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S.V. KUZMINOV,

*Doctor of Economics, Professor of the Global Economics Department,
Alfred Nobel University, Dnipro (Ukraine)*

S.O. HERASHCHENKO,

*Ph.D., Associate Professor of the Economics
and International Economic Relations Department,
Dnipro University of Technology, Dnipro (Ukraine)*

PROBLEMS OF PRICE REGULATION OF COMPETITION AND MONOPOLY IN THE XXI CENTURY

The article analyzes the peculiarities of the activities of five companies of technology giants, leading the world rankings, namely: Apple, Alphabet (Google), Microsoft, Amazon and Facebook in order to identify/refute possible threats of abuse of these companies their monopoly position in the market. A critical analysis of the assessment of the monopoly position of these entities in the relevant markets for goods / services based on the classical approaches to the interpretation of the monopolies. It has been established that due to the inconsistency of traditional approaches to antitrust regulation of the current state of affairs, modern market leaders often cannot even be identified as monopolists. However, there are possible threats to the activities of giant technology firms. In particular, they may be related to modern high-speed, often veiled ways of collecting, processing and storing information, certain personal data, etc., and the possibility of using them in certain interests.

A significant number of benefits that society receives from the activities of technology giant companies have been studied. Firstly, is the provision of free services for the use of information resources. Secondly, it is not setting high prices for advertising services. In any case, they are lower than in the real sector of the economy. In addition, over time, for loyal customers, advertising prices are constantly declining, and the effectiveness of advertising on social networks and the Internet is quite high. Thirdly, it is an opportunity to significantly save consumers when buying goods on Internet sites. It is noted that the difficulty of applying the concept of monopoly in the traditional sense of the term is that modern technology companies - giants often do not overestimate the price of their products, but rather provide their products / services at low prices or even free. Accordingly, such firms have a whole army of supporters. This suggests the obsolescence of existing antitrust law, its inability to regulate the activities of modern high-tech firms and, consequently, the need to develop more modern antitrust law.

Key words: *technology giant companies: Apple, Alphabet (Google), Microsoft, Amazon and Facebook; antitrust law; the benefits of society from the activities of technology giants; low prices/free services of technology giants, threats to the activities of technology giants.*

У статті проаналізовано особливості діяльності п'ятірки технологічних фірм-гігантів, що очолюють світові рейтинги, а саме: Apple, Alphabet (Google), Microsoft, Amazon та Facebook з метою виявлення/спростування можливих загроз зловживання зазначеними фірмами своїм монопольним положенням на ринку. Здійснено критичний аналіз щодо оцінки монопольного положення зазначених суб'єктів господарювання на

відповідних ринках товарів/послуг на основі класичних підходів трактування монопольних суб'єктів. Встановлено, що внаслідок невідповідності традиційних підходів до антимонопольного регулювання поточному стану справ сучасних лідерів ринку часто навіть не вдається визначити як монополістів. Проте існують можливі загрози діяльності технологічних фірм-гігантів. Зокрема, вони можуть бути пов'язані з сучасними надшвидкими, часто завуальованими способами збирання, оброблення та зберігання інформації, певних персональних даних тощо, та можливістю використання їх у певних інтересах.

Досліджено значну кількість переваг, які отримує суспільство від діяльності фірм технологічних гігантів. По-перше, це надання безоплатних послуг з користування інформаційними ресурсами. По-друге, це встановлення невисоких цін на послуги реклами. У будь-якому випадку вони є нижчими, ніж у реальному секторі економіки. Крім того, з часом для лояльних клієнтів ціни реклами постійно знижуються, а результативність реклами у соціальних мережах та інтернеті є досить високою. По-третє, це можливість суттєвої економії для споживачів, які купують товари на інтернет-майданчиках. Зазначено, що складність застосування поняття монополізму у традиційному розумінні цього терміну полягає у тому, що сучасні технологічні гіганти частіше не завищують ціни на свою продукцію, а навпаки, надають свої товари/послуги за низькими цінами або навіть безкоштовно. Відповідно такі фірми мають цілу армію прихильників. Це нашоухує на думку про застарілість чинного антимонопольного законодавства, його нездатність регулювати діяльність сучасних високотехнологічних фірм і, відповідно, необхідність розроблення більш сучасного антимонопольного законодавства.

