

Antitrust risks of platform pricing

Andrey E. Shastitko^{a,b}, Olga A. Markova^{a,b},
Anton N. Morozov^{a,b,*}

^a *Russian Presidential Academy of National Economy and Public Administration, Moscow, Russia*

^b *Lomonosov Moscow State University, Moscow, Russia*

Abstract

Platform pricing may be connected to antitrust risks, which a company can face under excessive or predatory price scrutiny when the platform is recognized as dominant in the market. Since Federal Antitrust Service of Russia (FAS Russia) prefers price-cost comparison when studying excessive or predatory pricing, we suggest using tariff regulation approaches when analyzing platform prices and calculating long-run average incremental costs (LRAIC). By using this approach one can reduce the risks of simultaneously perceiving platform prices for functionally different consumer groups as predatory and excessive. Having identified antitrust risks of platforms changing their prices (both downward and upward), we show that price increase within the inflation rate may be preferable from the point of view of possible antitrust risks and the transaction costs of interactions with the antitrust authority. However, this method of antitrust compliance could potentially conflict with the company's long-term development goals as a platform.

Keywords: antitrust enforcement, long-run average incremental costs, price-cost comparison, tariff regulation, platform.

JEL classification: K21, L11, L41, L86.

1. Introduction

In the recent decade, platforms have become an integral part of life for many consumers and companies, connecting two or more functionally heterogeneous parties (hereinafter also referred to as platform users) for direct contact and reducing their transaction costs: marketplaces, recruiting agencies, taxi service aggregators, payment systems, social networks, and many others. The rapid growth of platforms raises questions about their market power and excessive margins (Berry et al., 2019) and, in turn, the question of the legitimacy of platform prices.

* Corresponding author, E-mail address: morozov-an@ranepa.ru

In antitrust regulation theory, two approaches are traditionally used to justify the presence or absence of excessive or predatory pricing: the price-cost comparison approach and the comparative benchmark method. The last one brings some difficulties—it requires proving that the markets are truly comparable (Shastitko and Golovanova, 2017), and that the comparable market is truly competitive (Pavlova and Fatikhova, 2017). As a result, the price-cost comparison is preferred in Russian antitrust enforcement.

The price-cost approach assumes that the price of goods or services should be justified through the company's costs necessary for their production or provision, as well as the necessary rate of return. Despite the seeming simplicity of the price-cost comparison concept, its adoption leads to severe difficulties, especially in relation to platforms (Markova, 2023), because they set a price structure that allows them to offer a low (even zero) price to some groups and a high price (well above the relevant costs) to others. This pricing method is associated with additional antitrust risks and transaction costs for companies. Even if it is possible to allocate costs that relate to a specific group of platform users, prices assigned to groups of individual users may not be consistent with the amount of costs incurred, either in the direction of exceeding them (perceived as the excessive pricing) or in the direction of not covering costs (perceived as the predatory pricing). Moreover, this platform pricing strategy, other things being equal, may be preferable for all groups of users. So, if it turns out that any antitrust intervention in the platforms pricing only leads to integrally negative results, then another question may appear on the agenda: are there sufficient grounds for abolition of antitrust in this area (if not complete, then at least partial)?

In this article, basing on the excessive pricing enforcement analysis, we conclude that neither in Russian nor in foreign practice has the price-cost comparison approach been applied to the platform pricing, and only the comparative benchmark method was implemented for these purposes to date. Then we highlight the features of platform markets that must be considered under platform pricing analysis with cost-based methodologies. We then propose a methodology for price analysis based on a price-cost comparison approach, which includes two stages. In the first stage, the platform's core services' costs (direct and distributed) should be determined. In the second stage, these costs are to be allocated to the individual services that the platform provides. The price-cost comparison approach can be used not only to determine the exact price, but also to set a price cap. When the platform applies different strategies that lead to price changes: lowering or refusing to increase them, indexing prices in proportion to consumers' willingness to pay—may be associated with the antitrust risks. Possible effects of platform pricing behavior create a room for discussing the decision-making system in companies based on an adjusted accounting policy aimed at leveling antitrust risks and reducing regulation transaction costs.

2. Antitrust enforcement of the excessive pricing

In most countries antitrust legislation prohibits dominant companies from establishing and maintaining excessive (monopoly) prices. At the same time, in a few jurisdictions (USA, Canada, Australia, New Zealand, and Mexico),

a monopoly pricing is not considered to be an antitrust violation (Gilo and Spiegel, 2018). As a result, antitrust enforcement of excessive prices is limited only to those jurisdictions where such activity is prohibited. However, even when antitrust agencies are not involved in price control, it can be introduced by other authorities as part of industrial policy (process, also called “creeping regulation syndrome”; Shastitko, 2010).

The main issue that faces the antitrust or other price regulatory agency in such cases is proving the fact that the price exceeds a certain acceptable (“fair”) level. In practice, two approaches are used (see above):

- Comparative benchmark method—the price on a competitive market of a similar good is considered as a benchmark;
- Price-cost comparison—a cost-based methodology, where the cost of production is considered as a benchmark.

Using the comparative benchmark method, the authorities often consider markets of same or similar goods but defined within other geographical boundaries (for example, in neighboring countries), given that there are no signs of competition restriction. Despite the prevalence of this approach in foreign antitrust enforcement practice, in Russia the comparative benchmark method is not widespread. Moreover, comparison with other countries markets is technically difficult due to excessively stringent regulatory requirements (Pavlova and Fatikhova, 2017; Shastitko, 2010).

The price-cost comparison approach is based on the economic theory implications that under competition firms strive to reduce prices to the marginal costs level. This interpretation allows some judges and regulators to conclude that any excess of price over cost “is itself unfair.” However, in many cases the price-cost approach not only pays respect to direct variable costs which are related to the production process, but also considers other costs including investments, as well as the monetary value of business risk. In practice, instead of marginal costs, average costs are considered.

