Adapting market definition to digital markets: lessons from Cade's experience*

Adaptando as definições de mercado relevante nos mercados digitais: lições da experiência do Conselho Administrativo de Defesa Econômica (Cade)

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ABSTRACT

This paper aims to evaluate and discuss the main theoretical propositions presented in the literature to address the (in)compatibility of the market definition tool and its classic methodology with data-driven digital platform markets, based on the case law of the Administrative Council for Economic

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Defense (Cade). The research methodology employed a bibliographical survey, which was further enriched through the analysis of scientific articles and economic studies. Furthermore, the most relevant cases in which Cade had the opportunity to conduct a more detailed analysis of market definition in zero-pricing digital markets were examined. The study revealed that although no precedent was found in which the Brazilian authority applied any variation of the SSNIP test suggested in the literature to define relevant markets, the authority tends to avoid using a strict definition of the relevant market, instead adopting different proxies simultaneously to assess market power.

KEYWORDS

antitrust law — competition defense — digital markets — platforms — relevant market

RESUMO

O presente trabalho busca avaliar e discutir, a partir da experiência do Conselho Administrativo de Defesa Econômica (Cade), as principais sugestões teóricas indicadas pela doutrina para solucionar as dificuldades relacionadas à aparente (in)compatibilidade da ferramenta de definição de mercado relevante e sua metodologia clássica com os mercados de plataformas digitais. Para a pesquisa, utilizou-se do método do levantamento bibliográfico, aprofundando-se as pesquisas por meio de artigos científicos e estudos econômicos. Além disso, discutiram-se os principais precedentes do Cade em que a definição de mercado relevante em plataformas digitais foi discutida de forma mais aprofundada. O estudo realizado demonstrou que, embora não tenham sido verificados precedentes em que o Cade tenha aplicado algumas das variações ao teste Small but Significant and Non-transitory Increase in Price (SSNIP) sugeridas pela doutrina, a autoridade nacional apresenta uma tendência a não realizar uma estrita definição de mercado relevante, fazendo uso simultâneo de diferentes proxies para aferição de poder de mercado.

PALAVRAS-CHAVE

direito antitruste — defesa da concorrência — mercados digitais — plataformas — mercado relevante

1. Introduction

The rise of digital platforms in the current economic scenario has led to important reflections on the role of competition defense policies and antitrust law. This is mainly because traditional categories of competition law, embodied in neoclassical economic theory, in which the price factor is the main competitive variable, have been challenged by the new reality of data-driven digital platform markets. Here, price has lost ground as the main competitive variable, with "zero-price" common in at least one part of the market equation. This does not mean, however, that such tools no longer have uses and need to be discarded, since several approaches for resolving such challenges have emerged in doctrine.[1]

In this context, we will evaluate the theoretical proposals aimed at resolving the apparent incompatibility of traditional digital market tools, and verify whether, and to what extent, such proposals may be applied by the Conselho Administrativo de Defesa Econômica (Cade), the national antitrust authority, in its assessment of mergers and market behavior.

To this end, we will consider cases in which Cade has advanced possible adaptations to traditional market definition methodologies concerning digital platforms. These decisions are selected based on a Cade survey of case law[2]

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[1] In this sense, see: SILVEIRA DE SÁ, Marcus V. Integrando proteção de dados e defesa da concorrência: rediscussão do papel do direito antitruste e seu ferramental clássico na economia digital movida a dados. Dissertation (Master's)—Specialist Postgraduate Program in Economic Law and Development, Instituto Brasileiro de Ensino, Desenvolvimento e Pesquisa, Brasília, 2023, p. 52-66; and FERNANDES, Victor Oliveira. Direito da concorrência das plataformas digitais: entre abuso de poder econômico e inovação. São Paulo: Thomson Reuters Brazil, 2022. p. 241-255.

[2] For the case study research, we consulted, initially, the complete list of Concentration and Conduct Acts involving digital platforms in the Caderno do Cade. It is a public document, easily accessible, prepared by the antitrust authority itself, containing a list of cases evaluated by Cade from 1995 to 2020. Considering the historical perspective, processes begun prior to Law No. 12.529/2011 were ignored (i.e., May 29, 2012).

However, as the Caderno states that digital markets in the financial sector were not considered in the study, this base was supplemented by the Payment Instruments Record, which, according to Cade is where digital platform markets in the financial sector are assessed. Here, again, processes initiated prior to the research delimitation were ignored.

The database did not cover the entire period of the present study, it was noted, considering these publications were from 2020 and 2019 respectively. Thus, we supplemented the case study research using two specialized tools provided by Cade on its website. For Mergers, "Advanced Merger Search" was used; for Conduct, the "Jurisprudence Search System".

