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Competition and Markets Authority
Digital Markets Unit
Browsers and Cloud Team

About eyeo

eyeo is dedicated to empowering a balanced and sustainable online value exchange for users, browsers, advertisers, and publishers. By building, monetising, and distributing ad-filtering technologies, we create solutions that allow all members of the online ecosystem to prosper. Our ad-filtering technology powers some of the largest ad blockers on the market, like Adblock Plus[1] and AdBlock[2], an Android mobile browser[3], and is distributed through partnerships to millions of devices. There are currently 350 million global ad-filtering users, and ~6 million in the United Kingdom, who see nonintrusive advertising that is compliant with the independently established Acceptable Ads Standard.

We appreciate the Competition and Markets Authority's (CMA) commitment to ensuring fair competition in the mobile world and fostering a transparent business environment on mobile devices. Given our active and unique role in the online advertising ecosystem, we submitted a response[4] to the CMA's issues statement[5] in

[1] Adblock Plus
[2] AdBlock
[3] Adblock Browser
[4] Supplemental submission on the issues statement - eyeo
[5] Mobile browsers and cloud gaming market investigation - Statement of Issues

February, providing our insights and expertise, and bringing forward some issues that have not been explicitly discussed yet.

Limited support for browser extensions on iOS and Android

Introduction

In our previous submission, among other things, we voiced the competitive concerns arising regarding the absence of mobile extensions. Desktop browser extensions have been a resounding success in fostering an open web, granting users the autonomy and resources to enhance and tailor their online experience, while creating a competitive and innovation-driven market. However, in the mobile landscape, this empowerment of users is either constrained or completely impeded. Although Apple offers limited support for browser extensions on mobile Safari, the associated complexity and requisite technical proficiency severely limit their widespread adoption. Furthermore, Google Chrome on mobile does not support extensions in any capacity.

On 27 June 2024, the CMA disseminated their progress update[6] on the investigation. In working paper 3, entitled "Access to browser functionalities within the iOS and Android mobile ecosystems"[7] the CMA dedicates an entire chapter to the limited support for browser extensions on iOS and Android, incorporating arguments from numerous stakeholders attesting to the dearth of support for mobile extensions. We applaud its inclusion.

Given the emphasis of the CMA's working paper on the lack of support for mobile browser extensions, we would like to provide observations and insights on the underlying competition issues in this response. To optimise our assistance and focus our efforts effectively, we intend to concentrate our attention in this submission specifically on the limitations for browser extensions on iOS and Android, without

[6] Progress update on the Mobile Browsers and Cloud Gaming Market Investigation
[7] WP3: Access to browser functionalities within the iOS and Android mobile ecosystems

detracting from the value of the CMA's other commendable work and suggested remedies.

Our response is structured as follows: We first share observations on the identified issues of working paper 3, especially related to access to browser functionalities and limited support for browser extensions (Section 1). After that, we highlight additional data points and relevant evidence related to the limited support for browser extensions and the implications for developers and users (Section 2).

Section 1 | Observations related to the CMA's findings on access to browser functionalities and limited support for browser extensions

We acknowledge that several third parties submitted statements that outline how Safari can offer browser extensions on iOS; however, the same functionality and solutions are not available to third-party browsers[8]. We can confirm and would underline these submissions. Given the wide variety of extensions that enable users to customise their browsing experience, the competitive concerns based on this limitation for third-party browsers become evident. In this context, we also acknowledge and emphasise that "browser extensions are a key part of the web ecosystem"[9], as stated by the CMA.

