

Is Android harming competition in mobile software?

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Background

The European Commission has issued a Statement of Objections accusing Google of anti-competitive behaviour in the marketing and contractual arrangements of its Android mobile operating system (OS). Specifically, it is alleged that Google's supposed tying of apps together with Android constitutes foreclosure by a dominant undertaking, to the detriment of users and the competitive process (EC, 2016).

The Statement comes in the wake of another competition probe into Google's online search practices, and as the Commission prepares to release its communication on the role of online platforms, following a public consultation at the end of last year (EC, 2015a; EC, 2015b). While the Android investigation is independent of these other developments, it comes amid efforts to create a policy environment which will be more conducive to the growth of the European digital economy.

The growth of the smartphone and mobile app markets

Smartphone penetration has grown rapidly across the EU since 2011. 70 per cent of mobile subscriptions in the EU were smartphone subscriptions as of 2015, up from just 10 per cent four years earlier. Penetration was as high as 90 per cent in Sweden (Williamson et al., 2016) and is expected to be near-universal across Europe by 2020. Mobile broadband take-up overtook fixed broadband take-up in 2014, with close to 80 per cent of EU citizens now enjoying broadband access through their mobile devices.

The growth in smartphone adoption has been accompanied by a dramatic increase in the use of mobile applications. App downloads have increased more than tenfold since 2010, and virtually all of the growth in users' time spent online is explained by the increase in mobile access. As an illustration, smartphone sales to end users in the U.S. overtook PC sales in late 2010 and they are now five times greater (Williamson et al., 2016).ⁱ The EU has seen a similar shift towards mobile devices in the past half-decade.

Dominance, exclusivity and foreclosure on Android – reasons for scepticism

Android is the largest mobile OS in Europe, with a 74.5 per cent market share in the EU's top markets,ⁱⁱ compared to 19.5 per cent for Apple's iOS and Windows Phone's 5.5 per cent (Kantar, 2016). However, it is important to recognise that this is a rather recent development: as late as 2011, the main players in mobile software were not just today's Android competitors, Apple and Microsoft, but also RIM – the manufacturer of BlackBerry – and Nokia, whose market shares have dwindled in the last five years (Körber, 2014).ⁱⁱⁱ It is not unreasonable to expect Android to remain the largest player in the foreseeable future, but past experience suggests otherwise.

Furthermore, it is not sensible to judge the extent of competition in mobile software on the basis of crude market shares because Android operates a fundamentally different business model to Apple and, to a lesser extent, Microsoft/ Nokia.^{iv} In contrast to iOS and most Windows Phone devices, smartphones running on Android are not Google phones but are manufactured by a range of entirely separate original equipment manufacturers (OEMs), including Samsung, Huawei, HTC and Amazon.

When adopting Android software for their hardware, OEMs have various options involving different degrees of integration with Google's standards, apps and other services. They can: i) make their devices Android-compatible by following a set of publicly available guidelines;^v ii) sign (or not sign) an agreement committing them not to take actions which might lead to the fragmentation of Android, and are as a result entitled to label their devices officially 'Android Compatible';^{vi} iii) sign (or not sign) a Mobile Applications Distribution Agreement or MADA (see Körber, 2014). Only the latter involves the pre-loading of a set of Google apps,^{vii} and OEMs can sign i) and/ or ii) without committing to iii).

The relative openness and flexibility of Android is in stark contrast to its main rival for mobile software, Apple's iOS, where hardware and software are vertically integrated and app developers bound by strict compatibility rules. It is bolstered by the fact that Google licenses its mobile software for free. This is not an altruistic policy but rather aims to encourage Android adoption by OEMs, which in turn will enable greater use of Google apps which the firm can then monetise. However, regardless of its intent, Google's policy results in greater diversity and user choice than would otherwise be the case.

Some examples of Android phones which do not carry Google apps^{viii}

The choice given to device manufacturers is not just a theoretical option, but is also used by OEMs in practice. In Russia, Huawei and Vega sell Android phones without any Google apps. Instead, they come pre-loaded with apps from Yandex, Google's main domestic competitor in Russia. Bittium, a Finnish OEM, manufactures Android phones with and without Google apps. And Archos of France sells devices running on a 'forked' – customised – version of Android called GraniteOS, and without any Google apps. Finally, it is worth noting that 70 per cent of Android devices in China come without pre-loaded apps from Google (Hong, 2013).

Is the Android case a re-run of the Microsoft case?