The first tool is an advanced module developed to refine the results of the second with specific reference to Merger Acts, allowing application of filters unavailable without such a system. Furthermore, considering, at the time, an "Advanced Conduct Research" tool was not available to the public, it was decided, in these cases, to use the SBJ, to enable replicability of the adopted methodology.

during the first 11 years[3] of the current Defense Law (LDC)[4] regarding analysis of Concentration Acts (CA) and unilateral conduct involving multi-sided digital markets, as presented by Silveira de Sá.[5]

To this end, our study is split into three sections. Firstly, we consider the role of the relevant market definition tool and its apparent incompatibility with the reality of digital markets to address the question "why define relevant markets?". In the second, different approaches to defining a relevant market are presented and evaluated, as well as suggestions about adapting to the Small but Significant and Non-transitory Increase in Price (SSNIP) test to assist in defining a relevant market, regarding the issue of "how to define relevant markets?" The third section focuses on proposals which relativize the need to delimit the relevant market(s) that may be involved in an AC or are affected by particular conduct, addressing the matter "when to define relevant markets?". Finally, we present the main conclusions.

2. Reflections on the role of relevant market definition and its (in)compatibility with digital markets

One of the first, sometimes legally required stages, considered one of the most important,[6]-[7] of antitrust analysis consists of identifying the relevant market(s) affected by a given anti-competitive behavior, whether unilateral or collusive or an act of concentration. The definition of the relevant market is generally considered necessary to make inferences about the existence of and ability to exercise market power by the entities concerned.[8]

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3 i.e., from May 29, 2012 to May 29, 2023.

4 BRASIL. Law No. 12,529 of November 30, 2011: Estrutura o Sistema Brasileiro de Defesa da Concorrência; prevention and suppression of infractions against the economic order, among others. Available at: http://www.planalto.gov.br/ccivil_03/_ato2011-2014/2011/lei/l12529.htm. Accessed on: 3 May 2022.

5 Sá, Integrando proteção de dados e defesa da concorrência, op. cit.

6 CONSELHO ADMINISTRATIVO DE DEFESA ECONÔMICA. Documento de trabalho 01/10. Delimitação de mercado relevante. Available at: https://cdn.cade.gov.br/portal-ingles/topics/publications/economic-studies/working_papers/delimitacao_de_mercado_relevante.pdf. Accessed on: 30 Oct. 2022.

7 EBEN, Magali; ROBERTSON, Viktoria HSE The relevant market concept in competition law and its application to digital markets: a comparative analysis of the EU, US and Brazil, 2021. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3762447. Accessed on: 21 Sept. 2022.

8 KAPLOW, Louis. Why (ever) define markets? Harvard Law and Economics Discussion Paper No. 666, Harvard Public Law Working Paper No. 11-08, 2011. Available at: https://ssrn.com/abstract=1750302. Accessed on: 8 Feb. 2023.

"Relevant market" is usually understood as the smallest geographical space in which a given entity may exercise market power, generally associated with a unilateral increase in prices. Thus, the standard methodology for defining a relevant market consists of applying the SSNIP test, which pins market reaction to a small, but significant and non-transitory increase in prices.[9]

However, in zero-price markets, where the basic unit of value extracted from consumers is not expressed by the price factor, doctrine accepts the incoherence of[10] applying such tests as originally conceived, as there is no concrete way to analyze a 5% increase in a zero price. Mathematically, as 5% of zero is zero, application of the SSNIP test is inoperable.[11]

This, just one of the limitations, has led to criticism of the historical centrality of the relevant market definition methodology and of the reductionism and arbitrariness of such analysis, with some commentators defending its abandonment or, at least, relativization.[12]

Definition of the relevant market is, in fact, part of a fictional narrative,[13] a social construct[14] describing economic phenomena and human behavior relative to antitrust law questions of interest,[15] with recognition that such a tool cannot be understood as an end.

Based on this, some of the doctrine and different antitrust authorities align with Motta's understanding that "the definition is only instrumental for assessment of market power".[16] In this sense, such an analysis would only be useful for competition defense authorities, where the market power of a certain market entity is sufficient to justify an antitrust intervention.

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[9] The aim is to identify whether, in a short space of time, given the price increase, other companies may start offering the product/service in a given market, and whether such an increase would lead consumers to redirect their respective demands to other suppliers.

[10] NEWMAN, John M. Antitrust in zero-price markets: applications, 2017. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2681304. Accessed on: 31 Oct. 2021.

[11] EVANS, David. S. The antitrust economics of free, 2011. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1813193. Accessed on: 31 Oct. 2021.

[12] KAPLOW, Louis. Market Definition: impossible and counterproductive. Antitrust Law Journal, v. 79, no. 1, 2013, p. 361–379. Available at: https://www.jstor.org/stable/43486961. Accessed on: 9 Aug. 2023.

[13] Fernandes, Direito da concorrência das plataformas digitais, op. cit.

[14] STORR, Virgil H. The social construction of the market. 2010. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1711319. Accessed on: 9 Aug. 2023.

[15] EBEN, Magali. The antitrust market does not exist: pursuit of objectivity in a purposive process. 2021. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3600831. Accessed on: 9 Aug. 2023.

[16] MOTTA, Massimo. Política de concorrência: teoria e prática e sua aplicação no Brasil. Tradução de Lúcia Helena Salgado. Rio de Janeiro: Elsevier, 2015. p. 64.

The most appropriate response, however, seems to be somewhere between these two points, neither an end nor a mere economic instrument of analysis.

