



# Study on the impact of marketing through social media, online games and mobile applications on children's behaviour

## Executive Summary

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### Policy background

The European Online Games, Social Media and Mobile Applications sector has grown substantially in recent years. Given the complex and multifaceted nature of the sector, we are clearly just beginning to understand the motivational appeal of different kinds of applications, their use as marketing tools, and their use of problematic marketing practices. Although online marketing to children is regulated by various EU Directives, national legislation, as well as through self-regulation within the industry, it nevertheless remains a potential source of risks for children.

Children are a particularly vulnerable group in the use and purchase of digital content. The risk of exposure to intrusive online marketing has become a pressing concern in European consumer policy<sup>1 2</sup>. Both the European Parliament and European consumer organisations have been paying close attention to how online marketing impacts children. The European Parliament has called on the Commission to conduct a detailed analysis of the impact of misleading and aggressive advertising towards children<sup>3,4</sup> and consumer organisations have, through the European Consumer Consultative Group, expressed the opinion that children constitute a particularly vulnerable group<sup>5</sup>. Several concerns have been raised about websites using profiling and behavioural marketing techniques that target children. It has been shown that children are often exposed to child-inappropriate (commercial) content, sexual content and alcohol-related advertisements online.

Some concrete efforts to address the new challenges children face online have already been made. The European enforcement network (CPC Network) - a network of all the national Competent Authorities in the European Economic Area (EEA) - has put much effort into addressing specific unfair commercial practices, especially in-app purchases in the field of online games targeting teenagers and children. These efforts have resulted in better protection of children online<sup>6</sup>. Similar efforts have been made in the United States, where Apple in 2014 settled a US Federal Trade Commission complaint that the company billed consumers for children's in-app purchases that were made without parental consent.<sup>7</sup>

This study takes a broad approach to investigating the challenges children face as online consumers, and places a particular focus on online games, social media and mobile applications. The aim of the study is to provide a better

<sup>1</sup> <http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:32005L0029>

<sup>2</sup> <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32010L0013>

<sup>3</sup> <http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A7-2010-0338&language=EN>

<sup>4</sup> <http://www.europarl.europa.eu/sides/getDoc.do?type=TA&reference=P7-TA-2012-0209&language=EN&ring=A7-2012-0155>

<sup>5</sup> [ec.europa.eu/consumers/archive/empowerment/docs/eccg\\_opinion\\_consumers\\_vulnerability\\_022013\\_en.pdf](http://ec.europa.eu/consumers/archive/empowerment/docs/eccg_opinion_consumers_vulnerability_022013_en.pdf)

<sup>6</sup> [http://europa.eu/rapid/press-release\\_IP-14-847\\_en.htm](http://europa.eu/rapid/press-release_IP-14-847_en.htm)

<sup>7</sup> <https://www.ftc.gov/news-events/press-releases/2014/01/apple-inc-will-provide-full-consumer-refunds-least-325-million>

understanding both of the online marketing children are exposed to, and how children can be better protected online.

## Study context and methods

The European Commission is committed to ensuring that children in the EU/EEA enjoy an equally high level of protection, both regarding authorised and safe offers as well as illegal offers that may be accessible to children online, including in a cross-border context. To that end the study assesses the degree and ways in which sophisticated marketing techniques influence the behaviour of children and sheds light on the effectiveness of the existing consumer protection measures provided by the Member States and/or industry to alleviate consumer vulnerability in the online environment.

The aim of this research is to provide an understanding of the new and dynamic channels of online marketing directed towards children and to provide policy-relevant recommendations to the European Commission on alleviating the vulnerability of children exposed to sophisticated online marketing.

This study adopts the behaviourally informed approach to policy making that the European Commission and particularly DG JUST, along with other international and national policy-making bodies, have embraced over the recent years. Among other things, this study focuses on how children *actually* make choices, and tests the effect of potential policy solutions to reduce consumer vulnerability among children. This is investigated through behavioural experiments with children, focussing on prompts to make in-app purchases in games and on embedded advertisements in online games.