Commissioner Vestager has publicly compared the Android probe to the two investigations of Microsoft's software practices conducted by EU authorities in the early 2000s (Vestager, 2016). At the time, Microsoft was found in breach of EU competition rules due to the tying of its Internet Explorer browser and Windows Media Player, which users of its Windows software had to purchase together with it. It was ruled that these practices prevented alternative providers from competing effectively, and that consumer welfare was harmed as a result. Microsoft was mandated to 'unbundle' its various services and to offer Windows without the add-ons.

It is ironic that the Commission issued this ruling just as both Microsoft's browser and its media player were challenged by newcomers, in the form of Mozilla Firefox, Google Chrome and Apple's iTunes. Moreover, this was followed by the dramatic shift towards smartphones documented above, which has severely reduced Windows' share of the overall software market.

Quite apart from the merits of the Microsoft case, it is clear that the reasoning of regulators then is not appropriate for Android. Whilst Google is now accused – in language similar to the one used a decade ago – of bundling to foreclose competitors, both manufacturers and users have a substantial amount of choice when it comes to their use of mobile apps. There is choice in the agreements that OEMs can sign with regard to interoperability and the pre-loading of Google apps. As we have seen, OEMs exercise this choice when it suits them. Additionally, there is choice at the user level as to which apps to use, which to turn off and which to set as the default ones for various purposes. While a measure of choice was also involved with respect to Microsoft's bundled package,^{ix} the frictions – in terms of license costs and installation – were perceptibly greater than with mobile apps, which are overwhelmingly zero- or very low-cost and easy to download.

The Commission ignores platform competition at its peril

In its analysis of the competitive environment in mobile software and apps, the Commission takes an unduly narrow view of the relevant market. Specifically, it fails to take proper account of its multi-sided nature, where platforms such as Android bring together two or more distinct groups of users – in this case, OEMs, app developers, advertisers and end users, most saliently – enabling a transaction which otherwise would not take place (see Zuluaga, 2015b). Yet, this is a crucial consideration because competition policy in multi-sided markets must examine the effects of an undertaking's actions on *all markets* in order to be adequate (Evans, 2016).

The problem of analysing one side in isolation is best understood with an example from the case at hand. Even if one were to accept – hypothetically – that there was abuse of dominant position in Google's contractual arrangements with OEMs – which I do not believe to be the case – such an imposition of interoperability provisions could well be pro-competitive downstream, by giving app developers a stronger incentive to produce apps because there would be a larger number of compatible devices, and therefore a bigger base of potential users. In multi-sided markets, what might be viewed as anti-competitive behaviour on one side of the market can well have pro-competitive effects on the whole.

More broadly, competition authorities around the world must come to grips with the growing importance of platform competition in digital markets – that is, competition not *within* a single platform – e.g. between Google apps and non-Google apps on Android – but *between* different platforms – e.g. Apple's iOS versus Android. Such a change in focus is essential because platforms are increasingly experimenting with the ecosystems that they create to bring together their various types of users (see Hazlett et al., 2011). The success or failure of platforms is determined by the responses of manufacturers, app developers, advertisers and end users, as they switch their allegiances from one ecosystem to another. This form of competition is a central feature of multi-sided markets and it must be at the forefront of policymaking.

In sum, the Commission's Statement of Objections concerning Android is not justified in light of the existing arrangements between Google and its various counterparties. Critically, the competition authorities' assessment fails to acknowledge the growing role of platform competition in spurring innovation. Yet, intervention without adequate consideration of the competitive dynamics of the market may well stifle rather than invigorate competition in the digital economy.

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ⁱ Indeed, PC sales have slowly declined since 2012.

ⁱⁱ France, Germany, Italy, Spain and the UK.

ⁱⁱⁱ The fluidity of market shares in the digital sector is emphasised in Zuluaga (2015a) and it is a point to which we return later.

^{iv} Microsoft acquired Nokia in 2013 and the Finnish firm has since become integrated into its U.S. parent.

^v These guidelines are known as the Android Compatibility Definition Document (CDD) and aim to ensure interoperability across Android devices from different OEMs (see Körber, 2014). In other words, the CDD enables users to more easily switch between Android devices.

^{vi} This is known as the Anti-Fragmentation Agreement (AFA) and again seeks to maintain compatibility between devices.

^{vii} These are collectively known as Google Mobile Services, or GMS.

^{viii} I am grateful to Benoit Tabaka at Google for pointing me to various examples across different markets.

^{ix} One could have feasibly installed a different browser and/ or media player after purchasing the Windows software with the bundle.