BRICS
in the digital economy:
competition policy in practice

2nd Report by the Competition Authorities Working Group on Digital Economy

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Administrative Council for Economic Defense

Federal Antimonopoly Service

Competition Commission of India

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BRICS in the digital economy: Competition Policy in Practice (2nd Report)[1]

1. Introduction

In November 2017, the Brazilian Competition authority (CADE) hosted the fifth BRICS International Competition Conference in Brasília. At the time, the competition authorities of Brazil, Russia, India, China, and South Africa (the "Competition Authorities"), decided to create a working group to channel joint efforts to share experiences and cooperate for the enhancement of their respective competition policies concerning the digital economy. This Conference marked the creation of the BRICS Competition Authorities Working Group on the Digital Economy, having Brazil as its main coordinator and Russia as co-chair since 2018 (BARRETO, SAKOWSKI, & PARK, 2019).

The primary objectives of the Working Group are as follows: (i) facilitating the exchange of experiences among the BRICS countries regarding their efforts to combat anticompetitive practices in the digital economy; (ii) analyzing and deliberating on cases pertaining to the prevention of novel forms of cartels; (iii) examining mergers and acquisitions within the context of the digital era; and (iv) devising innovative mechanisms to bolster the enforcement against anticompetitive practices in response to the challenges posed by the digital economy (BARRETO, SAKOWSKI, & PARK, 2019).

The first meeting of the Working Group was held in Campos do Jordão, Brazil, in October 2018. This meeting was attended by Brazil, Russia, India, and South Africa. As a starting point for closer cooperation in competition enforcement, the group decided to prepare a questionnaire to share the ongoing practices and challenges faced by the Competition Authorities in the context of the digital economy. As the authorities shared

[1] This report was prepared in 2023 by Nicolo Zingales (UNDP consultant), reviewed by Lílian Santos Marques Severino (Chief Economist), Victor Oliveira Fernandes (Commissioner), Ricardo Medeiros de Castro (Deputy Head of the Advisory Unit), and Bruna Pamplona de Queiroz (Head of the International Unit) and covered some cases in the Digital Markets of Brazil, Russia, India, China, and South Africa, which were BRICS members in the same period..

their replies, the Working Group decided to produce a report based on the answers to the questionnaire, with the aim of consolidating the different practices and views within the BRICS countries on the challenges posed by the digital economy to competition enforcement. This process was led by CADE as main coordinator of the Working Group. Subsequently, the second meeting of the Working Group took place in July 2019 in Brasília, with representatives from all BRICS countries. Then, the Working Group had the opportunity to discuss its activities, which included the release of the report in the subsequent BRICS International Competition Conference in Russia.

Accordingly, in September 2019, the BRICS Competition Authorities Working Group on the Digital Economy launched the first Report of the authorities on digital economy during the sixth BRICS Competition Conference, under the leadership of CADE as Chair, and of the Russian authority (FAS Russia) as Co-Chair of the Working Group (BRAZIL, RUSSIA, INDIA, CHINA, & SOUTH AFRICA, 2019). In short, the First Report provides an overview of the state of the art of competition policy and enforcement practices in Brazil, Russia, India, and South Africa vis-à-vis digital markets. As described in the Report, China did not participate in this release due to institutional reforms that were concluded in 2018 in the competition field (BARRETO, SAKOWSKI, & PARK, 2019).

Now, the Second Report of BRICS Competition Authorities Working Group on the Digital Economy is presented.

1.1. Scope of the Second Report

The scope of this Second Report is to deepen the debate on digital markets, in several other dimensions, both in terms of evaluating mergers and acquisitions and anticompetitive conducts in the digital environment. This Report is not intended to have normative character or to be binding upon any Authority. It is made to identify common ground and foster debate about some of the key features of digital markets.

As a result, this Second Report aims to discuss some principles of the antitrust assessment of markets characterized by a significant digital component. It includes a discussion of the methods and principles that may be used for market definition and the assessment of market power; an analysis of the distinctive challenges raised by anticompetitive conducts and concentrations in this area; and an outline of possible remedies that can be used to address anticompetitive concerns.

Before specifically addressing each of these topics, it is necessary to set the overarching terms of this discussion: first, by defining the meaning and scope of the notion of "digital markets"; and secondly, by looking to the goals of competition law in the BRICS, with a view to delimiting the proper ambit of antitrust enforcement in this space.

1.2. What is meant by "digital markets"

A digital market is a market which is significantly affected by the process of digitalization, in the sense that one or more significant market players rely on digital technologies to produce or sell their products or services. As this technology can be used to support existing businesses or to create brand new services (UNITED KINGDOM, 2019), this has led to the proliferation of the service industry, often with disruptive effects with established players. For instance, "sharing economy" platforms like Uber, Airbnb and Task Rabbit have enabled and boosted the growth of peer-to-peer markets, where small suppliers can compete with more established providers of goods and services. Similarly, the digitalization of music in combination with substantial improvements in Internet connectivity has enabled the viability of streaming services, which gradually and largely replaced the download of music or its purchase in analogue medium. Reliance on the Internet infrastructure is a central driving force in the creation of digital markets, so much so that the South African authority understands that "more than a market, the digital economy cuts across all markets in which goods and services utilise an internet base for production, distribution, trade and consumption by different agents". (SOUTH AFRICA-CCSA, 2020b, p. 11). While a drawing of boundaries for the concept of digital markets can be somewhat artificial, what is essential for competition adjudicators is to have a clear grasp of the characteristics that make markets "digital". For an in-depth discussion of these features, we refer to prior work by CADE's Department of Economic Studies (BRAZIL- DEE, 2022, p. 9-14) which lists the following: a) Direct positive network effects; b) Indirect positive network effects; c) Cross-subsidization; d) Scale without mass; e) Low marginal costs; f) Possibility of attracting customers from all over the world; g) Economies of scale and scope; h) Generation and use of user data; i) Disruptive innovation; j) Switching costs; k) “Winner take all” or “winner take most”.

1.3.Goals of competition law in the digital economy

Despite some points of divergence, there is substantial convergence amongst BRICS jurisdictions in what they consider the goal of competition law and policy.

For instance, when specifically prompted to choose amongst several possible options, all BRICS authorities recognized the importance of promoting consumer welfare, enhancing efficiency and ensuring economic freedom. Also, as can be seen below in Table 1, at least 4 authorities recognized the importance of the goal of ensuring economic freedom, and 3 of them recognized the goal of Ensuring a level playing field for Small and medium-sized enterprises (SMEs). Other recognized goals amongst BRICS jurisdictions, in particular by Russia and South Africa, suggest a broader spectrum: Promoting equitable welfare distribution between employers and the labor force; Promoting fairness and equality of opportunity; Promoting consumer choice; Promoting diversity and pluralism; Promoting competitiveness in international markets; Promoting sustainability and resiliency; and Safeguarding privacy or fundamental rights.

	Brazil	Russia	India	China	South Africa
a. Promote consumer welfare	✓	✓	✓	✓	✓
b. Enhance efficiency	✓	✓	✓	✓	✓
c. Ensure economic freedom	✓	✓	✓	✓	✓
d. Ensure a level playing field for small and medium-sized enterprises (SMEs)		✓		✓	✓
e. Promote an equitable welfare distribution between employers and the labour force					✓
f. Promote fairness and equality of opportunity		✓		✓	✓
g. Promote consumer choice		✓		✓	✓
h. Promote diversity and pluralism					✓
i. Achieve market integration		✓		✓	
j. Facilitate privatization and market liberalization					
k. Promote competitiveness in international markets					✓
l. Promote sustainability and resiliency		✓			✓
m. Safeguard privacy or other fundamental rights					✓

Table 1– Answers of BRICS in terms of Objectives of Competition Law

Source: Answers to the Questionnaire

In India, the goal of Competition Law expressed in the preamble of the Competition Act of 2002 is "to protect the interests of consumers" and "to ensure freedom of trade". Furthermore, it is important to stress that the Indian Supreme Court in *Competition Commission of India v. Steel Authority of India Ltd* observed that: "[…] the main objective of competition law is to promote economic efficiency using competition as one of the means of assisting the creation of market responsive to consumer preference [2]"

The Brazilian Competition Law Act establishes the framework for the Brazilian Competition Defence System and encompasses provisions for the prevention and punishment of violations against the economic order. It is guided by constitutional principles such as freedom of enterprise, promotion of competition, social responsibility of property, protection of consumers, and eradication of economic power abuse.[3] Article 170 of the Federal Constitution establishes the pillars of the system of defense of the economic order, which is based on the valorization of human work and the free enterprise, in order to guarantee a dignified existence for all citizens, in accordance with the dictates of social justice. The article lists some values that guide the economic order, including the protection of consumers, free competition and private property, but also lists some principles that may be considered conflicting under a purely economic perspective of competition, such as national sovereignty, the social function of property, the protection of the environment, the reduction of regional and social inequalities, the pursuit of full employment and the treatment of favored for small companies incorporated under Brazilian laws that have their headquarters and management in the country. Nevertheless, since the 1990s, the dominant framework of competition law in Brazil has primarily emphasized objectives rooted in neoclassical economic thought. The Law 12,529, enacted in 2011, stipulates that gaining market dominance via superior efficiency relative to rivals is not considered a violation of competition legislation (Section 36(1)). Although the legal

[2] Judgment of 9 September 2010, Civil Appeal No.7779 of 2010 [D.No.12247 OF 2010]
[3] See Article 1 of Brazilian Competition Law (Law 12.529/2011).

framework in Brazil does not explicitly exclude wider non-economic goals, CADE's decisional practice has predominantly reflected neoclassical viewpoints.

In Russia, the goals explicitly recognized by the statute (Art. 1) include ensuring the unity of the economic space, the free movement of goods, the freedom of economic activity in the Russian Federation, the protection of competition and the creation of conditions for the effective functioning of commodity markets.

In China, the goals of Competition Law include preventing and restraining monopolistic conducts, protecting fair competition in the market, enhancing economic efficiency, safeguarding the interests of consumers and the public interest and promoting the healthy development of the socialist market economy[4]. Furthermore, Article 1 of the Anti-Monopoly Guidelines of the Anti-Monopoly Commission of the State Council on Platform Economy (hereinafter referred to as the "Chinese Guidelines on Platform Economy") establishes the purpose and principles of anti-monopoly supervision in platform economy, including: preventing and prohibiting monopolistic conducts in the field of platform economy, encouraging innovation, protecting fair competition in the market, promoting the standardized, orderly, innovative and sound development of platform economy and safeguarding the interests of consumers and the public. China has also formally established a specific type of goal of Competition Law for digital markets, or more specifically for the platform economy, which is to promote "standardized, orderly, innovative and sound development" of the platform economy and safeguarding the interests of consumers and the public.

2. Defining the "relevant market" in digital markets

The concept of "relevant market" provides a tool to draw the boundaries within which to assess the competitive effects of a particular conduct or proposed acquisition. The central question that market definition aims to interrogate is whether a particular firm

[4] Article 1 of China´s Antimonopoly Law.

has market power, considering the competitive constraints that have been identified in the course of the analysis. Market definition can identify in demand-side and, sometimes, in supply-side substitutability the forces that may discipline the exercise of market power, and proceeds to measure their strength in reaction to a hypothesized benchmark event.

In order to define relevant markets, competition authorities often use the hypothetical monopolist test, that normally aims to analyze if a monopolist is able to perform a "SSNIP" (Small but Significant and Non-Transitory Increase in Price) in a very narrow market. Normally, competition authorities consider a SSNIP of 5% as a threshold to relevant market definition. If a SSNIP is not profitable in that specific narrow market, then the relevant market is expanded until a SSNIP becomes possible and profitable, to a hypothetical monopolist.

However, market definition in practice is more nuanced. For example, according to Gama & Ruiz (2007, p. 246), in Brazil, the SSNIP test is rarely used. Mohit Chawdhry (2021, p. 15) reports that, in India, "the CCI [Competition Commission of India] hardly used the SSNIP test to determine substitutability." In many cases, competition authorities can rely in the analysis of different scenarios (letting the relevant market definition open) or using a more qualitative approach to define relevant markets.

Indeed, the results of the survey that was conducted with BRICS competition authorities reveal a growing tendency to consider market definition not an indispensable step of antitrust analysis: in particular, only in China and Russia this appears to be a *requisite*. In China, the State Administration for Market Regulation (SAMR) clarifies that, although it is a necessary step in the analysis and generally follows the principles laid down in the Anti-monopoly Law and its Guidance on the Definition of the Relevant Market by the Anti-monopoly Commission of the State Council, the application of these principles will vary on a case-by-case basis due to the complex business categories and evolving competitive dynamics of the platform economy. However, as a general rule, demand substitution analysis is assessed based on factors including platform functionalities, business models, use cases, user cohorts, multi-sided markets, and offline transactions, etc.; and, where supply substitution imposes a competitive constraint on the conduct of an undertaking in a manner similar to that of demand substitution, supply substitution analysis is assessed based on factors including market entry, technical barriers, network effects, lock-in effects, transfer costs, and cross-sector competition, etc[5]. Finally, in the definition of the relevant geographic market, factors such as the actual regions where users choose products, users' language preferences and consumption habits, the provisions of relevant laws and regulations, the degree of competition constraints in different regions, and online and offline integration are comprehensively assessed and considered, generally leading to the identification of a Chinese or a more specifically regional market (although global market may also be defined in specific circumstances).

In Russia, the authority is required to make a preliminary definition, focusing on the geographical boundaries of the commodity market and the conditions for the circulation of goods, and then refine it taking into account consumer surveys of substitutability and other evidence. To analyze the state of competition in the product market in accordance with FAS Russia's Order on April 28, 2010 No. 220, the authority identifies the functional purpose of the product, its quality, technical and other characteristics, as well as the conditions of the sale of goods; it also carries out consumer surveys to identify the product characteristics that determine their choice.

In turn, India holds market definition as a requirement only when it comes to merger cases. Whereas CADE recognizes that market definition is not an end itself, but merely a step in the assessment of market power, which can be skipped in the presence of reliable data on own and cross-price elasticities and margins, differences and differences analysis or event study analysis, or where a concentration would not raise anticompetitive concerns under all possible scenarios. With regard to mergers, the Brazilian authority referred to the upward pricing pressure methodology created by Shapiro & Farrell (2010) to analyze cases that are not necessarily dependent of relevant market definition. Besides that, one could also use event studies or counterfactual analysis

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[5] For example, in the *Alibaba* case and the *Meituan* case, international experience was drawn upon to analyze the demand and supply substitution of the players on different sides of the platforms, mainly based on the different services provided by the platforms; and the relevant product market was defined as online retailing platform services, and online food delivery platform services, respectively.

that also are not dependent of relevant market delineation (BRAZIL, 2016). In unilateral conduct cases, the Brazilian experience suggests that it may be less important to precisely define the relevant market, which is typically left open to different scenarios.

