the shift in attention. In some European countries (in Germany, France and the United Kingdom), adults spend more time with digital media than with any other media, TV included, according to eMarketer. The access to digital media content is tightly controlled by tech players, even if the content is not.

The prominent place of these two companies in the digital ecosystem (they are both basically platforms and act thus as intermediaries between the audience and the

<https://www.emarketer.com/Article/Ad-Blocker-Use-Grows-Publishers-Face-New-Challenges/1016076>.

⁶³ In France, the two companies captured 92% of mobile advertising growth in 2016. See *Pub en ligne : le duopole Google-Facebook pointé du doigt*, Les Echos, 26 January 2017, https://www.lesechos.fr/26/01/2017/lesechos.fr/0211734893066_pub-en-ligne---le-duopole-google-facebook-pointe-du-doigt.htm and in the United Kingdom both are expected to have a 70% share of the display advertising market by 2020. See *Google and Facebook to take 71% of UK online ad revenue by 2020*, The Guardian, 15 December 2016, <https://www.theguardian.com/media/2016/dec/15/google-facebook-uk-online-ad-revenue>.

⁶⁴ As claimed by Pivotal research based on IAB figures, *Facebook and Google completely dominate the digital ad industry*, Yahoo ! Finance, 26 April 2017, <https://finance.yahoo.com/news/facebook-google-completely-dominate-digital-204836182.html>.

⁶⁵ Facebook claims as of June 2017 2 billion monthly users, YouTube 1.5 billion and Facebook-owned Instagram 700 million. See *Facebook now has 2 billion monthly users... and responsibility*, TechCrunch, 27 June 2017, <https://techcrunch.com/2017/06/27/facebook-2-billion-users/>.

⁶⁶ The so-called "two-sided markets", http://lexicon.ft.com/Term?term=two_sided_markets&mhq5j=e1.

⁶⁷ See *Time Spent with Major Media Continues to Rise in Europe*, eMarketer, 12 December 2016, <https://www.emarketer.com/Article/Time-Spent-with-Major-Media-Continues-Rise-Europe/1014834>.



content) allows for an ever increasing accumulation of data on users (the new oil in a digital first economy,⁶⁸ in advertising used to tailor and target specific advertising messages to users), which renders them almost unavoidable for advertisers and their agencies.

Traditional TV companies have until now not had a direct link with their viewers (they have been distributed on DTT, cable, satellite and IPTV networks) and therefore are lacking the data needed to provide tailored and targeted ads wanted by advertisers.

As Time Warner's CEO stated, the need for data to be able to compete with the Googles, YouTubes, Facebooks and Amazons of the world was the main reason why Time Warner agreed to be sold to At&T.⁶⁹ TV companies are starting to collect data on their viewership by using log-ins for their catch-up services or through different means. However, not being in a central position, it seems almost impossible for their collection data to be as wide-reaching as those of the web giants that are in almost every place of a consumer's journey on the web, on desktop or mobile.

This market development towards an oligopoly in digital sectors is common;⁷⁰ however, the impact of these evolutions on the traditional media ecosystem has profound and long lasting consequences. A large pan of the media ecosystem⁷¹ (the production of audiovisual content and news reporting and therefore the companies in these businesses, commercial TV channels and publishers) is financed through advertising. As it becomes harder for traditional media companies to secure the same amount of advertising budgets as in the analogue age, the future of advertising-financed content produced by traditional players could come increasingly under threat.

Although the online advertising sector continues its growth and has surpassed TV advertising in 2016 in Europe, several challenges remain for the digital advertising industry: advertisers, advertising tech players and media groups/publishers/content producers.

■ What futur for traditional advertising-financed media companies?

The first question of concern is the place that traditional advertising-financed publishers (commercial TV channels, newspapers and magazines, digital-only websites) will occupy in this advertising ecosystem; in a digital economy, scale, reach and data are of utmost

⁶⁸ See *The world's most valuable resource is no longer oil, but data*, The Economist, 6 May 2017, <http://www.economist.com/news/leaders/21721656-data-economy-demands-new-approach-antitrust-rules-worlds-most-valuable-resource>.