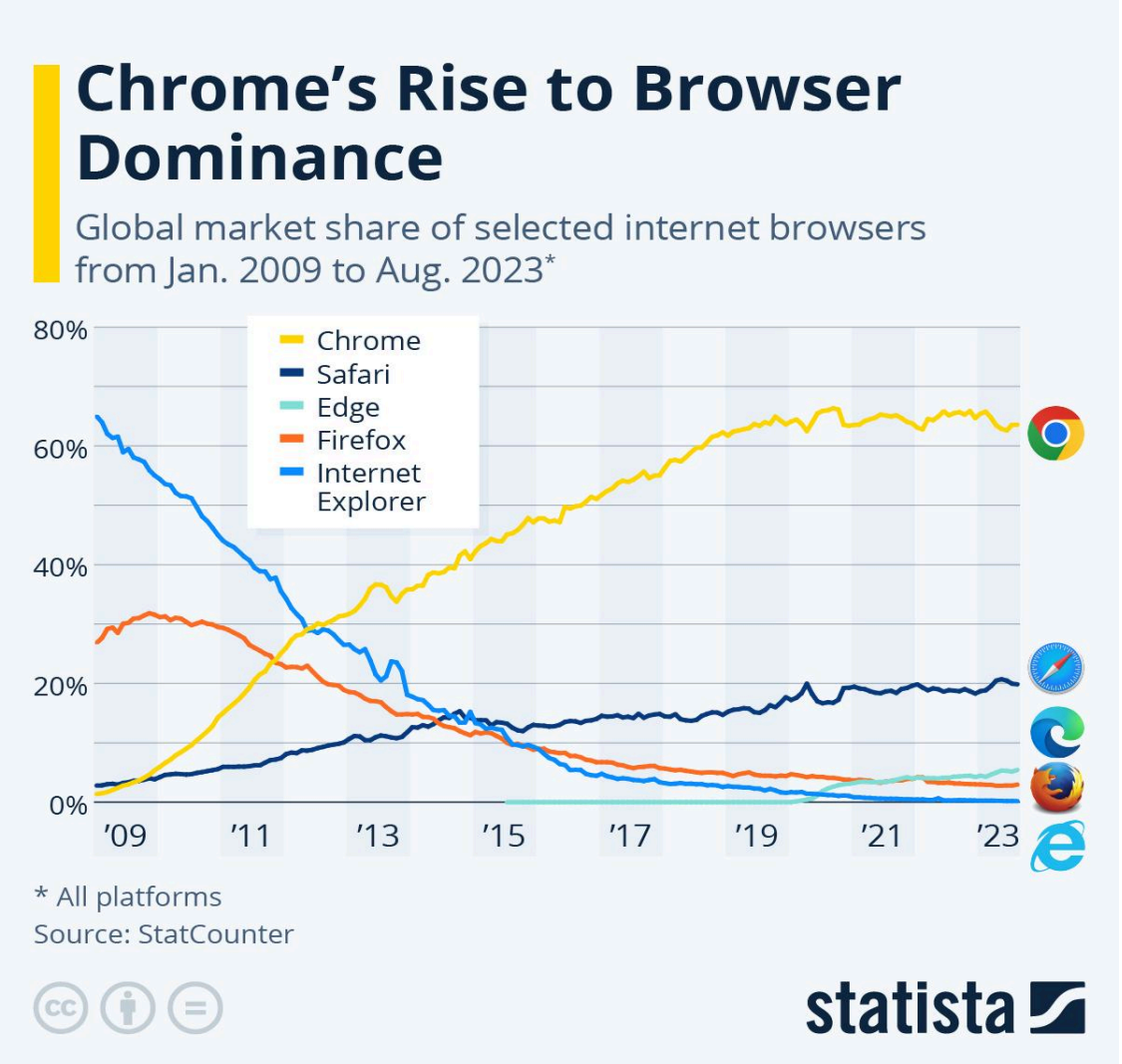
Regarding the limitations and lack of adoption for mobile extensions on Android, the CMA correctly observes that "Chrome, which represents 77% of browser usage, does not support extensions. This is in contrast to the position on desktop where Chrome does offer full support for extensions. This limits users from accessing the same extension functionality
on Chrome on Android that may be available to them on desktop". We fully agree with and confirm this statement. Due to Chrome's dominant market position, the competitive concerns, based on the lack of mobile extensions for Chrome on Android, become evident. At the same time, it is worth noting that the decision to not support

[8] WP3: Access to browser functionalities within the iOS and Android mobile ecosystems (p.12)
[9] WP3: Access to browser functionalities within the iOS and Android mobile ecosystems (p. 29)

extensions for Chrome on Android is in stark contrast to the Chrome desktop ecosystem, where there is full support of extensions[10]. In fact, Chrome on desktop is considered by most to be one of the browsers that proliferated the use of extensions at scale[11]. Interestingly enough, Chrome entered the desktop market fairly late and had to differentiate itself from the existing dominant market players Internet Explorer and Firefox (see illustration below). Its bountiful extension ecosystem is surely one of the reasons it was ultimately able to do so.