In this context, it is also important to note that economic theory proceeds from the equality of price and the *economic costs*, however the authority deals with *accounting costs*, which is not the same because the latter do not include *opportunity costs* and an *economic depreciation*. Failure to consider this fact under the antitrust evaluations makes it impossible to encompass a full spectrum of costs, particularly for platform markets where financial dynamics are complex and multifaceted.

The difficulty of a price-cost comparison approach implication lies in determining the relevant cost structure and the legally permissible rate of return. This often requires the use of value judgments. Such difficulties may push regulators away from price-cost methodology in favor of less controversial practices. For example, in Israel, until 2017, Guidelines 1/14 of April 9, 2014, were in force. According to them, while determining an excessive price the regulator had to use an advanced version of price-cost approach—long-run average incremental cost method (LRAIC, which is discussed in more detail below). The ambiguity surrounding this approach led to Guidelines 1/14 being replaced on 28 February 2017 by Guidelines 1/17, which minimized interference to companies’ pricing policies. In accordance with the updated Guidelines, monopoly pricing should be punished only where the price clearly exceeds the competitive level (includ-

ing on similar markets). In all other cases, the regulator should issue structural regulations aimed at promoting competition (Spiegel, 2018).

Although in Russian antitrust practice a few cases can be identified that consider the platform markets (for Booking.com case see Markova, 2022; for the case against Microsoft see Shastitko and Kurdin, 2017; for the case against Apple see Shastitko et al., 2020; for the case against Google see Yusupova, 2016; for the review of several cases see Pavlova et al., 2020), none of them concerned excessive pricing. So, we consider in more detail the existing foreign practice.

Numerous cases against Visa and Mastercard in the EU and the US, although they touched on the issue of platform price setting, were not related to monopoly pricing. As noted earlier, US antitrust law does not contain a rule towards excessive pricing, whereas the European Visa/Mastercard cases were not carried out under Article 102 of the Treaty on the Functioning of the EU (abuse of a dominant position), but under Article 81(1)—restriction of competition due to resale price maintenance.

Two cases of platform exclusive pricing were heard in Israel. In 1998, the District Court of Tel Aviv considered a class action lawsuit against the Visa card acquiring company. After the new participant's entry into the payment service market, the commission for Visa dropped sharply. That fact served as evidence of excessive pricing from the antitrust agency perspective. Thus, in this case, the price-cost approach was not used, but rather the retrospective method of comparable markets: the price in the market after the entry of a new company was compared with the price that was in effect in the same market previously (under a monopoly). Although the trial court upheld the claim, this decision was overturned by the Supreme Court on the grounds that the new entrant had soon left the market (Gilo and Spiegel, 2018). Also in October 2016, a class action lawsuit was registered in the Tel Aviv District Court to recognize the excessive price set by the local classification Yad-2 (Spiegel, 2018), however in this case there is also no evidence of the price-cost approach implication.

In 2018, the Turkish Antimonopoly Authority (Rekabet Kurumu, RK) accused the local classified site Sahibinden.com of establishing an excessive commission for placing advertisements in the real estate and car sales segments (case 18-36/584-285 TCA Sahibinden.com, 2018). According to the regulator, in 2015, Sahibinden.com sharply increased rates for ads in these two categories. But in that year, the classified business model changed, which subsequently affected the cost structure. In addition, the company itself pointed to the fact of cross-subsidization: the high profitability of the real estate and automobile segments is compensated by low margins of other segments.

RK attempted to conduct a cost-based pricing analysis and concluded that such an approach was inappropriate due to the business platform structure (although in previous cases the agency had widely used a price-cost approach). Because advertising across all segments and operating the entire site incurs a common cost (shared equipment and staff), RK was unable to isolate the share of costs associated with only the real estate and automobile segments. In the absence of cost analysis, RK was unable to either prove or disprove the hypothesis that price increases were associated with a revision of the business model, and test for the presence of cross-subsidies (in addition, the market boundaries were defined too narrowly for this).

In its analysis, the Turkish antitrust authority compared the Sahibinden.com services price increase with the other similar platforms price dynamics, as well as with the Sahibinden.com price growth rates in previous periods (Ayata, 2021). The regulator notes that price growth in 2015 was higher than in the previous two years. Although other companies also increased prices during the same period, Sahibinden.com's price increase was incomparably higher. As a result, RK concluded that there was an abuse of a dominant position and excessive pricing.

It is worth noting that, while in foreign antitrust enforcement regarding complex services markets (services combined into packages) comparison of prices within the market is widely used, FAS Russia, on the contrary, appeals to the impossibility of comparing tariffs of different companies. Thus, in the Decision on the case № 11/01/10-46/2020 it is noted that: “MTS PJSC, Megafon PJSC and Vimpelcom PJSC did not have tariff plans with similar content to the tariff plans of T2 Mobile LLC, including the ‘Everywhere Online’ tariff plan, the prices for which are given in the Objections. Accordingly, even an estimated comparison of the price of the ‘Everywhere Online’ tariff plan with the prices of the tariff plans given in the Objections is incorrect.”¹ This circumstance limits the possibility of using arguments about price comparability and emphasizes the greater focus of the FAS on the price-cost approach application.

Thus, neither Russian nor foreign antitrust authorities have applied a price-cost approach to platform markets pricing and only the comparative benchmark method has been used to date. Regarding the tendency of the FAS Russia to apply a cost-based approach to pricing analysis there is a need to clarify how to implement this method to platform markets. Let's take a closer look at the features of the platform business model, which are important to consider when using the price-cost approach in such markets.

3. Ways of analyzing platform pricing

Platforms are services that connect two or more functionally heterogeneous groups of users, affiliate them and enable their direct interaction (transaction) (Shastitko and Markova, 2020).