⁶⁹ See *Time Warner's CEO says its \$85 billion sale to AT&T is all about battling Google and Facebook*, Recode, 31 May 2017, <https://www.recode.net/2017/5/31/15722460/time-warner-ceo-jeff-bewkes-code-conference-2017>

⁷⁰ See for example Netflix's and Amazon's domination of the European SVOD market, Amazon's reign in e-commerce or Android and iOS in the smartphone operating systems market.

⁷¹ According to the Observatory, in 2015, advertising on television represented 31% of EU audiovisual services revenues, just behind pay TV, see Yearbook 2016, European Audiovisual Observatory.



importance, and while Google and Facebook can boast a user base of more than a billion, national publishers in Europe have a much more delimited reach and fewer monthly users. As the advertising pie is divided among more players (as opposed to a national market before the irruption of the web), it will be crucial for traditional media players to find ways to remain attractive to advertisers and brands in order to maintain their place in the media ecosystem and continue playing their role in content production, information/news, education and their societal impact.

However, and on this point the dominance of global tech players becomes evident, they need the audience that these players bring them. Users are increasingly primarily accessing news on Facebook,⁷² and free audiovisual content viewing is still mainly done on YouTube (and Facebook), with global OTT viewers watching more than 1 billion hours of videos on YouTube per day.⁷³ In the United States, eMarketer estimated that 85% of digital video viewers are YouTube viewers and that 95% of OTT video services users also watch videos on the service. Therefore it is almost impossible for content owners and media companies not to be present on these two services where the majority of digital video viewers flock to. As they share their content on these services, they can monetise it (at a much lower rate than on broadcast TV) but they also have to share the advertising revenues with these platforms. A sort of “frenemy” relationship (or “coopetition”) is therefore developing between media companies and content right holders and digital platforms, which take a cut of revenues in their role as intermediaries.^{74,75}

Other global players are in the starting blocks to challenge the duopoly. For now, a player that looks well positioned to transform the duopoly into a triumvirate is Amazon⁷⁶ with its suite of audiovisual services (from Twitch, an e-sport streaming platform to Amazon Prime Video), e-commerce, cloud-computing business and even traditional retailers since the acquisition of Whole Foods. TV and media companies are well aware of the threat posed by having to compete with another global giant for the same advertising budgets and content.⁷⁷ With the launch of its channel programme in

⁷² See *Social media 'outstrips TV' as news source for young people*, BBC, 15 June 2016, <http://www.bbc.com/news/uk-36528256>.

⁷³ See *YouTube Tops 1 Billion Hours of Video a Day, on Pace to Eclipse TV* », The Wall Street Journal, 27 February 2017, <https://www.wsj.com/articles/youtube-tops-1-billion-hours-of-video-a-day-on-pace-to-eclipse-tv-1488220851> and *YouTube Viewership Hits 1 Billion Hours a Day*, eMarketer, 28 February 2017, <https://www.emarketer.com/Article/YouTube-Viewership-Hits-1-Billion-Hours-Day/1015332>.

⁷⁴ Jason Kint describes the relationship between publishers and Facebook as follows: *Media companies are like serfs working Facebook's land*. See *Media Companies Are Getting Sick of Facebook*, Bloomberg Businessweek, 19 June 2017, <https://www.bloomberg.com/news/articles/2017-06-19/media-companies-are-getting-sick-of-facebook>.

⁷⁵ See *Publishers are wary of Facebook and Google but must work with them*, The Economist, 11th November 2017, <https://www.economist.com/news/business/21731194-new-concessions-social-media-firms-are-unlikely-help-publishers-much-publishers-are>

⁷⁶ See *The Race Is On to Challenge Google-Facebook 'Duopoly' in Digital Advertising*, The Wall Street Journal, 19 June 2017, <https://www.wsj.com/articles/the-race-is-on-to-challenge-google-facebook-duopoly-in-digital-advertising-1497864602>.

