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The Evolving Concept of Market Power in the Digital Economy – Note by Brazil

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1. Dominance and market power are concepts at the core of antitrust authorities' analyses of anticompetitive conduct and mergers; nevertheless, they are yet to agree on how to address them. According to Castro (2021), the Department of Economic Studies of CADE has sought to explain that it is difficult to assess market power in abstract terms, whether it regards a digital or different market. Several questions must be answered simultaneously when one is trying to assess market power. For instance: What type of conduct or merger is under analysis? What is its context? Who are the involved players? What methodology is applied to assess players' profitability and market share? How market power evolves dynamically over time? Moreover, other issues may affect the concept of dominance. Authorities may perform a structural analysis, based on a market share calculation or on the direct evidence of competitive harm, which eliminates the need for the former. There are a myriad of ways an antitrust authority can explore to define a relevant market, to assess profit margin, and to determine the incentives and capacity players may have to engage in anticompetitive conduct. This vast array of methodologic options on how to assess market power also exists in merger analysis.

2. Some methods, such as event studies, difference in differences, and price pressure indices, are alternative means to exclusively structuralistic analyses.

3. These apply to all markets, including digital ones. However, it is relevant to assess the specificities of the latter.

4. According to PRADO (2021, p.5):

> *"Morton at al. (2019) and Furman (2019) argue that the traditional conceptualization of market power, which relates to the capacity of a firm to increase and sustain prices above the competitive equilibrium, needs to be re-defined in the context of digital markets. In these new markets, retail prices are mostly zero. Competitive advantages and entry barriers are created by the accumulation and ownership of customer data as well as information about complementary players".*

5. The author created a model to cover digital markets. Thus, in place of a hypothetical monopolist test based on SSNIP, PRADO (2021, p. 33) suggests using the SSNIA or SSNID:

> *"In line with such an idea and informed by the arguments developed in Section 3, I propose the use of two additional tests aimed to also analyze the response of the demand to a small but significant, non-transitory increase in typical sources of disutilities other than price. They are the level of targeted ads bundled with the service and the amount of private data collected from the user by the platform while it is being used (a SSNIA and a SSNID test, respectively, where A accounts for targeted ads and D for data collection). Such tests could be operationalized like the traditional SSNIP test, and their expected results should be governed by the demand-elasticity functions derived in Chapter 3 (see equations 3.10 and 3.11)".*

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6. Similarly, Lapo FILISTRUCCHI (2008) proposed a test for defining relevant markets in two-sided markets, showing the complexity of the matter. Moreover, there is an Upward Pricing Pressure (UPP) model for these markets (AFFELDT & at., 2012). Furthermore, Daniel MANDRESCU (2018, p.7) suggests using the SSNIC and SSNDQ tests for online platforms and zero-price markets instead of the SSNIP.

> *"Modifying the price oriented SSNIP into a cost oriented test would mean that the purpose of the test would be to assess whether the concerned undertaking is capable of imposing a small but significant non-transitory increase in cost for customers in a profitable manner (SSNIC). In the context of such a test, the costs for customers in the case of zero-priced markets are divided into information and attention costs. Information costs refer to the amount of data that the customer needs to provide in order to make use of the free product or service. Attention costs refer to the exposure of customers to advertisements during their use of the zero-priced product or service. Both types of costs can be identified in the case of zero-priced products or services offered by online platforms. (…) Testing demand substitutability based on quality entails some similar practical complexities as in the case of a cost-based test despite the soundness of its economic foundation. In the context of a quality-oriented test, the core question will concern the effect of a small but significant non transitory decrease in quality (SSNDQ), which is comparable to an increase of price from an economic perspective".*

7. Naturally the so-called zero-price markets earn revenue from one of its sides or through other manners; thus, one can use a broader approach and incorporate the paid side of the market in the relevant market definition, as proposed by Filistrucchi (2008). Besides, unlike the methodology of the SSNIP test, which is known and discussed to some extent, the performance of the SSNIA, SSNID, SSNIC, and SSNDQ tests are still to be evaluated.