Marketplaces, recruiting platforms, taxi aggregators, payment systems, and social network services that provide advertising, are classic examples of platforms. Though these examples are digital, non-digital platforms are also widely discussed: airports (Brilha and Nobre, 2019; Markova, 2023), radio and TV channels (Rozhkina et al., 2022) and newspapers (Katz and Sallet, 2017). One of the main features of platforms is that their charge price structure consists of two or more parts and refers to their ratio: allocation of the total price between the buyer and the seller matters (Rochet and Tirole, 2006). What is more, whereas price level is always positive, a platform can charge to one or more sides zero, or even negative price that exceeds corresponding costs. This price structure is sometimes called “the Seesaw Principle.” Charging such a price structure is possible due to different demand elasticities of the connected sides (groups of platform users) and the presence of indirect network externalities,

¹ <https://br.fas.gov.ru/ca/upravlenie-regulirovaniya-svyazi-i-informatsionnyh-tehnologiy/58f016fb-c013-4d45-9c23-e1c0ce91683c/> (in Russian).

namely the costs and benefits of one of the sides that arise because of an increase in user activity or number of users of the other side. At the same time, the platform pricing scheme creates antitrust risks for those platforms that hold dominant position. Thus, this scheme poses a challenge to antitrust scrutiny of platform pricing, that requires comparing costs of providing services with prices (Ma, 2022). Platforms appear to reduce transaction costs (Golovanova et al., 2024), which provide additional benefits to consumers and creates discussion on applicability of value based approach to discuss platform pricing (Michel, 2014).

That is why old approaches to antitrust scrutiny of pricing should be adapted to account for special features of platform business models. In analyzing platform prices for antitrust purposes to assess whether they are excessive or predatory one should answer two interrelated questions:

- (1) which sides should one scrutinize;
- (2) what costs does one need to consider?

Let's look at each of these questions step by step.

3.1. Which sides should one scrutinize?

When addressing which sides to scrutinize while applying price-cost comparison in markets with platforms, two extreme viewpoints arise:

- (a) scrutinize each group (side) separately, compare the corresponding costs with prices;
- (b) scrutinize all sides that platform connects and compare total price (price level) with the total costs of the platform.

3.1.1. Considering each side separately

The service provided by the platform can potentially be divided into two or more services. If we take marketplaces as an example, these would be sellers and buyers, in the case of social media—viewers, content owners and advertisers, for recruiting platforms—employers and job applicants, for airports—passengers/cargo carriers and airlines serving companies. However, even if at the end of the day we can attribute the costs of a platform to certain sides, then it is not clear how one should tackle the prices that each of the sides pay. It is especially important if one of the sides pays low and even a zero or negative price that is optimally defined by a platform (Rochet and Tirole, 2006) (in the examples that we draw above, these are buyers, viewers, job applicants, and passengers/cargo carriers), whereas the costs that arise when providing a free service may be non-zero.

As a result, when comparing prices and costs for the side that pays low (up to zero) price, one will by default conclude that the platform under consideration may set predatory prices. Whereas simultaneously with respect to the other side the prices could be defined as excessive. At the same time, the overall profit margin of the platform could be within the antitrust limits for the rate of return.

In fact, prices set by a platform for each of the sides that it connects are not tied to costs. If costs for one of the sides increase, prices for this side may remain stable (Evans and Schmalensee, 2007). Such an occasion has been revealed by

the US Federal Trade Commission (FTC) when investigating the activity of the payment system American Express as a platform. The FTC found out that the price increase for one of the sides could be explained by an increase in quality (associated with additional costs) for the side that paid zero price (consumers). At the same time American Express's competitors also increased quality level and prices, so it is unlikely that the observed price increase was due to the abuse of market power by American Express but was a result of an increase in the average quality level in the market (Ayata, 2021).

So, in some circumstances an increase in prices can be a result of rough competition supplemented by rising quality. As a result, due to the special price structure of a platform that depends on demand elasticities of the sides connected by the platform and indirect network externalities, the potential disparity between prices and costs for each of the sides does not mean that the platform abuses its market power (Evans et al., 2011). Thus, one should analyze the price structure of a platform, not prices for each side separately. However, here the other extreme can be found: does analyzing price structure mean that one should investigate the overall price of a platform having in mind overall profitability?

3.1.2. Comparing total price (price level) with the total costs of the platform

An alternative approach, which calculates overall profitability, overcomes the problems associated with the pricing structure of platforms. In addition, in this case there is no need to allocate costs to individual parties. However, this approach can also lead to errors that arise while platforms sometimes charge different prices even for the members of a functionally homogeneous group.

For example, some developers produce apps that are primarily free, then charging consumers when they use an app (however, for example, Apple also charges commission when purchases are made inside of the app (Geradin and Katsifis, 2021) or monetizing via advertisers). In such a case, when we analyze platform business model, we can conclude that this platform covers its costs when charging developers of paid apps. Comparing benefits of different types of developers when analyzing indirect network externalities, we may infer that developers of paid apps do not benefit when the number of developers that create free apps increases (Bostoen and Mândrescu, 2020). If we can separate the costs for the paid and free developers, then when assessing prices versus costs for the paid side, we will define the platform prices as excessive, making type I errors. Thus, when considering which costs should be taken when performing price-cost analysis, one should consider positive network externalities which arise between different sides that the platform connects. This approach is sometimes called the “inter-connected markets” test (Manne and Wu, 2019). When using such a test one can name sides that are connected by the platform when providing “core function” (Markova, 2023) and thereby can be used when applying price-cost analysis of platform pricing (Ayata, 2021).

For example, when studying recruiting platforms, one should keep in mind that zero prices for job seekers are only possible because employers pay a non-zero price. At the same time, employers' benefits grow when the number of job seekers joining the platform increase, as it makes it easier for them to find workers (thus saving transaction costs on looking for applicants). That is why,

when considering the benefits to employers using the platform one should keep in mind that these benefits are partially defined by the presence of zero price for job seekers. This means that platform prices should be compared to the costs associated with the presence of both employers and job seekers.