⁷⁷ As the CEO of German cable operator Unitymedia (owned by Liberty Global) says: I have “*huge respect for Amazon*” because “*they are going out there and taking our business away*. See *Amazon will have 'bigger impact' than Netflix*, DigitalTVEurope, 30 May 2017, <http://www.digitaltveurope.net/701831/amazon-will-have-bigger-impact-than-netflix/>.



Europe,⁷⁸ Amazon is surely in a position to severely challenge established broadcasters in Europe and elsewhere. Basically Amazon is proposing to other TV channels to be distributed on its website, and is putting forward its amount of data to find new subscribers and viewers. Starz's COO Jeffrey Hirsch puts it this way: "They are spectacular at finding an audience, finding targets and selling into it".⁷⁹ According to WPP's CEO Martin Sorell, Amazon has a strategic place with its plethora of digital business to take a major place in the online advertising ecosystem and BBC's worldwide chief executive Davie states: "If you look at single country broadcaster commissioner, you cannot compete with Amazon", adding, "There are few companies that are both full partners and full competitors" and "There is no one who is the outright enemy. Ultimately, my customer now might be my competitor tomorrow."⁸⁰

In November 2017, Amazon in association with German IPTV platform waipu.tv⁸¹ has given the possibility to TV viewers to directly order products of a commercial for the first time. TV advertising and e-commerce have come together; examples like these illustrate the new possibilities tech players have to innovate around advertising and to further challenge established players.

Amazon is not the only player competing for TV's advertising money; several new ones have also entered the competition such as Snap's Inc. Snapchat and, of course, Chinese tech giants which have not yet significantly expanded abroad and into Europe.⁸²

When the rise of handheld mobile devices is taken into account and the ever growing attention we devote to them, the challenges for traditional players are even more steep – on the mobile web, only a handful of players seem to be in a position to truly reap the benefits of the increase in media consumption brought to the sector through these devices.

Furthermore, advertising rates on the mobile web are much lower in the digital space than they were in the analogue one, and this has a profound impact on commercial television business models. In order to attain a certain threshold in digital advertising,

⁷⁸ See *Amazon TV Service Helps Starz, HBO Stand Out in Netflix Era*, Bloomberg, 23 May 2017, <https://www.bloomberg.com/news/articles/2017-05-22/amazon-s-a-la-carte-tv-helps-starz-hbo-stand-out-in-netflix-era>.

⁷⁹ Idem.

⁸⁰ See *'The one to watch': Amazon is set to turn the duopoly into a troika*, Digiday UK, 9 June 2017, <https://digiday.com/marketing/amazon-set-turn-duopoly-troika>.

⁸¹ See *Waipu.tv and Amazon launch TV shopping*, BroadbandTV News 22nd November 2017, <https://www.broadbandtvnews.com/2017/11/22/waipu-tv-and-amazon-launch-tv-shopping/>

⁸² Snap's recent USD 100 million deal with Time Warner for shows and ads indicates that the company has to be taken seriously as it makes more in-roads into TV coveted audience: younger generations. Snap's takes advantage of the fact that it is a mobile-first (or even only) application and as users spend more time with their mobile device for media consumption, the company appears to be in a prime position to reach and engage with a younger audience one which is sought after by advertisers. See at *Time Warner Signs 100 Million Deal With Snap for Shows and Ads*, The Wall Street Journal, 19 June 2017, <https://www.wsj.com/articles/time-warner-signs-100-million-deal-with-snap-for-shows-and-ads-1497885737> and *Snapchat Shows: Inside the Plan to Reimagine TV for the Mobile Era*, Variety, 23 May 2017, <http://variety.com/2017/digital/news/snapchat-shows-inside-the-plan-to-reimagine-tv-for-the-mobile-era-1202440096/>.



businesses need scale and a large user base; the shift from mass-advertising towards individualised advertising, as is the case on the web, clearly benefits companies which have a large user base. Traditional media companies are therefore experimenting with changes to their traditional model and formats for selling advertising in order to adapt to these new competitive challenges and often have to rely on the services of the same tech companies they are competing with to reach their audience.