In South Africa, given the complex nature of digital markets, the competition authority (CCSA) avoids relying on traditional tools of defining markets. For example, in the Online Intermediation Platforms Market Inquiry, the CCSA did not undertake the traditional SSNIP test analysis. However, it sought to determine whether other distribution channels can constrain online intermediation platforms. In this regard, the CCSA sought to determine the closeness of competition between online intermediation platforms and other distribution channels that may be used by businesses to reach customers (e.g., direct own online channels and offline channels). The CCSA also considered if there are any unique features that differentiate online intermediation platforms from the other distribution channels. For example, an online platform is a single aggregator that offers consumers the convenience to easily search and compare products and prices of a wide variety of businesses. Other distribution channels lack this feature and are generally seen as less attractive to consumers and less effective for businesses. The CCSA also took into account the fact that businesses generally use online platforms in addition to other distribution channels as indicative that online platforms' wide and growing consumer sales are not easily substituted. Furthermore, while large businesses have larger budgets to spend on marketing (e.g. Ad word spend), they still cannot match the spend of online platforms. Accordingly, after assessing if there are any significant constraints from both the consumer side and the business user side, the CCSA concluded that online intermediation platforms are each other's closest competitors and are not constrained by other distribution channels.

Even if an interpreter is clearly determined to define a relevant market in a specific case, it is important to mention that there are several hermeneutic options to choose, such as qualitative aspects of the product, level of prices and/or price-cost margins, diversion ratios, available capacity, among others. It is also possible use applied quantitative or econometrics analysis methods, a non exhaustive list of which includes simple correlation, cointegration, critical loss analysis, methods tailored to geographic specification, and methods of simulations (CASTRO, 2021, pp. 19-20).

On the other hand, in the digital realm, there are at least 3 features that makes market definition more complex:

- In multi-sided markets, feedback loops across sides may strengthen or mitigate the effects from a price increase, ultimately affecting the equilibrium.
- An additional complication of digital markets is that, in some cases, the peculiarities of non-monetary or "zero" prices may compromise the effectiveness of the tools traditionally used for market definition purposes.
- Finally, a third difficulty relates to making an adequate market delineation given the dynamic and innovative nature of digital markets, especially the role that innovation plays in capturing new dimensions of competition within the relevant market.

This section aims to discuss these three issues.

2.1.Multi-sidedness

A first major question involving multi-sided markets is whether the relationship between the intermediary platform and the respective sides is such that the relevant market encompasses all sides; or whether each side belongs to a different, but related market. The former scenario present similarities to so-called "system markets", where complementary products are included within the same relevant market, in particular where consumers rationally calculate the so-called "lifetime pricing" of the primary product: in other words, where they take into account in their purchasing decisions all the costs that they need to incur over the lifetime of the primary product, including the pricing of complementary products (as for instance, the cost of cartridges for a printer). In a similar way, a single multi-sided market may be defined where consumers on one side are able to take into account the changes of supply on the other side.

The mainstream view, endorsed by the US Supreme Court in *Ohio v. American Express Co.*, 585 U.S. ___ (2018) [the *Amex case*], is that this definition is possible in the case of transactional two-sided markets, where consumers (for instance, users of payment cards) effectively take into account the fees charged in each transaction to the other side (merchants) as the two are connected by a *usage* externality. By contrast, in non-transactional multi-sided markets like media, only a *membership* externality is present, which makes the link between the two sides (presumably) weaker. Therefore, while antitrust analysis should recognize the multi-sidedness of these markets, it can do so by taking into account the competitive constraints imposed by one side on another at the stage of the assessment of market power, rather than in the market definition stage (see below, section 3).

An alternative view is that a definition of two (or more) interrelated markets should be preferred even in case of transactional two (or multi)-sided markets, unless (i) a firm's service necessarily involves all groups and (ii) substitutability of the service from the perspective of each customer group does not differ substantially (WISMER et al., 2017). To illustrate why this is the case, consider a market where one group multi-homes while the other single-homes: this configuration leads to a stronger competition between platforms for the fractions of customers that are multihoming, thus undermining the idea of a single multi-sided market (ARMSTRONG, 2006). Accordingly, the proponents of this view recommend the use of descriptive quantitative methods, such as the matching of customer lists of different platforms, to measure the degree and importance of multi-homing or to identify common customers and their characteristics (OECD, 2018).

In conclusion, the question of whether the relationships between different sides are such that a unique or a separate interrelated market can be identified is not to be answered in the abstract. The answer depends not only on the specific platform users and the restriction in question, but also on the level of abstraction and empiricism that is chosen for the application of multi-sided market theory: for instance, on the basis of empirical evidence it might be concluded that, even in the context of non-transaction markets, there are sufficiently strong indirect network effects between usage on the two sides of the platform, such that a single-sided definition may be appropriate. By way of example, in the context of search engines CADE identified separate national markets for

(i) online advertising; and (ii) online price search and comparison[6]; while on another occasion it defined two distinct markets of general search and advertising, and specialized search and advertising[7]. In turn, in the context of mobile service operators, CADE identified two related markets: the market of mobile phone communication and the market for apps and content[8].

A second important issue for market definition in multi-sided context is the suitability of the hypothetical monopolist test, which is typically performed through a "SSNIP" analysis. In a multi-sided context, it is difficult to determine from which number this 5-10% should be calculated, considering the interactions between sides.

The most straightforward approach is to use the price level, i.e. the sum of the prices on all sides; however, even in this simplified scenario an additional complexity is that it needs to be determined to what side the price increase should be allocated, as demand elasticity may vary significantly across sides. This can be done by assuming that the intermediary platform will determine the optimal price structure, adjusting the price on one side according to the loss of customers on the other side(s) triggered by that price increase. This process can involve a series of adjustments, as any loss of customers on the other side(s) may also trigger further loss of customers in the market where the price increase was made, which can in turn generate similar effects in the related market, and so on, until an equilibrium is reached. Importantly, this additional complexity does not apply to audience-providing platforms when defining the market on the side that does not generate externalities, as is the case for advertising in ad-funded services. However, on those types of platforms an adjustment may be needed when focusing on the market for

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[6] Adminitrative Proceeding 08700.002703/2019-13, *Buscapé/Mosaico*; 08700.009082/2013-03 *Buscapé/Bondfaro*.
[7] Administrative Proceeding 08012.010483/2011-94, *E-Commerce Media Group Informação e Tecnologia Ltda (Buscapé) and Google*.
[8] Adminitrative Proceeding 08700.00 4314/2016 -71, *CLARO S.A., TIM Celular S.A., OI Móvel S.A and TELEFONICA BRASIL S.A.*

the services that are funded through advertising, as failing to consider the externalities would lead to an overly broad definition (FILISTRUCCHI et al., 2012; OECD, 2018).

Filistrucchi (2008, p. 1) developed a modified model to perform a SSNIP test for a multisided market in order to take into account indirect network externalities, suggesting that in non-transactional two-sided markets the test is run by raising each of the two prices separately allowing each time the other price to be adjusted.

Pontual Ribeiro and Golovanova (2020) extended and complemented what was discussed by Emch & Thompson (2006), Evans and Noel (2008); Filistrucchi (2008); and Affeldt et al. (2013), specifically by presenting how critical loss analysis (CLA) and upward pricing pressure (UPP) may be implemented in (i) transaction platforms; (ii.a) non-transaction audience providing platforms and (ii.b) non-transaction matching platforms.

As an alternative to running an adjusted SSNIP on the price level, market definition may rely on the price on one side only, but without dispensing from the need to make adjustments on other side(s) for the reasons stated above. Consequently, the key point is not which basis is used to calculate the SSNIP, but rather whether it sufficiently takes into account the interdependency with other markets. To make this determination, however, antitrust analysis may run into additional difficulties, including: the lack of proper data on a specific industry; the handling of "zero price" services; the identification and operationalisation of competitive dimensions besides the price; and the underestimation of cross-side effects for consumers interrogated in survey research (OECD, 2018).

While the techniques can be refined to take into account these concerns, the amount of complexity and resources involved suggests that, where possible, antitrust adjudicators should consider establishing market power without necessarily defining the relevant market, or making only a *prima facie* definition of the relevant market subject to rebuttal on the basis of evidence of market power (KAPLOW, 2012; ZINGALES, 2013; SCHWEITZER et al., 2019). It has also been suggested that in multi-sided markets the hypothetical monopolist test should be considered as a thought experiment, onto which qualitative evidence is applied (OECD, 2018).

Independently from this quantitative debate, there are significant challenges in antitrust practice in understanding the scope of relevant market and its real implications.

2.1.1. *Aggregated scenario: relevant market encompasses all sides of the market*

One example of how complex this process might be is seen in the *Amex* case. In this case, the United State Supreme considered that American Expresses's anti-steering provisions (which prevented merchants from steering customers away from the use of Amex´s card, including through lower transaction prices) should be analyzed considering all sides of the credit-market, on grounds that the product that credit-card companies sell is transactions, not services to merchants, and the competitive effects of a restraint on transactions cannot be judged by looking at merchants alone. In the dissenting opinion, however, Justice Breyer contended that courts should not include in the relevant market services that are complements, rather than substitutes, of the good that is subject to a competitive restraint. This case has been used to illustrate the point that market definition in a multi-sided context may distract the analyst from some important and substantive topics: instead of using IO economics in market definition as a shield, the court should have started from a presumption of harm due to the fact that the anti-steering rule disrupted the competitive process and elevated market acceptance fee by stifling price competition among credit cards for merchant acceptance (SHAPIRO, 2021).

As an example of an aggregated approach to market definition, one can mention in Brazil merger case 08700.004426/2020-17, between Bus Serviços de Agendamento S.A. and J3 Participações Ltda. In this case, where online platforms were used to sell bus tickets from third parties bus companies, CADE considered the Global Distribution Services market as a single one, whilst considering its cross-group feedback effects.

2.1.2. *Segregated scenario: relevant market encompasses each side of the market separately.*

An alternative approach is to define separate markets for each side of the multi-sided platform. According to Sebastian Wismer and Arno Rasek (2017, p. 9), a definition of two (or more) interrelated markets should be preferred even in case of transactional two (or multi)-sided markets, unless (i) a firm's service necessarily involves all groups and (ii) substitutability of the service from the perspective of each customer group does not differ substantially. However, neither of the two approaches seems right or wrong in absolute terms as long as the analysis appropriately accounts for interdependencies –such as indirect network effects– and for all competitive forces on each 'side' of the market.

2.1.3. Multi-homing vs single-homing in a multi-sided context

Customers' single-homing and multi-homing behaviour can be relevant for market definition. Multi-homing and single-homing may both justify narrowly defined markets, but for different reasons. 'Multi-homing' may reflect product differences, whereas 'single-homing' may indicate that platforms are bottlenecks." (WISMER & RASEK, 2017, p. 11) .

2.1.4. Position of BRICS authorities

According to the questionnaire that was circulated with BRICS countries, the approach taken may vary somewhat across jurisdictions. Specifically, whether one or two markets are defined in a 2-sided context may depend on the existence of cross-side network effects, for China, India and Russia, while for South Africa on whether the players consider those markets as separate. About this topic, Brazil mentioned that it is difficult to define relevant market in abstract terms, but the existence of cross-side network effects, certainly, plays an important role in its definition. One important difference, for instance, exists between platforms that are dedicated to one specific functionality, such as those owned by restaurants and used to commercialize their products, and those who act as intermediator like marketplaces, some of which provide also logistic services (so-called "full service model)[9]. Traditionally, these have been considered as part of the same product market,

[9] See the distinctions made in Merger case n. 08700.007262/2017-76

although more recebnt jurisprudence at CADE hinted at the possibility to treat dedicated platforms differently from the other two models[10].

2.1.5. Conclusion

In conclusion, the question of whether the relationships between different sides are such as to identify a unique or a separate interrelated market cannot be answered in the abstract. The answer depends not only on the specific platform users and the restriction in question, but also on the level of abstraction and empiricism that is chosen for the application of multi-sided market theory.[11]

2.2. "Zero price" markets

A second major complication for market definition in digital markets lies in the prominence of services that are not monetarily paid by consumers. In large part, this is a byproduct of the spread of multi-sided business models, and hence suffers from some of the same challenges for the operationalization of market definition. In addition to what has been said above, it should be mentioned that a "zero price" is not equivalent to other possible prices that can be charged to consumers: it benefits from a sort of irrational excitement caused in consumers by the concept of "free", something called "zero price

[10] See Merger case n. 08700.006662/2020-60 and 08700.001691/2021-16 (*The Axionlog Uruguay S.A., BFFC do Brasil Comércio de Alimentos Ltda., CIATC Participações S.A.,Giraffas Administradora de Franquias S.A., Holding de alimentos e Participações S.A., Outback Steakhouse Restaurantes Brasil S.A., Bramex Comércio e Serviços Ltda., Rei do Mate Distribuidora, Importação e Exportação Ltda.,4all Holding BR S.A. e DP Brasil Operações, Franquias e Participações Ltda*)

[11] For instance, on the basis of empirical evidence it might be concluded that even in the context of non-transaction markets, if there are sufficiently strong indirect network effects between usage on the two sides of the platform, such that an aggregated scenario definition may be appropriate. In a multi-sided context, it is possible for a monopolist to profit from an SSNIP on one side of the market, but not on the other side. So, if the scenario chosen for the use of the hypothetical monopolist test is the aggregate scenario, it is important to evaluate how to consider SSNIP in such a hypothesis. As an alternative to running an adjusted SSNIP on the price level of both sides, market definition may rely on the price on one side only, but without dispensing from the need to make adjustments on other side(s). Consequently, the key point is not which basis is used to calculate the SSNIP, but rather whether it sufficiently takes into account the interdependency with other markets. To make this determination, however, antitrust analysis may run into additional difficulties, including: the lack of proper data on a specific industry; the handling of "zero price" services; the identification and operationalization of competitive dimensions besides the price; and the underestimation of cross-side effects for consumers interrogated in survey research (OECD 2018).

effects" (ARIELY, 2009; BOSTOEN, 2019; NEWMAN, 2015). This can ultimately lead to underestimate market power or excessively broad market definition, due to the high number of consumers that would switch to a substitutable product in the presence of a price increase.

Furthermore, with specific regard to the SSNIP test, it is important to recognize the practical difficulty of starting it from a price of zero, as the 5-10% of zero remains zero. Since a zero price indicates that the main parameter of competition would in this type of cases be quality or variety, one proposed variant is the "SSNDQ" (Small but Significant and Non-transitory Decrease in Quality) test.

The suitability of this test has been contested due to the multi-dimensional character of quality (OECD, 2013); however, in the context of multi-sided market it may be more practical to execute it, by viewing the size of network effects derived from the other side as an intrinsic quality. For instance, once it is established that consumers derive positive feedback effects from the high number of sellers of a marketplace, the SSNDQ could measure the impact on substitutability with other products of a diminution of sellers, which constitutes a degradation of quality; or, once it is established that consumers derive negative feedback effects from the number of advertisements, the test could be used as a conceptual guide (rather than a precise tool) to measure the impact on substitutability of the increase in advertising (FILISTRUCCHI, 2018).

But of course, quality can come in other forms, too, including privacy and minimization of data collection. This may be at the same time an important dimension of quality and a strategic factor in the monetization plans of the firm(s) in question. There is some discussion on whether relevant data markets can be defined only where data is already traded as a commercial asset (TUCKER & WELLFORD, 2014), while it would fall into the concept of "future markets" (see below, section 2.3) where there is a potential use of data to build new products or services (GRAEF, 2016).