Furthermore, this study investigates which problematic practices children are exposed to in online games, social media and mobile applications, what children themselves think about problematic practices they are faced with online, what parents are concerned about and how they attempt to regulate their children's online activities, and finally how online marketing is regulated at EU and Member States level. This is done through a literature review, an in-depth analysis of popular online games, focus groups with children and parents, a survey with parents and a regulatory review.

## Key findings

### Marketing practices in popular online games

Children are exposed to a number of problematic practices in online games, mobile applications and social media sites. The study found that online marketing to children and young people is widespread, and that the various marketing techniques used are not always transparent to the child consumer. The study particularly investigates the marketing techniques used in online games. Twenty-five of the most popular online games provided through Facebook, Apple Store and Google Play as well as advergames of large brands were analysed and grouped under four main dimensions: advertisement features, game features, user engagement and protective measures.

The analysis of the advertisement features deployed in online games shows that all advergames, and almost half of the games analysed from Facebook, Apple Store and Google Play included some embedded or contextual advertising which indicates that advertisements are at the core of the business models of the social media and mobile applications. The embedded advertisements often came in the form of a picture of the product, a logo or product symbol, as a link to more product information, as product placement or as an advertisement shown before, in the middle or after the game play. Contextual advertisement is a form of targeted advertisement appearing on websites and other media. In this study, Facebook was the most prominent user of contextual advertisements since the games were embedded into the

Facebook platform and advertisements were shown on the left side of the platform throughout game play. All games provided through Facebook contained contextual advertisements.

The analysis of game features and user engagement found that casual games, including puzzles, was the most common genre followed by simulation games. A common attribute in games provided through Apple Store and Google Play was the availability and/or requirement to pay in order to continue and/or accelerate game play. Often, the users also had to pay extra fees if they wanted to avoid being exposed to advertising. However, in the case of games provided through Facebook, users continued to be exposed to contextual advertisements even when they did pay. Most of the games actively encouraged users to spend more time playing and also prompted them to make in-app purchases in order to continue and/or improve the game experience. Many of the games also included game personalisation options to increase user engagement and many of the games sought to engage the users through the use of social media and engagement in an online community.

Finally, the analysis found that the games generally lacked protective measures, such as ad breaks/ad alerts or guidelines that could help users to distinguish the advertisement in the game. The protective measures found in the most popular online games were mostly directed towards parents, such as links to privacy policies, terms of usage and information about parental control tools.

### **The impact of marketing on children's behaviour**

The two experiments conducted as part this study shows that online marketing has a significant effect on children's behaviour.

The first experiment investigated the effect of embedded advertisements in games, i.e. advergames, on children's consumption behaviour. The results show that, compared to playing an advergame promoting toys, playing an advergame promoting energy-dense snacks increased the snack consumption among Dutch and Spanish children. The type of game did however not impact the children's attitudes to the game, the brand or the products promoted. This indicates that the embedded advertisements in the game have a subliminal effect on children – it affects their behaviour without them being aware of it.

The second experiment investigated the effect of prompts to make in-app purchases in games on children's purchase behaviour and the effect of various protective measures in reducing the amounts children spend on in-app purchases. It is possible to infer that prompts to make in-app purchases have an effect on children's behaviour from the fact that children included in the control group, who were not exposed to any protective measures, spent more of the proxy money than their peers who played the game with protective measures.

The results from the experiments show that the behaviour of children of all ages tested in the advergame experiment (from 6 to 12 years old) was influenced by the promotion of energy-dense food. On the other hand, in the in-app purchase experiment, the youngest children (8 to 9 years old) were found to be most vulnerable. In both experiment countries, the youngest children tended to spend more of the proxy money than older children (10 to 12 years old) and the younger children in Spain were more likely than the older children to select the "paid" or the "in-app purchases" version of the game, as opposed to version of the game promoted as "free".

The findings from the behavioural experiments were to a great extent complemented by findings from the literature review and the focus groups. In the focus groups many children (11 – 12 years old) said that they found it easy to distinguish advertisements from other content, that they did not think that they were being influenced by the advertisements and that they generally perceived advertisements as the most annoying aspect of the Internet. However, when shown examples of advergames most of the children were not able to identify the advertisement features and did

not appear to recognise the persuasive intent of the games. This indicates that children are likely to be more influenced by advertisements than they realise. Regarding in-app purchases, several children said, in the focus groups, that they had bought extra features without fully realising that it would cost real money. A majority of the children also said that they became irritated by prompts to make in-app purchases in games, while some children considered it as an opportunity to customise and enjoy the games more.