8. CADE, however, has not yet used such tests in its analyses and reviews. Nonetheless, as indicated by BASTOS (2021, p.11-14), digital markets are usually characterised by some features that may influence the assessment of the effects of antitrust practices and market concentration, such as:

- *"**Direct positive network effects:** the usefulness of some online platforms for users (e.g. social media and instant messaging platforms) depends on the number of users on the same side. As the number of users increases, the platform becomes increasingly useful for its users – this is called positive direct effects. However, that is not the case for all platforms, considering some have negative network effects (e.g. dating platforms).*
- ***Indirect positive network effects:** all platforms have positive and indirect network effects, which characterises a multi-sided market. This effect occurs when a group of users benefits from increases in another group – and possibly the opposite is also true. Hence, if a platform provides better service on one side of the market, the demand increases on the other side. Where there is indirect network effects, the volume of demand for a platform's services does not depend entirely on price, but also on price structure.*
- ***Cross subsidy:** cross subsidisation is a way platforms have to grow to a size that enables profiting with a multi-sided market as a result of price structure. It occurs when firms subsidise one side of the market to benefit another side. That is the case, for instance, with search engines that do not charge for their use; this way, they have more searches on their platform and can be more attractive to advertisers. Thus, to increase the user base on one side of the market, many platforms subsidise it, which translates into lower prices for its users since total*

subsidisation does not always occur. At times they do not use actual subsidies but asymmetric prices. Amongst the platforms that apply such a strategy are social media, instant messaging platforms, and the majority of the search engines, where advertising revenue allows for free services to users on the other end of the platform.

- ***Scale without mass:*** *the possibility of faster and cheaper growth for platforms, compared to markets of physical goods. "Without mass" means that the asset is usually intangible. This is because these platforms have extremely low and reduced unit costs for data processing, storage, replication, and transmission.*
- ***Low marginal cost:*** *after covering costs with hardware and a webserver to store data, digital markets bear a low marginal cost to add a new user to the platform. Economies of scale and low marginal costs are crucial for these platforms as they influence pricing and product differentiation strategies; however, they also tend to increase market concentration.*
- ***Ability to attract customers worldwide:*** *this is due to the global reach of the internet.*
- ***Economies of scope and scale:*** *some platforms benefit from economies of scope that derive from the complementarity of different services provided by the same or different platforms. In some cases, business lines may share development data and/or costs. Besides, applications may make customers get used to them easily by looking and operating similarly, which offers them competitive advantages and faster growth. Furthermore, providing more services is a way to keep users connected to the company, meaning the platform has more opportunities to collect data from users to improve its services. This can lead to efficiencies in competition terms but also to anticompetitive conduct with users of downstream and upstream businesses.*
- ***Creation and use of user data:*** *although digital platforms are not the only businesses that collect and generate data, they leverage user data to target and attract customers. Since firms that have more data improve their products with lower costs, creating a "dynamic economy of scale", data is an essential input for platforms. However, this represents a potential entry barrier as data can be used for increasing a platforms' productivity and market share, further expanding the amount of available data and market power.*
- ***Disruptive innovation:*** *most platforms have created or changed markets. Disruptive innovation represents a breakthrough of massive changes not limited to technological development; it does not happen regularly. Besides, it usually reduces the market share of incumbent companies, at times making them leave the market (e.g. Blockbuster left the market after on-demand companies emerged) or creating new ones (e.g. the television).*
- ***Switching costs:*** *some platforms may generate high costs for users that change to another platform. For instance, social media has the switching costs of creating a new profile on a different platform, uploading a new content, and creating a new community of friends or followers. The costs can be simply becoming familiar with the platform or confident with using it. If the transfer of costs is not easy, it can discourage users from switching platforms, even in the event of price rises, lower quality, or less privacy. In addition, users are less likely to switch platforms if data is not bound to a single platform but to an ecosystem to which it is related.*