Competing with the duopoly (or oligopoly if Amazon or another tech player reaches a significant market share in online advertising) seems to get harder by the day as these services expand their reach and presence on the web and into our daily lives.

“Content is king” but data and distribution are queens in the digital age. Media companies have the content, now they need to know (data) and reach (distribution) their audiences online. A pessimist might think that for digital media distribution and knowledge of audiences, the game has already been played and has designated its winners.

■ **The role of data and the rising concerns about consumers’ digital privacy**

Another question which comes with several consequences attached is the central position that personal data (collected throughout a user’s journey on the web) occupies in the advertising-financed web ecosystem. Data is clearly the most valuable resource in the online economy and the majority of so-called “free” services and digital products are only “free” in exchange for access to the user’s data.

As seen before, traditional free television players are either entirely lacking data on their audience because until now they have had no direct link with them, or are starting to collect basic data (gender, age, location) which is quite pale in comparison to all data points collected by tech players throughout a consumer’s journey on the web. Data (and data analytics) are the condition *sine qua non* to be able to target users with advertising messages tailored to their personal preferences and interests.

While traditional media companies are still switching their mind-sets and starting to collect data on their viewers, tech giants are already a step ahead. It would take too long to dress an exhaustive landscape of the use made of personal data collected on and off the web, so here are just two examples of how data can be used to lure in more advertisers:

- Google said that it plans to track credit card spending offline in stores in order to allow advertisers to see if the online advertising campaigns generate offline sales.⁸³ There are not even a handful of players worldwide who are in a position to

⁸³ At the announcement of the service, Google said that it already captures 70% of all credit and debit card transactions in the United States and that its location data will be able to further close the gap between the physical and the digital world. See *Google plans to track credit card spending*, BBC, 26 May 2017, <http://www.bbc.com/news/technology-40027706> and *Google Adds YouTube to Suite of Ad Tools Tracking*



propose such a service to advertisers. This new suite of advertising tools is also integrated into YouTube.

- Facebook made similar enticing announcements for advertisers. In June 2017, the company launched an advertising tool that allows advertisers to target the people most likely to buy their products. Advertisers can therefore optimize their budgets to target users most interested in their products and services and at the same time reduce wastage caused by targeting people who are not interested, and these new tools are free for marketers.⁸⁴

These two examples show the power of having enormous data points for companies whose business model is based on advertising. In the digital world, marketers can target and evaluate the performances of their advertising campaigns like never before; but in order to be able to propose such innovations, the prerequisite is to have collected these data points on individual users, online and offline, and then to be able to analyse them correctly – not an easy feat when the amount of data collected runs into billions. However, the presence of global corporations not only in our digital, but also in our physical daily lives is starting to raise increasing concern among consumers and governments.⁸⁵ And if we consider the fact that Facebook tracks (or was tracking) all users around the web,⁸⁶ not only Facebook users, it becomes quite evident that these web giants know a lot more about us⁸⁷ than most private companies or even public organisations. The recent fine of EUR 110 million by the European Commission over Facebook's use of WhatsApp data⁸⁸ (the messaging service Facebook acquired in 2014 for USD 19 billion) to match users shows the importance of data for digital advertising-based services and businesses. Data has become the decisive competitive advantage.

As citizens around the world are becoming more concerned about the collection and use of their personal data, there is a risk of creating a division between the poorer and the wealthier members of society;⁸⁹ those who are wealthier are starting to pay for

Retail Sales, Bloomberg, 23 May 2017, <https://www.bloomberg.com/news/articles/2017-05-23/google-adds-youtube-to-suite-of-ad-tools-tracking-retail-sales>.

