**Sustainability of Digital Platforms under the Impact of Economic Regulation and Voluntary Withdraw from the Domestic Market: Lessons for Competition Policy**

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**Abstract**

Conventional wisdom on the persistence market power of digital platforms inspires elaboration and adoption of new competition laws over the globe. Russian evidence shows how sustainable the dominance of digital platforms is under the changes in regulatory and business environment. Under head-to-head competition between global and domestic digital platforms, public measures targeted at wider consumer choice and protection of Russian platforms have modest recordable effects in the use of browser and search services. In contrast, in social media sector redistribution of attention (measured by the time spent online) in 2022 comparative to 2021 surpasses the changes in browser and search use over eight years. Using YouTube as ‘free advertising space’ content creators raise their bargaining power with other attention brokers as well. Russian case demonstrates, first, sustainable dominance of digital platforms based on the control of operational system and pre-installed applications as well as accumulated data capacity and prediction power of algorithms in contrast to less sustainable market power based on pure attention, and, second, the possibility of relatively quick reallocation of bargaining power between attention brokers and content providers in favor of the latter.

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**1. Introduction**

Market power of digital platforms is one of the most discussed issues in public policies. Hundreds of research papers (Jullien, Sand-Zantman, 2021: Calvano, Polo, 2021; Jacobides, Lianos, 2021) and policy papers (see review in Lancieri, Sakowski, 2021) discuss the determinants of market power of digital platforms, including direct and indirect network effects, economies of scale, control on digital data, QWERTY-effect, organization of governance between subsidized and cost side and many others. Understanding the role of a particular factor as a determinant of sustainability of digital platforms dominance is important to develop effective policy measures to cope with.

At the same time, many authors (see for instance Tucker, 2019; Franck and Peitz 2023) consider concerns on sustainability of platform power as overstated. Cross-platform network effects may support entrenched power of incumbents in digital markets, but they also may promote effective entry as well, and this is also true for economies of scale and scope. Moreover, pross-platform network effects may explain fast shift of users towards entrant(s). Control on digital data may be more important for one type of digital platform and less important for the others.

In spite of growing number of new laws, law drafts and legislative initiatives on the competition policies towards digital platforms, empirical works on the effectiveness of public interventions remain to be scarce. Important exception is Vasquez Duque (2023) who explains the minor effect of screen choice remedy under EU decision on Microsoft Case (2009) by pure consumer inertia. The evidence on the effects of other regulatory interventions is scarce. It is even more so for the comparison of how similar changes (shocks) in regulatory and business environment affect different digital platforms, depending on the type of cross-platform network effects they use.

Russian case is interesting to answer these questions for several reasons. First of all, for decade Russia represents the rare case of competition between international and domestic participants in the domestic market. Secondly, Russian governments long before the military action in Ukraine (2022) undertook specific policy measures in order to protect domestic digital platforms from their international competitors. Thirdly, in 2022, international digital platforms were either banned in Russia (Meta, Facebook and Instagram) or voluntarily restrict their actions (Google and Youtube, TikTok). This causes reallocation of advertising spendings across digital platforms and attention brokers, and increased competition for consumer attention respectively.

The goal of this article is to compare the effects of protectionist policies and voluntary restrictions on redistribution of digital markets and draw the conclusions on different digital platforms sustainability.