- ***Winner-takes-all and winner-takes-most:*** *most markets in which digital platforms operate tend to have this characteristic as a result of positive network effects and economies of scope and scale. In these markets, network effects are strong, switching costs are high, and users find it difficult or undesirable to use multiple platforms simultaneously. On one hand, positive network effects and economies of scope and scale (especially where first-mover advantages and switching costs are considerable) may hinder competition by entrenching the market positions of players it helped win the market. The first entrant into a winner-takes-all market can become a strong player so rapidly that it outdistances new entrants. It can be harder for the other entrants since, unlike the first player, they are entering a market with an already strong and promising incumbent benefiting from economies of scale and direct network effects. On the other hand, direct network effects, scale without mass, and the non-rivalry nature of digital information also facilitate that entrants provide better services to overcome incumbents quickly. In other words, some characteristics that help incumbents to get a market position may occasionally be in favour of entrants. Each user leaving a platform with positive and direct network effects means other users being more likely to leave it as well. Therefore, being a leader platform does not ensure a permanent market leader position nor that it will not face competition, even in a winner-takes-all market. Moreover, not all markets where online platforms operate is a winner-takes-all or winner-takes-most market. Direct network effects should be strong, switching costs should be high, and users should find multi-homing difficult or undesirable (meaning they are not likely to use multiple platforms or rival platforms simultaneously)".*

9. Thus, in assessing violations and mergers, it should be considered whether these factors can somehow influence the parties' interest and capacity in the market. For instance, theoretically, by only using the HHI-score, a case of the digital market such as Merger no. 08700.004431/2017-16 would not be considered problematic. By the HHI rule, that is, the traditional analysis, to raise anticompetitive concerns, a merger should arise in a market with an HHI of over 1,500 points and deltas greater than 100 points. BASTOS (2021, p.92–95) described the case as follows:

> *"Merger no. 08700.004431/2017-16 involved the financial investment industry. It consisted of an acquisition of stake in an open platform (XP Investimentos S.A.) by a traditional bank (Itaú Unibanco S.A.). As laid down in CADE's Guide for Horizontal Merger Review and stated in the opinion of the Office of the Superintendent General and later in the vote of the rapporteur, it is noteworthy that the HHI threshold, in this case, should be relaxed if one of the merging parties is a maverick firm or has a disruptive strategy. (...)*
>
> *CADE emphasized that, although there might be horizontal overlaps, the merger could no longer raise competition concerns according to the traditional HHI threshold for two reasons: the resulting markets were unconcentrated (with a post-merger HHI below 1,500) and had a ΔHHI under 100 (although the market of retail investment products had moderate concentration, with 1,983 points). As XP was a disruptive maverick, the HHI could not be used as a causal link to demonstrate concentration because the index is a static snapshot of the market at the moment market share data is gathered. That is why CADE's and other authorities' merger guidelines express reservations on their use."*

10. This is an example of how the HHI rule can be relaxed.

11. As mentioned, the concept of market power is very broad and cannot be assessed in abstract terms. Hence, it is difficult to say whether the concept can or cannot be expanded or adapted in an equally abstract manner.