### **Effects of potential protective measures**

The in-depth analysis of games found that the most popular games contained few protective measures, especially protective measures directed at the users themselves. The study therefore investigated, through the behavioural experiments, the effect of various protective measures directed at children in increasing children's understanding of the commercial intent of advergaming and of prompts to make in-app purchases. It was challenging to devise operational and effective protective measures targeting children directly, and thus further research is warranted to corroborate the study's findings.

Nevertheless, the study found positive effects of protective measures based on making the children aware of the commercial intent of the marketing practice and of protective measures aimed at breaking the flow of the game. Protective measures based on conscious cognition, such as a warning message, were found to have an effect in reducing the amounts children spent on in-app purchases, but had no effect in reducing the behavioral impact of advertisements in online games. Protective measures aimed at breaking the flow of the game, such as adding a distractive task, were found to be effective in reducing the amounts children spent on in-app purchases.

### **Parents' risk perception and regulatory strategies**

The results from the parent's survey (conducted in eight EU countries) show that, overall, parents were fairly concerned about what their children were exposed to online. They were most concerned about their children being exposed to violent images and about being bullied online, but they were also fairly concerned about their children being exposed to data tracking, digital identity theft and advertisements for unhealthy lifestyles. They were also somewhat concerned about their children being exposed to advertisements for unhealthy food, targeted advertisements, hidden advertisements and to prompts to make in-app purchases. They were least concerned about their children spending too much money on in-app purchases. Overall, parents saw exposure to the various kinds of advertisement as less harmful, but more likely to occur compared to the other problematic practices. The main factor influencing parental concerns was past experience with the practices which, in all eight countries studied, led to heightened risks perception of all practices.

In the focus groups, parents expressed little concern about online advertisements. Many thought that their children were not interested in advertisements and that they were annoyed by them. They said that their children usually click away the advertisements and that they do not pay much attention to their content. Most of the parents were not particularly concerned by advergaming containing embedded advertisements, as they did not think that these advertisements would have a strong influence on their children. Nonetheless, some parents thought that the advertisements had an effect on their children, and claimed to have experienced this effect themselves. Thus, although parents play an important role in mediating their children's online behaviour, they are often not fully aware of the risks to which their children are exposed in online environments.

Previous studies have found that parents' opportunity to regulate their children's online activities is limited (e.g. Henry & Story, 2009; Kelly et al., 2008), and that parents are not particularly engaged in regulating their children's behaviour online (e.g. Tsai et al., 2012). The results from this study show that parents' regulatory strategies can be categorised according to how actively parents engage in discussing online content and the extent of restrictions on their children's use of the Internet. Previous studies (e.g. Duerager & Livingstone, 2012) have found that most parents exert some kind

of mediation, and that parents with high socio-economic status tended to use active mediation strategies while parents with lower socio-economic status tended to rely more on restrictive mediation. The results from this study show that parent's regulation strategies also significantly differed between the eight countries studied, and that parents using active mediation tended to have higher risk perceptions compared to parents using more restrictive mediation strategies.

When asked about the effectiveness of various protective measures, the parents indicated that they perceived stricter regulation of businesses and more education for children on online risks as the most effective protective measures. Awareness campaigns and better parental control software were also seen as effective, while training sessions for parents and contact point lines were not. Many parents said that the best way to protect children was to trust them and discuss the problems that they might encounter on the Internet. A majority of parents in the countries investigated thought that they were the main responsible actors in protecting their children from online marketing, but they also expected regulators and the online industry to take action and assume responsibility for making the online environment safe and appropriate for children. In the context of online advertising practices, such as hidden advertisements and advergames, two protective measures stood out in the view of parents - parental pre-approval and school education for children about online advertising. Similarly, in the context of in-app purchases the parents perceived parental pre-approval and having a password as a default option as the most effective protective measures.