We compare the magnitude of structural changes in the markets covered by digital platforms of three groups, with three different sources of network effects: based mostly on consumer inertia, based on the scope of dataset and quality of algorithmic prediction, and based on the user’s attention. Browsers are the example of the first type of platforms, where the user sticks to default option, refraining from the active choice (see Vasquez Duque for the discussion, 2023). For the majority of end users, different browsers provide almost the same utility, and prevalence of one browser over the other is mostly due to consumer inertia. Search engines are chosen due to quality of choice, which depends on the datasets and algorithms. In this respect, Google overperforms globally, while Yandex obtains advantages for the local use. At the same time, due to stronger positive effect of scale on the prediction quality, tipping is most likely in this segment. For social media and video-streaming platforms, attention of the viewer itself provides positive network effects both for content creators and advertisers. Due to heterogenous of users by their preferences, language, nationality, gender, time constraints etc the competition between digital platforms in this segment is higher and potential of market tipping is lower (Rieder et al, 2023; Bedre-Defolie & Nitsche, 2020). Under the suspending monetization of audience attention at YouTube and banning Facebook and Instagram one would expect the deepest redistribution of the shares both in terms of attention and advertising flows. Predictions on the reallocation of the value created by the attention monetization through advertising might be different. On the one hand, competition between ‘entrants’ (smaller attention brokers) may induce higher price for contents. On the other hand, exit of large global companies from the market may escalate competition between content providers and decrease price for content and revenues of content providers respectively.

In order to explain the changes in the digital markets, we use two alternative datasets on the distribution of domestic markets across different participants, StatCounter and Yandex.Radar, and also systematize information from the corporate reports and information agencies on the allocation of time Russian spend online, and advertising revenue received in 2021 and 2022.

We contribute to the literature, first, by the recording and comparing the structural changes in different segments controlled by digital platforms under external shock in terms of reallocation of market shares and also the shares in the value added in the sector, second, by assessing the potential or protectionist policies towards domestic digital platforms.

The structure of the article is the following. Section 2 explains the public policy towards digital sovereignty in Russia. Section 3 assesses the magnitude of market structure changes for the use of browsers and search services. Section 4 is devoted to the redistribution of attention and advertising revenues between social media platforms as well as between the platforms and content providers. Section 5 concludes.

**2. Competition in the Russian digital markets and public policies to protect domestic companies**

Russian market of digital services is typical for the country that is between upper-middle- and high-income economies. Internet penetration exceeded 2/3 about ten years ago, recently it is about 90%. Mobile Internet is relatively cheap. Population is educated, a lot of time spent online, the share of advanced Internet users is relatively large. Special program of the unified dataset of administrative, health and education services named ‘Public Services’ substantially improves everyday life in Russia, and at the same time contributes to the deeper penetration of Internet (see Bannykh, Kostina, 2022). ‘Public Services’ became an important achievement since 2009 by allowing to receive documents (passports, driving licenses, property registrations etc.), make the appointments with the doctor, enroll children in school, register the transactions between natural persons, pay taxes in comfortable and timely manner.

Unlike most of countries in the world, in the Russian digital markets domestic participant competes vis-à-vis international company. Russian Yandex (founded 1993) introduced own search in 1997, geolocation service in 2004, navigation in 2006, browser in 2012. Afterwards the company expanded its services on introducing a personal recommendations feed – Yandex.Dzen in 2016 and two years later the platform for e-commerce – Yandex.Market. Russian public policy supported Yandex as well as other domestic market participants by different measures but (until 2022) without substantial restrictions on the competing platforms. Nothing similar to Chinese ‘Golden Shield Program’ (also known as ‘Digital Firewall’) took place.

Since 2014, changes in the policy were driven by public security reasons. Since 2015, there are requirements on personal data localization: personal data of all users should be stored on the servers within the country, companies are obliged to provide access to the personal data by request of security authorities. LinkedIn was finally blocked in Russia (2016) exactly for non-compliance with this requirement. Later, threatened with the same ban, messaging app Telegram finally (2018) complied with security remedies.

Important goal of public policy is to develop domestic software to rely on. In 2015, strongly preferential treatment of Russian software under public procurement was introduced. Soon, the share of domestic software in public procurement increased substantially (Bannykh, Kostina, 2022).