Furthermore, the acquisition of personal data is not the only possible consideration inducing an online market player to provide a "zero price" service: letting aside the special case of philanthropic motives, charging no price can be seen as a strategy for consumer adoption, in the hope to capitalize on the established customer base in the future to promote product and services. And while there could be a link between those products or services and the personal data acquired, the degree of proximity and correlation varies. It would thus seem more prudent to place focus on the market for consumers' attention, a concept that is able to capture a broader range of considerations, and which has been used so far only in the context of broadcasting. But how to modify the SSNIP test to account for the role of attention as scarce resource? A suggestion specifically targeted on ad-funded services is to turn it into a "SSNIAL" ("small but significant and non-transitory increase in the advertising load") (WU, 2017), while more comprehensive attempts suggest to adopt a SSNIC ("small, significant and non-transitory increase in exchanged costs"), including both attention costs as well as informational costs such as data disclosure without a corresponding increase in the quality of the product or service exchanged (JAPAN- FTC, 2017; NEWMAN, 2016).

Recently, the Federal Trade Commission and the Department of Justice released a set of guidelines updating the US Merger Guidelines view of SSNIP test. According to the document, the SSNIPT test would mean a "small but significant and non-transitory increase in price or other worsening of terms" for at least one product in the group. The document clarifies that SSNIPT may entail worsening terms along any dimension of competition, including price (SSNIP), but also other terms (broadly defined) such as quality, service, capacity investment, choice of product variety or features, or innovative effort.

Regardless of the specific test to be adopted, it is important to recognize that, in an era of big data analytics and informational overload, both personal data and attention constitute resources which may influence the product offering, that may impact market definition: the relevant question is whether the presence of users can be monetized (WISMER & RASEK, 2017), which is why it is useful to understand the different business models outlined in section 2.1.

2.3.Innovation considerations

A third set of challenges relates to the way in which innovation is taken into account when performing market definition. This is a recurring problem in digital markets and is not limited to cases where digital technologies are used to disrupt markets or industries. In fact, innovation can be understood in a broad sense as referring to 'the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations" (OECD & EUROSTAT, 2005, p. 46). This definition goes well beyond the improvement of products within an existing product market: it includes, for instance, the technology that might have enabled that improvement, the business strategy supporting its placing in the market; and the research and development that leads to the creation of new products that may be complements or substitutes of the product currently sold in the market.

All BRICS authorities can, in principle, define separate "innovation markets", but some authorities (namely, in China, India and Russia) have never done it. South Africa does so focusing on the core functions of the players under consideration and the extent of technology, information, patents, IPRs involved that are for future use. Brazil referred to the merger between Bom Negócio and Zap Viva, where the supply structure that was initially presented did not reflect the real market power of every involved actor, due to the diversity of business models of the agents involved in the merger[12]. Another relevant case is the one concerning Microsoft´s acquisition of Activision, where CADE specifically said that it would consider data other than market shares, due to the incapacity of these to appreciate the competitive pressures in the development of new products and services[13].

With specific regard to platform markets, China´s Guidelines on the Platform Economy clarify that demand substitution analysis can be carried out based on a broader set of attributes, including platform functions, business models, application scenarios, user groups, multilateral markets, offline transactions and other factors; and that when the competitive constraints caused by supply substitution on a platform operator´s behavior are similar to demand substitution, it can be based on market entry, technical barriers, network effect, lock-in effect, transfer cost, cross-border competition and other factors

[12] Merger nº 08700.001796/2020-94, *Bom Negócio Atividades de Internet Ltda. e Zap Viva Real Group*.
[13] See Opinion nº 23/2022/CGAA3/SGA1/SG/CADE in Merger nº 08700.003361/2022-46, footnote 125 and the corresponding text.

consider supply substitution analysis (art. 4). Furthermore, Article 3 of the Guidelines on the Definition of the Relevant Market by the Anti-monopoly Commission of the State Council mentions the impact of innovation (along with the definition of technology markets) as one of the potential focuses of the analysis in antitrust enforcement efforts involving IPRs, such as technology trade and licensing agreements. Finally, it is worth noting that the Chinese legislator, in the first amendment to the Anti-monopoly Law in 2022, included "encouraging innovation" in the legislative purposes- which may have some interpretative bearing on the definition of innovation markets.

Antitrust analysis has traditionally used four different baskets to accommodate innovation within market definition:

- Technology markets, where technology is viewed as an innovation output, and thus the focus is on technology rights and their substitutes (EUROPEAN UNION- E.C., 2014). This innovation can be incorporated into a product, as much as sold or licensed on a stand-alone basis. This last scenario lends itself more easily to this approach, but the fact that a technology is not licensed or even subject to intellectual property rights does not prevent it from defining a technology market around it: for instance, the market shares of the firms selling products that incorporate the technology may be used as a proxy to estimate market power in technology markets (EUROPEAN UNION- E.C., 2014).
- Innovation markets, also called R&D markets, where R&D is viewed as a determinant of innovation production, and thus the focus is on R&D capabilities and efforts directed to particular new or improved goods or processes, and the close substitutes for that R&D (BRAZIL, 2016; UNITED STATES, DOJ & FTC, 2017; EUROPEAN UNION- E.C., 2011).
- Future markets, which are an intermediate step between R&D and its consolidation into a technology (ROBERTSON, 2020). This concept aims to capture competition that is taking place towards a product market that does not yet exist, but where R&D activities are observable and the development of future products is relatively certain (KERN, 2014).
- Supply-side substitution, which is a factor taken into account in the definition of the product market, suggesting that a firm at the fringe of that product

market would be able to enter that market in the short term and without incurring significant costs. This concept is similar to, but differs from, potential competition*:* the latter refers to committed entry (i.e., with significant investment) in the medium term, and is a competitive constraint that is considered for market power assessment and not at the market definition stage (O'DONOGHUE KC & PADILLA, 2020).

In light of the nature of competition in digital markets, some of these concepts might need contextualization. The process of innovation that characterizes competition in this new technological age presents at least one important difference: the availability of big data and data analytics reverses the direction of discovery, using data to formulate hypotheses rather than to prove existing hypotheses (MAYER-SCHOENBERGER & PADOVA, 2016). This means that R&D is now more closely informed by the observation of the daily activity of consumers, and (where applicable) of business partners. Innovation and R&D are therefore relevant not just to the next model or version of something a customer might buy, but also to the next use the customer might make of a given product or service (SHELANSKI, 2013).

Consequently, identifying changes in key products' performance attributes may give better views on substitutability than a price-focused or an R&D-focused test (JORDE & TEECE, 1992), at least in case of incremental innovation. This intuition is consistent with the criticism made against the SSNRIE ("small but significant non-transitory reduction in innovation efforts") test suggested by the original proponents of the "innovation market" approach (GILBERT & SUNSHINE, 1995), revolving on the weak economic evidence on the connection between market structure and innovation, the unclear relationship between R&D and innovation, and the residual role of unidentified market participants (ROBERTSON, 2020). Indeed, competition for innovation depends not just on R&D expenditure, but also on the use of know-how and the ability to successfully commercialize the innovations. In the digital age, what appears to play an even more important role is the market participants' dynamic capabilities, referring to their ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments (TEECE, 2017).

It has been suggested that these would include data, computing power, computing skills or risky and patient capital (STREEL, 2020). Another suggestion is to look specifically at the labor costs of R&D, which would allow avoiding reliance on overblown and disaggregated figures (PETIT, 2020). When it comes to future and innovation markets, the uncertainty related to future products may be reduced by looking at existing market characteristics, such as customers' experience with existing products, applicable regulatory requirements, or market participants' past performance indicators (REGIBEAU & ROCKETT, 2019)

It is important to ponder if the four "baskets" described above are able to capture data-driven innovation. Also, it is important to be aware that the traditional focus of market definition on demand-side and supply-side substitutability may deviate the attention of problems that could arise from potential competition of new products and services, in a data driven industry. Given the increasing importance of customer data in enabling the creation of new products and services, real markets are likely to be less neatly defined around a specific product or service, and much more centered on a participant's ability to use those data across different types of activities.

An additional complexity in this regard, however, is that customer data may be used for a variety of purposes, making such candidate markets not easily identifiable. One way in which this analysis can be guided is to determine the extent to which the privacy policy and the technical features of the consumer-facing service allows the re-deployment of the information submitted by the user in other contexts. In addition to the possible use of such data for the provision of another service by the same firm ("intra-firm versatility"), it would be relevant to examine the extent to which the firm allows the user to export such data in order to receive more targeted services outside the firm ("inter-firm portability"). And in the case of platforms, this analysis should be conducted for all sides (including, for instance, merchants and app developers).

An alternative solution is to consider consumer data as a specialized asset which positions the data collector in competition for a range of markets, together with other significant data collectors (GRAEF, 2016). Under this solution, competition analysis would focus on the impact on ecosystems, rather than merely on markets. As aptly put in a recent market study on mobile app stores: "*the battle fought by online platform-ecosystems is not about dominating markets, but it is about becoming the default gateway to the internet and content for a critical mass of users that can be monetized in various ways*" (NETHERLANDS- ACM, 2019). Due to this particular dynamic, the market of ecosystems must be based on a clear understanding of the trends of demand of their users and their biases, and of the technological and organizational affordances (including data) that are necessary for competition in these markets; furthermore, particular attention should be placed on quality (rather than price) as the attribute that drives competition (JENNY, 2021).

As a threshold question, however, it appears crucial to identify the conditions under which ecosystem competition would be the appropriate framing to assess a particular conduct or transaction, and whether this framing would effectively displace or complement traditional market analysis. Some suggestions may be found from the literature on cluster markets, which are markets comprising a number (cluster) of non-competing goods: for example, the range of financial services offered by a bank. It has been suggested that it is appropriate to focus on the market for the cluster rather than on individual products only if entering into (non-clustered) competition with the cluster is difficult, and one of the following conditions apply: either there is clear preference for customers to receive the group of products rather than individually, or economies of scope make joint distribution cheaper than distribution of each good separately (HOVENKAMP, 2021).

2.4. Concluding remarks of the debate about relevant market

The relevant market definition is not an end in itself. Likewise, it is difficult to assess in the abstract which is the superior theoretical lens to understand different competitive dynamics in digital markets. What was sought, in this chapter, was just to point out that innovative, zero-priced and multiple-sided markets have particularities that make the task of defining the relevant market more complex. The new tests that were cited throughout the report are examples of this complexity:

- SSNRIE (small but significant non-transitory reduction in innovation efforts)
- SSNDQ (small but significant and non-transitory decrease in quality)
- SSNIAL (small but significant and non-transitory increase in the advertising load)

- SSNIC (small but significant and non-transitory increase in exchanged costs)
- SSNIPT (small but significant and non-transitory increase in price or other worsening of terms)

Other tests may still be created or discussed in international realm.

While relevant market definition is a useful technique (WERDEN, 2014) and may be refined to take into account these new perspectives, antitrust adjudicators could also try to consider establishing market power without necessarily defining the relevant market, resorting to difference and difference analysis, for instance, or making only a *prima facie* definition of the relevant market subject to rebuttal on the basis of evidence of market power (KAPLOW, 2010; SCHWEITZER, HAUCAP, WOLFGANG, & WELKER, 2018; ZINGALES, 2013).

3. Measuring market power in digital markets

The analysis of market power is particularly important to comprehend the incentives and capacity players may have if they engage in a specific unilateral conduct and also to understand the impact (effect) of such practices in society.

Sometimes, market power can be seen as a pre-requisite to perform a specific conduct. On the other hand, in cases such as abuse of intellectual property or sham litigation, the gain of illicit market power can be the result of the conduct itself (and not just a mean to achieve an end). A note submitted by Brazil to an OECD Roundtable (BRAZIL, 2022) pointed out that several questions must be answered simultaneously when one is trying to assess market power, such as: "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 [as indirect evidence or a rebuttable presumption of market power] or on the direct evidence of competitive harm, which eliminates the need for the former. There are myriads 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". Some methods, such as event studies, difference in differences, and price pressure indices, are alternative means to exclusively structuralist analyses.

In order to understand market power of digital platforms and multisided markets, BRICS authorities typically look at all sides of the market (China, India and Brazil) and assess consumer behavior through surveys (South Africa and Russia). Furthermore, CCSA seeks to determine whether the effect of multi-homing may be stronger than network effects, and several jurisdictions may use other indicators of power than price: for instance, authorities may look at the the imposition of contractual terms[14], the number of users and their traffic or time spent on their service, the number of goods agreegated on the services, the uniqueness of data that is possessed (Russia) and when they are a source of innovation and competition (South Africa). In China, in the *Alibaba* case and the *Meituan* case, market shares were analyzed from the perspectives of both platform service revenue and transaction volume, while in the *CNKI* case, the market share was analyzed from the perspectives of user coverage and the possession of academic resources.

Brazil identified some indicators of the existence of dominant position, which is a subcategory of market power: these include number of transactions, number of downloads of a software application, number of active users, number of web-visits and number of clicks[15]. More generally, one could use the following alternative metrics for market shares: quantity shares (in terms of share of sold quantity, bough quantity or

[14] As it did in *Kanspersky v Apple*, by focusing on the possibility of switching and the need for sellers to use different development teams in order to multi-home effectively.
[15] In Merger Case nº 08700.001796/2020-94, *OLX/Zap*, the authority analyzed number of unique visits, quantity of distributed announcements, and quantity of announcements that were not duplicated on other platforms

produced quantity), capacity share (in terms of total capacity or available capacity), revenue share, worker share and consumer share[16].

[16] To the extent that indicators of dominance are deemed relevant to answer this question, it should be noted the following:

- In Brazil, the statute establishes (under art. 36.2) that a dominant position is assumed when a company or group of companies is able to unilaterally or jointly change market conditions or when it controls 20% (twenty percent) or more of the relevant market, provided that such percentage may be modified by Cade for specific sectors of the economy.

- In Russia, the statute identifies (in Art. 5) the factors that will be used to determine the existence of a dominant position include: (1) market share above 50%, unless, when considering a case on violation of antimonopoly legislation or when exercising state control over economic concentration, it is established that the position of the economic entity on the product market is not dominant; (2) market share below 50% when the authority concludes that this market share unchanged or subject to insignificant changes, considering the relative size of shares in this commodity market owned by competitors, the possibility of access to this commodity market of new competitors or on the basis of other criteria characterizing the commodity market; (3) The dominant position of an economic entity (with the exception of a financial organization) whose share in the market of a certain product does not exceed thirty-five percent cannot be recognized, except where federal explicitly establishes this possibility, and in case of collective dominance. Article 5(3), in turn, requires the fulfillment of 3 conditions for the establishment of collective dominance: (1) the aggregate share of not more than three economic entities, the share of each of which is greater than the shares of other economic entities in the relevant commodity market, exceeds fifty percent, or the aggregate share of not more than five economic entities, the share of each of which is greater than the shares of other economic entities in the relevant commodity market; commodity market exceeds seventy percent (this provision shall not apply if the share of at least one of the said economic entities is less than eight percent); 2) over a long period (for at least one year or, if such a period is less than one year, during the period of existence of the relevant commodity market), the relative size of the shares of economic entities is unchanged or subject to minor changes, as well as access to the relevant commodity the market for new competitors is difficult; 3) a product sold or purchased by economic entities cannot be replaced by another product when consumed (including when consumed for production purposes), an increase in the price of a product does not cause a decrease in demand for this product corresponding to such an increase, information about the price, conditions for sale or purchase of this product on the relevant product market is available to an indefinite circle of persons.