12. There are several reasons for this. As CASTRO (2021, p.16) maintains that

> *"(i) the possibility to perform, (ii) interests to conclude and (iii) effects of some anticompetitive conducts may vary according to some relational aspects, and not to some absolute abstract ones. Depending on how these relations or scenarios are drawn, it is possible to have substantial market power (in certain conditions) and not have it (in others) at the same time. Thus, knowing that Antitrust Law analyzes lot of conducts C={C1, C2, C3, ... Cn} involving several players P={P1, P2, P3, …., Pn} that occur in specific conditions X={X1, X2, X3, ... Xn}, it would be important to determine the relational aspects of such variables {horizontally, vertically and diagonally}, and not consider — in a vacuum — the concept of market power as an abstract precondition to every single antitrust punitive enforcement of all anticompetitive practices or structures (one size fits all). Indeed, it is possible to have, inside a specific market, different companies with different diversion ratios, price-cost margins, marketing strategies, products and so on. For example, an enterprise can succeed to exclude from the market its nearest competitor through exclusive contracts with the retail sector (P1 excludes P2 performing the conduct C1), where P1 and P2 have very high diversion ratios between themselves in a specific niche of the market with high barriers of entry and low rivalry among all other players of this niche [X1 and X2 Conditions]. In this case, it is possible that this conduct could generate a great impact if there is a substantial price increase, regardless of how the relevant market is defined in abstract terms or the specific size of the market share that both companies may have. However, the same conduct can be directed to some specific parts or niches of the same relevant market. In a formal example, P1 would not have interest to exclude P3 performing the conduct C2,, knowing, beforehand, that the diversion ration between P1 and P3 is almost zero. Therefore, the interest to perform an anticompetitive practice is a relational concept, since the exclusion of the nearest competitor leads to bigger payoffs (in other words, it brings a bigger reward to the company that can succeed in this effort, and it could possibly generate a greater impact in terms of raising prices). It is possible that P3 rests on a different niche of the market with different conditions (entry barriers, rivalry levels, capacity constraints, among others: market conditions X3, X4, X5) within the same relevant market. These conditions could interfere not only in the interest but also in the possibility of exclusion of a rival. If that is the case, P1, with a certain amount of market share, can exclude P2 but not P3. Sham litigation or fraud litigation are examples of how the capacity to exclude rivals may be linked to the conduct itself and not necessarily to the market share. Indeed, even the smallest player of a market can bring a judicial or administrative claim and legally exclude all other players (and acquire market power), raising, subsequently, unsurmountable legal market barriers to rivals. In this example, dominance is the outcome of the conduct and not a precondition for its performance. Furthermore, what is considered important and substantial market power to one conduct (C1) may not be substantial or important to another conduct (C2). For example, contractual relationships with several retailers in the downstream market could be an important precondition to determine what is right or wrong in terms of exclusive contracts. An enterprise could enforce contractual clauses to delay or constrain the entry of a rival in a specific market through exclusivity agreements with retailers (C1) (because such enterprise has many contractual relationships). However, this same company may*

have difficulties to perform predatory pricing (C2) in the same market, targeting the same competitors, depending on how hard it may be to sacrifice its own profits vis-à-vis how efficient its rivals are in terms of production costs.

(…)

Moreover, there are many other continuous concepts that could influence what a relevant market is. For example, even narrowing the analysis to seller power, there are several hermeneutic options available to define a relevant market, ranging from: the analysis of the qualitative aspects of the product; the verification of price levels, diversion ratios, price-cost margins and available capacity; the analysis of -the movement of some variables, specially prices (simple correlation, cointegration, impulse response analysis, variance decomposition of vector error correction model, granger causality test and several other exercises) (FORNI, 2004) (WERDEN & FROEB, Correlation, Causality, and All that Jazz: The Inherent Shortcomings of Price Tests for Antitrust Market Delineation., 1993); the use of critical loss analysis (HARRIS & SIMONS, Focusing Market Definition: How Much Substitution Is Enough? , 1989) (SCHEFFMAN & SIMONS, 2003); the use of critical loss with aggregated diversion ratio (KATZ & SHAPIRO, 2003); generalized critical loss analysis (COATE & WILLIAMS, 2005); and several other methodologies. Moreover, there are methods tailored to the geographic specification of relevant market, such as the Elzinga-Hogarty test (ELZINGA & HOGARTY, 1973) (ELZINGA & HOGARTY, 1978) and the gravity model test (ANDRADE, et al., 2010), just to name a few. It is important to mention that critical loss can either be a profit maximizing model or a breakeven model. It could be the case that using one of both models could mean the difference between the clearance of a merger and its blocking; the acquittal of an enterprise and its conviction, especially if structural analysis is used."

13. And there are multiple decisions involved in building models to assess market power: how to assess demand, calibrate instruments, and design static tests (which includes choosing between Bayesian econometrics or classic econometrics, finding out which party has the null hypothesis to be tested, determining how relevant and successful a test is, how good the instruments are), amongst many others. All these decisions have to be connected to a market model.