On the other hand, for airports the “core” product is transportation of passengers (or cargo). This service requires both airlines and passengers (or cargo carriers), as well as service companies (e.g., aviation fuel and cleaning companies). Moreover, when providing advertisement places at the airport is not an important source of income that is essential to cover costs of providing core services, then the costs of attracting advertisers should not be considered when comparing the price for core services of the airport with their costs (if passengers and cargo carriers pay zero price).

Thus, when justifying platform prices using the price-cost approach, one can use the “interconnected markets” test as it helps to define costs of the platform when it connects different groups of its users.

Another question, complementary to the question of which sides should one scrutinize, is what costs one needs to consider when performing price-cost analysis. Though this question is not new and arises in relation to other markets, it is especially relevant for markets with platforms, as it can be extremely difficult for them to attribute costs to the sides that this platform connects.

3.2. Which costs does one need to consider when performing price-cost analysis for markets with platforms?

Though close to zero average costs is a typical feature for most digital companies that do not use platform business models, it is especially important for platforms (Botta, 2021). Moreover, it is rarely possible to separate the costs that the platform incurs in relation to the sides it connects (Shastitko and Markova, 2020). For example, hardly ever can bookkeepers’ wages be attributed to any of the sides. As for programmers, though some costs can be allocated to services for different sides, such an allocation is principally associated with additional significant costs (Ayata, 2021).

What is more, if a firm implements some form of allocation of costs associated with providing services to different sides, at the end of the day such a system may lead to additional expenses and thus can be passed into the platform prices. Moreover, in the case of capital expenditures, for example the costs of developing software products, the allocation of costs becomes even more complex, since the sides connected by the platform can use the same software.

For non-digital platforms, the allocation of costs is also relevant: for example, if we consider airports that repair runways, the costs of what side should contain the associated expenses? Moreover, even when partial cost allocation is possible, if we consider the platform business model such an allocation may not have any economic sense. Thus, the two steps procedure can be used when performing price-cost analysis for markets with platforms: firstly, one can assess the overall profitability of the platform (Ayata, 2021), and secondly, one may test several alternative cost allocation schemes. If the results obtained by different cost allocation schemes are similar, we can conclude that the results of the test are reliable (Mandrescu, 2022; O’Donoghue and Padilla, 2020).

4. Establishing the excessive pricing in the platform markets

As mentioned above, there are two approaches used to establish the fact of excessive price setting: the *comparative benchmark* and the *price-cost comparison* method. The *profitability analysis* method can also be used for initial analysis, however, its interpretation is limited, so the second step is to use the price-cost comparison, which requires determining the costs to be estimated. For this purpose, natural monopoly price setting approaches can be used. Natural monopolies, as well as companies with significant market power (SMP), are subject to government regulation in most countries. The latter include telecommunications companies, which, in turn, are a classic example of bundled goods providers (Pavlova and Meleshkina, 2018; Pavlova and Shastitko, 2019). The creation of bundled goods is associated with high fixed costs, which are common to various activities. The difficulty of identifying direct costs and the need to cover investments make the example of regulation in this area indicative for this study.

As a rule, government tariff regulation uses pricing methods aimed at covering average costs. This allows the regulated enterprise to maintain a break-even tariff level. When determining prices for regulated companies, the following approaches are used:

- Fully distributed costing (FDC)—the tariff includes the rate of return and *all costs* of the enterprise, including indirect and fixed, distributed in proportion to direct costs or another way;
- Activity based costs (ABC)—extension of the FDC approach, where costs are distributed *in proportion to the activities* associated with creating the product;
- Long run incremental cost (LRIC)—classic version assumes that the tariff includes the rate of return and costs associated with the production of *a certain volume* of good: direct variable and fixed costs, including capital costs; in the LRIC+ modification, the tariff also includes indirect and general business expenses, distributed in proportion to direct costs;
- Long run average incremental cost (LRAIC)—generalization of the LRIC approach. The tariff is set in such a way that revenue from a particular activity covers all costs associated with its *occurrence*.

Regardless of the pricing method chosen, various cost estimation options can be used:

- Historical—pricing is based on cost data that occurred in past periods. For example, based on financial statements;
- Current—costs are recalculated into current prices. Capital costs are estimated based on the current value of assets;
- Forward-looking—costs are determined based on the forecast of the value of assets in future periods for which the tariff is estimated. The best available analogues are considered as fixed assets.

The FDC method seems to be the simplest and historically arose earlier than the other listed methods but is still applied today within the tariff regulation framework in the telecommunications industry in Belgium, the Czech Republic, Poland, Portugal, and Spain. As a rule, when allocating costs, the FDC method relies on historical data, but the current price method can also be implemented (Spain; OECD, 2013).

Although the FDC method involves the allocation of indirect and other costs, there is no uniform approach for such allocation. The simplest solution is to distribute indirect costs in proportion to direct ones, but in practice this can lead to overestimation of tariffs for those products whose creation is associated with high direct costs. To minimize possible distortions, the ABC method can be applied.

In accordance with the ABC approach, an enterprise identifies separate activities in its accounting. Each activity has its own cost drivers and is to some extent related to the final product creation. The cost drivers can be hours worked, energy consumed, etc. In other words, these are values associated with increased costs. At the first stage, the enterprise's costs are distributed in proportion to the cost drivers of various activities. At the second stage, the costs accumulated for certain activities are transferred to products related to these activities. If an activity involves several products, then these costs are distributed in proportion to output. This approach to cost accounting is recommended by the European Commission,² and is also reflected in the tariff regulation of other countries, for example Norway (Bjørnenak and Fjell, 2005).

The LRIC method is based on identifying the incremental costs that arise in connection with the creation of a certain volume of product. They correspond to the amount of costs that the company *would not have incurred* if it *had not produced* this product in such volume. Incremental costs include all fixed, indirect, and capital costs that are incurred in connection with the production process. The extended LRIC+ method also includes general and other expenses, distributed in proportion to the share of direct costs.