But still, in the private segment of digital markets public policy (outside security requirements) does not affect global digital platforms aggressively. The only specific measures were antitrust decisions. Russian competition authority among the first in the world (2015) issued infringement decision on effectively exclusionary clauses on Android GMS pre-installment (Avdasheva, 2019; Avdasheva, Korneeva, 2019; Golovanova, Pontual Ribeiro, 2022). Similar decisions were made in many jurisdictions, confirming competition concerns in the case. Other decisions of the Russian competition authority towards global digital platforms do not go beyond regular enforcement. Moreover, competition enforcement in Russia does not draw the difference between international and domestic digital platforms (Remington et al, 2022): domestic Yandex was also under competition scrutiny, and complies with specific competition remedies.

Incentives to develop domestic applications, software and operational system became stronger in 2019, under the Google’s threat of the ban on Android use by Huawei (Cartwright, 2020). Russian government adopts new legal requirements on localization of digital services. Since 2021, law requires obligatory pre-installation of domestic application bundles on smartphones, computers, tablets, smart TV and the like. The applications (free as well as paid) include Yandex services, such as Yandex Browser, Yandex Disk and Yandex Maps, local social networks – VK (‘In contact’ – ‘Vkontake’ in Russian), and OK (‘Classmates’ – ‘OdnoKlassniki’ in Russian), Public Services (‘Gosuslugi’ in Russian), MirPay (application for domestic payment system), package of MyOffice Documents, antivirus from Kaspersky Lab (paid), bundle of Russian TV channels (paid) and the catalog of domestic software App List from the Ministry of Digital Development, Telecommunications and Mass Media of the Russian Federation (analogue of AppStore). Pre-installation of the Russian program bundle takes place in neutral manner, similar to browser choice screen under the remedy issued by European Union under Microsoft Internet Explorer Decision in 2009 (Vasquez Duque, 2023). Decision straightforwardly protects Russian developers and tries to introduce domestic alternatives for almost all digital services. At the same time, this has nothing similar with ‘firewall’: under first activation the user is asked whether she wants to use domestic software and is provided with the list of software to choose from. When using domestic software, there are also instruments of ‘soft tying’ (but again, not out of regular scope of application distribution). Domestic software is interconnected, so using auto navigation from Yandex makes it difficult (but still possible) to refuse Yandex Browser and Yandex Search. There is a bundling of domestic social media ‘Vkotakte (VK)’ – ‘In contact’ with ‘Public Services’ by more convenient authorization. But still, protection of domestic software and digital services did not substantially undermine the principles of neutrality and non-discrimination.

In 2022, competitive landscape in the Russian market changed substantially. On the 4th of March the Federal Service for Supervision of Communications, Information Technology, and Mass Media partially limited the access to Facebook and Twitter and later announced “Meta group” to be an extremist organization, blocking the access to its services, Facebook and Instagram, completely. Moreover, on July 18, 2022 the Russian court fined Google 21,77 bln RUB (about 320 mln USD) for repeated refusal to delete false information. The company has already been fined earlier at the end of December 2021 for 7,2 bln RUB (about 100 mln USD) for mass repeated violations of the legislation of the Russian Federation and not deleting prohibited information according to the instructions of the Federal Service for Supervision of Communications, Information Technology and Mass Media (Roskomnadzor).

Apart from the certain restrictive measures being undertaken by the Russian government towards digital services, quite a number of companies decided to leave the Russian market. Google and Apple are among them. On March 10 2022, Google announced suspension of all its paid-for services in Russia, including advertising on Google and YouTube. In May, Google’s Russian subsidiary filed for bankruptcy, formally due to inability to pay fine imposed by of Roskomnadzor.

To conclude, one part of international digital platforms was excluded from the normal Russian market under national security reasons, another part left Russian market more or less voluntary. At the same time, since almost all mobile phones, laptops and computers et sold in Russia are imported, they keep pre-installed Google GMS. For the natural persons, almost all the services of international companies (if they are not banned officially) are available. Among others, content providers continue to use YouTube for video streaming. Access for Russian audience is still opened, at least partially.