Ключові слова: *технологічні фірми-гіганти, Apple, Alphabet (Google), Microsoft, Amazon та Facebook, норми антимонопольного законодавства, переваги суспільства від діяльності технологічних гігантів, низькі ціни/безкоштовні послуги технологічних гігантів, загрози діяльності технологічних фірм-гігантів.*

Problem statement and analysis of recent research studies. The modern post-industrial economy poses new, previously unknown challenges to the anti-trust system. For many years, it was believed that the list of industries in which monopolies are the most influential and highly profitable is limited to energy, certain types of mechanical engineering (especially high-tech) and certain raw materials industries. But in the process of building a new technological system [1], Apple, Amazon, Google, Facebook and other companies in the computer and Internet industry have formed a new segment of the global economy.

If we will look at this firstly, this is nothing new. The most attractive industries for monopolization have changed from time to time. Thus, the medieval financial and usurious sector gave way to transoceanic trade in the Renaissance, and in modern times light industry developed most dynamically, but only until the large-scale offensive of steel kings shifted the emphasis on metallurgy and heavy engineering [2]. But the current situation in several respects is not similar to the previous ones.

Firstly, the development of the stock market helps to ensure that the process of changing leading industries takes place at an unprecedented rate. The current stage of globalization, sometimes called financialization, forces us to pay attention to the dynamics of stock markets and stock market valuations of companies in various sectors. Here it is impossible not to notice one important trend: each year less traditional industrial corporations remain in the top ten most expensive public global companies - they are losing in game with technology giants. Even BerkshireHathaway dropped out of the top five, leaving only Apple, Alphabet (read:

Google), Microsoft, Amazon and Facebook. Is this good news or bad in terms of the development of monopoly-state relations? The answer is not very obvious.

As Amazon and Facebook made their way to the top of the rankings, a strong wave of discontent rose in Western academy, as well as among journalists and politicians, which concentrated on the demands of “demonopolization” and application to these and other technology companies, including Apple and Microsoft, antitrust rules, even to the point of violent division. Today, such appeals are heard almost daily, and citizens are intimidated by the fact that the dominance of several major companies can even “stop technological progress.” And it’s not just empty appeals. Sometimes they are embodied in specific antitrust and court decisions, one of which, for example, Microsoft was forced to unbundle its Windows operating system and the Microsoft Explorer browser. In fairness, this unbundling has benefited the development of the IT industry, and several competing browsers have appeared on the market, which were not worse than Microsoft Explorer. However, the pill is made less sweet by the fact that Microsoft has benefited the most from the retreat, not so terrible and, moreover, faster growing Google with its Chrome browser, which has evolved from a regular browser into a complete package of Internet solutions, absorbing entire sectors. However, he often creates - online translation, authorization and authentication systems, solutions for classes and conferences and more. The credo is “Google must have a solution for everything” raises suspicions that by restricting Microsoft, the US government has released and even more powerful company.

But antitrust law against these new technology companies is difficult in use. If the United States v. Microsoft lawsuit was largely in the same style as the United States v. StandardOil lawsuit a hundred years earlier and with about the same key allegations of restricting competitors’ market access, Google is not so vulnerable. Formally, it does not restrict competitors’ access to the market, but simply discourages them from wanting and being able to push the leader by offering their services for free.

Traditional approaches is inconsistency to antitrust regulation with the current state of affairs leads to the fact that modern market leaders often cannot even be identified as monopolists. For example, Apple’s share in the second half of 2017 (quite successful for the company) in the global mobile phone market did not exceed 15% while Samsung had 22%, but the former almost constantly balanced on the verge of a formal charge of abuse of monopoly. While no one touched another firm. We can think that the point here is that the South Korean government is simply more gentle with its compatriots than the American government, but the key to understand the situation is not just that.