The generalized LRAIC method is based on long-term *average* incremental costs, i.e., costs determined based on the entire volume of production in any activity associated with an increase in costs—an increment. The latter may include several products, as well as all products of the company. Incremental costs in the LRAIC approach characterize all the costs that an enterprise incurs as part of an increment—costs that *would not have arisen* if there had been *no increment*. In the extreme case where the increment corresponds to one product, LRAIC is equivalent to LRIC/LRIC+ (TERA Consultants, 2014).

Implementing the LRAIC method, indirect costs associated with producing of multiple goods can be allocated in a variety of ways. Traditionally, such distribution is carried out in proportion to the production capacity used. Administrative and other fixed costs are distributed, as a rule, in proportion to the share of certain service costs in the total costs (TERA Consultants, 2014).

The LRIC/LRIC+/LRAIC methods can be implemented in two ways, depending on the modeling direction: bottom-up and top-down (TERA Consultants, 2014).³ In the bottom-up approach, the structure of the enterprise's assets associated with meeting forecast demand is first modeled (for example, for telecommunications—the network structure). Based on this structure, expected operating

² Commission Recommendation of 8 April 1998 on interconnection in a liberalized telecommunications market (Part 2—Accounting separation and cost accounting) (98/322/EC) (OJ L 141, 13.5.1998, p. 6–35); Commission Recommendation of 8 January 1998 on interconnection in a liberalised telecommunications market (Part 1—Interconnection pricing) (98/195/EC) (OJ L 73, 12.3.1998, p. 42).

³ Public Consultation on the LRIC model guidelines CITC Public Notice No. 18. https://www.citc.gov.sa/en/new/publicConsultation/Documents/LRICModelGuidelinesApril_17.pdf

Table 1

Comparison of pricing methods.

Method	Historical data	Current data	Forward-looking data	Costs dividing
Fully distributed costing (FDC)	+	+	–	–
Activity based costs (ABC)	+	+	–	+
Long run incremental cost (LRIC)	+	+	+	+
Long run average incremental cost (LRAIC)	+	+	+	+

Source: Compiled by the authors. ...

capital and other costs are estimated. In bottom-up modeling, the asset structure is treated as given. However, the LRIC/LRIC+/LRAIC methods are usually based on forward looking cost estimates, so even with the top-down method, costs must be recalculated. Costs using the LRIC/LRIC+/LRAIC method reflect the expenditures that would be incurred by a firm that decided to enter the market in the forecast period. Regardless of the modeling method, its result is a tariff (set of tariffs) which ensures that the enterprise receives profit at a certain sufficient level (this level is the subject of justification).

Note that cost-based pricing methods can be used not only to justify a specific tariff value, but also to estimate its maximum value (price cap). For example, in Austria the tariff for virtual sharing of local access services (VULA) is determined using the retail-minus method, if it does not exceed the price cap determined by the LRIC+ method.⁴

Thus, generalizing pricing approaches that are different in the way they allocate costs incurred by the company, we can conclude that the LRIC and LRAIC methods are more flexible, since, on the one hand, they can be used in relation to forward-looking data, and on the other hand, they suggest the possibility of dividing costs attributable to certain activities even in the absence of such an option within the management accounting system (Table 1).

5. Antitrust compliance for digital platforms

Antitrust compliance includes mitigation antitrust scrutiny risk in different decisions of a company—investment, commercial practices, accounting, etc. Since the FAS Russia priority method for excessive price assessment is the price-cost method, one should consider accounting policy as an activity that generates additional antitrust risks, since cost allocation is enshrined there.

This is especially important for companies that provide a bunch of products via one website and charge different prices for different services. At the same time, when we turn to accounting policy, costs for these products may not be allocated to the production of different services there. In such a case, when we directly compare average costs with prices for different services, we may conclude that these prices are either excessive or predatory. What is more, when checking if a price is excessive, the FAS Russia sometimes uses current inflation rates to compare to price growth.

⁴ https://circabc.europa.eu/sd/a/f0b30335-13fb-4c9c-9f95-aa74afc8a331/AT-2013-1475-1476%20Recommendation%20adopted_EN.pdf

Given this, a company may face several antitrust risks when choosing different pricing strategies:

- price change defined by consumer willingness to pay;
- refusing to increase prices or their reduction;
- price increase within the inflation rate;
- price increase at the inflation rate plus investments.

These pricing strategies are a part of the everyday decision process for most companies. However, for dominating companies each of these alternatives can be assessed as violating antitrust rules. Considering that, the recent changes to Russian legislation introduced network effects that arise at platforms that may cause market dominance, increasing related antitrust risks for digital platforms. Next, we will consider each of these alternatives in detail.

Price change defined by consumer willingness to pay for a service provided by the platform. Though price changes defined by consumer willingness to pay is appropriate in terms of economic theory approach, antitrust risks of being accused of setting monopoly prices grow simultaneously with the market power of a company. Moreover, it is even more difficult to justify the price increase in this case since the price no longer depends on the cost level.

Refusing to increase prices or their reduction. Though price reduction can be extremely attractive in the short run for the consumers and thus may be supported by the antitrust regulator, in the long run, if an increase in costs (at the rate of inflation) is not accompanied by a proportional increase in prices, then companies may also face the risk of being accused of setting predatory prices.

Following the logic of platform business model, if the platform lowers the prices, it will attract more users, which is enhanced by the presence of indirect network externalities (Akerlof et al., 2021). This may lead to the growth of the company's market share and if this platform dominates the market under consideration, it can be accused of market exclusion.

Maintaining or reducing prices by a company, if it also, in the opinion of the FAS Russia, occupies a dominant position, may lead to the implementation of another antimonopoly risk, which is associated with the outflow of customers from other market participants in favor of such a platform.