### **Policy interventions in place**

The analysis of the regulatory framework at EU level found that several EU directives have been implemented in the Member States aligning provisions in terms of: identification and separation of audio-visual commercial content from media content; information requirements for providers; price transparency; prohibition of unfair and misleading commercial practices; prohibition of content that might lead to physical and moral impairment, and prohibition of audio-visual commercial content for alcoholic beverages targeting children. The regulatory framework also covers the harmonisation of national consumer protection in the area of online advertising and marketing directed at children. In this context, Member States have been further encouraged to adopt stricter measures for the protection of minors under the AVMSD Article 4(1). This provision encourages self-regulation in certain fields in combination with government intervention (co-regulation), but also calls for extensive parental control to prevent children being exposed to harmful content.

Despite this broad regulatory framework, developments in technology and social online environments may easily outpace provisions of existing laws.

Self-regulation has been put forward as a way to respond flexibly to technological advancements, and industry self-regulatory initiatives concerning online marketing to children are prevalent in almost all EU Member States. The advertising industry, which includes advertisers, agencies, media companies and writers, has committed itself to specific rules and standards of practice. These elements of self-regulation complement legal frameworks on consumer protection and enable flexible reaction to emerging issues and problems.

However, self-regulatory initiatives are often criticized. It is argued that they fail to adequately restrict commercial activities or actors that make use of marketing practices whose commercial intent is disguised or not disclosed, or that are not easily identified as such, and that the outreach of self-regulatory initiatives varies between countries. As a consequence, self-regulation does not necessarily guarantee sufficient protection of children online and across Europe children do not receive an equal level of protection.

## Policy recommendations

A key recommendation from this study is that more should be done to protect children against online marketing. Children should not be exposed to online marketing when it is likely that they will not understand the persuasive intent of the marketing practice. Online marketing should be made more transparent to child consumers, and more should be done to empower children in recognizing and responding appropriately to online marketing techniques. It should also be considered whether, with the exception of direct exhortation to children to buy advertised products that is addressed in Annex 1 of the UCPD, particularly harmful practices should be further regulated and/or banned through legislation.

Protective measures used in online games should not exclusively target parents, but should focus increasingly on children. Protective measures that target children directly have the advantage of empowering children to recognize the commercial intent of the marketing practice and in so doing protect children against these practices. This study has investigated the effectiveness of some potential protective measures targeting children. It found that protective measures have a positive effect by making children aware of the commercial intent of the marketing practice and breaking the flow of the game. A recommendation based on these findings is that mandatory protective measures targeting children in games that include advertisements or other marketing practices should be considered along with further research on measures that can increase the protection of children online.

The Commission work programme for 2015 announced a fitness check of the legislative framework related to consumer rights and commercial practices, as part of European Commission's Regulatory Fitness and Performance programme (REFIT) under the Better Regulation Agenda. This includes an assessment of whether legal acts particularly relevant for this study, such as the Unfair Commercial Practices Directive (UCPD), are fit for purpose. Furthermore, the Audio-visual Media Services Directive (AVMSD) is also being evaluated as part of REFIT. It is therefore recommended that the fitness checks of these key legislative instruments should pay particular attention to the results of this study and to the protection of children with regard to disguised marketing and other questionable online marketing practices.

To protect children effectively from problematic marketing practices in a uniform manner, it is also of key importance that the enforcement of the existing legislation is stepped up. The European enforcement network (CPC Network), a network of national Competent Authorities of all countries in the European Economic Area, has put much effort into addressing some specific unfair commercial practices, such as in-app purchases, in the field of online games targeting teenagers and children, and these efforts have resulted in better protection of children online. It is strongly recommended that regular EU coordinated enforcement actions or sweeps are undertaken to monitor and investigate the practices of the online industry regarding online marketing towards children.

Finally, the extent to which self-regulation should be relied upon in future regulation of the online industry should be based on the proven effectiveness of self-regulatory measures. Self-regulatory initiatives should be required to demonstrate effective protective impacts on children's behaviour. The effectiveness of this type of initiative could be assessed through accompanying monitoring mechanisms. Public authorities could facilitate this work by, for example, issuing guidelines for the industry to follow.