Therefore, Russian context allows us to track the changes of digital market structures in response to different interventions. First one is a protection of domestic companies, attempts to improve their competitive positioning vis-à-vis large international rivals. Second one is complete or partial exit of digital companies from the Russian market for end users, together with the partial exit from digital advertising market. Unsustainability of global digital companies under the influence of these development allows to make a judgment on dominance as entrenched and durable market power.

**3. Structural changes in the use of browser and search: moderate or reversible changes due to protectionist measures**

The section traces the structural changes in the shares of browsersand searchusage in Russia under the impact of domestic applications support measures since 2019 (in full effect since mid-2021) and sanction regime since 2022 followed by self-restrictions in the form of partial withdrawal from Russia. We expect to find the impact of protectionist policy on rivalry between domestic and international providers as the increasing share of Russian (and more precise, Yandex)products in both segments.

To analyze the changes of digital market structure, we apply cosine similarity index as well as market share changes. The cosine index is a similarity coefficient used to measure structural differences that widely used in different research directions (for instance, see Sun & Ng, 2000; Gregori & Pietroforte, 2015; Yang et al, 2022; Girardi et al, 2021).

For the shares of companies in the market (measured by the number of users), , where indicates companies, and – subsequent periods, cosine index is measured as

[1]

Cosine index belongs to the interval [0, 1], or [0; 100%] respectively. Cosine index equal to 1 (100%) indicates that the markets structure is similar, and there is no structural change moving from period to . The lower cosine index is, the higher structural changes are. Therefore, structural changes are measured by 1 - , or (1 - ,

If the cosine index deviates from 1 to 0, it means that within these two periods market structure has changed significantly. For example, if cosine index of two vectors is 0.86, it will show, that market structures of two periods are 86% similar and the structural difference is 14%. The diagram bellow illustrates differences of market structures, market changes, in other words, it is (1 - cosine), i. e. 14%.

Important difference between trends in market shares, or market concentration indexes, on the one hand, and cosine index, on the other is that the latter reflects relative changes in the shares of all market participants, not only the largest ones. Being measured relative to the particular starting point, cosine similarity shows redistribution of the markets between the products or suppliers. Moreover, cosine index allows us to trace if redistribution of shares is reversible or not. The former takes place in case of fierce competition between comparable companies.

To assess the structural changes, we use datasets of StatCounter (Global Stats StatCounter[[1]](#footnote-1)) and Yandex Radar[[2]](#footnote-2) for the period from January 2015. Both datasets record page views, adjust them for possible bias (bot activity, prerendering and etc.) and calculate digital services and platforms market shares. StatCounter, independent analytical service, has global scope, according to the name, and allows us not only to trace changes of browser and search use in Russia, but also to compare the magnitude of structural changes with the globe. The tracking code is installed on more than 1.5 million sites globally, which is not that many sites for each country. According to the StatCounter countries sample size, the data may deviate from being representative. The Yandex Radar data base collects data about a few countries. It focuses on Russian and nearby domains of Russian-language users. In covers 3 million sites (as it registers 78.88% of traffic in the .ru domain zone, while Google analytics only 39.47%). The Yandex.Radar reports exclude views to Yandex's own sites to ensure a representative sample of domains. Evident disadvantage of this dataset is the inability to provide international comparisons.

In the use of browsers, Chrome dominates in Russia, as everywhere in the world. However, share of Yandex Browser in the usage increases. Yandex.Radar source estimates the recent usage of own browser higher than StatCounter. According to both sources we observe steady increase of Yandex Browser share since the middle-2021 (when protectionist measures took effect). At the same time, 2022 military operation in Ukraine does not contribute to the redistribution of browser usages (Fig 1).

|  |  |
| --- | --- |
|  |  |
| StatCounter Global Stats | Yandex.Radar |

Fig 1. Distribution of browsers use in Russia: January 2015 – June 2023

Note: The category ‘Other’ on the diagram includes many browsers, which we take separately calculating the cosine similarity index, but for ease of perception they are combined on the diagram here and below.