⁸⁴ See *New Facebook Tools Help Marketers Serve Ads to People Most Likely to Spend Money*, The Wall Street Journal, 12 June 2017, <https://www.wsj.com/articles/new-facebook-tools-help-marketers-serve-ads-to-people-most-likely-to-spend-money-1497279600>.

⁸⁵ Just as an example, as actions by national regulators, the EU Commission or governments abound. See *Facebook facing privacy actions across Europe as France fines firm €150k*, The Guardian, 16 May 2017, <https://www.theguardian.com/technology/2017/may/16/facebook-facing-privacy-actions-across-europe-as-france-fines-firm-150k>.

⁸⁶ See *Facebook 'tracks all visitors, breaching EU law'*, The Guardian, 31 March 2015, <https://www.theguardian.com/technology/2015/mar/31/facebook-tracks-all-visitors-breaching-eu-law-report>

⁸⁷ See *You Probably Don't Know All the Ways Facebook Tracks You*, Gizmodo, 8 June 2017, <http://fieldguide.gizmodo.com/all-the-ways-facebook-tracks-you-that-you-might-not-kno-1795604150>

⁸⁸ See *EU fines Facebook over 'misleading' WhatsApp data claim*, BBC, 18 May 2017, <http://www.bbc.com/news/business-39958630>.

⁸⁹ See *How Privacy Became a Commodity for the Rich and Powerful*, The New York Times, 9 May 2017, <https://www.nytimes.com/2017/05/09/magazine/how-privacy-became-a-commodity-for-the-rich-and-powerful.html>.



their services and digital products in order to escape this data collection frenzy and protect their privacy (for example, the rise of the subscription-based business model in media, the usage of VPNs and ad blockers), and those who are not financially able or willing to pay for their privacy, ‘pay’ for their free digital services and products by giving up control of their personal data.

■ **Increased rejection by consumers of interruptive digital ad formats**

However, the rise of ad blockers (the installation of ad blockers is mostly a protection used by consumers against interruptive ad formats during their media consumption) has shown that there is only so much ‘annoyance’ that consumers will accept. By not having adapted advertising to the digital age (interruption during an activity such as watching a video or reading a website, the same advertising as interrupts broadcasted TV content) where attention spans are getting shorter,⁹⁰ the advertising industry (advertisers, advertising tech players, publishers...) is in part responsible for the consumers’ increased rejection of digital advertising. These issues need to be addressed to ensure that advertising remains effective online.

Attention is a scarce commodity online as consumers have a nearly infinite choice of entertainment options and content. As Microsoft’s CEO Satya Nadella stated in a company internal memo in 2015: “We are moving from a world where computing power was scarce to a place where it now is almost limitless, and where the true scarce commodity is increasingly human attention.”⁹¹

Therefore advertisers, media companies and tech players have to rethink how best to capture our attention and how to convey advertising messages in such a way that they are no longer seen as intrusive and unworthy of our short and scarce resource, our attention. The measure taken by Fox to limit all advertising on its digital services to six seconds is a step in the right direction, but there are still unexplored areas for brands and media companies alike to explore. As the web content is still mainly financed through advertising, it is essential that advertising is reinvented for the digital age. The focus here lies mainly on audiovisual players; digital-first companies such as BuzzFeed, YouTube, Facebook, and Pinterest are aware of the situation and have been constantly innovating advertising formats, duration and types.