Price increase within the inflation rate. When increasing the prices within the inflation rate, a company can mitigate the named risk of being accused in setting predatory prices. However, this approach may reduce the attractiveness of investment in quality improvement of services as such costs will not be compensated via a price increase. If investments in quality were one of the reasons why the company currently dominates the market (the premise that applies to companies with network externalities; Berry et al., 2019), then it is possible that such a strategy will lead to a slowdown in innovation activity in the industry.

Price increase at the inflation rate plus investments. Using an option when the price is increased by the inflation rate plus investment helps a company to avoid the risks associated with accusations of setting predatory prices, and moreover, it saves incentives to improve the quality of services.

The disadvantage of this approach is that when using this option, a company will need to justify the level of investment, as well as the appropriate price increase. Since investments usually mean additional fixed costs, a platform may also face difficulties when allocating fixed costs to the prices set for different

services. In this case, an essential part of antitrust compliance will be fixing the allocation of such expenses in the company's accounting policy since some allocation methods may be viewed as improper by the antitrust agency.

However, there is little evidence of successful inclusion of investment in price increase, as, for example, when the price increase of Russian telecom companies T2 Mobile LLC⁵ and MTS PJSC⁶ was considered, the antitrust authority concluded that the growth rate of income exceeded the growth rate of expenses. In addition to this, the FAS Russia decided that price increases were not required to implement the investment program as the companies could have covered the investments using their own funds.

Justifying capital costs is just a part of a much bigger problem of splitting of costs between different activities and goods. As we showed in the previous section, the best approach to split costs is LRIC/LRAIC. The first step is to distinguish an *increment* of specific activity. It is computationally a non-trivial task as it requires demand estimation and capacity planning. We will further focus only on a conceptual example illustrating the principle of an incremental cost approach to identify certain activity costs, as one needs special assumptions to apply it to separate markets.

One could consider digital platform cost structure in a conventional view, breaking it down into fixed or variable and direct or indirect costs. For example, a web search platform monetizes its business via advertising, so it serves two user groups: advertisers and searchers. The platform deals with advertisers through its client service apparatus, which takes orders and bills consumers. The greater the number of advertisers, the more transactions there are, so the service apparatus is needed more. Moreover, client service apparatus is also responsible for inappropriate content filtering, so it works with searchers complaints and wishes too. As client service costs are rising with users' number, these costs are variable.

Both user groups interact with the platform via a single interface, designed by frontend developers. Though advertisers could use a specific control panel, generally it is just a part of a sole website. Frontend functionality based on backend software, is executed on server hardware by virtue of local network infrastructure. The hardware and network primarily constitute a platform's fixed assets, and their capacity does not change in the short run. So, the frontend, backend, hardware, and network expenditures can be seen as fixed direct costs. Indirect costs in a manner are non-operational, and one could not explicitly separate out their operational part. In our case, we introduced general and energy expenditures. We show the outlined cost specification in Fig. 1 (left panel).

Follow the platform logic, advertisers are charged by the platform a distinct fee, and searchers have access to a web search at a zero price. Due to network effect, a transaction with the platform is valuable for the advertiser only when there are plenty of searchers who will see the ad. As a result, advertisers tend to pay more for a growing number of searchers. By its pricing strategy, the platform must attract both groups, rather than separate users. Moreover, if the platform would hypothetically consider assigning positive prices for each group at a marginal cost level, it will face issues with technical possibility to distinguish such costs:

⁵ FAS Russia decision, 20.09.2021 case No. 11/01/10-7/2021.

⁶ FAS Russia decision, 25.10.2022 case No. 11/01/10-37/2021.

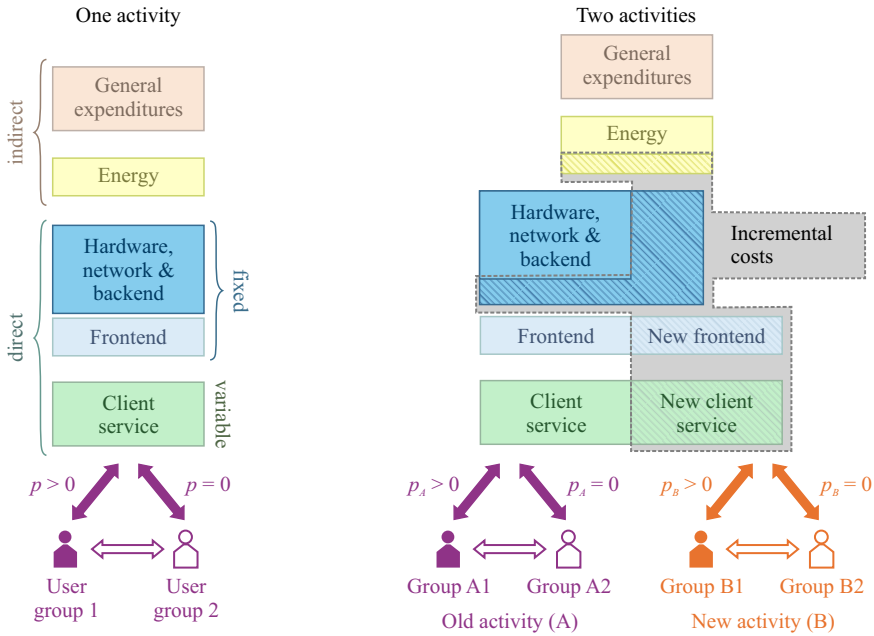


Fig. 1. Digital platform cost specification example in one activity (left) and two activities (right) cases.

Source: Compiled by the authors.

all costs arise simultaneously for both user groups. That is why naïve price-cost comparison method is inappropriate for platforms, and it is optimal to charge only one user group meeting all costs.

If the platform performs are engaged in two activities (e.g., A and B—Fig. 1, right panel), then to assign costs to an activity one should think up what would happen if such an activity did not exist at all. This approach can be used to justify a price increase associated with expansion to new markets or industries.