Compared to the period up to 2021, structural changes are slightly accelerating (fig. 2). According to Yandex.Radar they are mostly because of redistribution of the market shares outside the largest browser Chrome (particularly, Yandex Browser crowds out IE, Opera and the group of smaller browsers). According to StatCounter, in contrast, slight decrease of Chrome share takes place.

|  |  |
| --- | --- |
|  |  |
| StatCounter Global Stats | Yandex.Radar |

Fig 2a. Structural changes in the browser usage in Russia: relative to January 2015

The change in the browser market structure is 10.8% (12.8%) as of June 2023, with Chrome share raised by 13 % (4.5%) and Yandex browser share increased by 12% (19%) according to StatCounter and Yandex.Radar correspondingly. The world growth of Chrome share is 20% (from 42% to 62% from January 2015 to June 2023) and the world browser market structure change is 7.55% for the period. Therefore, Russian market mainly reflects global trends. The effects of domestic application support program are weak, if any, similarly to the effects of competition promotion measures in Europe (Vasquez Duque, 2023).

In contrast to browser use, in search Google and Yandex are comparable rivals (fig 3a, 3b). According to StatCounter, the share of the Yandex search engine has recently surpassed Google in market share. Yandex.Radar source estimates the whole period usage of own search engine higher than StatCounter. StatCounter shows more volatile dynamics than Yandex.Radar. According to both sources we observe steady increase of Yandex browser share since the middle-2020. According to StatCounter, in 2022 Yandex share exceeds Google market share in Russia (Fig 3), while according to Yandex.Radar it took place many years ago.

|  |  |
| --- | --- |
|  |  |
| StatCounter Global Stats | Yandex.Radar |

Fig 3. Market shares of search engines in Russia: January 2015 – June 2023

Structural changes over the whole period are explained by redistribution of the users between two close competitors during fierce competition between Google and Yandex. In contrast to browser market, after some structural changes, the structure returns to the initial state (Fig 4). Over time, share of Yandex search slightly increases (by 19,8% or 4,4% relative to January 2015, according to Statscounter and Yandex.Radar correspondingly).

|  |  |
| --- | --- |
|  |  |
| StatCounter Global Stats | Yandex.Radar |

Fig 4. Structural changes in search engine usage in Russia: relative to January 2015

During the period, indicator of structural changes is less than 6% or even less than 1%. This is only slightly higher than this indicator globally, that is only 0,07% over the period. The difference is negligible, taking into account that in Russia search service is more competitive than globally.

To conclude, in spite of large difference between structure of use of browsers and search services (dominance of Chrome with significantly lower share of Yandex in contrast to close competition between Google and Yandex in search), the effects of protectionist measures are moderate in both markets, being a bit observable in browser segment. With usual reservations we are unable to compare the markets with and without support measures, they only allow to maintain the presence of domestic competitor in the markets.

Conclusion on the stability of user distribution in browser and search is important before we analyze the redistribution of the use of online social networking and video sharing platform services in the next section.

**4. Structural changes in attention and advertising**

For social media and video streaming segments, the fact of authorization in particular network does not reflect distribution of market. The resource that digital platforms compete for is users’ attention, that is further used to promote digital advertising, being the ‘attention brokers’ (Prat, Valletti, 2022). Under given attention resource, market shares in digital advertising depends on the effectiveness of advertising via particular channel. In the mature markets of digital advertising an increase of the attention available for platform results in the increase of the share in advertising revenue. In the attention market, entry, exit, mergers and any other structural changes affects prices and ‘quantities’ in advertising markets (see for instance Anderson et al, 2018; Evans, 2020).

In this respect, Russian ‘attention’ and digital advertising markets in 2022 survived drastic changes. On the one hand, large participants Facebook and Instagram were excluded (at least partially, with reservation for VPN use) from the attention side, or left attention market voluntary (TikTok). At the same time, attention demand for social media increased due to military operation. Redistribution of consumer attention would affect digital advertising market as well. On the other hand, there is restructuring of digital advertising market as well since Google suspends monetization of audience.