⁹⁰ The average attention span is estimated at 8 seconds in 2016, down from 12 seconds in 2000. See *The Eight-Second Attention Span*, The New York Times, 22 January 2016, <https://www.nytimes.com/2016/01/22/opinion/the-eight-second-attention-span.html>

⁹¹ See *Microsoft’s CEO Sent a 3,187-Word Memo and We Read it So You Don’t Have To*, The Atlantic, 10 July 2014, <https://www.theatlantic.com/technology/archive/2014/07/microsofts-ceo-sent-a-3187-word-memo-and-we-read-it-so-you-dont-have-to/374230/>



■ The concern for brand safety and advertising fraud

Just as consumers have increasingly rejected the interruptive digital advertising experience, advertisers have realised through several examples (ads near extremist content on YouTube,⁹² fake news⁹³ or objectionable political content such as Breitbart⁹⁴) that their brands can be put in jeopardy when ads for them appear next to questionable content.

These issues are regrouped under the umbrella term “brand safety” but reference the concerns advertisers have as their ads are placed on websites through an increasingly automatized process (programmatic advertising), with sometimes little control over the content next to which the ads are displayed. Ad giants such as Google’s YouTube and Facebook are currently addressing these issues in order to reassure advertisers and agencies that their services represent a safe environment for their brands. It seems that for YouTube, the exodus of advertisers has stopped and that several are back on the service after YouTube cleaned up videos next to which ads could appear.⁹⁵ Clearly, brands are protecting their brand reputation as if it were the apple of their eyes, but forgoing major services which draw billions of consumers cannot last long. “Brand safety”⁹⁶ will remain a concern, but one which the major players in the online advertising industry are sure to address since their revenues depend on it.

Another looming threat to the digital advertising industry is linked to advertisers’ concerns about advertising fraud⁹⁷ (robots, not humans, are clicking on ads) and the viewability of ads⁹⁸ (ads are displayed and charged for, yet no human eye has seen them). These issues have forced several services, notably YouTube⁹⁹ and Facebook,¹⁰⁰ to allow third-party measurement on their sites to reassure advertisers that their ads are actually

⁹² See *YouTube Advertiser Exodus Highlights Perils of Online Ads*, The New York Times, 23 march 2017, <https://www.nytimes.com/2017/03/23/business/media/youtube-advertisers-offensive-content.html>

⁹³ See *Google has banned 200 publishers since it passed a new policy against fake news*, Recode, 25 January 2017, <https://www.recode.net/2017/1/25/14375750/google-adsense-advertisers-publishers-fake-news>

⁹⁴ See *Breitbart ads plummet nearly 90 percent in three months as Trump’s troubles mount*, Digiday UK, 6 June 2017, <https://digiday.com/media/breitbart-ads-plummet-nearly-90-percent-three-months-trumps-troubles-mount/>

⁹⁵ See *YouTube Wins Back Some Marketers After Ad Uproar, but Others Stay Away*, The Wall Street Journal, 20 June 2017, <https://www.wsj.com/articles/youtube-wins-back-some-marketers-after-ad-uproar-but-others-stay-away-1497951005>

⁹⁶ See *Google to Allow ‘Brand Safety’ Monitoring by Outside Firms*, The Wall Street Journal, 3 April 2017, <https://www.wsj.com/articles/google-to-allow-brand-safety-monitoring-by-outside-firms-1491256676>

⁹⁷ See *The Fake Traffic Schemes That Are Rotting the Internet*, Bloomberg 2015, <https://www.bloomberg.com/features/2015-click-fraud/>

⁹⁸ See *Ad Measurement Feuds on Facebook, YouTube Hinge on Code*, the Wall Street Journal, 9 November 2016, <https://www.wsj.com/articles/ad-measurement-feuds-on-facebook-youtube-hinge-on-code-1478689200>

⁹⁹ See *Google Agrees to YouTube Metrics Audit to Ease Advertisers’ Concerns*, The Wall Street Journal, 21 February 2017, <https://www.wsj.com/articles/google-agrees-to-youtube-metrics-audit-to-ease-advertisers-concerns-1487678403>

¹⁰⁰ See *Facebook Takes Steps to Improve Advertising Data After Criticism*, The New York Times, 10 February 2017, <https://www.nytimes.com/2017/02/10/business/media/facebook-takes-steps-to-improve-advertising-data-after-criticism.html>



seen by humans (consumers). These commitments to third-party measurements have often come after serious errors committed by these companies in the measurement of ads,¹⁰¹ which has drawn the ire of advertisers.