Starting a new activity (e. g., fintech, taxi or delivery), the digital platform must create a completely new frontend design and client service appropriate for new user classes. Additionally, there is a need to allocate some server space, network capacities and develop specific backend solutions for the new activity. Since hardware and network capacities are common for both activities, some interoperability upgrades may be required. Given the increased hardware load, it also could lead to expanded backup and no-break power infrastructure investments. Such upgrades in turn increase fixed assets, related to the first activity, and subsequently increase associated fixed costs. There also could be an increase in indirect cost, such as the energy consumption. All listed above increased costs constitute incremental costs of the new activity.

How would the platform set prices for old and new activity’s users (A- and B-users respectively) if it was obligated to use cost-based pricing scheme? Client service and frontend costs could be separated between both activities undoubtedly. Other indirect and direct fixed costs may be divided equally or in proportion of each activity’s user base. However, this approach will lead to higher price for activity A, compared to situation if there were no activity B. As for A-users’ interests, the price for activity B should be set based on its incremental costs. In

addition, transferring a part of the general expenditures (in any proportion) to the activity B price will also not make it worse for A-users. It is worth mentioning that the allocation of such incremental costs should be available within the platform's accounting system.

Considering the severity of possible antitrust risks and all the complexities that arise from dealing with the antitrust authority, a simple price increase within the inflation rate seems to be the most appropriate. However, the main disappointment for the company when choosing this option is its potential contradiction with long-term development goals. Meanwhile, the analysis of the FAS Russia enforcement shows that it is difficult to predict which approach the antimonopoly service will choose, so it is impossible to unambiguously determine a set of actions that will assuredly reduce antitrust risk.

Since Russian companies are obliged to use *price-cost comparison* method as it prevails in Russia, their accounting should meet the requirements, relevant to the price-cost comparison. This is especially important for digital platforms, whose operating features are far from traditional brick and mortar.

In the very near future, platforms may confront the need to justify prices in a cost-based manner, then they should definitely check if their accounting system allows them to split costs between goods or user groups. In our opinion, the most preferable way for the cost splitting is the incremental approach (LRIC/LRAIC). It should become currently a major priority for antitrust compliance systems of Russian digital platforms.

6. Conclusion

This study critically rethinks possible approaches to justifying platform prices, as well as the risks associated with their price changes. Generalizing Russian and foreign antitrust enforcement, we conclude that only the comparative benchmark method has been employed to platform excessive pricing so far.

Since the Russian antitrust enforcement de facto prioritizes the price-cost comparison approach, then to analyze the platform prices, we propose to consider the experience of price control in regulated industries, particularly in the telecommunication industry. To ensure the break-even conditions, the regulated tariff must cover not only direct costs—directly related to the production process—but also commercial, administrative, general, and other expenses. Since platforms typically provide a range of services, the cost allocation process should be carried out in two stages. The first step is to determine platform costs (direct and distributed) related to core services. In the second stage, these costs are distributed to certain services. In this case, it may be preferable to consider long run incremental costs (LRIC) or long run average incremental costs (LRAIC).

Price changes may be associated with antitrust risks for company: (1) a price increase defined by consumer willingness to pay for a service provided by the platform can cause additional antitrust risks as there is almost no way to justify such price increases; (2) reducing prices or refusing to increase them could potentially lead to accusations of predatory pricing and/or ousting out competitors, with the subsequent danger of tariff regulation; (3) a price increase within the inflation rate may lead to an innovation incentives deterioration; (4) a price increase above the inflation rate within the limits of investment cost growth may bring

difficulties in justifying the investment component of the tariff (which requires justification for the inability to use the company's current funds).

Based on the antitrust risks severity and the complexity of interaction with the authorities, the price readjustment within the inflation rate seems to be the most acceptable. However, the main negative consequence for the company choosing this option is its potential contradiction to the long-term development goals.

Since price-cost comparison method is prevailing in Russia, big digital platforms' antitrust compliance should check whether their accounting system allows them to split costs between different goods or user groups. We show that the most preferable way for the cost splitting is the incremental approach (LRIC/LRAIC). Additionally, this approach should be included in the guide used by the FAS Russia to assess competition conditions as they correspond with recent amendments concerning Russian antitrust law (5th package of amendments entered into force on January 1, 2023).

Acknowledgments

The paper was written as part of the research work on the state assignment of the Russian Presidential Academy of National Economy and Public Administration.

References

- Akerlof, R., Holden, R., & Rayo, L. (2023). Network externalities and market dominance. *Management Science*. <https://doi.org/10.1287/mnsc.2022.02894>
- Ayata, Z. (2021). Old abuses in new markets? Dealing with excessive pricing by a two-sided platform. *Journal of Antitrust Enforcement*, 9(1), 177–195. <https://doi.org/10.1093/jaenfo/jnaa008>
- Berry, S., Gaynor, M., & Morton, F. S. (2019). Do increasing markups matter? Lessons from empirical industrial organization. *Journal of Economic Perspectives*, 33(3), 44–68. <https://doi.org/10.1257/jep.33.3.44>
- Bjørnenak, T., & Fjell, K. (2005). Taking ABC to court: A research note on cost oriented access prices in Telecom. *SNF Working Paper*, No. 74/05.
- Bostoen, F., & Mândrescu, D. (2020). Assessing abuse of dominance in the platform economy: A case study of app stores. *European Competition Journal*, 16(2–3), 431–491. <https://doi.org/10.1080/17441056.2020.1805698>
- Botta, M. (2021). Exploitative abuses: Recent trends and comparative perspectives. Available at SSRN: <https://doi.org/10.2139/ssrn.3909894>
- Brilha, N. M., & Nobre, H. (2019). Airports as platforms: Towards a new business model. *International Journal of Business Performance Management*, 20(4), 297–312. <https://doi.org/10.1504/IJBPM.2019.105234>
- Evans, D. S. (Ed.) (2011). *Platform economics: Essays on multi-sided businesses*. Competition Policy International.
- Evans, D. S., & Schmalensee, R. (2007). Industrial organization of markets with two-sided platforms. *Competition Policy International*, 3(1), 150–179.
- Geradin, D., & Katsifis, D. (2021). The antitrust case against the Apple App Store. *Journal of Competition Law & Economics*, 17(3), 503–585. <https://doi.org/10.1093/joclec/nhab003>
- Golovanova, S., Ribeiro, E. P., Styryn, E., & Makarov, I. (2024). The institutional environment and gig platform transaction cost solutions. *Journal of Institutional Economics*, 20, e12. <https://doi.org/10.1017/S1744137423000383>
- Katz, M., & Sallet, J. (2017). Multisided platforms and antitrust enforcement. *Yale Law Journal*, 127, 2142.