Alphabet and Facebook became two of the most expensive companies in the world. Their business is so different from the business not only industrial but also most of our service companies. We do not have clear mind whether the concept of monopoly can be applied here in the traditional sense. However, in the current terms, reflected in the antitrust laws of the world, this is impossible.

The main problem from market monopolization is the artificial increase in prices for unjust enrichment. It’s a main idea in the century of government and society’s struggle against monopolies. This has always served as an ideological and legal justification for the state persecution of companies that have a dominant po-

sition in certain industry markets [3]. But how can this be blamed on technology giants if 99% of their customers do not enter into any financial relationship with them at all? If the product is provided to the consumer free of charge? If paid applications are released not by big monsters, but by small and medium-sized developers, which is just ridiculous to call monopolists? How to accuse the same Amazon or TaoBao of capitalist greed, when the expansion of these corporations significantly lowers rather than raises prices where consumers have to pay for real goods. We can buy a cable for a computer or a case for a smartphone which will cost the buyer cheaper on such a global virtual trading platform than in the nearest real store. The antitrust authorities simply have nothing to do in such cases. Many believe that you should not cling to anything, especially since consumers are happy and do not complain about anything.

Theoretical foundations and applied problems of development and regulation of the global market of high-tech goods have been studied in the works of such foreign and domestic scientists as L. Antonyuk, V. Anshin, V. Badrak, A. Brandenburg, V. Vergun, V. Geets, E. Dandon, P. Drucker, O. Ingiou, V. Kim, D. Collins, F. Kotler, I. Macmillan, T. Orekhova, A. Lieutenant, V. Presnyakov, O. Ray, O. Rogach, N. Rodigina, G. Simon, V. Sidenko, Y. Yakovets and others.

However, many issues remain unresolved. Among them, is it necessary to pay any special attention to huge technology companies, provided there is no mass dissatisfaction of direct customers of their services? Should the activities of these high-power players in high-tech markets be regulated? Let's try to understand this by analyzing the most common concerns in society about these companies.

The **aim** of current research is to analyze the activities of well-known companies of technology giants in terms of abuse / non-abuse of monopoly position in the market, according to the standards of global antitrust law.

The main material of the research. The first concern in society is whether like companies are another manifestation of the "soap bubble" incarnation? Due to these concerns, it is may be necessary to control this company by law and the state to prevent the devastating consequences of the crisis, which ended all the bubbles stories from Dutch tulips. At first glance, this fear is not unfounded. The active users of Facebook services are 2.91 billion people [3] on the September 30, 2021, which is more than a third of the world's population, and if we take the population of economically active age, this figure exceeds half. Moreover, this number of users is constantly growing and this, for example, 10% higher than in 2020. Mailboxes on Gmail are actively used by one-fifth of all people on earth, and this proportion is growing as computer literacy spreads to third world countries. The variety of messengers is also growing dynamically: since 2016, Telegram's audience has almost doubled every year. A similar explosion is observed with regard to the capitalization of these companies. Their value has increased hundreds and thousands of times since the IPO, like a bubble, partly due to exaggerated investor expectations and partly due to acquisitions and takeovers (who does not know about Microsoft's purchase of Skype or Facebook's acquisition of WhatsApp and Instagram, and Google - AdMob and DoubleClick?). But the only fundamental thing that prevents this process from being a standard bubble blow is that it does not flake, it demonstrates its ability to endure rather devastating crises to the envy of companies in other industries, including the previous favorite, inter-

national banking. The crisis of 2008-2009 undermined the position of the world's largest banks, but did not cause significant damage to technology companies. The crisis of 2020 has hit almost all sectors, but not this one.