This matches Podszun's understanding[17] that, currently, by informing the antitrust community how economic reality is translated and interpreted within a field of normative value judgment, the relevant market definition "assumes the nature of a true legal concept that confers legitimacy on antitrust intervention."[18]

It is, then, a non-static concept, in a process of evolution[19] and adaptation, like the markets it seeks to define, allowing antitrust authorities to shape it as best reflects the reality in which the issue is situated. Such an evolutionary capacity is especially relevant with respect to dynamic markets, sensitive to innovation, such as digital markets, as it considers different factors, present and future, which may influence the decisions of the entities concerned.

For these reasons, the relevant market definition tool not only aims to understand the competitive dynamics of the market,[20] but also identify competitive forces and outline the limits within which a given legal issue is analyzed,[21] "especially with regard to definition of the applicable theory of damage, identification of anticompetitive effects and alleged efficiencies".[22]

3. On the methodology for defining relevant markets in digital markets

The definition of relevant markets is compounded by the multifaceted nature of digital platforms,[23] and the antitrust authority must decide whether the multiple sides comprise only a single relevant market or whether each side corresponds to its own market.[24]

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17 PODSZUN, Rupprecht. The arbitrariness of market definition and an evolutionary concept of markets. The Antitrust Bulletin 2016. Available at: https://doi.org/10.1177/0003603X15625109. Accessed on: 9 Aug. 2023.

18 Fernandes, Direito da concorrência das plataformas digitais, op. cit., p. 240.

19 PODSZUN, The arbitrariness of market definition and an evolutionary concept of markets, op. cit.

20 FRAZÃO, Ana. Direito da concorrência: pressupostos e perspectivas. São Paulo: Saraiva, 2017. p. 139-140.

21 Eben, The antitrust market does not exist, op. cit.

22 Fernandes, Competition law for digital platforms, op. cit., p. 240.

23 Ibid., P. 241.

24 ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. Rethinking antitrust tools for multi-sided platforms. 2018. Available at: https://www.oecd.org/daf/competition/Rethinking-antitrust-tools-for-multi-sided-platforms-2018.pdf. Accessed on: 21 Sept. 2022.

Furthermore, it appears that the reality of digital markets, based on data, challenges the use of traditional market definition methodologies which consider the "price" element as the main competitive variable, thus suggesting use of the SSNIP test, which considers the peculiarities of digital markets when defining the relevant market. These questions will be individually addressed below.

3.1 Single market vs. multiple market approaches

One of the main challenges of defining relevant markets is deciding, in the light of multiple-sided platforms, how many relevant markets should be defined and, in the event of multiple markets, how the relationship between them should be incorporated into the analysis.[25] The antitrust authority, then, must decide whether multiple sides comprise just one market or if each side corresponds to its own market.[26]

As the definition of a single relevant market or multiple markets has different implications for the rest of the analysis,[27] this is often the subject of intense debate and disagreement among antitrust authorities.[28]

A way of tackling the divergences is the categorization approach suggested by Filistrucchi,[29] which differentiates platforms between "bilateral transactional" and "non-transactional".

In the first category are platforms that monitor transactions between different groups of consumers, which can charge for access to the platform and establish prices for each of the transactions therein. This is the case, for example, with online marketplaces and payment methods, subject to analysis by Cade within the scope of AC No. 08700.000059/2021-55[30] (AC Magalu/Hub), as well as the delivery platforms market evaluated by the Brazilian antitrust authority within the scope of Inquérito Administrativo (IA) No. 08700.000059/2021-55 ("Rappi/iFood case").[31]

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[25] Eben and Robertson, The relevant market concept in competition law and its application to digital markets, op. cit.

[26] Organization for Economic Cooperation and Development, Rethinking antitrust tools for multi-sided platforms, op. cit.

[27] Fernandes, Direito da concorrência das plataformas digitais, op. cit., p. 241-250.

[28] Sá, Integrando proteção de dados e defesa da concorrência, op. cit., p. 42-49.

[29] FILISTRUCCHI, Lapo. A SSNIP test for two-sided markets: the case of media. 2008. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1287442. Accessed on: 28 July 2023.

[30] BRASIL. Conselho Administrativo de Defesa Econômica. Ato de Concentração nº 08700.000059/2021-55.

[31] Id. Conselho Administrativo de Defesa Econômica. Inquérito Administrativo nº 08700.004588/2020-47.

The second category includes those platforms on which the transaction does not occur directly, although different consumer groups are brought together. Well-known examples are media platforms based on advertising, such as digital newspapers, recently investigated by Cade in IA No. 08700.006085/2022-78,[32] or online real estate classifieds: the focus of AC No. 08700.001796/2020-94[33] (AC OLX/ZAP).

Based on this categorization, it is suggested that, on transactional platforms, only a single relevant market would need to be defined, since "the product allows for transaction on the platform",[34] whereas, for non-transactional platforms, distinct, yet interrelated, markets should be defined for each side.[35]

This classification, however, has attracted significant criticism,[36] mainly following the judgment, by the North American Supreme Court of Ohio vs American Express,[37] in which Filistrucchi's model was used to define a single relevant market involving credit card platforms.