Finally, Art. 5 (2. 1) specifies that the dominant position of an economic entity whose founder (participant) is one individual (including those registered as an individual entrepreneur) or several individuals, cannot be recognized as dominant if the proceeds from the sale of goods for the last calendar year of such an economic entity does not exceed four hundred million rubles, except when it qualifies as (1) a member of a group of persons as defined in art. 9; (2) a financial organization; (3) a subject of natural monopoly in a commodity market that is in a state of natural monopoly; (4) an economic entity that has as founders or participants in economic entities - legal entities; (5) a business company, in the authorized capital of which there is a participation share of the Russian Federation, a constituent entity of the Russian Federation, a municipality.

- In India, the statute lists (in Section 19) a series of factors that will be used to assess the existence of a dominant position. Those factors are the following: (a) market share of the enterprise; (b) size and resources of the enterprise; (c) size and importance of the competitors; (d) economic power of the enterprise including

In India, the case-law has identified several indicators of market power, which are specific to different scenarios:

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commercial advantages over competitors; (e) vertical integration of the enterprises or sale or service network of such enterprises; (f) dependence of consumers on the enterprise; (g) monopoly or dominant position whether acquired as a result of any statute or by virtue of being a Government company or a public sector undertaking or otherwise; (h) entry barriers including barriers such as regulatory barriers, financial risk, high capital cost of entry, marketing entry barriers, technical entry barriers, economies of scale, high cost of substitutable goods or service for consumers; (i) countervailing buying power; (j) market structure and size of market; (k) social obligations and social costs; (I) relative advantage, by way of the contribution to the economic development, by the enterprise enjoying a dominant position having or likely to have an appreciable adverse effect on competition; (m) any other factor which the Commission may consider relevant for the inquiry.
- in China, the statute identifies (in Art. 24) the factors that will be used not only to determine, but even to assume (subject to the possibility of rebuttal) the existence of a dominant position, specifically: (i) the relevant market share of one undertaking accounts for 1/2 or above;(ii) the joint relevant market share of two undertakings accounts for 2/3 or above; (iii) the joint relevant market share of three undertakings accounts for 3/4 or above. However, (ii) and (iii) will not apply if the undertaking has 10% or less of market share. Furthermore, the Guidelines on the Platform Economy sets out the following factors:

(1) Market share of undertakings and indicators of relevant market competition conditions: such as transaction value, number of transactions, sales, number of active users, development status of the relevant platform market, number of existing competitors and market share, platform competition characteristics, degree of platform differentiation, economies of scale, situation of potential competitors, innovation and technological changes, etc.;

(2) The undertaking's ability to control the market: such as the undertaking's ability to control the upstream and downstream markets or other related markets, to hinder or affect other undertakings to enter the relevant market, the relevant platform business model, network effect, and to influence or determine prices, internet traffic, or other trading conditions;

(3) The undertaking's financial and technical conditions: such as the undertaking's investor profile, asset scale, source of capital, profitability, financing capacity, technological innovation and application capabilities, intellectual property rights, the ability to collect and process relevant data, and to what extent the financial and technical conditions can facilitate the business expansion or consolidate and maintain the market position of the undertaking;

(4) The degree of dependence of other undertakings on the undertaking's transactions: such as the transaction relationship between other undertakings and the undertaking, transaction volume, transaction duration, lock-in effect, user loyalty, and possibility of other undertakings to switch to other platforms and conversion costs;

(5) Difficulty for other undertakings to enter the relevant market: such as market access, the platform's economies of scale, capital investment scale, technological barriers, user multi-homing, user switching costs, ease of data acquisition, user habits;

(6) Other indicators: Other factors based on the characteristics of platform economy may be considered in finding an undertaking has a dominant market position, which includes the impacts from related market on the market power of the undertaking.

- In South Africa, the statute establishes (under Section 7) that a firm is dominant in a market if-
(a) it has at least 45% of that market; (b) it has at least 35%, but less than 45%, of that market, unless it can show that it does not have market power; or (c) it has less than 35% of that market, but has market power. Market power, in turn, is defined under Section 1 as "the power of a firm to control prices, to exclude competition or to behave to an appreciable extent independently of its competitors, customers or suppliers".

1) for dominance inquiries: market share; size and resource of the enterprise; size and importance of competitors; economic power of the enterprise, including commercial advantages over competitors; vertical integration of the enterprises or service network of such enterprises; dependence of consumers on the enterprise; monopoly or dominant position as a result of statute or by virtue of being a government company or a public sector undertaking or otherwise; entry barriers; countervailing buyer power; market structure and size of the market; social obligations and social costs; relative advantage, by way of the contribution to economic development, by a firm having a dominant position or likely to have appreciable effect on competition.

2) for mergers: extent of barriers, market share, nature and extent of innovation, removal of competitor, effect of competition likely to sustain in the market, extent to which substitutes are available or likely to be available, and likelihood that the merger would result in the parties to the combination being able to significantly and sustainably increase prices or profit margins.

for digital markets, in particular: comparative strength; network effects; feedback loop; dependence of consumers; lack of interoperability between platforms; switching cost; extent of multi-homing; control over data; status quo bias; market shares based on value/volume; economies of scope, access to data as entry barrier and multi-sided nature of markets and the resultant interdependencies.

In South Africa, the CCSA emphasised in the *Meta* case that has referred for prosecution in 2023, following upon a complaint by Govchat, that market power is not only a function of high market shares, but also of the existence of substantial barriers to entry and the absence of countervailing power. Indeed, the CCSA concluded that Meta has substantial market power based on three key factors. First, the CCSA observed that the Social Media Market where Meta is active possesses substantially high barriers to entry and expansion. Second, it was found that Meta has scope advantage as compared to other competitors. Lastly, the CCSA took into account the fact that Meta has an acquisition strategy that protects it from competitive constraints.

Furthermore, in the Online Intermediation Platforms Market Inquiry, the authority used the following factors to distinguish among platforms those with leading market positions that enjoy a degree of dependence from business users and are capable of influencing business user competition or exploiting business users:

- The size of the platform overall and in relation to the intermediation market.
- The number of business users and consumers on the platform.
- The extent of business user dependency on the platform.
- The scale and network effects enjoyed by the platform.
- The market structure.
- The platform's behaviour and conduct, and observed outcomes.
- Other relevant features or evidence that may demonstrate that the platform may have the ability to influence rival platforms or business users.

Overall, an observable international trend for authorities and courts is to rely on a series of alternative indicators, including, most notably: market shares, usually in combination with barriers to entry and countervailing power; diversion ratios (i.e., an assessment of the customers migrating from one firm to another), which in the context of mergers has led to the use of upward pricing pressure Index (UPPI)[17]; as well as direct observation of market power through the Lerner Index (an index that measures the percentage markup that a firm is able to charge over its marginal cost).

In digital markets, new indicators of market power have been suggested in connection to the specific ways in which technology affects the allocation of value in the market in question, including by decreasing the value of ad placement (PATTERSON, 2013) or enabling the extraction of excessive data (GERMANY- BKA, 2019). However, neither cases nor current guidelines or academic literature provide a comprehensive analysis of the characteristics and measurement challenges of market power in digital

[17] Merger guidelines routinely mention not only higher prices but lower quality as potential outcomes that can raise competition concerns. (OECD, 2013, p. 11).US Horizontal Merger Guidelines, 2010. It should be noted however that research finds that the UPPI cannot successfully be adapted using pure quality measures due to an inability to predict whether quality will increase or decrease. To avoid these shortfalls, it has been suggested that a quality-adjusted price can be used in the calculation of pricing pressure (PINTO & SIBLEY, 2016; OECD, 2018). Nonetheless, the inability of UPPI to account for dynamic effects and product repositioning should be recognised before being relied upon in merger review (WILLIG, 2011).

markets. The following classification aims to take stock at different indicators of power that could be considered in these markets, whilst recognizing the need for a mix and match of different tools depending on the specific market and concern(s) at stake.

3.1. New perspective on Market Power

Market power is a disputed term. Market power is typically defined as the power to raise the price over the competitive level.

Although references to price increases are often used as a shorthand for a wider range of manifestations of power, including reduction of quality, output, innovation or variety (EUROPEAN UNION- E.C., 2008), measurement of the likelihood of profitable price increase remains a staple method for establishing market power. Nevertheless, this method presents significant challenges in digital markets, particularly in the context of “zero price” markets: as noted above (section 2.2), consumers tend to see zero as an “emotional hot button” that can lead them to underestimate the substitutability of competing products, and to overlook the downstream consequences of trading data and attention.

In theory, a price-tag could be applied to measure the profitability of increases in personal data collection and use or of the attention costs borne by a consumer in relation to a particular good or service. However, while attention is a perishable good that must be renovated over time in order to profit from it, therefore offering consumers an effective exit (HIRSCHMANN, 1970), the same does not necessarily apply to personal data: there is intrinsic value in the data disclosed by consumers as a counter-performance to a commercial transaction, and this value is not undermined by the ability of users to discontinue their use of the good or service.

Furthermore, information asymmetry affects consumers’ ability to assess the value of what they are trading. First, while the privacy policy of the provider of good or service in question might shed some light on the data collected and its intended use, these are typically far from complete and detailed descriptions; additionally, grasping the content of these descriptions presupposes a significant amount of time and level of expertise that are simply not available to the average consumer (MC DONALD &

CRANOR, 2008; AUXIER, et al., 2019). Second, while data is by nature replicable, consumers typically lack the machinery to track their digital footprint.

As a result, they find themselves ignoring important elements about personal data that are already in the hands of the provider, and thus the added benefit (or detriment) of any marginal data that they disclose. From the perspective of the provider, given the indirect network effects, one needs to take into account the effects of price increases on the other side of the platform. This means that the introduction of user fees can slow down the growth of a platform, and, therefore, it is only strategic to do so where sufficiently large user groups have already been achieved (GERMANY- BKA, 2016).

For all these reasons, reliance on the profit-based indicators (such as the Lerner Index) and the traditional metric of market shares is riddled with complexities in a zero-price context. The fact that market shares are not necessarily indicative of market power is now widely recognized (PORTUGAL, 2019; OECD, 1996), especially when it comes to fast-growing sectors characterized by short innovation cycles.[18]

Some authorities have emphasised the importance of alternative criteria to turnover, namely user-based and volume-based criteria such as number of registered users, monthly or daily active users, page visits or page referrals, logged-in users, number of uploaded/seen videos, and number of searches (LANCIERI & SAKOWSKI, 2020, p. 20) , or even the financial resources and technical conditions of the economic operator (CHINA, 2021). Others have placed more emphasis on innovation, suggesting that assessment of market power should focus on the ability to "undermine innovation through control of key resources, critical access points, visibility, information, etc." (FRANCE CNNum, 2014, p. 21).

This suggestion is sensible in taking into account that the strategic value for a participant in a digital market, particularly in the context of platforms and platform-based

[18] Case T-79/12. *Cisco Systems Inc. and Messagenet SpA v Commission.* ECLI:EU:T:2013:635.

ecosystems, may be neither on turnover nor in the number of users (JACOBIDES, SUNDARARAJAN, & ALSTYNE, 2019), as illustrated below.

Metric	Companies that use the metric
Revenue	Booking.com, SAP, Uber
Funnel of transaction/transaction volume | number of people travelling	Booking.com, BlaBlaCar
Profit and market share	Uber
Number of participants (consumers, suppliers) | "gravity of the platform", e.g. how many complementors | number of active users	Booking.com, SAP, Deutsche Bank
Quality (customer satisfaction ratings, surveys)	Booking.com, Door2Door, SAP
Supply – number of rooms and number of properties	Booking.com
Customer adoption rate | customer engagement | customer experiences and outcomes | customer health score | customer acquisition costs	SAP, Deutsche Bank, GE Digital, BlaBlaCar
Prevalence of multi-homing	Lyft
Killer application	Alibaba
Culture and talent – talent adoption – "integrated talent management score"	GE Digital
Share of revenues from digital sales	Klöckner
Membership	BlaBlaCar
Utilization rate	Door2Door
Share of ecosystem revenue captured by partners, share captured by platform	Alibaba, SAP
Share of organic new users to paid new users	Uber, Lyft
Match rate	Alibaba, Uber, Lyft

Table 2- Measures of Digital Platform Success

Source: (JACOBIDES, SUNDARARAJAN, & ALSTYNE, 2019)

In a working paper, the *Bundeskartellamt* made a further suggestion on the factors that should be taken into account in the presence of direct and indirect network effects (GERMANY- BKA, 2016). Building on a metric used by Evans and Schmalensee to establish the existence of market tipping (EVANS & SCHMALENSEE, 2007), the *Bundeskartellamt* argues that authorities should consider as indicators the existence of self-reinforcing feedback loops, economies of scale, multi-homing, platform differentiation, platform congestion (the technical and physical limitations of a platform that, once reached, may make it impossible for the platform to accept any more users), as well as data sources and innovation potential. In particular, they suggest that this last element should be focused not only on the innovation-driven competition in the existing market, but also the potential competition from innovative business. In this respect, the *Bundeskartellamt* recognizes that, while the existence of free online services should be taken into account, the mere ability to reach users is not enough to constrain market power: thus, the effectiveness of entry depends also on their monetization strategy.

More generally, it has been recognized that the assessment of traditional market power is complicated in digital markets by the interaction of some of the characteristics discussed above in section 2. Not coincidentally, the 10th Amendment to the German Competition Act introduced a provision establishing the need to take into account the following factors in the assessment of the market power of multi-sided markets and platforms: (1) direct and indirect network effects, (2) the parallel use of services from different providers and the switching costs for users, (3) the undertaking's economies of scale arising in connection with network effects, (4) the undertaking's access to data relevant for competition, and (5) innovation-driven competitive pressure (§ 18 para 3a GWB).

Further complications may arise when using the traditional approach to examine market power in the context of ecosystems, since cross-ecosystem competition may be significantly affected by switching costs such as: (i) the need to purchase a specific primary device, such as a mobile device or a hardware; (ii) the inability to transfer data from one system to another, creating a disincentive for users to switch; (iii) any signed (long-term) contracts; and (iv) any learning costs, as changing to a new platform or system requires one to learn how to use the new system (FRANCE & UNITED KINGDOM, 2014).

3.2. Relative market power

A second type of power that is of relevance in digital markets is the one focused on the superior bargaining position enjoyed by a subset of actors within the digital ecosystem *vis a vis* their trading partners, in particular suppliers or retailers in the context of supply chains. More specifically, this contractual power is present where there is a relationship of dependence for the supply of or demand for a good or a service in such a way that there are no sufficient and reasonable possibilities to switch to other companies.