[10] As stated by the CMA, on desktop, Chrome offers over 180,000 extensions and nearly half of Chrome desktop users use extensions. More details on the widespread adoption and success of desktop extensions on Chrome are listed by Google on their blog: Trustworthy Chrome Extensions, by default

[11] Extensions Status: On the Runway, Getting Ready for Take-Off



Chrome's Rise to Browser Dominance, statista[12]

This assertion is amply supported by the product itself, its development and in particular how it was marketed. In 2009, the Chrome blog announced that "[w]hen we first launched Google Chrome in September 2008, we knew that we wanted to make it

[12] Chrome's Rise to Browser Dominance

easy for you to customise the browser with extensions. We also wanted to make extensions easy to create and maintain, while preserving Google Chrome's speed and stability. Extensions on Google Chrome accomplish all these goals: they are as easy to create as web pages, easy to install, and each extension runs independently to avoid crashing or significantly slowing down the browser"[13]. In 2010, the Google Chrome team published a blog post to celebrate Chrome's success on its second anniversary, which identified extensions as a key feature and differentiator, and trumpeted the "more than 6,000 extensions in [their] gallery to enhance [users'] browsing experience" [14]. In addition, Google has developed a collection of their own extensions, which are actively promoted to "make Chrome easier to use"[15]. These include key accessibility features like colour and contrast enhancers designed to assist users who need additional support while browsing the web.

Now, with the benefit of hindsight, it seems evident that Chrome relied on browser extensions as a key differentiator to gain market share and offer users a wide variety of extensions to customise and improve their browsing experience.

In the mobile browser ecosystem, on the other hand, Chrome did not need to play catch-up, given the dominant position of Android and a choice architecture favouring Google products (e.g., by having Chrome pre-installed on most Android devices, placing Chrome in a more prominent position than other browsers, imposing hurdles or complexities to prevent changing default browsers or browser choices, etc.[16])

Thus, it seems that a deliberate choice was made to steer clear of depending on the pro-user, pro-competition ecosystem partially fostered by extensions. Google solidified its own market power, and the lack of support for extensions, among other things, appears to be part of that decision. Put otherwise: one can conclude that the benefits

[13] Google Chrome for the holidays: Mac, Linux and extensions in beta
[14] Back to the future: two years of Google Chrome
[15] Use Chrome with accessibility extensions
[16] For a more detailed analysis on the patterns favouring Chrome on Android as the dominant browser, we refer to the CMA's WP5: The role of choice architecture on competition in the supply of mobile browsers, Mobile browsers and cloud gaming market investigation - Statement of Issues and the Mobile ecosystems - Market study final report, published by the CMA.

to users and competition facilitated by browser extensions were only utilised when they offered a crucial competitive advantage, as was the case on desktop Chrome, not when said advantage was already present on Android. Moreover, the effect of this decision has undoubtedly deprived users of tools to improve their browsing experience and the extensions marketplace at large.

In this context, we would also like to highlight and underline the issues identified in the CMA's commissioned research on web developers[17]. We support the CMA's aim to understand the experiences and issues of web developers when working with mobile browsers and mobile browser engines and confirm the related findings on the limited support for browser extensions on iOS and Android.

Section 2 | Limited support for browser extensions - implications for developers and users

The CMA rightfully notes that the related implications for developers are "less access to a potentially lower cost, distribution channel for their applications or content, and less access to a potential entry point into browsers"[18]. The choice to not support extensions on mobile deprives the browser of critically important functionality compared to the desktop extension Application Programming Interfaces (APIs), and restricts developers and companies from developing extensions that can significantly enhance the browsing experience for users. For example, on desktop Chrome there are a total of 81 extension APIs[19] that are used by developers to extend and elevate the browser functionality. This includes basic functionality like blocking and/or modifying network requests, improving accessibility, interacting with the browser history, modifying browser tabs, manipulating bookmarks, and much more. That is why many other popular browsers on Android offer extension support such as Firefox, Microsoft Edge, Samsung Internet, Kiwi browser and others.