14. These models can always increase in complexity, whether by adding analytic layers for two-sided markets – such as digital platforms, which have low marginal costs but high fixed costs – or through various other improvements, hence making the definition of supply and demand and the simulations of effects more plausible and closer to reality. Conversely, sometimes analytic complexity translates into less intuitive analyses or an increased number of assumptions.

15. It is always worth using direct evidence to assess the effects of mergers or specific violations whenever available (except in assessing per se violations, such as cartels). In this kind of assessment, there is no difference between a digital market and a different one. However, in digital markets it is occasionally possible to use different types of metrics. In this regard, SAKOWSKI & LANCIERI (2020, p.19-20) state that

"zero prices and bandwagon effects hamper the application of econometric tests such as the test of Small but Significant Nontransitory Increase in Prices (SSNIP) or the critical loss analysis, usually employed to define a relevant market. (...)

Some reports discuss how to measure market shares in online markets. For instance, a report by the Autorité de la Concurrence affirms that there are numerous suitable metrics to calculate market shares in zero-price markets besides

a company's revenue. These include the number of accounts, number of active users on a monthly and daily basis, number of visits, number of logged users, number of videos uploaded or viewed in a platform, number of searches, etc. [2] *The report mentions how time spent in the platform may be the best metrics for many markets. Similarly, a report by the CMA on online advertising markets uses revenue, number of searches, number of page referrals, number of users, and time spent in the platform as the best metrics to capture shares in certain markets.* [3] *A report prepared by the LEAR consultancy firm for the CMA also stresses data on platform usage is preferable over data on the platform's network. For instance, in the food ordering market, data on the number of restaurants listed on each platform can be used to measure competition between platforms (restaurants are passive), but competition on the user side should be measured by consumer use.*[4] *"*

16. In analyzing the substitutability of products sold on digital markets, one should also take into account these markets' distinctive features. This affects the definition of relevant market and, consequently, the assessment of market power. In this regard, BASTOS (2021, p.73) says:

"In a merger of the property classifieds market in 2020 (Merger no. 08700.001796/2020-94) between companies ZAP Viva Real Group (ZAP Group) and Bom Negócio Atividades de Internet Ltda. (OLX Brasil), CADE defined the online property classifieds market as the relevant market. The market includes platforms that operate as shop windows for products, online estate agencies, websites, applications, and social networks that display online classifieds, such as Facebook Marketplace. In clarifying the exclusion of printed classifieds from the relevant market, the antitrust authority explained there were differences in terms of substitution. According to CADE, demand-side substitution should be carefully considered as online classifieds are free for potential customers (whereas printed newspapers are paid); they can be accessed from any place with internet access (whilst printed classifieds depend on the reader's physical presence); they allow users to post and view photos for all ads (unlike printed classifieds); they provide chat tools for communication (which is not possible offline); amongst others. As for the geographic dimension, due to extant local and national dynamics, the authority preferred to offer an open definition."

17. Finally, it is crucial to learn new theories of harm and consider to what extent they can be accepted and used in real cases. On the other hand, considering the intrinsic flexibility of prescriptive concepts of market power, it is not necessary to change how Brazilian legislation and CADE's internal guidelines describe market power. In fact,

[2] Autorité de la Concurrence, 'Opinion No. 18-A-03 of 6 March 2018 on Data Processing in the Online Advertising Sector' https://www.autoritedelaconcurrence.fr/sites/default/files/integral_texts/2019-10/avis18a03_en_.pdf pg. 80-83.

[3] Competition and Markets Authority, 'Online Platforms and Digital Advertisement - Market Study Final Report'

https://www.gov.uk/cma-cases/online-platforms-and-digital-advertising-market-study pgs. 80-81; 119-122; 246.

[4] LEAR, 'Ex-Post Assessment of Merger Control Decisions in Digital Markets - Report Prepared for the CMA'

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/803576/CMA_past_digital_mergers_GOV.UK_version.pdf pg. 27

according to Article 36, Paragraph 2 of the Brazilian Competition Law (12529/2011), "It is assumed a company or group of companies has a dominant position when it is able to change market conditions, whether individually or jointly, or control 20% or more of the relevant market. This percentage may be modified by CADE for specific economic sectors."