Superior bargaining power is a source of concern in all BRICS jurisdictions, except China; however, in Brazil and Russia it is merely a factor to be considered in the market power analysis. In South Africa, by contrast, it is specifically addressed in the law with specific rules on buyer power, which define the sectors in which it applies (currently agro-processing, eCommerce & online services, and grocery -wholesale & retail-), considering it irrefutably presumed above 45%, and *prima facie* presumed between 35% and 45% market share.

Specific forms of abuse of this type of power are prohibited by competition laws in some jurisdictions, including Austria, Belgium, China, France, Germany, Italy, Japan, Korea, the Slovak Republic, South Africa, Switzerland, and Taiwan. In some cases, these laws recognize abuses in a way that replicates some of the traditional competition law provisions: for instance, the unlawful refusal of a sale, purchase or other transaction conditions; the direct or indirect imposition of purchase or sale prices or other unfair trading conditions; the limitation of production, markets or technical development to the detriment of consumers; the application of unequal conditions to equivalent services to economic partners, thereby placing them at a competitive disadvantage; the subjection of the conclusion of contracts to the acceptance, by the economic partners, of additional services which, by their nature or according to commercial usage, are not related to the subject matter of those contracts (THOMBAL, 2020). In others, these abuses include new concepts or terminologies, such as "unfair impediment or discrimination" and "demanding advantages without objective justification" (GLÖCKNER, 2019)

What is crucial to notice is that, in all these cases, the situation of power is defined with reference to the specific relationship between two undertakings, and thus without direct reference to the power of those two undertakings in the market writ large. However, some elements contributing to the determination of the scope of protection against abuse of relative market power can be said to be at least indirectly related to the relative success on the market of those undertakings: for instance, the notions of "sufficient" and "reasonable" possibilities to switch are evidently informed by market considerations, although the former is usually interpreted on objective grounds, and the latter from the perspective of the alleged victim of abuse (FETEIRA, 2015). Similarly, in South Africa, according to Government Gazette no. 43018, the Buyer Power Enforcement Guidelines aim to protect against unfair commercial practices by dominant buyers only small and medium-sized businesses (SMEs) or suppliers owned and controlled by historically disadvantaged persons (HDP firms) which supply less than 20% of the buyer's purchases of a particular product (SOUTH AFRICA, 2020, p. 35).

According to Lianos & Lombardi (2016), some countries established a range of factors that are relevant to establish the existence of economic dependence, which include the existence of alternative distribution paths or alternative production paths, the importance of a product for the retailer, brand strength, and the existence of aggregated buyer power. On the basis of these factors, four types of relationships have been identified:

a) assortment-based dependence, if the other party's product is considered as a must-stock good due to its notoriety or popularity;

b) scarcity-based dependence, if the other party is one of the rare sources where the good can be found;

c) demand-based dependence, if the other party's input or resource is of significant importance in the undertaking's turnover;

d) business relationship-based dependence, if the other party's investment in the relationship has been significant[19].

To these traditional categories, it is important to add the one introduced by the 10th Amendment to German Competition Law, clarifying that "dependence may also arise from the fact that an undertaking is dependent on access to data controlled by another undertaking for its own activities" (§20, 1a). Furthermore, the Amendment explicitly recognizes the role of intermediation power as a type of power related to the importance of platforms as intermediaries for access to sales and procurement markets (SCHWEITZER, HAUCAP, WOLFGANG, & WELKER, 2018, p. 4).

On the other hand, it must be highlighted that the use of this concept ("Relative market power") can raise concerns about efficiency. Indeed, according to Këllezi (2008) there may be "risks related to the protection of inefficient undertakings and the inherent

[19] In this regard, German competition law presumes the existence of this dependence where a supplier regularly grants to a purchaser, in addition to discounts customary in the trade or other remuneration, special benefits which are not granted to similar purchasers.

risk of over-regulating the market and inhibiting efficient behaviour and the growth of efficient firms", by using these concepts.

Indeed, Këllezi (2008, p. 86) refers that the traditional approach of "equally-efficient-competitor and the consumer-welfare test aim at distinguishing between the protection of competition and the protection of competitors. Nevertheless, the majority of the abusive practices in the situation of economic dependence are directed towards vertically related customers, not competitors." So, by trying to impose a rule determining the prohibition of price discrimination, under the argument of economic dependence, an interpreter may contribute, in specific situations, to the reduction of the quantity offered in the market.

Therefore, caution is required in applying this specific kind of understanding.

3.3. Data Power

A third form of manifestation of power is the use of superior access to data as a way to erect obstacles to competition in a given market. This relates to the use of data for at least two different purposes: first, as an input for building and training algorithms; and second, as an asset that can be exploited to offer targeted products and services. A third role can be recognized in forecasting market trends and facilitating the improvement of an undertaking's production and distribution process, but this usage is not likely to raise competitive concerns, and therefore will not be addressed here.

All BRICS authorities recognize that data can be a competitive advantage that is captured under market definition. In this context, Brazil, despite a lack of specific conduct cases in this area, calls attention for the role played by business models, distinguishing between data that are merely an input (as in the case of a joint venture for credit scoring among banks[20]) and

[20] Merger nº 08700.002792/2016-47, Banco Bradesco S.A.; Banco do Brasil S.A.; Banco Santander (Brasil); Caixa Econômica Federal; Itaú Unibanco S.A.

data that are also a product (as in the case involving the commercialization of market share data[21], or in a case involving its possible sale for third parties[22]).

In China, the undertakings' ability to collect and process relevant data, such as the number of platform users, user loyalty, user data portability, algorithms, and computing power, can be used as a basis to determine if data provides a competitive advantage. In India, it can be seen as a "resource" that is used to estimate market power; it is also recognized that it may grant such power as it enables incumbents to engage in data-driven innovations, improve their market position and provide competitive advantage, and can have the potential when combined with feedback loops to raise rival costs and create entry barriers. Similarly, in South Africa, it is recognized that it would confer market power when it is required for innovation and competition and cannot be reasonably and timeously replicated.

For instance, because it allows the attainment of a level of knowledge about an individual's behavior and preferences that can hardly be matched by entrants and facilitate exploitation (SOUTH AFRICA- CCSA, 2020b, p. 48), and because existing data points can be used to infer additional data through probabilistic reasoning (LYNSKEY, 2019). In these situations, competitive harm may arise to the extent that certain market players derive an objective advantage from the loss of agency and control over personal data that individuals may suffer, despite the theoretical possibility for such individuals to avail themselves of the safeguards provided by consumer and data protection legislation (such as, most notably, transparency and the exercise of data subjects rights).

3.4. Informational power

A related, but yet different, type of concern with market power is the use of information to prevent the effective competition. This can be done in several ways, including misleading or manipulated information, personalized offerings and so-called

[21] Preliminary Inquiry n.º 08700.002074/2013-28, *IMS HEALTH DO BRASIL LTDA ("IMS") e Abafarma – Associação Brasileira do Atacado Farmacêutico.*
[22] Merger nº 08700.006373/2020-61, *Claro/Serasa.*

"confusopoly" – i.e., the use of confusing marketing designed to prevent the buyer making informed decisions. These manifestations of power interact with the relationship between a provider of goods or services and a consumer, although the effect of that is to create a smokescreen against competitors' products.

BRICS authorities recognize the relevance of this form of power, especially when it comes to lack of transparency. India specifies that this may occur where it amounts to the imposition of unfair conditions or is used to leverage market power or results in denial of market access or limiting markets, as it happened in a case involving WhatsApp´s new privacy policy in 2021. In March 2021, the CCI directed its Director General to conduct an investigation into updated privacy policy of WhatsApp. The CCI *prima facie* held that WhatsApp is dominant in the relevant market for Over-the-Top (OTT) messaging apps through smartphones in India; that due to lack of/restricted interoperability between platforms, the users may find it difficult to switch over to other applications except at a significant loss; that there is opacity, vagueness, open-endedness and incomplete disclosures in the 2021 Update on vital information categories; and that concentration of data in WhatsApp and Facebook itself may raise competition concerns, with data sharing that amounts to degradation of non-price parameters of competition.

CADE also was involved in the analysis of the 2021 privacy policy in a joint action (yet without opening a formal investigation or conducting an analysis of market power) together with the consumer protection and data protection authorities, as well as the civil public prosecutor. This joint action was concluded with a warning to WhatsApp that its 2021 privacy policy update might entail a violation of rules of different legal regimes-including the lack of transparency in the sharing of personal data.

Other actions worth mentioning regarding the exercise of power through lack of transparency were taken in Russia: in August 2020, FAS imposed a fine on Apple for abuse of dominant position in the market of applications for mobile devices operating under iOS precisely because of the use of such power. The Authority found that in the fall of 2018, after the release of the iOS 12 operating system with the pre-installed Screen time app, Apple Inc. began to restrict the tools and capabilities of third-party parental control applications, as a result of which such applications lost some of the important functionality. FAS concluded that the conditions established by Apple for admission of applications to App Store, whereby Apple is entitled to discretionally reject any third-party application, result in uncertainty and may lead to restriction of competition in the market of applications for the iOS operating system. Similarly, in February 2022, FAS concluded that Alphabet abused its dominant position with regard to Youtube's "sudden blocking and deletion of user accounts" due to the lack of transparency, bias and unpredictability of the rules related to the formation, suspension, blocking of accounts and the circulation of user content on Youtube.

PATTERSON (2017) suggests a test of legality based on four (cumulative) elements: first, that competitors have access to accurate information that would allow them to correct any information deficiencies. Indeed, their access to accurate information may be hampered by the absence of objective reference points, particularly where the information has some intrinsic subjectivity. Second, that competitors are able to provide corrective information when that is useful to consumers, which may effectively be impossible where they cannot reach those consumers who are induced in error (for instance, because it is impossible or impractical for them to detect when such inducement occurs). Third, that competitors have in fact an incentive to correct the information problems, which may not be the case when it is in the economic interest of the industry or a subset of it to perpetuate or perhaps even replicate the same practices. Fourth, it is likely that consumers would readily accept the correct information as a substitute for the information deficiencies, rather than being affected by behavioral biases such as reputation or confirmation bias.

Although this last element may be complicated by the need for in-depth studies about consumers' malleability to inaccurate information, the test could provide a valuable tool for authorities to screen for possible use of informational power by participants in digital markets. If anything, the rise of the platform economy facilitates the emergence of these practices, due to the ample opportunities by companies that are serving as gateways of information to target the information they convey to consumers, and to benefit from feedback loops that reinforce consumers' affiliation to the platform in question.

On the other hand, as a cautionary note, the idea that antitrust law should be used to limit the freedom of dominant information providers to design and use their products in specific ways may confer wide discretionary powers in the hands of Competition Authorities, in judging what would be the “truth” or “manipulation” of reality.

3.5. Architectural power

Another possible manifestation of power in digital markets which cannot be always subsumed within the previous forms is the ability to set up user interface design choices in a way that benefit an online service by coercing, steering, or deceiving users into making unintended and potentially harmful decisions. This type of conduct, often called “nudging” or viewed as part of the narrower concept of using “dark patterns” (DAY & STEMLER, 2019), is enabled by the control over the architecture for the distribution of information.

Some of BRICS authorities said that, although coercion, steering and deception may be taken into account in the assessment of market power, it is typically the competence of other authorities to look into this (Russia, Brazil and China). It should be noted, however, that Russian competition law specifically includes a prohibition of unfair competition by deception[23], one of unfair competition through incorrect comparison[24], and one of unfair competition related to the creation of confusion[25].

Despite the harmful potential of some of these practices, an act that directs or influences consumer choice may also be welfare-enhancing, in the pursuit of legitimate business strategy. Antitrust analysis must therefore thread carefully in examining this manifestation of architectural power, distinguishing those interface design choices that satisfy consumer preferences from those that result in manipulation.

Thaler (2015) has identified three criteria to distinguish acceptable nudging (or "nudging for good") from manipulation:

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[23] Article 14 (2). This is phrased in general terms, but it includes by way of illustration the following:
1) the quality and consumer properties of the goods offered for sale, the purpose of such goods, the methods and conditions for their manufacture or use, the results expected from the use of such goods, their suitability for certain purposes;
2) the quantity of goods offered for sale, the availability of such goods on the market, the possibility of acquiring them under certain conditions, the actual amount of demand for such goods;
3) the place of production of the goods offered for sale, the manufacturer of such goods, the warranty obligations of the seller or manufacturer;
4) the conditions under which the goods are offered for sale, in particular the price of such goods.

[24] Article 14 (3). This is phrased in general terms, but it includes by way of illustration the following:
1) comparison with another economic entity-competitor and (or) its product by using the words "best", "first", "number one", "most", "only", other words or designations that create the impression about the superiority of the product and (or) the economic entity, without specifying specific characteristics or comparison parameters that have objective confirmation, or if the statements containing these words are false, inaccurate or distorted;
2) comparison with another economic entity-competitor and (or) its product, in which there is no indication of specific compared characteristics or parameters, or the comparison results cannot be objectively verified;
3) comparison with another economic entity-competitor and (or) its product, based solely on insignificant or incomparable facts and containing a negative assessment of the activities of the economic entity-competitor and (or) its product.

[25] Art. 14 (6). This is phrased in general terms as an action or inaction that can cause confusion with the activities of an economic entity-competitor or with goods or services introduced by an economic entity-competitor into civil circulation on the territory of the Russian Federation, including: 1) illegal use of a designation that is identical to a trademark, trade name, commercial designation, name of the place of origin of goods of an economic entity-competitor or confusingly similar to them by placing it on goods, labels, packaging or otherwise using it in relation to goods that are sold or otherwise put into civil circulation on the territory of the Russian Federation, as well as by using it in the information and telecommunications network "Internet", including placement in a domain name and other addressing methods;
2) copying or imitation of the appearance of a product introduced into civil circulation by a competing business entity, the packaging of such a product, its label, name, color scheme, corporate identity as a whole (in the aggregate of branded clothing, design of a trading floor, showcase) or other elements, individualizing the economic entity-competitor and (or) its product.

i. First, the nudge is transparent and not misleading;
ii. Second, it is as easy as possible to opt out from the nudge; and
iii. Third, the nudge must increase welfare.

First of all, it is important to note that the requisite level of transparency depends on the degree of intrusiveness of the nudge with an individual's deliberative process: there may be cases where a disclosure is inapt to fulfil the purpose of transparency, for instance because the nudge appeals to irrational thinking (so called "system 1") while the disclosure merely presents information to guide a consumer's rational thinking ("system 2") (KAHNEMAN, 2011); or because a meaningful disclosure would require expert evaluation, or would necessitate of special safeguards such as approval by expert review boards and ongoing/periodic monitoring of implementation.

Second, it should be recognized that the existence of an easy opt-out is not a requisite for acceptable nudging, but a factor that can serve to mitigate the potentially disproportionate anticompetitive effect of a nudge designed for a legitimate purpose. There might indeed be cases where opting out involves several steps, but the effects on consumers are still largely positive.

Third, it is necessary to clarify that welfare analysis must not focus on the specific situation of the nudged consumer (or even not necessarily on that of the group of nudged consumers), but rather at the overall effect on consumer welfare.