The second remark concerns just an incredible array of advertising. These corporations are indeed undisputed leaders, who are constantly displacing traditional advertising channels as computer literacy spreads among the population. This leads to the hypothesis that all these technology giants are not really companies selling postal, search and other officially announced services, but huge, hypertrophied advertising agencies, and it is the concentration of power in the advertising market that should be brought to justice. This plan is hampered by the indisputable fact that the flow of advertising services from traditional radio, television and print media to Internet channels cannot be reduced to the standard denominator of abuse of market dominance, as the cost of advertising is steadily falling, despite the seeming of the monopolization of this business. Indeed, it is through targeted advertising that Google and Facebook make their billions in revenue. It is believed that these profits are taken, ultimately from the pockets of consumers. According to standard microeconomic theory, this should be part of the consumer's gain, withdrawn in one way or another. However, this interpretation is quite difficult to confirm and evaluate in numbers. And the point here is not that the relevant data (as is often the case) cannot be collected due to their scattering, undeclared, etc. The problem is different: judging by the data we can get to characterize the general state of affairs, we show that the activities of new technology target advertisers do not reduce, but increase consumer gain. And this applies both to the advertiser, who not only year after year enjoys constantly decreasing tariffs for advertising, but also receives more conversion of recipients of advertising from consumers, which benefits even more, and buyers of advertised goods, who buy more and pay more for goods less and less, moving along the demand curve to the right and down, which, in fact, increases the overall consumer gain. Therefore, the standard criticism does not pass in this remark.

The third remark, or rather suspicion, is that information companies are parasitizing on free or extremely cheap content, which is actually much more expensive and the distribution of which deprives the creators or performers of an audiovisual product. However, even here it is quite difficult to agree. First, the biggest problem with content piracy is not respectable grants, but relatively small firms, groups, and even individuals. Facebook and Youtube look just examples of decency, ideological advocates of copyright, against their background. Not only do they not engage in hacking and illegal disclosure of content, they also purposefully create the conditions for comfortable and effective harassment of those who do so on relevant resources. Second, the statistics of income growth of singers, writers and musicians, who now receive additional income not only from live performances, but also from viewing their work on the Internet, does not allow us to say with a sincere heart that they have suffered from technology companies. Rather, the opposite.

Attempts to traditionally accuse technology giants of obstructing the emergence of new competitors also have little prospect of turning into well-founded accusations in court. Traditionally, monopolists have behaved like predators, occasionally "cleaning" their industry of startups, lowering their prices in anticipa-

tion of bankruptcy. In this case, the antitrust authorities proved the existence of dumping, restricted such practices and punished the perpetrator. However, this is not the case with the technology sector. Today, a huge number of innovative entrepreneurs around the world are finding new technological solutions that are in demand every day. Some of them sell their product on their own (thanks to the specifics of the technological process, a brilliant indie developer has a chance to be no less in demand in the market than a huge company), and others, and so often resell ownership of the product to large companies. For instance, this happened with a peer-to-peer file-sharing file that three young Estonians used for their Kazaa project. From this small investment grew Skype, which two and a half years after its founding was bought by eBay for \$ 2.6 billion, and then, after the company decided to get rid of it, went to Microsoft in 2010 for \$ 8.5 billion. Another example of success has been the explosive rise in the cost of Zoom and examples of this kind are growing every year. What can really be blamed on the biggest players in the technology market is that they have organized a system of constant filtering of promising projects, sweeping away almost all promising startups. However, firstly, they sweep away these startups not just like that, but for money, and secondly, this practice is not unique and not new, it was used a few decades ago by a leading manufacturer of video equipment, Japanese Sony, which, however, did not save it from the emergence of powerful competitors in the face of South Korean, and now Chinese manufacturers, who moved from the pedestal of the former leader. Therefore, having such an example in mind, it would be difficult to argue that such a practice can effectively protect the monopolist from competition. Despite the fact that traditional accusations are easily refuted, in our opinion it is too early to leave the new technology giants out of the focus of state competition authorities. We believe that the main attention should be paid to the sources of income of such companies, and the sources are not in a concrete-applied sense, but in a broader, general theoretical context. It seems most likely that Google, Amazon and other new technology leaders are enjoying the insane savings provided by the introduction of new technologies for collecting, processing and disseminating information.