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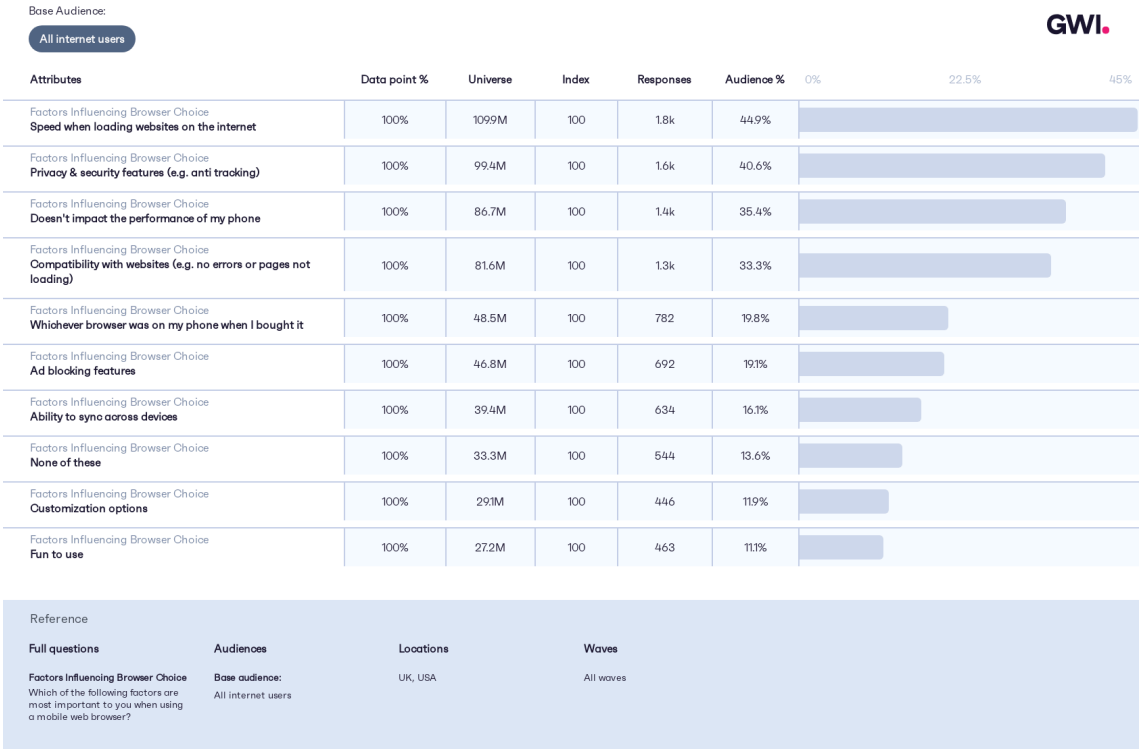
[17] Qualitative Research with Developers on Mobile Browsers and Mobile Browser Engines.
[18] WP3: Access to browser functionalities within the iOS and Android mobile ecosystems (p.31-32)
[19] Google Chrome API reference

In addition, the CMA also correctly observes that "[t]he limited support for browser extensions on iOS and Android has implications for browser users, who are less able to customise their browsing experience by using extensions to add features or functionality, relative to desktop"[20]. We strongly agree with this argument and would like to share related data points and user research underlying it.

In Q1, 2022, GWI conducted a survey, in which eyeo participated, about user attitudes towards sharing data, ad-blocking effects and reasons for choosing mobile browsers. The sample included 4,007 internet users in the UK & US, aged 16-64. One of the questions asked in particular about the factors influencing browser choice on mobile:



Base Audience:

All internet users

GWI.

Attributes	Data point %	Universe	Index	Responses	Audience %
Factors Influencing Browser Choice: Speed when loading websites on the internet	100%	109.9M	100	1.8k	44.9%
Factors Influencing Browser Choice: Privacy & security features (e.g. anti tracking)	100%	99.4M	100	1.6k	40.6%
Factors Influencing Browser Choice: Doesn't impact the performance of my phone	100%	86.7M	100	1.4k	35.4%
Factors Influencing Browser Choice: Compatibility with websites (e.g. no errors or pages not loading)	100%	81.6M	100	1.3k	33.3%
Factors Influencing Browser Choice: Whichever browser was on my phone when I bought it	100%	48.5M	100	782	19.8%
Factors Influencing Browser Choice: Ad blocking features	100%	46.8M	100	692	19.1%
Factors Influencing Browser Choice: Ability to sync across devices	100%	39.4M	100	634	16.1%
Factors Influencing Browser Choice: None of these	100%	33.3M	100	544	13.6%
Factors Influencing Browser Choice: Customization options	100%	29.1M	100	446	11.9%
Factors Influencing Browser Choice: Fun to use	100%	27.2M	100	463	11.1%

Reference

Full questions	Audiences	Locations	Waves
Factors Influencing Browser Choice: Which of the following factors are most important to you when using a mobile web browser?	Base audience: All internet users	UK, USA	All waves

Speed (45%), enhanced privacy and security features (41%) and low impact on phone performance (35%) were identified as the key factors in choosing a mobile browser.