These criteria imply a need for engagement with empirical evidence of consumer preferences, and of the effects of nudges over consumer behavior. However, while this can in principle be done with controlled groups experiments (LUGURI & STRAHILEVITZ, 2021), there are important challenges in relation to the identification of the reference group of consumers as well as of the behavior in question, considering that in the online environment both are frequently updated. Furthermore, the framing of survey questions can have a significant impact on the outcome.

3.6. Portfolio power

Another manifestation of power that has been increasingly observed in digital market is one relating to large firms using their portfolio of products in ways that allows them to leverage their strength across markets. This concept has mainly been used in the context of conglomerate mergers, as discussed below in section 7. However, as noted recently by the OECD (2022), it may also be applied in other settings, and is of particular interest in digital markets due to the rise of digital ecosystems, where multiple markets are interconnected. For instance, in recent abuse of dominance case in online markets in China, such as *Alibaba*, *Meituan* and *CNKI*, SAMR looked into the parties'power in associated markets.

3.7. Concluding remarks of the debate about market power

Market power analysis sometimes can be seen as a pre-requisite for condemning specific conducts, but, also, could be the outcome of illicit acts. For example, in sham litigation cases, even an agent without market power can exclude other players from the market. As there are various elements to consider at the same time, presenting a clear, abstract, closed definition of dominance, or even market power, is, certainly, a complex task.

This report does not have the intention to present a closed answer to the problem of how to deal with market power or how to understand and apply concepts of relative, data, informational or architectural power. It is enough here to describe that there may be different approaches on how to deal with competition problems in digital scenario. Indeed, in digital markets, there are different dimensions that may impact this specific analysis. Also, it is important to understand that there is a balance between under and over intervening in markets, depending on how authorities consider what is licit or illicit use of market power (and what market power really is).

4. Some conducts in the context of the digital economy

This chapter aims at discussing a few types of conduct which generate particular concern in the digital scenario, taking stock of the framework in place in BRICS jurisdictions to deal with such conduct.

4.1. Algorithmic collusion

The advancement of digital technology and data analytics has enabled a growing number of firms to rely on computer algorithms for their decision, not only for a more efficient management of their production chain, but also to forecast market trends, improve their pricing, and customize their services (OECD, 2017).

A similar framework is in place in the BRICS to deal with coordination reached through algorithms. For instance, South African competition law prohibits both "agreements" between competitors (whether or not legally enforceable) and "concerted practices", which refers to co-operative or coordinated conduct between firms, achieved through direct or indirect contact, that replaces their independent action[26]. It also establishes a presumption of agreement where anyone of the firms involved owns a significant interest in the other, or they have at least one director or substantial shareholder in common (rebuttable by establishing that the practice was a normal commercial response to conditions prevailing in that market)[27].

South Africa presented a Note to OECD for Competition Committee meeting on 14-16 June 2023, explaining that:

> The Competition Commission of South Africa ("CCSA") has been active in exploring the role of algorithms in how they shape competition in various markets and has obtained valuable insights in this regard. (…) Two broad themes of how algorithms affect competition are

[26] Section 4 of the Competition Act
[27] Section 4 (2) and (3) of the Act

explored, namely how algorithms affect ranking on digital platforms and how this in turn shapes competition in online markets, and the role that price recommender systems and AI tools play in an online world and the role it has in facilitating tacit collusion. (…)

A recent case that the CCSA referred to the Competition Tribunal of South Africa for prosecution highlights the potential for firms to abuse an online platform's algorithm to achieve a collusive outcome. The case involves two competing companies selling personal protective equipment (PPE) during the height of the Covid-19 pandemic on Takealot, South Africa's largest online eCommerce marketplace. It is alleged that the two firms colluded to fix prices of face masks and divided the market around times that they would feature more prominently on the platform.

The firms achieved this outcome by making use of features of Takealot's algorithm to influence their relative ranking position and visibility, in turn impacting on sales volumes to consumers. Takealot takes variables such as price and stock availability into account in its algorithm which then affects visibility of suppliers to customers. For example, a supplier that has a cheaper product and available stock is likely to have its product more visible to customers on the Takealot platform than a supplier with a higher price and less stock. The visibility in turn impacts on sales volumes as consumers tend to click on more prominently displayed results.

It is alleged that the two companies, through telephonic discussions, allocated days to each other. However, to try avoid detection through more obvious conduct such as not selling on particular days allocated to the other party, the firms sought to engage in conduct that would impact on their ranking based on the Takealot algorithm. It was also agreed to alternate the days where each would price higher than the other, and where stock availability would be reduced. This meant each firm would have a day to charge a higher price with limited stock availability followed by a day to charge a lower price with greater stock availability. The switching would be at 5 pm each day when the parties would adjust their respective prices and stock availability according to

> which day was allocated to them. The firm with the higher price and low stock availability would be relegated down the ranking, making them less likely to contest the other for consumer attention and sales.[28] (SOUTH AFRICA, 2023)

In Brazil, article 36 of Law No. 12.529/2011 establishes that a conduct is deemed an antitrust violation whenever it is adopted for the purpose of causing or may cause the following effects, even if these are potential: (i) limit, distort, or in any way harm free competition; (ii) arbitrarily increase the economic player's profits; (iii) dominate relevant markets for goods and services; and (iv) whenever the economic player exercises its market power in an abusive manner. Still, article 36, paragraph 3, presents a non-exhaustive list of conducts. According to article 36, I and II of Law No. 12.529/2011, it is considered illegal:

> I – to agree, join, manipulate or adjust with competitors, in any way:
> a) the prices of goods or services individually offered;
> b) the production or sale of a restricted or limited amount of goods or the provision of a limited or restricted number, volume or frequency of services;
> c) the division of parts or segments of a potential or current market of goods or services by means of, among others, the distribution of customers, suppliers, regions or time periods;
> d) prices, conditions, privileges or refusal to participate in public bidding;
>
> II – to promote, obtain or influence the adoption of uniform or agreed business practices among competitors

[28] See Competition Commission of South Africa, Competition Commission Newsletter (April 2023). Retrieved 5 May 2023 from: https://www.compcom.co.za/wp-content/uploads/2023/04/CompCom-Newsletter-April-2023.pdf.

Therefore, there is no need to adjust the legal concept of cartel in Brazil in order to punish algorithmic collusion, considering that: (i) the list of prohibited in article 36 is not exhaustive; and (ii) article 36, II, of Law No. 12.529/2011 can potentially cover algorithmic collusionin a broader range scenarios. In line with this, Brazil presented a Note to OECD for Competition Committee meeting on 14-16 June 2023 (BRAZIL, 2023) reporting that:

> Algorithms may also be designed to facilitate collusion between companies. For example, companies may use algorithms to monitor each other's behavior and enforce a collusive agreement. An algorithm may be designed to detect deviations from agreed-upon prices and trigger a response such as a price change or a warning message.
>
> However, algorithms can also evolve beyond their original design as they process new data and information. One way they evolve is through machine learning, which allows them to learn and adapt by using data. This can be relevant when investigating mergers and acquisitions, for example, since combining data sets can improve algorithm performance, generating efficiencies but also potentially increasing barriers to entry. Another way algorithms can improve is through optimization, such as with genetic algorithms, inspired by natural selection. They evolve potential solutions over multiple generations to find the best one. However, because the result is unpredictable, there are concerns about algorithms coming to display anticompetitive behavior, such as collusion. Algorithms are often associated with online markets such as search engines and online shopping. However, their use is becoming widespread in various industries as data availability and processing capacity increase. Two recent cases in Brazil that dealt with pricing algorithms occurred in the airline market and the liquid fuel market.The first case cited by Brazil concerns an increase in airplane ticket prices, fuel prices, and aviation taxes in the states of Rio Grande do Norte, Bahia, and Tocantins, and the existence of price parallelism among companies as to several routes. In this

case[29], the Department of Economic Studies obtained evidence through surveys sent to the investigated companies that they constantly monitored the prices of competitors through the use of a company specialized in the collection of real-time information. However, CADE ultimately concluded that there was no robust evidence of agreement.

The second case originates from a consultation submitted to CADE by gasoline distributor Ipiranga regarding its policy that included an algorithmic rebate scheme for the liquid fuel distribution market[30]. The policy offered the possibility for retailers to negotiate a discount on the sell-in price if they offered a lower sell-out price to consumers, with the expectation of increased sales volume. The novelty introduced by Ipiranga concerned an algorithmically-driven maximum sell-out price for each retailer, based on their unique characteristics, using a common methodology. In this case, CADE´s tribunal unanimously found the arrangement to be permitted under Brazilian competition law, particularly because resale prices were merely recommended (not imposed) and concerned the maximum (rather than the minimum) price, the arrangement was adopted unilaterally and without any retaliation in case of non-acceptance, and each determination of price would involve an analysis of the characteristic of the particular retailer. This particular aspect was considered as a mitigating factor for the risk of price coordination, and the exclusive control over the algorithmic system and its database was suggested as an additional safeguard, together with the one that the price suggestion always be lower than the resale price currently charged.

[29] See Technical Note No. 2022/DEE/CADE on proceedings n. 08700.001653/2019-49 Tarifas aéreas do Rio Grande do Norte; 08700.002957/2019-23 Tarifas aéreas da Bahia 08700.003524/2019-95; Tarifas aéreas de Palmas 08700.003164/2019-21; 08700.002345/2020-74; 08700.002367/2020-34; 08700.002642/2020-10.

[30] Administrative Proceeding No. 08700.002055/2021-10

In India, the notion of “agreement” includes any arrangement or understanding or action in concert: whether or not such arrangement, understanding or action is formal or in writing; and whether or not such arrangement, understanding or action is intended to be enforceable by legal proceedings[31].

In Russia, the competition law includes a prohibition of concerted actions. which do not constitute agreements, but nevertheless fulfill the following conditions: (1) have as result the interests of each of the specified economic entities (2) the actions are known in advance to each of the economic entities participating in them in connection with the public statement of one of them about the commission of such actions; and (3) the actions of each of these economic entities are caused by the actions of other economic entities participating in concerted actions, and are not the result of circumstances that equally affect all economic entities in the relevant commodity market[32].

In China, as well, the notion of monopolistic agreements prohibited in the law includes agreements, decisions or *concerted actions* which eliminate or restrict competition (art. 16). This notwithstanding, article 6 of the Guidelines on the Platform Economy specifically warns that operators in the field of platform economy with competitive relations may reach horizontal monopoly agreements such as fixed prices, market segmentation, restriction of production (sales), restriction of new technologies (products), and joint resistance to transactions by: (1) Using the platform to collect and exchange sensitive information such as price, sales volume, cost, customer, etc.; (2) Using technical means to communicate with the will; (3) Using data, algorithms, platform rules, etc. to achieve coordinated behavior; (4) Other ways that help achieve synergy.

[31] Section 2 (b) of the Competition Act
[32] Article 8

Considering the above, and the existence of some case-law involving algorithmic collusion (particularly in Brazil and Russia)[33], it is no surprise that no BRICS authority considered that new provisions must be introduced in order to address it.

Brazil mentioned that the notion of "influence of a uniform conduct" is better suited than the notion of "concerted practice" to deal with the situation known as "autonomous machine" (or "Digital Eye"), a concept that refers to the unilateral use of heuristic models following some high-level order, potentially without awareness of collusion as likely consequence (EZRACHI & STUCKE 2016, p. 178).

It is also worth noting that algorithmic collusion may involve a vertical element, a so called "hub and spoke" agreement. The legal assessment of this phenomenon may be somewhat different depending on the jurisdiction in question: for instance, in the United States, courts have insisted on the need to identify a "rim" that connects the horizontal spokes. To that end, while it might not be sufficient to show that the horizontal spokes acted in parallel at the request of a common vertical business partner, or knew that similar policies would be adopted by their competitors, an orchestrated horizontal conspiracy can be inferred by using additional 'plus factors', such as direct communications between the horizontal competitors, actions against independent business interests, actions that are conditional on a similar or identical course of conduct of competitors, and a significant departure from past business practices (BRASS & HIGNEY, 2016; OECD, 2017, p. 20).

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[33] See, in Brazil: Case 08012.00 0677/199 9-70, *TAM, Varig, Transbrasil, Vasp and ATPCO*; Case 08012.00 2028/200 2-24 and 08012.00 3572/200 4-55, *Airline Tariff Publishing Company* (*ATPCO*); Case 08012.011 791/2010 -56 *Centro de Formação de Condutores Estrela Ltda., Auto Escola e Despachant e Helly, Auto Escola e Despachant e Mundial, Auto Escola e Despachant e Santa Bárbara Auto Escola Sinal Verde, Auto Escola Pérola and others*; Case 08012.00 5660/201 0-30, *Aface and ITV*; Case 08700.00 8318/201 6-29, Associação de Motoristas Autônomos de Aplicativos, Ministério Público do Estado de São Paulo and Uber Tecnologia do Brasil Ltda; and In Russia: *LG Electronics; Samsung Electronics RUS Company; JSC IPK Strazh, LLC Transplombir, LLC TD KZMI, LLC SotekKomTs entr, CJSC OTSV*.

By contrast, in the European Union, the applicable legal standard for inferring intent on the part of the hub can benefit from the lower threshold applicable regarding the liability of an undertaking for the conduct of an independent contractor, which require simply that the undertaking could reasonably have foreseen the anti-competitive acts of its competitors and the service provider and was prepared to accept the risk which they entailed[34]. The latter approach appears to be more flexible to attach liability for the outcome of algorithmic conduct.

From a BRICS perspective, Russia explicitly recognizes specific conditions for hub & spoke cartels, which relate to the use of a third party to exchange the information between parties for which an agreement can be said to exist. The Chinese Guidelines on the Platform Economy in their Art. 6 warn that platform operators may reach vertical monopoly agreements such as fixed resale prices and limited minimum resale prices in the following ways: (1) Automatic price setting by technical means; (2) Unify prices by using platform rules; (3) Use data and algorithms to directly or indirectly limit prices; and (4) Use technical means, platform rules, data and algorithms to limit other trading conditions and exclude and restrict market competition. Similarly, Art. 7 specifies that a platform operator with a competitive relationship may reach an axis-spoke agreement with the effect of a horizontal monopoly agreement with the help of the vertical relationship by the platform operator, or organized and coordinated by the platform operator; and that in order to analyze whether the agreement is a monopolistic agreement, it shall be considered whether the operators on the platform with competitive relationship use technical means, platform rules, data and algorithms to reach and implement a monopoly agreement to exclude and restrict relevant market competition.

[34] Case C-542/14, *VM Remonts and others* ECLI:EU:C:2016:57.

In India, the case-law has made clear that mere use of a common algorithm is not sufficient for a hub & spoke conspiracy: in November 2018, the Competition Commission of India (CCI) dismissed a case involving an alleged algorithmic price-fixing facilitation by taxi aggregators, Ola and Uber, due to the lack of evidence of either an agreement between drivers or an agreement imposed to drivers by the platform to coordinate on their behalf[35]. This decision was upheld by the Supreme Court in December 2020[36], confirming the orientation of the CCI expressed in an earlier decision as to the importance of ascertaining the existence of an active role by the hub and the spokes[37]. The recent Competition Amendment Act of 2023 introduces a explicit provision with respect to hub and spoke cartel providing that"an enterprise or association of enterprises or a person or association of persons though not engaged in identical or similar trade shall also be presumed to be part of the agreement under this sub-section if it participates or intends to participate in the furtherance of such agreement".