In general, specialized doctrine suggests it is not possible to definitively separate, in the real world, platforms that establish models for individualized transaction fees, implying an artificial categorization.[38] Furthermore, the single market approach may carry significant risks of underestimating the market power of the platform,[39] besides neglecting the competitive pressure of non-transactional platforms and vertically integrated companies,[40] and the effects of "competitive bottlenecks".[41]

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[32] Id. Conselho Administrativo de Defesa Econômica. Inquérito Administrativo nº 08700.006085/2022-78.

[33] Id. Conselho Administrativo de Defesa Econômica. Ato de Concentração nº 08700.001796/2020-94.

[34] Fernandes, Direito da concorrência das plataformas digitais, op. cit., p. 242.

[35] FILLISTRUCCHI, Lapo; GERADIN, Damien; DAMMNE, Eric van; AFFELDT, Pauline. Market definition in two-sided markets: theory and practice. 2013. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2240850. Accessed on: 28 July 2023.

[36] See, for example, NIELS, Gunnar. Transaction versus non-transaction platforms: a false dichotomy in two-sided market definition. 2019. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3438913. Accessed on: 27 July 2023; and KATZ, Michael L. Platform economics and antitrust enforcement: a little knowledge is a dangerous thing. 2019. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/jems.12304. Accessed on: 27 July 2023.

[37] USA. Supreme Court. Ohio et. Al. V. American Express Co. et. Al. 585 US 2018.

[38] FRANCK, Jens-Uwe; PEITZ, Martin. Market definition and market power in the platform economy. 2019. Available at: https://cerre.eu/wp-content/uploads/2020/05/report_cerre_market_definition_market_power_platform_economy.pdf. Accessed on: 28 July 2023.

[39] Fernandes, Direito da concorrência das plataformas digitais, op. cit., p. 241-250.

[40] KATHURIA, Vikas. Platform competition and market definition in the US Amex case: lessons for economics and law. 2019. Available at: https://ideas.repec.org/a/taf/recjxx/v15y2019i2-3p254-280.html. Accessed on: 28 July 2023.

[41] VOLMAR, Maximilan. Marktabgrenzung bei mehrseitigen Online-Plattformen. 2017. Available at: https://www.zwer-online.de/heft-4-2017/zwer-2017-386-marktabgrenzung-bei-mehrseitigen-online-plattformen/. Accessed on: 28 July 2023.

Notwithstanding the debate over the usefulness of Filistrucchi's classification model, we must remember that the objective of any methodology for defining the relevant market "is an appropriate judgment of demand substitutability in view of current and potential competitive pressures".[42]

In this way, definition of a single relevant market or multiple separate markets depends, in fact, on how each of the consumer groups views the existence of substitute products/services, and, particularly, the OECD recommendations[43] for antitrust authorities to assess the intensity of cross-network effects before deciding, comprehensibly, the most appropriate approach in each case.

3.2 Proposals for adapting the SSNIP test

As mentioned, to adapt to the new reality of digital markets and address their peculiarities, some approaches favor variation/adaptation of the SSNIP test to assist in defining the relevant market.

Among the adaptation suggestions are those that focus on other relevant variables unrelated to the price factor, such as quality[44]—Small but Significant Non-transitory Decrease in Quality (SSNDQ)—, cost[45]—Small but Significant and Non-transitory Increase in Costs (SSNIC)—and attention[46]—Attentional Small but Significant and Non-transitory Increase in Price (A-SSNIP).

Another proposal is to consider the volume of transactable personal data[47] (tradeable personal data or TPD) as a qualification for goods or a service.[48]

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42 Fernandes, Direito da concorrência das plataformas digitais, op. cit., p. 246.

43 Organization for Economic Cooperation and Development, Rethinking antitrust tools for multi-sided platforms, op. cit.

44 CRÉMER, Jacques; MONTJOYE, Yves-Alexandre; SCHWEITZER, Heike. Competition policy for the digital era. 2019. Available at: https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf. Accessed on: 31 Oct. 2021.

45 Newman, Antitrust in zero-price markets, op. cit.

46 Wu, Tim. Blind spot: the attention economy and the law. 2019. Available at: https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=3030&context=faculty_scholarship. Accessed on: 15 Sept. 2022.

47 Eben defines "transactable personal data" as part of a transaction between the seller/provider and a user that can be monetized. Thus, personal information possesses economic value: "personal data which can be part of an exchange between a seller, or service provider, and a user, and which can be monetized by the seller".

48 EBEN, Magali. Market definition and free online services: the prospect of personal data as price. 2018. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3207201. Accessed on: 15 Sept. 2022.

The first model, above, assesses deviations in demand based on a decrease in the quality of the service provided, while the second is based on an increase in information and attention costs associated with using the platform. The third, despite possible terminological confusion with the second, (from translation of the original term in Portuguese), not to be confused with it, focuses on consumer reaction to an increase in online advertising on platforms. The final model, notably, focuses on the number of TPDs consumers are willing to provide to gain access to the products/services offered, focused on possible demand deviations resulting from an increase in personal data.

When applying such instruments in the context of data-driven markets, the level of privacy protection[49] may be considered a factor, so that any model could be applied in changing the personal data protection policies of a given platform or even when analyzing merger operations which results in the sharing of databases.