Russian attention market is relatively large, with 143 mln population, very high Internet penetration, and a lot of time spent online. Table 1 reports 93 hours as attention, that is slightly less than world average but higher than in many high-income countries and distribution of attention between digital platforms. YouTube obtains strong competitive position. At the same time smaller and country-specific attention brokers (VK and Telegram to a lesser extent) are present in the market.

Table 1. Average monthly time spent on social media and streaming platforms in 2021 in the selected countries, hours

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Indonesia | Turkey | India | Brazil | France | Japan | UK | USA | Germany | Russia | Worldwide |
| WhatsApp | 30,8 | 15 | 21,3 | 30,3 | 5,9 | - | 9,3 | 7,7 | 11,7 | 10,0 | 19,4 |
| Facebook | 17 | 13,1 | 17,1 | 15,6 | 14,2 | 3 | 17 | 17,7 | 11,5 | 2,8\* | 19,5 |
| Instagram | 17 | 19,7 | 9,8 | 14 | 8,4 | 5,2 | 8 | 7,5 | 7,6 | 9,4 | 10,3 |
| TikTok | 13,8 | 14 | 10,6 | 14 | 17,3 | 11,4 | 20 | 21,5 | 19,4 | 17,4 | 13,3 |
| YouTube | 25,9 | 18,8 | 26,4 | 26,3 | 13,2 | 21,4 | 17 | 23,1 | 12,6 | 30,4 | 23,2 |
| Netflix | 9,3 | 8,3 | 7,4 | 7,9 | 7,4 | - | 5,6 | 5,7 | 6,3 | - | 7 |
| Twitch | - | 5,8 | - | - | 5,5 | - | 3,9 | 4,9 | 5,1 | 4,7 | 5,1 |
| VK | - | - | - | - | - | - | - | - | - | 16 | 13,9 |
| Telegram | - | - | 2,4 | - | - | - | - | - | 2,7 | 4,6 | 2,9 |
| Total | 113,8 | 94,7 | 95,0 | 108,1 | 71,9 | 41,0 | 80,8 | 88,1 | 76,9 | 95,3 | 114,6 |

Source: DataReportal, web address: https://datareportal.com/, accessed 28 July 2023*.*

*\** The portal does not provide the statistics on the average time spent on Facebook. Therefore, it was calculated separately, using the data for the distribution of Facebook users in Russian Federation by age groups[[3]](#footnote-3) and average time spend on the platform by age[[4]](#footnote-4); with respective correction of the totals.

According to the research conducted by Russian Association of Communications Agencies (ACAR), in 2021, the overall digital advertising in Russia was at least half from 8,5 bln USD advertising in total[[5]](#footnote-5). In 2022, advertising spending in Russia fell by about 18-20% in USD[[6]](#footnote-6).

Table 2 reports the magnitude of structural changes in three dimensions. The first one is redistribution of the shares in digital advertising market from Google/YouTube towards Yandex and smaller market participants (VK, Telegram, and the group of marketplaces), mostly domestic ones. Local social media as well as e-commerce apps started to attract more attention to their services. The most significant rise was experienced by Telegram, which engagement, i.e., relative time spent on the digital platform, increased by 70%. It was followed by VK and Yandex Dzen that had an increase in the engagement of 30% and 32% respectively[[7]](#footnote-7). At the same time, in 2022, the most significant fall in engagement showed Instagram, where the average time spent on the platform declined from 39 to 15 min a day[[8]](#footnote-8). According to Mediascope[[9]](#footnote-9), reallocation of attention is significant, but generally lower in scale that reallocation of advertising revenues. Domestic providers of hot content in 2022 attract more attention than one year before.