There have been recent investigations into Amazon, namely information about competitors' deals that it collects on its platform. It is known that the company is both the operator of the platform and the seller on it. It is noted that Amazon provides preferences for its own sales offers and for sellers-users of the platform who use Amazon's logistics and delivery services. Proving this suspicion could threaten the company with a fine of 28 billion \$[5].

The US Department of Justice recently filed an antitrust lawsuit against Google. As part of the lawsuit, the Ministry of Justice will argue that Google is using its dominant position in the market to protect its monopoly among search engines [6]. This is the first antitrust lawsuit of this magnitude against the company.

The lawsuit alleges that Google maintains its monopoly status by entering into exclusive rights agreements. For example, the company entered into agreements with equipment manufacturers, requiring Google search to be installed on their devices. It is often not possible to remove Google services from your smartphone or computer. In particular, the lawsuit concerns the cooperation of Google and Apple, which made the Google search engine almost the only one thankfully built into the Safari browser.

The lawsuit also states that Google controls about 90% of all search queries in the United States. And the company receives 40 billion \$ from advertisers per year. The vast majority of American consumers have access to the advertising offered by Google, as competitors have limited access to traffic. Critics of Google says that the giant is using its access to users' web stores to support its own advertising business.

Finally, the leadership of the European Union from time to time invited directors of the largest technology corporations like Amazon, Apple, Facebook and Google to the European Parliament in Brussels for a hearing on market monopolization [7].

Conclusions. Thus, today it is obvious that a new segment of the global economy has been formed, capable of developing not only in conditions of sustainable and cost reduction (as demonstrated by the production of information hardware), but also with free distribution of its coreproduct, using its market power as the monopolists of the past did.

It is also obvious that it is almost impossible to regulate such companies according to the canons of the twentieth century. Just not because they are based on a completely different economic model, but also because the number of their loyal users in each developed country overpass the number of voters. Whose representatives could try to lobby for such regulatory laws.

It is difficult to prove in court the abuse of a dominant position by technology giants in the market. This is primarily due to the fact that any estimates, including estimates of the degree of use of the dominant position of the market entity are relative. They are found only in comparison with another peer.

And since we have to compare with the old, obviously less efficient technologies, the redistribution of savings in favor of modern technology giants remains invisible. A small part of this savings, provided to consumers, completely eliminates the existing disparity in the relationship "seller-buyer", which actually exists.

The rapid growth of companies, which at the beginning of their journey required minimal investment, and then eventually became dominant in their fields, poses many difficult questions to modern economists and politicians.

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Sergiy V. Kuzminov, Alfred Nobel University, Dnipro (Ukraine)

E-mail: kuzminov@duan.edu.ua

Svitlana O. Gerashchenko, Dnipro University of Technology, Dnipro (Ukraine)

E-mail: gerashchenko75@gmail.com

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A significant number of benefits that society receives from the activities of technology giant companies have been studied. Firstly, is the provision of free services for the use of information resources. Secondly, it is not setting high prices for advertising services. In any case, they are lower than in the real sector of the economy. In addition, over time, for loyal customers, advertising prices are constantly declining, and the effectiveness of advertising on social networks and the Internet is quite high. Thirdly, it is an opportunity to significantly save consumers when buying goods on Internet sites. It is noted that the difficulty of applying the concept of monopoly in the traditional sense of the term is that modern technology companies - giants often do not overestimate the price of their products, but rather provide their products / services at low prices or even free. Accordingly, such firms have a whole army of supporters. This suggests the obsolescence of existing antitrust law, its inability to regulate the activities of modern high-tech firms and, consequently, the need to develop more modern antitrust law.

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