An example is the decision of the European Commission in the LinkedIn/Microsoft[50] and Facebook/WhatsApp[51] cases, which did not determine the cancellation of operations, but recognized that data privacy was a significant factor that should be considered as a competition parameter in digital markets.

Likewise, an increase in the personal data on a given platform might be seen as a cost increase for users, who would have to provide a greater amount of data to use the services provided.

In this sense, note the decision of the Bundeskartellamt, which determined that Facebook had abused its dominant position, engaging in an exploitative practice verging on an unjustified price increase[52] in the form of data collection, "by conditioning social network use to unlimited accumulation of data

[49] There is debate over the concept of privacy, but for the purposes of this study, the term will be used to refer to the level of control users have over their personal data. For more information on the topic, see: SOLOVE, Daniel J. Conceptualizing privacy. 2002. Available at: https://www.jstor.org/stable/3481326. Accessed on: 1st Dec. 2022.

[50] EUROPEAN COMMISSION. Regulation (EC) No. 139/2004. Merger Procedure Case M.8124—Microsoft/LinkedIn. Available at: https://ec.europa.eu/competition/mergers/cases/decisions/m8124_1349_5.pdf. Accessed on: 30 Nov. 2021.

[51] Id. Regulation (EC) No. 139/2004. Merger Procedure Case COMP/M.7217—Facebook/WhatsApp. Available at: https://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf. Accessed on: 30 Nov. 2021.

[52] COSTA-CABRAL, Francisco; LYNSKEY, Orla. Family ties: the intersection between data protection and competition in EU Law. 2017. Available at: https://core.ac.uk/download/pdf/77615074.pdf. Accessed on: 22 Nov. 2022.

generated by the use of third-party websites, merging them with the user Facebook account".[53]

Despite these considerations, such models are not easy to apply and certainly have limitations.

One, most pertinent to this discussion, concerns the possibility of users not noticing the increase in costs or reduction in quality. In such circumstances, their tend to be no changes in individual conduct with continued use of platform services rather than alternative solutions; an accommodation, therefore, in the face of what may be considered abusive exercise of market power.

Furthermore, a degree of subjectivity may be identified in concepts such as "quality", which reduces the capacity for effective quantification associated with the SSNIP test, limiting its effectiveness and impairing its application.

On this point, the General Court of the European Union, ruling on the Google Android case (Case T-604/18),[54] challenged the arguments presented in the appeal against the European Commission decision in case AT.40099,[55] in that SSNDQ was imprecise instrument, unable to adequately measure user opinion on operating system quality, and that, as there is no standard of predefined quality, it could not be applied in a specific case.

Notwithstanding, in its decision, the Court understood there was no hierarchy among the types of evidence observed in defining the relevant market, and the results of the application of such a test may mean a possible reduction in the quality of the product used for such purpose, especially when faced with an uninformative SSNIP test.

Furthermore, it was considered unnecessary to precisely define a standard of quality for the application of the SSNDQ test; that it was enough to assess the results of a small, not transitory and significant, reduction in the quality levels previously practiced.

Thus, the General Court rejected the argument presented by Google and upheld the European Commission decision, suggesting that, although application

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[53] KIRA, Beatriz; COUTINHO, Diogo R. Ajustando as lentes: novas teorias do dano para plataformas digitais. In: Competition Defense Magazine, v. 9, no. 1, p. 88, jun. 2021.

[54] GENERAL COURT. Judgment of the General Court (Sixth Chamber, Extended Composition) of 14 September 2022: Case T-604/18. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:62018TJ0604. Accessed on: 20 Dec. 2022.

[55] EUROPEAN COMMISSION. Commission decision of 18.7.2018 relating to a proceeding under Article 102 of the Treaty on the Functioning of the European Union (the Treaty) and Article 54 of the EEA Agreement (Case AT.40099—Google Android). Available at: https://ec.europa.eu/competition/antitrust/cases/dec_docs/40099/40099_9993_3.pdf. Accessed on: 20 Dec. 2022.

of the SSNDQ has limitations, it is still useful in the analysis of specific cases, with important insights for antitrust analysis.

On this point, the discussion may be expanded as to the test, based exclusively on the volume of data collected: a "small but significant and non-transitory increase in data collection" (SSNIDC). In principle, such a test would investigate user behavior in the face of a significant and non-transitory increase in the volume of data collected by the platform.

However, such a test would not only involve the same difficulties as that of the SSNIC and SSNDQ tests, described above, in terms of the possibility of users overlooking the effects; there would also be an inherent design problem, which might prejudice the results obtained.

The fact that an increase in the volume of data collected may suggest the effect of market power suggests data has a value per se. However, as noted by DeMauro, Grimaldi and Greco,[56] in their studies on big data,[57] it is the act of processing and analyzing information that gives data its value.

Therefore, the possibility of increasing the volume of data should not automatically be associated with market power. This is even more relevant in relation to a scenario marked by a lack of rationality, as in the modern "privacy paradox",[58] the object of a series of studies since the early 2000s.[59]

According to this paradox, the concerns of individuals about their privacy contradict their behavior. In other words, consumers in digital markets profess

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[56] DEMAURO, Andrea; GRECO, Marco; GRIMALDI, Michele. A formal definition of big data based on its essential characteristics. 2016. Available at: https://www.researchgate.net/publication/299379163_A_formal_definition_of_Big_Data_based_on_its_essential_features. Accessed on: 2 April. 2022.