Table 2. Restructuring of attention and advertising markets in Russia, 2022 in comparison to 2021

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Attention market (time spent online, min per day) | | | Online advertising revenue (in USD mln) | | |
|  | 2021 | 2022 | Change, % | 2021 | 2022 | Change, % |
| **Yandex** | 22,5 | 17 | -24,4% |  |  |  |
| Platforms revenue |  |  |  | 2437 | 2926 | 20% |
| Content creators’ revenue (Yandex Dzen integrations) |  |  |  | 0,62 | 0,69 | 11,2% |
| **Google, YouTube** | 22 + 83=  105 | 20,5+91=  111,5 | 6,2% |  |  |  |
| Platforms revenue |  |  |  | 1960 | 351,1 | -82% |
| Content creators’ revenue |  |  |  | 3,7 | 7,5 | 102,7% |
| **Facebook, Instagram** | 5,5 +39= 44,5 | 7,5+15= 22,5 | -49,5% |  |  |  |
| Platforms revenue |  |  |  | 1700 | 283,3 | -83,4% |
| Content creators’ revenue |  |  |  | 140,8 | 62,7 | -55,5% |
| **Vkontakte** | 45 | 45 | 0% |  |  |  |
| Platforms revenue |  |  |  | 644,77 | 832,77 | 29% |
| Content creators’ revenue |  |  |  | 28,6 | 41,8 | 46,2% |
| **Telegram** | 22 | 39 | 77,3% |  |  |  |
| Platforms revenue |  |  |  | 285 | 292,6 | 3% |
| Content creators’ revenue |  |  |  | 39,6 | 94,1 | 137,6% |
| **Marketplaces** | 19 | 22 | 15,8% | 321,9 | 731,5 | 127% |

* Source: Average time spent on the platform for VK, Telegram, Instagram, YouTube and E-com was taken from the research conducted by Mediascope[[10]](#footnote-10). The values for Google and Yandex were taken from the research Digital 2021 and Digital 2022, the data for which was taken from Semrush[[11]](#footnote-11). For Facebook the data on average time spent on the platform in 2021 was taken from Statista[[12]](#footnote-12) and in 2022 – from Digital 2022, using SimilarWeb rating[[13]](#footnote-13).

Advertising revenues from integrations for YouTube, Telegram, Meta group, Yandex Dzen and VK were calculated by multiplying the platform share in revenues received by content creators by the value of money spent on influencer marketing (Source: Perfluence[[14]](#footnote-14)); VK platform ad revenue is from the company’s financial statement for 2022[[15]](#footnote-15); Meta advertising revenues received by the platform were taken from article on Forbes[[16]](#footnote-16) and for 2022 it was supposed that they would stay at the same level as in 2021 with only two operating months; Telegram ad revenue is from advertising activities in 2021 were taken from Telega.io[[17]](#footnote-17), which is an official ad service in Telegram, while for 2022 the revenues were calculated by AIAD[[18]](#footnote-18); Revenues of Google and YouTube in Russia were taken from the financial statements of the official representative firm of Google in Russia[[19]](#footnote-19)

Fig. 5 indicates the structural changes in the distribution of attention and advertising during one year. Outside the group of largest digital platforms, where Yandex gains huge additional advertising revenue in contrast to Google-YouTube that self-exit from advertising segment and Facebook-Instagram that was administratively excluded, for smaller market participants (Telegram, VK, group of marketplaces) there is clear positive dependence between additional advertising and additional attention. Smaller market participants exert specific efforts to attract attention in order to be more competitive in the advertising market.

Fig. 5. Redistribution of the users’ attention (according to MediaScope) and advertising revenues of platforms in Russia, from 2021 to 2022. Source: data of Table 2.

The structural changes in the attention market in 2022 relative to 2021 is 3,3%, and in advertising market 20,8% respectively.

In other words, during one year the magnitude of attention redistribution is comparable with the redistribution of browser use and exceeds search use during eight years and a half. Restructuring of digital advertising flows is far deeper than restructuring of any of two mentioned segments during all the period. Reallocation of shares affects the demand for digital advertising and advertising expenditure at the extent less than it was expected. End users are little affected as well.