Brazil has decisions analyzing the possibility of configuration of coordinated conduct of "hub and spoke" in some cases, referring that the existence of an illicit agreement and the exchange of competitively sensitive information between competitors help to characterize this type of conduct. At the same time, CADE may opt to pursue a practice merely as "influence to uniform commercial conduct", which may be pursued as an unilateral conduct and does not require any agreement among competitors (but only the possibility to influence their behavior without any formal agreement). Brazil also noted that the business model of

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[35] Competition Commission of India. *In Re: Samir Agrawal, ANI Technologies Pvt. Ltd., Uber India Systems Pvt. Ltd, Uber B.V. and Uber Technologies Inc.* Case No. 37 of 2018. Order under Section 26 (2) of the Competition Act, 2002

[36] *Samir Agrawal v. Competition Commission of India*, Judgment in Civil Appeal No. 3100 of 2020, retrieved on 31 August 2023 from https://main.sci.gov.in/supremecourt/2020/16963/16963_2020_33_1502_25089_Judgement_15-Dec-2020.pdf

[37] Competition Commission of India. *In Re: Alleged Cartelization in the Airlines Industry*. Suo Motu Case No. 03 of 2015. Order under Section 26 (6) of the Competition Act, 2002

digital platforms may bring additional complexities, including the absence of an agreement between the spokes using a platform as a common hub, and the lack of a collusive intention in the imposition of common rates among the spokes (MACEDO, 2018)[38].

In a similar fashion, the South African authority suggests that “hub & spoke” type of conduct is likely to be pursued as a concerted practice to directly or indirectly fix prices, and not as a typical hardcore cartel which would require the establishment of an agreement between such parties (OECD, 2019). It also drew attention to its decision in Nedbank[39], where it clarified that interdependent oligopoly behavior amounts to a concerted practice unless, given the nature of the market, the behaviour of the firms concerned cannot be explained other than by concerted behaviour.

4.2. Across-platform parity agreements

In the online environment, consumers tend to begin their searches for products and services by navigating on digital platforms or digital aggregators (which are referred as “platforms” for simplicity here and in the rest of this section). Consumers find the products and services of a large number of sellers, who are featured in these platforms as they benefit from the greater ability to reach their audiences, as well as additional services such as price comparison and consumer reviews. In exchange for the showrooming, platforms obtain a commission for every sale they made.

To prevent free-riding on this enhanced visibility and additional services, while sales being made in alternative channels, platform often require suppliers to agree not to offer a lower price on some other platforms (a so called “narrow” price parity agreement) or both on other platforms and on the suppliers´ own websites (a so called “wide” price parity agreement). The practice of across-platforms parity agreements (APPAs) has generated controversy in Europe, where the German competition authority has taken a

[38] See Technical Note Nº 26/2018/CGAA4/SGA1/SG/CADE, Procedimento Preparatório Nº 08700.008318/2016-29, *Uber do Brasil Tecnologia Ltda*..
[39] *Mohammed Iqbal Surve and Others vs. Nedbank Ltd and Others,* IR153Dec21.

stricter decision than several other authorities by prohibiting the use of both wide and narrow parity clauses. CADE has aligned itself with the latter view in its decision on Booking, Expedia, and Decolar about APPAs, which preserved the possibility for these companies to request parity deals with regard to suppliers´own websites.

The main concern with wide APPAs is that they remove the incentive for platforms to compete on the commissions they charge (since, where the platform raises its commission to a merchant bound by a wide APPA, that merchant cannot pass on this increase to its customers unless it does so also on its website and on that of any other platform) and they prevent new entrants from undercutting the platforms.

Furthermore, the use of wide APPA can result in price uniformity, depending upon the number and size of platforms that benefit from the agreement, the number of suppliers tied to it, their bargaining power and that of the platforms, the compliance by suppliers with the APPA and the availability of meta-search tools (EZRACHI, 2015).

APPA are recognized as potentially harmful by all BRICS jurisdictions: for instance, they are specifically adressed by China under the Guidelines on the platform economy, which state in art. 7 that factors to be considered for the assessment include the market power of the platform undertaking, the status of competition in the relevant market, to what extent market entry will be restricted for other undertakings, and the impact of such conduct on consumer interests and innovation. In Russia, wide price parity clauses for Russian hotels have been condemned in the Booking case. The Federal Antimonopoly Service (FAS) Russia found that Booking had 80% in the Russian market for providing information on hotels, hostels and other accommodation facilities, and ultimately imposed the removal of both wide and narrow parity clauses, including not only price parity but also parity as to other conditions of sale (UNCTAD, 2021).

In Brazil, CADE has reached a settlement with several travel agencies who had engaged in this practice. In India, APPA has been held by CCI to be in contravention of the competition law in the MakeMyTrip (MMT) matter[40] . In this matter, it was found that imposition of parity conditions (price parity and room availability parity impositions), in conjunction with exclusivity conditions and deep discounting, creates an ecosystem that reinforces MMT-Go's dominant position in the relevant market. Another case currently under investigation by CCI involves the use of wide APPA by online food delivery platforms Zomato and Swiggy, a practice which the CCI has *prima facie* found to be anticompetitive agreements in its order on 4 April 2022[41].

Finally, the CCSA has recently concluded the Online Intermediation Platforms Market Inquiry[42] where it found that the application of Price Parity Clauses in travel, food delivery and e-Commerce had a negative impact on competition. The CCSA has since imposed remedial actions that require the removal of these clauses in agreements between online intermediation platforms and business users.[43] For example, in travel, Booking.com is required to remove both narrow and wide price parity clauses in its contracts with accommodation providers.

4.3. Exclusive dealing

Another significant concern in digital markets involves exclusive dealing. This refers to conduct by which an undertaking requires a commercial party to obtain all or

[40] CCI Decision by on 19.10.2022 in Case No. 14 of 2019 and 01 of 2020. *In Re: Federation of Hotel & Restaurant Associations of India (FHRAI), Casa2 Stays Pvt. Ltd. vs MakeMyTrip India Pvt. Ltd. (MMT), Ibibo Group Private Limited (Ibibo) and Oravel Stays Private Limited (OYO)*, para. 311.
[41] Competition Commission of India. Order on 01.01.2022 in Case No. 16 of 2021. *National Restaurant Association of India ('NRAI') Vs. Zomato Limited ('Zomato') & Others*.
[42] Competition Commission of South Africa. Online Intermediation Platforms Market Inquiry- Final Order and Decision (July 2023). Retrieved 1 December 2023 from https://www.compcom.co.za/wp-content/uploads/2023/07/CC_OIPMI-Final-Report.pdf.
[43] Competition Commission of South Africa. Online Intermediation Platforms Market Inquiry- Summary of Findings and Remedial action (July 2023). Retrieved 1 December 2023 from https://www.compcom.co.za/wp-content/uploads/2023/07/CC_OIPMI-Summary-of-Findings-and-Remedial-action.pdf.

most of a particular type of goods or services from itself, thereby foreclosing competitors. International antitrust practice reveals that, for this conduct to fall under the scope of antitrust scrutiny, the exclusivity does not need to be explicit (*de jure*) (ICN, 2013): it is sufficient that it be obtained *de facto* through conditions that create an incentive in this sense, such as cross-subsidization[44] , loyalty-inducing discounts[45] or even a seller´s policy to refuse to supply any buyer that is also supplied by a competitor (ICN, 2013). The existence of an exclusive dealing arrangement may also be inferred from the volume or quantity that is specified in a supply agreement: if it specifies that a quantity must be bought and this quantity is equivalent or close to the customer‘s total requirements, *de facto* exclusivity may be created (ICN, 2013).

Similar to APPA clauses, the analysis of this conduct depends on the degree of market power and foreclosure of the firm that imposes the restraint. Relevant factors that may be considered to analyze foreclosure are the market coverage of the practice, the duration of the arrangement and the existence of alternative sale channels, the level (suppliers vs distributor vs end users) at which the restriction is imposed, whether it has been requested by the customer, easy of entry and market dynamics, as well as economies of scale (ICN, 2013). Furthermore, the analysis should consider the weight of potential efficiencies generated by the practice, such as preventing free-riding and hold-up problems, quality control, and encouraging vigorous competition at the distributor level (ICN, 2013).

[44] See Case C-522/03 P, *Unilever Bestfoods (Ireland) v Commission* ECLI:EU:C:2006:607. See also, at https://www.justice.gov/atr/case/us-and-plaintiff-states-v-google-llc, the complaint filed on 20 October 2020 by United States Department of Justice and the Attorney Generals of the States of Arkansas, Florida, Georgia, Indiana, Kentucky, Louisiana, Mississippi, Missouri, Montana, South Carolina, and Texas against Google. The complaint alleges the Google engages in a number of anticompetitive practices in violation of Section 2 of the Sherman Act, including long-term agreements with Apple that require Google to be the default – and de facto exclusive – general search engine on Apple's popular Safari browser and other Apple search tools.

[45] See Case C-413/14 P, *Intel v Commission* ECLI:EU:C:2017:632.

This type of conduct has been subject to scrutiny in some landmark cases involving digital markets in Brazil, China, India, and Russia.

In Brazil, CADE first assessed a practice of allegedly *de facto* exclusive dealing in the *Google Adwords* case, where the authority investigated, following a complaint by Microsoft, a claim that Google would be ostracizing the use of alternative paid search platforms through restrictions of interoperability to advertisers´ data. Specifically, the complaint alleged that the terms and conditions of Google´s ad management platform raised rivals´costs, prevented the attainment of critical mass and stifled innovation and interoperability by prohibiting both the automatic transfer of data from Adwords and the exportation of ad campaigns to rival search platforms[46]. After an examination of responses by 106 Adwords customers, CADE closed the case on grounds of lack of evidence that the contested clauses in Adwords' Terms & Conditions (T&C) materially hindered multi-homing: in fact, customers expressed satisfaction with returns of investment obtained on Adwords, which are not comparable to those obtained on other platforms, and there was no evidence that those T&C affected Microsoft´s market share to such a degree that it lost attractiveness to its customers.[47]It should be noted that a current CADE Commissioner criticized the decision for failing to clarify which exclusionary theory of harm was considered in this case, and offered two alternative framings for the analysis of this conduct: as a restriction to disruption capabilities, and restrictions of access to key assets for innovation, specifically the data of ad campaigns (FERNANDES, 2022, p. 336-338).

A second case in Brazil involves exclusivity conditions imposed contractually by iFood, the leading online food delivery platform in the country, to the most famous (so called "must-have") restaurants[48]. CADE has settled the case by signing a cease-and-desist agreement with iFood relating to the se of exclusive contracts. Prior to that, on grounds that iFood's contracts have the potential to lead to market closure, increase barriers to entry and

[46] Administrative Proceeding 08700.005694/2013-19. SEI No. 0005301, paras. 86-193.
[47] Administrative Proceeding 08700.005694/2013-19. SEI No. 0628841.
[48] Administrative Proceeding 08700.004588/2020-47.

raise rivals' costs by limiting their freedom in the market or confining them to less attractive restaurants, CADE imposed an interim measure, subject to a penalty of 150.000 reais per day of non-compliance, which established the following: (a) with regard to new restaurants or restaurants already in iFood's marketplace without exclusivity clause, iFood was enjoined from entering into contracts including such clause until CADE has rendered a decision on the merit; (b) with regard to restaurants already in iFood's marketplace with exclusivity clause, iFood was allowed to maintain these contract in place and, in case of expiration, renew them with only an exclusivity clause of to up to 1 year (renewable) if this is in the interest of both parties; (c) with regard to restaurants already in iFood's marketplace with exclusivity clause and whose contract renewal does not include an exclusivity clause, iFood was enjoined from including such clause in later contract renewals[49]. Ultimately, however, the *interim measures* were revoked upon the settlement of the case with a cease and desist agreement, which involves the commitment by iFood not to sign exclusivity agreements with restaurants that generate sales in more than 25% of online food delivery (and 8% in certain municipalities), and in any case requiring that such agreeements involve benefits for the restaurants, that they expire after 2 years (only renewable after a period of quarantine) and that they do not restrict the ability of selling through channels other than food marketplaces.

A third case in Brazil concerns an investigation opened by CADE into the conduct of the leading aggregator for gym plans, Gympass, who imposes exclusivity and MFN conditions to its partner gyms. Triggered by the complaint of rival platform Totalpass, CADE investigated the merits of this conduct. It initially adopted an *interim* measure enjoining the defendant from signing contracts with exclusivity clauses, eliminating MFN restrictions and any associated sanctions, as well as eliminating the mandatory quarantine period that was imposed after termination of partnerships with Gympass and before the beginning of partnerships with competitors, and clearly communicating such policy to

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[49] Administrative Proceeding 08700.004588/2020-47. Despacho n° 342/2021. SEI 0876798.

gyms[50]. Some insights on the elements used to assess the conduct can be gleaned from the technical note that precedes the adoption of such measures: this includes references to the lead advantage of Gympass as market creator, the risk of tipping in digital and multi-sided markets, and the ability for a dominant company with more than 80% market share to (i) foreclose the market, (ii) increase barriers to entry, and (iii) raise rival costs by restricting the contestable share of the market or limiting it to less attractive suppliers[51]. Ultimately, however, the case was settled with a cease and desist agreement, where Gympass committed not to propose, maintain or sign any new parity clauses, and not to propose, maintain or sign any exclusivity agreements, except for the renewal of existing contracts where the term of exclusivity is of limited duration (two years) and where exclusivity is in exchange for minimium investment in the relationship with the counterpart, which involves guarantees of minimum volume.

In China, one of the most notable cases in digital markets involved Alibaba's "choose one from two" policy, which required sellers to agree to sell exclusively on the platform. This explicit exclusivity condition was supplemented by a system of incentives and penalties, which for instance include the exclusion from promotional exercises, demotion in searches, and the withdrawal of a number of rights on the platform (ZHANG, 2022). This was considered to be contrary to Article 17(4) of China´s Anti-Monopoly Law, which prohibits dominant companies from "without justifiable reasons, allowing their trading counterparts to make transactions exclusively with themselves or with the undertakings designated by them".

The "choose one from two" practice had also been scrutinized previously by the Supreme People's Court in 2014 in *Qihoo 360 v Tencent*, which involved a complaint by Qihoo that Tencent had made its software incompatible with Qihoo, in reaction to Qihoo's practice of blocking pop-ups from Tencent's instant messaging service (IMS) in devices using Qihoo's antivirus programmes. However, in that case,

[50] Administrative Proceeding 08700.004136/2020-65. Despacho SG Nº 1865/2021. SEI 0998834.
[51] Administrative Proceeding 08700.004136/2020-65. Technical Note no. 14/2021/GAB-SG/SG/CADE. SEI 0998652.

the Court found that: a) there was no drastic reduction of Qihoo's or other competitors' market shares; and b) damage to consumer welfare would be minimal given the availability of competing products (MARCO COLINO, 2021). That early decision had been criticized for overlooking the wider, long-term consequences of losing Qihoo as a competitor, the impact on the company's ability to compete in the antivirus market or other markets it may wish to enter, and the signal sent by Tencent to rivals thinking of defying its hegemony (PANG, 2014; MARCO COLINO, 2021).