[57] According to the OECD, although the use of the term "big data" is generally vague, the most frequent definitions are (i) large dimensions of datasets; and (ii) the need to use high-capacity processors and non-standardized software, to extract value from data in a reasonable period. The authors propose adoption of the following, supplementary definition: "Big Data is the Information asset characterized by such a High Volume, Velocity and Variety to require specific Technology and Analytical Methods for its transformation into Value".

[58] NORBERG, Patricia A.; HORNE, Daniel R.; HORNE, David A. The privacy paradox: personal information disclosure intentions versus behaviors. 2007. Available at: https://www.jstor.org/stable/23860016?seq=1#page_scan_tab_contents. Accessed on: 30 Aug. 2021.

[59] In this sense, see: KOKOLAKIS, Spyros. Privacy attitudes and privacy behavior: a review of current research on the privacy paradox phenomenon. 2017. Available at: https://www.sciencedirect.com/science/article/pii/S0167404815001017. Accessed on: 30 Aug. 2021; and SILVEIRA DE SÁ, Marcus V. O custo da privacidade: uma abordagem jurídico-econômica sobre a regulação da proteção de dados em mercados digitais de múltiplos-lados e seus impactos. In: CONSELHO ADMINISTRATIVO DE DEFESA ECONÔMICA. Coletânea de artigos em defesa da concorrência e direito econômico: mercado médico-hospitalar e economia digital. Brasilia: Cade, 2021. v. 3. Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/colet%C3%A2nea%20de%20artigos/VOLUME-03.pdf. Accessed on: 29 Oct. 2021.

concern about their data, but in general apply few or no precautionary measures to protect it.[60]

In this scenario, in theory, many consumers omit to read the Terms & Conditions/Terms of Use of a given platform or website, accepting them in full or clicking on the pre-entered options that appear. Thus, even a new enterprise or a company not considered dominant can collect significant volumes of data, and periodically adjust its terms to amass more information.

The amount could even be greater than the effective processing capacity. This can be understood, for example, from Hirshleifer [61] and Taylor's models,[62] which demonstrate how economic entities can "overinvest" in collecting personal data, generating inefficiency.

A possible response to the SSNIDC issue is to adopt the approach of Eben,[63] focused exclusively on personal data considered "transactable", with an intrinsic value. The application of the TPD concept, however, raises new issues, including identification of which data could be considered transactable and which not.

Depending on the context, data considered tradable in one market may not be in another. Therefore, if an entity cannot predict in advance which data is transactable it may be tempted to collect all information, potentially resulting in the economic scenarios mentioned above.

The difficulties presented above, especially concerning the practical application of such tests, do not rule out or mitigate the usefulness of the SSNIP proposal discussed here. However, as Fernandes highlights,

> proposals to modify the SSNIP test should serve as "conceptual guides" for understanding competition between digital platforms, not precise and universal economic tools.
>
> The lack of robust economic methodologies for adapting the TMH in relation to zero-price markets implies that the antitrust authority should try, as far as possible, to supplement the market analysis with direct evidence.[64]

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[60] BERENDT, Bettina; GUNTHER, Oliver; SPIEKERMANN, Sarah. Privacy in e-commerce: stated preferences vs actual behavior, 2005. Available at: https://cacm.acm.org/magazines/2005/4/6247-privacy-in-e-commerce/abstract. Accessed on: 30 Aug. 2021.

[61] HIRSHLEIFER, Jack. Privacy: its origin, function and future. 1980. Available at: https://www.jstor.org/stable/724176. Accessed on: 28 Aug. 2021.

[62] TAYLOR, Curtis R. Privacy in competitive markets. 2003. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=419720. Accessed on: 30 Aug. 2021.

[63] Eben, Market definition and free online services, op. cit.

[64] Fernandes, Direito da concorrência das plataformas digitais, op. cit., p. 255.

In other words, rather than definitive, such tests should be understood as just one of the economic analysis tools available, combined with others, along with an assessment of other pertinent information in each specific case.

In fact, in our detailed of Brazilian antitrust authority case studies during the first 11 years of Law No. 12,529/2011, with reference to multi-sided digital markets, we identified no instance where Cade, analyzing acts of concentration or suppressing unilateral conduct, made use of tools other than the SSNIP.

However, as Administrative Inquiry No. 08700.002940/2019-76 ("Google Android case") is still in progress, concerning whether conduct deemed illegal by the European Commission in the scope of case AT.40099, also practiced in Brazil, is an infringement of the economic order, based on questions elaborated in the public procedural instruction, the authority may use, albeit in an ancillary way, the SSNDQ and/or SSNIC tests to analysis that case.

Given that the Brazilian antitrust authority has not used the proposals outlined above, it is especially important to identify how they have in fact dealt with the issue of digital markets following the establishment of the current LDC.