However, even if the concerns over brand safety, advertising measurement and advertising fraud are serious, the rapid shift of consumers' media consumption (and therefore their attention) towards the digital space indicates that advertisers and brands will continue to target and tailor their advertising messages to their desired audiences online.

■ **Foreseen developments in the advertising sector**

Several recent market developments and technological innovations are set to further impact the already shifting advertising sector. This is only an outlook of what might lie ahead and it is clear to the sector that the pace of innovation has not yet slowed down. Some of the issues and developments which will further challenge traditional players as they battle for a share of the advertising pie could include the following:

- Original content acquisition, production and commissioning by tech giants

The main source of competition for traditional audiovisual companies comes from the fact that tech players are also investing in original scripted content (and not only web series or short-form content), a trend famously launched by the SVOD giant Netflix (who operates a paid service which does not depend on advertising for revenues) but which has been taken up in recent years by several players (including Amazon, also for its SVOD service).

Facebook has started to cooperate with publishers (Buzzfeed, Vox Media, ATTN, Group Nine Media and others) to create original video shows for its service, which will carry ads.¹⁰² But the service is also talking to Hollywood studios for the production of TV-quality shows with the aim of launching its original programming by late summer (2017).¹⁰³ The shows will be aimed at audiences aged between 13 and 34 and the budgets for the shows are as high as USD 3 million, budgets which equal high-end pay TV shows.

¹⁰¹ See *Facebook Discloses Yet Another Ad-Measurement Glitch, Will Refund Affected Clients*, Variety, 16 May 2017, <http://variety.com/2017/digital/news/facebook-advertising-measurement-error-refunds-1202429254/>

¹⁰² See *Facebook signs BuzzFeed, Vox, others for original video shows*, The Sydney Morning Herald, 25 May 2017, <http://www.smh.com.au/technology/technology-news/facebook-signs-buzzfeed-vox-others-for-original-video-shows-20170525-gwcq57.html>.

¹⁰³ See *Facebook Is Going Hollywood, Seeking Scripted TV Programming*, The Wall Street Journal, 25 June 2017, <https://www.wsj.com/articles/facebook-is-going-hollywood-seeking-scripted-tv-programming-1498388401>



Facebook aims to own the shows, which it plans to display in a separate video tab,¹⁰⁴ hoping thus to open up a new advertising revenue stream as its newsfeed becomes too cluttered.¹⁰⁵

Google's YouTube has also commissioned 40 original shows, of which at least 6 will be run on its advertising-supported service and the rest on its subscription-based YouTube Red service.¹⁰⁶ YouTube is thinking on a global scale, as YouTube's chief business officer Robert Kyncl said in an interview: "We're turning the infrastructure we've built for original programming into supporting our biggest partners," "Nobody is doing it the way we are. Nobody can release originals on a global basis with the scale we have in advertising."¹⁰⁷

Other digital players, like BuzzFeed¹⁰⁸ or Snapchat,¹⁰⁹ are following the example. The clear aim is to go after TV advertising budgets, and after having already taken a big chunk out of print advertising, tech players could well insert themselves into the TV budgets by providing long-form premium content; an unequalled large user base in the billions; and the matching data to target advertising to this user base. Only the future will show if they succeed, but the threat is real.

Mention should also be briefly made of the impact of SVOD viewing, which, even if it is not in competition with advertising-supported services, does however take up the consumer's precious time and attention. As attention is becoming increasingly scarce and tech giants are competing with traditional media players on their turf, getting the same amount of attention as in the analogue and linear world already seems out of reach for traditional media companies.

¹⁰⁴ See *Facebook Plans Original Content to Grow Video Tab*, Techvibes, 15 June 2017, <https://techvibes.com/2017/06/15/facebook-plans-original-content-to-grow-video-tab>.