- Ma, J. (2022). *Regulating data monopolies: A law and economics perspective*. Singapore: Springer Nature Singapore. <https://doi.org/10.1007/978-981-16-8766-2>
- Mandrescu, D. (2022). Abusive pricing practices by online platforms: A framework review of Article 102 TFEU for future cases. *Journal of Antitrust Enforcement*, 10(3), 469–517. <https://doi.org/10.1093/jaenfo/jnac001>
- Manne, G. A., & Wu, T. (2019). Ohio v American Express. *Journal of Antitrust Enforcement*, 7(1), 104–127. <https://doi.org/10.1093/jaenfo/jnz003>
- Markova, O. (2023). Platform market definition: Accounting for network effects and pass-through effect. *Voprosy Teoreticheskoy Ekonomiki*, (3), 7–30 (in Russian). https://doi.org/10.52342/2587-7666VTE_2022_3_7_30
- Markova, O. (2023). Airports as platforms: Consequences for antitrust policy. *Voprosy Teoreticheskoy Ekonomiki*, (3), 80–91 (in Russian). https://doi.org/10.52342/2587-7666VTE_2023_3_80_91
- Michel, S. (2014). Capture more value. *Harvard Business Review*, 92(10), 20.
- O'Donoghue, R., & Padilla, J. (2020). Excessive pricing. In *The law and economics of Article 102 TFEU* (pp. 887–954). Oxford: Bloomsbury Publ. <https://doi.org/10.5040/9781509942985.ch-014>
- OECD (2013). *OECD communications outlook 2013*. Paris: OECD Publishing. https://doi.org/10.1787/comms_outlook-2013-en
- Pavlova, N. S., Shastitko, A. E., & Kurdin, A. A. (2020). The calling card of Russian digital antitrust. *Russian Journal of Economics*, 6(3), 258–276. <https://doi.org/10.32609/j.ruje.6.53904>
- Pavlova, N. S., & Meleshkina, A. I. (2018). Intranet roaming: Is there a market? *Modern Competition*, 12(6), 5–15 (in Russian).
- Pavlova, N. S., & Fatikhova, A. A. (2017). Design and implementation of the concept of comparable markets in Russian antitrust. *Modern Competition*, 11(2), 36–51 (in Russian).
- Pavlova, N. S., & Shastitko, A. E. (2019). Empirical analysis of market boundaries in telecommunications. *Voprosy Ekonomiki*, (9), 90–111 (in Russian). <https://doi.org/10.32609/0042-8736-2019-9-90-111>
- Rochet, J. C., & Tirole, J. (2006). Two-sided markets: A progress report. *RAND Journal of Economics*, 37(3), 645–667. <https://doi.org/10.1111/j.1756-2171.2006.tb00036.x>
- Rozhkina, V. S., Golovanova, S. V., & Korneeva, D. V. (2022). Quantitative assessment of cross-side network effects for non-transactional platforms. *Moscow University Economic Bulletin*, (4), 17–38 (in Russian).
- Shastitko, A. (2010). “Comparable markets” as an instrument of antimonopoly policy. *Voprosy Ekonomiki*, (5), 96–109 (in Russian). <https://doi.org/10.32609/0042-8736-2010-5-96-109>
- Shastitko, A., & Golovanova, S. (2017). Structural alternatives of the method of comparable markets in implementing antitrust law. *Modern Competition*, 11(2), 5–17 (in Russian).
- Shastitko, A., & Kurdin, A. (2017). The effects of market power expansion of the essential facility owners in software markets. *Upravlenets—The Manager*, 68(4), 43–52 (in Russian). <https://doi.org/10.29141/2218-5003-2017-6-4-6>
- Shastitko, A. E., & Markova, O. A. (2020). An old friend is better than two new ones? Approaches to market research in the context of digital transformation for the antitrust law enforcement. *Voprosy Ekonomiki*, (6) 37–55 (in Russian). <https://doi.org/10.32609/0042-8736-2020-6-37-55>
- Shastitko, A. E., & Pavlova, N. S. (2019). Complex services: Product market definition in mobile communications. *Ekonomicheskaya Politika*, 14(4), 120–141 (in Russian). <https://doi.org/10.18288/1994-5124-2019-4-120-141>
- Shastitko, A. E., Pavlova, N. S., & Kashchenko, N. V. (2020). Antitrust regulation of product ecosystems: The case study of Kaspersky Lab.–Apple Inc. *Upravlenets—The Manager*, 11(4), 29–42 (in Russian). <https://doi.org/10.29141/2218-5003-2020-11-4-3>
- TERA Consultants (2014). *Modification and development of the LRAIC model for fixed networks 2012–2014 in Denmark: MEA assessment*. Danish Business Authority.
- Yusupova, G. (2016). Federal Antimonopoly Service against Google: Economic analysis for special markets. *Ekonomicheskaya Politika*, 11(6), 82–99 (in Russian). <https://doi.org/10.18288/1994-5124-2016-6-04>