4 On the (lack of) need for precise delimitation of the relevant market and identification of market share

As recognized by Cade,[65] digital markets are subject to frequent innovations, with competition often arising between companies that adopt different business models. Furthermore, these are markets with fluid barriers, reinforcing the difficulty of precisely defining the relevant markets for antitrust analysis purposes.

Moreover, too much care in the definition of the relevant market may mean central elements in the competitive dynamics are overlooked, so that, rather than an end, it becomes just another of the analysis tools available to competition defense authorities. Thus, it may be better to leave the definition open and suggest different scenarios, applying a more dynamic assessment of the damage theories applicable in the specific case.

This was observed, for example, in the decision of the General Superintendent within the scope of AC OLX/Zap, which highlighted that "the definition of

[65] CONSELHO ADMINISTRATIVO DE DEFESA ECONÔMICA. Caderno de plataformas digitais. 2021. Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/cadernos-do-cade/plataformas-digitais.pdf. Accessed on: 25 June 2022.

the relevant market for online classifieds must be understood as an initial approximation for understanding the existing competitive dynamics".[66]

Similarly, in Administrative Process No. 08012.010483/2011-94 ("Google Shopping case"), the Rapporteur Vote states:

> Traditionally, the investigation of any anti-competitive conduct begins by defining the relevant market, from a product and geographic perspective. This definition is always used by Cade, but it should not be considered an end. In some cases, specifically those involving dynamic markets such as the present one, a relevant market definition can be seen as a guide in conducting the analysis; yet, this does not prevent the antitrust authority from employing the definition and its scope with a certain flexibility, to avoid limiting its perspective or failing to take into account any significant aspect of the market. The OECD states:
> 'Therefore, provided the competitive effect analysis examines the interrelationship between the different sides or markets, the framing of the market definition as a multi-sided market or as multiple interrelated markets, or indeed the absence of a market definition, need not distort the conclusion.' (OECD, 2018—page 13).[67]

Case study analysis shows that Cade recognizes the need to adapt the market definition tool to face the challenges presented by a data-driven economy. Thus, even if the definition is left open, a relevant market reference framework is often established based on the identified characteristics.

An example of this is the OLX/Zap CA, where it was found that entities with different business models, while cooperating with each other or at least using services offered by their ostensible rivals, competed for the attention and preference of the platform's users.

Thus, in this precedent, it was understood that "the rigid definition of a relevant market in traditional terms" was undesirable; but that, "with the objective of establishing a framework for competitive analysis to be developed",[68]

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[66] Opinion No. 15/2020/CGAA1/SGA1/SG/CADE, registered in the Electronic Information System under No. 0803656.

[67] Vote of rapporteur Mauricio Oscar Bandeira Maia in the scope of Administrative Process No. 08012.010483/2011-94, registered in the Electronic Information System under No. 0632170.

[68] Opinion No. 15/2020/CGAA1/SGA1/SG/CADE, registered in the Electronic Information System under No. 0803656.

the online property classifieds market was considered relevant, including, "besides platforms that function as showcases for properties, digital real estate agencies, websites, applications and social networks that provide online property classifieds, as is the case of Facebook Marketplace".[69]

In summary, it seems that Cade has recognized limitations in the use of the market definition tool and sought to adapt it when necessary. Still, in a scenario where there is no precise definition of the relevant market, one might question how it would be possible to identify the existence of a dominant position, a necessary condition for the exercise of market power.

As mentioned, when the definition of the relevant market is undefined or left open, to allow analysis of the effects of a given operation or conduct, different scenarios are usually established. Nevertheless, considering the intangibility of certain products or services relevant to digital platform markets (e.g., personal data), which are difficult to measure, doubts arise as to the possibility of effectively quantifying market shares to determine a dominant position and market power.

In this regard, different antitrust authorities/agencies, international bodies and organizations have conducted studies and research to address the issue and share practical experiences. An example is the work of the International Competition Network (ICN), whose Unilateral Conduct Working Group (UCWG) surveyed 97 antitrust authorities and 251 non-governmental advisors (NGAs), and prepared a report[70] on the information presented by the 39 authorities and 24 NGAs which responded to the questionnaire.

The report shows that 25 antitrust authorities and 16 NGAs consider market shares an effective proxy to assess the existence of market power in digital markets, with only 13 authorities and 9 NGAs opposed.

In its considerations, the German authority observes that platform market shares give a general indication of the market structure and the position of competitors, providing a basis for analyzes. By showing differences in market share through assessment of the evolution of holdings over time, stable positions may be inferred,[71]

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[69] Id.

[70] INTERNATIONAL COMPETITION NETWORK. Report on the results of the ICN survey on dominance/substantial market power in digital markets. Available at: https://www.internationalcompetitionnetwork.org/wp-content/uploads/2020/07/UCWG-Report-on-dominance-in-digital-markets.pdf. Accessed on: 2 Nov. 2021.

[71] i.e., checking whether historically the same entities are in the same position or if there are constant variations in the share, with the top positions in the market disputed and changed.

However, several responses highlighted the need to take additional care with the use of market shares in analyzes involving multi-sided digital markets. As they are dynamic markets, the shares may not represent reality, especially concerning the attractiveness of new products and business models.