[20] WP3: Access to browser functionalities within the iOS and Android mobile ecosystems (p.31)

Also, a fifth (19.8%) of the respondents stated that they used whichever browser was pre-installed on their mobile. Around the same amount of users stated that ad-blocking features are a deciding factor (19.1%).

It is relevant to note that all of these responses from users make ideal use cases for extensions. On desktop, a wide variety of extensions help users speed up their web experiences and improve computing performance[21]. The same is true for privacy and security features: The sheer amount of web extensions improving privacy and security for users (such as virtual private network (VPN) extensions, tracking-blockers, malware protection tools, etc.) underline the diversity of offerings for consumers and the low barriers of entry to extension developers. Along the same lines, the landscape of ad-blocking and -filtering extensions offers a wide range of user-focused solutions by a variety of developers, underpinning the competition-friendly market for desktop extensions.

It seems evident that browser extensions on iOS and Android would be beneficial for users and competition, as the most relevant features for users and the factors influencing browser choice on mobile are determined by the use cases that extensions offer.

At the same time, it is critical to highlight that one in five (19.8%) of the surveyed users acknowledged that they used whichever browser is pre-installed on mobile. This research supports the findings outlined by the CMA related to the role of choice architecture in the supply of mobile browsers and how default settings influence the adoption of mobile browsers[22].

In another study, we asked users of our desktop products about their usage and attitudes towards mobile browsers[23]. When queried about missing or expected features

[21] See, for instance: How to speed up Chrome? 10 tools & extensions to browse the web faster in 2023

[22] As outlined by the CMA in multiple publications, such as WP5: The role of choice architecture on competition in the supply of mobile browsers

[23] We surveyed a sample of 200 users in the US, Canada and UK. More insights on this research can be shared upon request.

of a mobile browser, the most common answers were built-in ad blockers (52%), fast page load (40%), and privacy features, such as anti-tracking or cookie blocking (32%).

Again, it seems clear that the features and use cases consumers need the most are unfortunately only offered on desktops.

Conclusion

We are grateful for the opportunity to submit our comments on the CMA's market investigation and applaud the authority's significant work and progress. Our observations underscore the critical imperative to address the adverse effects on competition within the mobile browser market and confirm the key issues identified by the CMA, which result in limited options and innovation for consumers. This submission focussed explicitly on the limitations imposed upon browser extensions on iOS and Android platforms, without diminishing the value of the CMA's other working papers, issues identified, and suggested remedies.

Our analysis demonstrates several critical competitive issues arising from the limited support for browser extensions on the dominant mobile platforms. We have observed that Safari on iOS restricts third-party browsers from offering extensions. Similarly, Chrome on Android does not support extensions, in stark contrast to its desktop counterpart which uses extensions as a key differentiator. This deliberate limitation stifles competition and innovation, depriving users of enhanced functionalities and developers of opportunities to create value-added services. It can be argued that this decision correlates with Chrome's dominant market position in the mobile ecosystem.

The implications for users are significant, as they are unable to leverage extensions to improve their browsing experiences. This means they miss out on choice and competitive offers on mobile, compared to the much healthier, more open, and more competitive desktop ecosystem. Simultaneously, it is concerning that the most relevant factors for users regarding their mobile browsing experience – speed, enhanced

privacy and security features, and low impact on phone performance – are covered by existing solutions of desktop extensions. To support these extensions on mobile would be a much needed boon for competition, user choice, and innovation on iOS and Android.

For developers, the lack of mobile extension support restricts their ability to provide innovative solutions, ultimately reducing the diversity and competitiveness of the mobile browsing ecosystem. The decision to withhold support for extensions on mobile devices presents several limitations and missed opportunities for developers. As an example, compared to desktop extension APIs, mobile browsers lack critical functionalities that could greatly enhance the browsing experience. Such restrictions hinder developers and companies from creating extensions or solutions that address the specific needs and preferences of mobile users. Instead, these developers miss a key distribution channel and are forced to either make substantial investments in developing a browser or an app from scratch – which favours existing, dominant platforms and incumbents over smaller companies and startups – or entirely miss out on the mobile market.

Given these findings, we urge regulators to investigate further the competitive issues related to the lack of mobile browser extensions. Addressing these concerns is essential to ensure a fair, competitive landscape that benefits both developers and users.

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