The second is vertical restructuring of digital advertising market. Two important changes are to be mentioned there. First, advertising in social media and video streaming decreases in favor of advertising in marketplaces. Increase of advertising spendings through sale channels indicates diversification and enhancing competition between advertisers. Competition between marketplaces in Russia (the shares of leading marketplaces Wildberries, Ozon and Avito are 17, 15 and 14% respectively; with a fringe of smaller competitors[[20]](#footnote-20)) support rivalry in the sector further.

Third, content providers use YouTube as ‘free advertising platform’, receiving revenues by direct contracts through so-called ‘integrations’ as inclusion of advertising in the streaming directly. What is more important, direct advertising contracts and integrations are becoming popular in other social media as well. Table 2 indicates that content creators’ revenue obtained by direct contracts increases in most used digital social media. The share of content creators’ revenue to the overall spendings on advertising using particular platform increased from 12 to 24% in the fastest growing Telegram and from 8% to 18% in Facebook and Instagram, which is relatively sluggish in self-promotion of social media. Another important indicator of the increasing share of content creators in the overall value in the sector is that according to the Association of Bloggers and Agencies[[21]](#footnote-21) is that ‘influencer’ content creators increased rather than decrease the price of their services, in spite of overall slight decrease of advertising spendings in 2022 comparative to the previous year. Competition for new attention is the driving force of competition for the authors. In October 2022 comparative to October 2021, there is a clear redistribution of the authors to domestic social media, especially those providing better opportunities for direct contract with the advertisers: for instance, there is about 2,5 times growth of the number of the authors in Telegram (up to 10,5 mln) and about 18% growth in VK (up to 28 mln) in contrast to sharp decrease of the number of Russian content creators in Instagram (more than twice, from 38,1 mln to 17,2 mln) and TikTok (about three times, from 4 to 1,4 mln)[[22]](#footnote-22). YouTube have lost less then one third from 8,6 mln authors. The model of value creation changes considerably, however. In the new environment it is not YouTube that commoditizes (Barnett, 2018) the creation of content, but instead, content creators commoditize video streaming, using YouTube as ‘free infrastructure’. Large share of YouTube in the attention attracted in particular circumstances supports bargaining power of content providers in their contracting with other attention brokers. Increasing demand for content as derived advertising demand motivates catching-up social media (especially Telegram) to increase the share of content providers in the value created.

Data on redistribution of advertising revenues from social media and video streaming platforms to content creators might be transitory effect of unexpected shock. However, it might indicate the changes in the governance of the value chain from attention attraction to advertising and back to the attention: the increasing power of content creator vis-à-vis digital platforms under the competition of the latter.

Russian evidence shows that platforms where attention provides network effects monetized by advertising under specific circumstances may lose their market power shortly. This distinguishes attention brokers from the providers of browsers and search services. Important is that not only ‘entrants’ or smaller digital platforms may expand their networks fast, but also content creators enhance their bargaining power and the share in value created. In other words, competition between digital platforms as attention brokers results in ‘more fairness’ of contracts with content providers.

**5. Concluding comments**

Recent developments of digital markets in Russia provide evidence that contributes to the assessment of the determinants of market power in digital markets and the potential of public policy either in supporting of domestic companies or in competition protection.

When market power of digital platform is based mainly on consumer inertia (browsers) or quality of services (search), active policy measures (if they are not prohibitive) have little effect, at least in the medium run. In Russia, pre-installment of the bundle of domestic applications, including Yandex browsers, results in very slow and modest in magnitude reallocation of end users. In search, head-to-head competition between domestic Yandex and global Google seems to be even less affected by policy measures and 2022 crisis.

In contrast, in attention market forced or voluntary, complete or partial exit of global companies results in fast redistribution of the shares in advertising spendings between attention brokers as well as in the shares of value added between attention brokers and content providers, while the amount of digital advertising spendings dropped less than it was expected. In this respect, digital platforms relying on ‘pure’ cross-platform network effects instead of hardware decrease their entrenchments according to the prediction of Tucker (2018, p. 78).

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