18. However, this is only an initial and rebuttable assumption, and CADE may use other metrics to determine an agent's dominant position regardless of it being a player in a digital market. In Brazil, an anticompetitive conduct is any practice adopted by an economic agent that may, even if potentially, cause damages to free competition, even if the infringer has no intention to cause damages to the market.. This concept is sufficiently open to include new theories of harm.

19. With regard to merger review, CADE's Guide for Horizontal Merger Review[5] provides that the authority can assess cases in which there is the elimination of maverick firms (which have a disruptive degree of rivalry) and potential competition. As for the latter, the authority evaluates whether a firm is on the brink of entering a market; whether it has relevant assets that can be used easily to return to the market without incurring significant sunk costs; whether it can bear the costs needed for entering the market in a relatively short term; amongst others. Similarly, the Guide points to the necessity of adapting merger review for two-sided markets and relativizes market power analyses that employ classic concentration indexes such as the HHI since, amongst other reasons, they are only an initial assumption about the parties' market power. Therefore, Brazilian laws are adaptable to new concepts of market power as they are not limited to a structuralistic view of antitrust analysis founded on market shares.

References

AFFELDT, Pauline; FILISTRUCCHI, Lapo; KLEIN, Tobias J., Upward Pricing Pressure in Two-Sided Markets (July 23, 2012). TILEC Discussion Paper No. 2012-029, CentER Discussion Paper Series No. 2012-069, Available at SSRN: https://ssrn.com/abstract=2115382 or http://dx.doi.org/10.2139/ssrn.2115382

BASTOS, Camila Sanson Pereira. (August 2021) Caderno do CADE sobre plataformas digitais, Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/cadernos-do-cade/plataformas-digitais.pdf

CASTRO, Ricardo Medeiros de. (March 2021) Documento de Trabalho 1/2021 (DEE/CADE) “The problematic binary approach to the concept of dominance”. Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/documentos-de-trabalho/2021/Documento-de-Trabalho_The-problematic-binary-approach-to-the-concept-of-dominance.pdf

FILISTRUCCHI, L. (2008). A SSNIP Test for Two-Sided Markets: The Case of Media. NET Institute Working Paper No. 08-34. Available at: https://ssrn.com/abstract=1287442 or http://dx.doi.org/10.2139/ssrn.1287442

MANDRESCU, D. (1 December 2018). The SSNIP Test and Zero-Pricing Strategies: Considerations for Online Platforms. European Competition and Regulatory Law Review, 2 (2018)(4). Available at: https://ssrn.com/abstract=3337765

[5] Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/guias-do-cade/Guide-for-Horizontal-Merger-Review.pdf

PRADO, Tiago S. (2021): Assessing the Market Power of Digital Platforms, 23rd Biennial Conference of the International Telecommunications Society (ITS): "Digital societies and industrial transformations: Policies, markets, and technologies in a post-Covid world", Online Conference / Gothenburg, Sweden, 21st-23rd June, 2021, International Telecommunications Society (ITS), Calgary . Available at: https://www.econstor.eu/bitstream/10419/238048/1/Prado-Assessing.pdf

RESENDE, G. M. (2021) Ecossistemas digitais e o antitruste. Consultor Jurídico, São Paulo, 9 July 2021. Available at: https://www.conjur.com.br/2021-jul-09/defesa-concorrencia-ecossistemas-digitais-antitruste

SAKOWKI, Patrícia Alessandra Morita; LANCIERI Filippo Maria. (2020) Documento de Trabalho 5/2020 "Concorrência em mercados digitais: uma revisão dos relatórios especializados". Available at: https://cdn.cade.gov.br/Portal/centrais-de-conteudo/publicacoes/estudos-economicos/documentos-de-trabalho/2020/documento-de-trabalho-n05-2020-concorrencia-em-mercados-digitais-uma-revisao-dos-relatorios-especializados.pdf