In Brazil, Cade's case studies reveal that, even when market shares are used to assess dominance in varied scenarios, there are different considerations regarding the interpretation of such data.

Thus, "the offer structures […] seek to capture the different aspects of competition in a market marked by diversity of business models and different solutions to similar problems".[72]

Regarding different metrics, the ICN Report (2020) reveals that in zero-price markets, among others, the number of transactions, downloads, active users, website visits and clicks are often used as proxies by the antitrust authorities. The document also reports that several responses emphasized that the list of proxies is not exhaustive, and that choice and use depend on the specific circumstances of each case, as well as the type of information available. Another metric was recommended for the investigations, for a better understanding of the existing competitive dynamics.

This analysis of Cade jurisprudence shows that the Brazilian antitrust authority, on different occasions, makes simultaneous use of different metrics to measure market share in digital markets. More specifically, evaluating the first 10 years of LDC validity regarding the control of concentrations in such markets, in 48 cases Cade chose to leave the definition of the relevant product market open, evaluating more than one definition scenario in 27 of them. Furthermore, in 32 operations, at least two proxies were used to measure the market share.

With AC OLX/Zap, for example, the following were used for the online property classifieds market: (i) number of accesses to platforms/sites; (ii) number of unique accesses;[73] and (iii) number of non-duplicate advertisements linked.

In a similar way, in the Rappi/iFood case,[74] Cade General Superintendence, in establishing the IA, mentions the different metrics used by the Representative

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[72] Opinion No. 15/2020/CGAA1/SGA1/SG/CADE, registered in the Electronic Information System under No. 0803656, issued within the scope of Merger Act No. 08700.001796/2020-94. Petitioners: Bom Negócio Atividades de Internet Ltda. and Zap Viva Real Group.

[73] As pointed out in the SG Opinion on this case, the "unique accesses" metric concerns the number of different users who accessed the website/platform. In this case, it is assumed that each user corresponds to a single IP address.

[74] BRASIL. Conselho Administrativo de Defesa Econômica. Inquérito administrativo nº 08700.004588/2020-47.

(Rappi), Represented (iFood) and Associação Brasileira de Bares e Restaurantes (Abrasel) to calculate iFood's market share in the market of digital platforms delivery. Although not all the proxies used are detailed in public records, there was an intense debate between the parties about the metric that best represented the reality of the market, and the SG, on that occasion, limited itself to verifying that "in any case, the percentage exceeds the 20% required in the Competition Law to authorize the presumption of a dominant position".[75]

5. Conclusions

In this article, we have considered whether the traditional relevant market definition tool, based on the application of tests that use price as the main competitive factor, is compatible with the reality of the data-driven digital economy, marked by multi-sided digital platform business in which zero pricing is used in at least one side.

We found that the definition of the relevant market is also useful for analyzing cases involving data-based digital markets, as such tools diagnose existing competitive dynamics, identifying competitive forces and drawing the limits within which the legal issue raised is assessed.

However, it is clear that, due to the specific characteristics of such markets, there are limitations to the application of conventional tools as originally conceived; hence, different proposals have been formulated by specialized doctrine to deal with the challenges of defining relevant markets in a digital economy.

Approaches to defining a single market or multiple interrelated markets were considered, and for adapting to the SSNIP test and relativizing the need to precisely delimit the relevant markets affected by a given conduct or merger, which allows antitrust authorities to use different metrics to measure market share.

On the first point, we determined that the option of one or another approach depends mainly on symmetries in the demand dictates of each consumer based on changes in relevant competitive variables, such as price and quality.

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[75] Technical Note nº 4/2021/CGAA1/SGA1/SG/Cade, registered in the Electronic Information System under nº 0875341.

Authorities must justify their choice, given the different implications for the rest of the analysis.

Concerning proposals for adapting the SSNIP test, these consist, in essence, of replacing the "price" variable with other competitive variables, such as quality (SSNDQ), cost (SSNIC), volume of data collected (SSNIDC) and attention (A-SSNIP); or the volume/"price" of transactable personal data required to acquire the product/use of the service.

As seen, such proposals are not without problems, and there are limitations to their application. However, these limitations do not mean such tools should be discarded, as there are situations in which antitrust authorities have used the considerations derived from alternative tests when analyzing concrete cases, even if they have not referred to them in their decisions.

On the relativization of the importance of the original definition of relevant market, this proposition is based, on the one hand, on the fact that digital markets have fluid borders, with adoption of different business competing models, and, on the other, on the realization that an excess of care in the search for a precise definition of a relevant market may lead to the neglect of central elements in the competitive dynamics.

In the light of this choice, Cade and other antitrust authorities have employed different metrics to develop structures and measure market share, to understand, from different perspectives, how competitors interact and exert pressure, despite the business model, which may complicate a single proxy due to the lack of an information standard.

Finally, concerning national antitrust authority practice, based on the analysis of Cade case studies, we found no instance in which alternatives to the SSNIP test proposed by the doctrine were used.

In general, the data obtained indicates that the antitrust authority avoids a precise definition of the relevant markets, as they see fit, evaluating different scenarios and applying different metrics to determine market share and the existence of a dominant position.

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