¹⁰⁵ See *Facebook says it's running out of places in News Feed to show people ads*, Recode, 27 July 2016, <https://www.recode.net/2016/7/27/12305002/facebook-ad-load-q2-earnings>.

¹⁰⁶ See *With 40 New Original Shows, YouTube Targets TV's Breadbasket*, Bloomberg, 5 May 2017, <https://www.bloomberg.com/news/articles/2017-05-04/with-40-new-original-shows-youtube-targets-tv-s-breadbasket>.

¹⁰⁷ Idem.

¹⁰⁸ BuzzFeed is currently developing 31 shows with the aim to distribute them on the major platforms. See *BuzzFeed bets big on original shows for platforms*, Digiday UK, 16 March 2017, <https://digiday.com/media/inside-buzzfeeds-original-shows-strategy/>.

¹⁰⁹ Snapchat has launched 10 new shows for its Discovery service thanks to the USD 100 million received from Time Warner, Vice has received an investment of USD 450 million to develop more original content and the service Musical.ly has also launched its first set of original short-form series. See *The Moves Tech Giants Just Made That Should Terrify Hollywood*, Variety, 20 June 2017, <http://variety.com/2017/digital/opinion/moves-tech-giants-made-terrify-hollywood-apple-facebook-1202470920/>.



- Live streaming

Live events, such as major sporting events, still remain a major viewer attraction for linear television, even in the digital age.¹¹⁰ With the aim of competing with these audience attractions, Facebook, Twitter, Amazon and YouTube have all invested into live streaming, some of them taking the streaming rights to major sports leagues.

Live streaming is only starting, and in future, tech giants might enter bids for premium sports rights and challenge media players (commercial, public and pay TV channels) in a domain which was seen until now as belonging exclusively to traditional broadcasters. But as consumption habits change, innovations allow for new forms of broadcasting, and tech giants want a share of the TV advertising pie, live streaming is set to render the equation even more difficult for traditional companies that cannot compete with the budgets tech giants have at their disposal.

- **Concluding remarks**

These are only two of the several developments which will further disrupt the advertising market, online and offline. As technology progresses, new innovations such as the introduction of Artificial Intelligence; the shift to cloud-computing; the increased adoption of Virtual and Augmented reality by consumers; and the emergence of self-driving cars, leading to drivers' time and attention being freed up, will see the competition for advertising budgets intensify. For now, Tech players seem to be in the best position to take advantage of these new changes; traditional media players, battling for a share of the advertising pie, have to prepare themselves to experience further ground-shifting developments. As we have already seen in the print sector, advertising revenues are no longer guaranteed in an ecosystem where traditional and digital players are in competition for the same advertising budgets. Audiovisual players are already aware of this; only the future will tell if they manage a successful transition.

In the physical and analogue world, which is limited by scarcity of resources (technical such as frequencies and content), the power comes from controlling the supply of these resources. In the digital world, where content is abundant and entertainment options almost unlimited, the power comes from controlling demand. For now, only a handful of players control the demand (for digital content) which exists among vast parts of our societies. With network effects and externalities, distribution and transaction costs

¹¹⁰ Even if the recent results of Sky's Premier league viewership appear to have had their biggest drop since 2010, live sports will remain, for the mid-term, an attractive way to generate mass audiences for TV channels. See *Sky TV suffers fall in viewers of live Premier League games*, Financial Times, 12 June 2017, <https://www.ft.com/content/45e8a3e8-4d1e-11e7-a3f4-c742b9791d43>.



close to zero, and a “winner takes all” outcome, the digital online advertising market’s state of equilibrium could well be that of an oligopoly.¹¹¹

¹¹¹ See *Ends, Means, and Antitrust*, Stratechery, 28 June 2017, <https://stratechery.com/2017/ends-means-and-antitrust/>.

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