A third relevant case on exclusivity in China is the RMB 3.44 billion (~USD 541 million)-fine imposed by SAMR for the "choose one from two" on Meituan, a super-app that delivers meals. In addition to the exclusivity incentives and punishment mechanisms, Meituan was also using data to detect whether sellers were using other apps (MARCO COLINO, 2022).

Finally, a fourth case of exclusivity brought by SAMR in China is the RMB 87.6 million yuan (~USD 12.6 million)-fine imposed on Chinese National Knowledge Infrastructure (CNKI), an online academic database which was found to be dominant in the domestic market for online database services focusing on Chinese-language academic paper. In addition to charging exhorbitant access prices, CNKI was found guilty for having signed exclusive cooperation agreements that prohibit academic journal publishers and universities from authorizing any other third parties to use academic journals or doctoral and maste''s dissertations, among other academic papers. It also implemented multiple rewards and penalties to ensure the implementation of exclusive partnerships. In doing so, it limited market competition, infringed on users" legitimate rights and interests, and impacted concerned market innovation and development and academic exchanges, thereby constituting a violation of the country's Anti-Monopoly Law (GT STAFF REPORTERS, 2021).

In India, the most relevant case on exclusivity in digital markets concerns online travel agencies[52]. The case brought together two complaints: one filed in October 2019 by the Federation of Hotel & Restaurant Associations of India (subsequently joined by Casa2 Stays Pvt. Ltd. or "FabHotels") against MakeMyTrip, Goibibo (two online travel agencies, hereinafter referred to as 'MMT-Go') and Oravel Stays Private Limited MMT (a budget hotel franchise group, hereinafter referred to as "OYO"); and another one filed by Ruptub Solutions Pvt. Ltd. (Treebo) under Section 19(1)(a) of the Act, against MMT and OYO raising similar allegations. Complainants alleged exclusion of their properties and those of their partner hotels from listing on MakeMyTrip's platform pursuant to an agreement between the latter and OYO Rooms which included exclusivity conditions and parity restrictions.

Treebo alleged that it agreed to accept the exclusivity agreements put forth by MMT because it had incurred excessive losses due to the discontinuance of Treebo properties from MMT's platform (BHATTACHARYA & KHANDELWAL, 2021). The CCI found that MMT was dominant in the market for online intermediation services for booking hotels in India[53], while Oyo was a significant player in the franchisee budget hotel market. It ultimately determined that MMT violated Section 4 the Competition Act by imposing unfair conditions in the purchase of goods and services, and indulging in practices that result in denial of market access because of MMT role of important gateway (not substitutable to others) for these independent budget hotels to secure an effective listing/visibility at OTAs[54]. Interestingly, the exclusive dealing between MMT and Oyo was examined as "vertical agreements with the nature of refusal to deal"[55]. However, as pointed out above[56], the Commission found that the deep discounts, exclusivity condition

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[52] CCI Decision by on 19.10.2022 in Case No. 14 of 2019 and 01 of 2020. *In Re: Federation of Hotel & Restaurant Associations of India (FHRAI), Casa2 Stays Pvt. Ltd. vs MakeMyTrip India Pvt. Ltd. (MMT), Ibibo Group Private Limited (Ibibo) and Oravel Stays Private Limited (OYO).*
[53] Id., para. 278.
[54] Id., para 289.
[55] Id., para 286.
[56] Supra, section 4.2.

and parity conditions, in conjunction, creates an ecosystem that reinforces MMT-Go's dominant position in the relevant market.

In another case involving food delivery platforms Zomato and Swiggy, the Commission established a *prima facie* case of anti-competitive agrrements on grounds that those platforms may be obtaining exclusivity through explicit commitments, though in exchange for minimum volume guarantees and substantial discounting of intermediation feees, and co-branding arrangements that prevent the use of the restaurants'brand in connection with competing platforms.

In Russia, arguments which may be traced back to *de facto* exclusivity were considered by FAS Russia in 2019, following a complaint by the provider of a smartphone app, Muver, wich allowed taxi drivers to get free information about orders in taxi aggregator apps (Yandex.Taximeter, Citymobil Driver, etc.), select an order, and change their status in the specified applications. Muver claimed that when using its application and the Gett Drivers taxi aggregator app at the same time, the latter sent a notification to the user that it was impossible to work correctly due to the presence of another application on the device (namely, Muver). Having examined this case, FAS Russia concluded that there were no signs of violation of the antimonopoly legislation in Gett's actions, since these applications are not competitors: any taxi order aggregation application can function independently, providing interaction between the passenger and the carrier (RUSSIA, 2021).

A similar case, which also has some commonalities with the Google Adwords case in Brazil, concerns the results of an investigation by FAS Russia of the largest online sites for job search and job candidates in Russia. In July 2020, FAS imposed a fine on HeadHunter[57] due to terms of service that prohibited users (including employers) from using third-party software (including automated recruitment software) when working with their sites. In the particular case of HeadHunter, FAS established that the company was creating barriers to enter the product market for

[57] FAS case No. 4-19.8-1974/00-11-18.

the Robot Vera software designed for the automatic selection of staff in the databases of various services. However, while HeadHunnter.ru was issued a cease-and-desist order, the decision concluded that the obstacle of access to a specific computer program did not have a negative impact on the product market as a whole, since the company made changes to the terms of use of its website and established non-discriminatory terms of use for third-party software (RUSSIA, 2021).

4.4. Pricing abuses

One of the key operational challenges in the digital economy concerns the application of the traditional tests relating to pricing abuses, namely excessive pricing, predatory pricing and margin squeeze.

4.4.1. Excessive pricing

Not all jurisdictions prohibit excessive pricing, which is considered one of the most controversial issues in competition policy, mainly because markets can be self-correcting, because it is difficult to devise an operational test and remedy, and because intervention may distort incentives and innovation (OECD, 2011).

Excessive pricing cases can potentially be brought some BRICS jurisdictions. In Brazil, however, the provision that explicitly forbid excessive pricing was removed with law 12.529/2012, and the prevalent jurisprudence denied the possibility of pursuing excessive pricing as an autonomous offense.

In Russia, China and South Africa, a guiding framework directs the authority to focus on margins (in particular, in Russia, though with the possible defense that the price is equal to that formed by a comparable product in a competitive market) and cost increases (in particular in China, in platform economy cases, when there are “stable costs”) or provides benchmarks for cost calculation (in India, where they were issued by the competition authority[58]). In this sense, it is interesting to note that definition of "excessive prices" in South African competition law was deleted by section 1(b) of Act 18 of 2018, but several factors are listed as possible (but not exclusive) criteria to determine if the price is higher than the competitive price and if any difference is unreasonable[59]:

(a) the respondent's price-cost margin, internal rate of return, return on capital invested or profit history;

(b) the respondent's prices for the goods or services – (i) in markets in which there are competing products; (ii) to customers in other geographic markets; (iii) for similar products in other markets; and (iii) historically.

c) relevant comparator firm's prices and level of profits for the goods or services in a competitive market for those goods or services;

(d) the length of time the prices have been charged at that level; I) the structural characteristics of the relevant market, including the extent of the respondent's market share, the degree of contestability of the market, barriers to entry and past or current advantage that is not due to the respondent's own commercial efficiency or investment, such as direct or indirect state support for a firm or firms in the market; and

(f) any regulations made by the Minister, in terms of section 78 regarding the calculation and determination of an excessive price.

Furthermore, the Minister responsible for the administration of the Competition Act is required to make regulations setting out the relevant factors and benchmarks in those

[58] CCI (Determination of Cost of Production) Regulations, 2009 at https://www.cci.gov.in/legal-framwork/regulations/5/0.

[59] See section 8 (3) of the Competition Act. It is worth noting also that section 8 (2) establishes that, where a *prima facie* case of excessive pricing is made, the dominant firm must show that the price was reasonable.

sectors for determining whether prices and other trading conditions […] are unfair with regard to SMEs and firms owned by historically disadvantaged persons[60].

In Russia, as well, the prohibition of excessive pricing, called by the statute "Monopoly high price of goods", is guided by some basic criteria[61]. The statute distinguishes between price increase and price maintenance, each of which is subject to its own specific conditions[62]. It also clarifies that the price is not monopolistically high if it does not exceed the price that was formed in the conditions of competition in a comparable product market or if it is set on an exchange, while several conditions are met,[63] or finally if it does not exceed the price set on the stock exchange and at the same

[60] Section 8 (d) (2).

[61] See Section 6 of the Federal Law on the Protection of Competition.

[62] In the former, the requirements are that (a) the costs necessary for the production and sale of goods have remained unchanged or their change does not correspond to a change in the price of the goods; (b) the composition of sellers or buyers of goods has remained unchanged or the change in the composition of sellers or buyers of goods is insignificant; and (c) the conditions for the circulation of goods on the goods market, including those due to state regulation measures, including taxation, tariff regulation, have remained unchanged or their change is disproportionate to the change in the price of the goods. In the latter, the conditions are the following: a) the costs necessary for the production and sale of goods have significantly decreased; (b) the composition of the sellers or buyers of the goods determines the possibility of changing the price of the goods in the direction of decrease; and (c) the conditions for the circulation of goods on the goods market, including those caused by state regulation measures, including taxation, tariff regulation, provide the possibility of changing the price of the goods downward.

[63] 1) the volume of goods sold on the exchange, produced and (or) sold by an economic entity that occupies a dominant position in the relevant commodity market, is not less than the amount established by the federal antimonopoly body and the federal executive body in charge of legal regulation of the field of activity to which refers to the production of the relevant product;
2) transactions are concluded by an economic entity that occupies a dominant position in the relevant commodity market, in the course of exchange trading, which meet the requirements determined by the federal antimonopoly body and the federal executive body exercising legal regulation of the field of activity to which the production of the relevant product belongs, in including the requirements for the minimum number of participants in exchange trading during the trading session;
3) an economic entity that occupies a dominant position in the relevant commodity market, accredited and (or) participating in trading (including by submitting applications for participation in trading to a broker, brokers), provides the stock exchange with a list of affiliates in the manner established by the federal antimonopoly body;
4) the actions of an economic entity that occupies a dominant position in the relevant commodity market and (or) its affiliates do not relate to market manipulation;
5) the sale of goods on the stock exchange by an economic entity that has a dominant position in the relevant goods market is carried out regularly with an even distribution of the volume of goods over trading sessions during the calendar month. The Government of the Russian Federation has the right to determine the criteria

time the economic (commercial) terms of the transaction are comparable in terms of the quantity and (or) volume of goods supplied , terms of fulfillment of obligations, terms of payments usually used in transactions of this type, as well as other reasonable conditions that may affect the price.

In China, although the statute does not provide criteria to assess the existence of "unfairly high selling prices" (or "unfairly low purchasing prices"), the Guidelines on the Platform Economy (in art. 12) establish the following factors: (1) Whether the price is significantly higher than or significantly lower than the price of the same kind of goods or comparable commodities under the same or similar market conditions;(2) Whether the price is significantly higher than or significantly lower than the price of the same commodity or comparable commodity under other conditions of the platform's economic field operator; (3) Under the condition that the cost is basically stable, whether the operator in the economic field of the platform has increased the sales price or reduced the purchase price beyond the normal range; and (4) Whether the price increase of the trader of the platform's economic field is significantly higher than the cost increase, or whether the price reduction of purchased goods is significantly lower than the cost reduction range. When determining that the market conditions are the same or similar, factors such as platform type, business model, transaction link, cost structure, transaction specific situation, etc. can generally be considered.

4.4.2. Predatory pricing

Much like with excessive pricing, the doctrine of predatory pricing has been built around relevant notions of costs incurred by the dominant undertakings. These costs have

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for the regularity and uniformity of the sale of goods on the stock exchange for individual commodity markets;
6) an economic entity that occupies a dominant position in the relevant commodity market, registers over-the-counter transactions for the supply of goods circulating in such a commodity market, in the cases and in the manner established by the Government of the Russian Federation;
7) the minimum size of an exchange lot does not prevent access to the relevant commodity market;
8) the sale of goods by an economic entity that occupies a dominant position in the relevant commodity market is carried out on an exchange that meets the requirements of the legislation of the Russian Federation on organized trading, including such applications to the broker, brokers.

been used as proxies to reveal an anti-competitive purpose: a predatory price is a price that is profit-maximizing only because of its exclusionary or other anticompetitive effects, implying that a sacrifice of profits in the short run will be compensated by a profit increase after the relevant competitor (the "pray") has exited the market. The traditional test applied to predation is that a conduct is presumed to be predatory when it is below average variable costs, whereas in case of prices above average variable costs and below average total costs, the conduct can be deemed predatory only if it appears that such prices are part of a plan for eliminating a competitor. The relative simplicity of this test is put under challenge in at least a couple of ways by the use of zero-price markets.

A first question arises as to whether the relevant price figures would need to take into account the price charged on all sides of a multi-sided market: it would be misguided, for instance, to hold that a club letting women in for free during "ladies night" is engaging in predation, when the club can more than compensate losses through the fees charged to men. A review of the literature on the application of this test in two-sided market reveals large agreement that the relevant measure of costs and prices is a sum of those on both sides (BOSTOEN, 2019).

As an alternative, it has been proposed that "balancing the two sides of a two-sided market" be recognized as a justification to a *prima facie* finding of predation (ICN, 2012). Both these solutions appear to be readily extendible to multi-sided markets. In Technical Note 21/2022/DEE/CADE, the Brazilian Department of Economic Studies understood that it was not possible to use traditional tests to analyze predation whenever there is a multisided market, with zero price services/products in one side of the market that are being subsidized by another side of a specific platform.

A second question concerns the role of non-monetary prices, which could provide the incentive for a seller to justify a below-cost selling strategy. This is in line with the increasing importance of factors other than sales to estimate the market power of a company in digital markets (see supra, section 3.1). Indeed, it has been observed that it is common for the investors of certain firms in the digital sector to expect no profitability even beyond the short-term, which could be a factor that creates a first-mover advantage[64].

Newman (2016) defend that antitrust analysts can take into account information and attention costs in order to identify the "all-in" price. The problem of this approach, on the other hand, is that (a) it is quite difficult to implement this concept in a real situation; and (ii) it does not create a clear rule in terms of what is an allowed price, according to antitrust rules.

No BRICS authority has done this, yet. China, on the other hand, advised to assess these factors qualitatively, rather than quantitatively, through concepts such as multi-sided markets, lock-in and network effects. It should be recognized that in predation analysis, unlike in the context of excessive pricing, the challenges in the practical implementation of this do not involve an estimation of the preferences of consumers, as there is no need to establish the "economic value" of the product in question. On the other hand, a below-cost pricing may be justified by business models other than data collection or advertising, for instance through "freemium", or more generally be part of a strategy to increase the user base in the expectation of later monetization opportunities. One way to recognize this diversity of business models would be to accept their role as a defense against a prima facie establishment of predation, as the ICN Unilateral Conduct Working Group suggests doing for two-sided considerations.

In conclusion, despite the rarity of predatory pricing cases, if there are some digital platforms that suffer huge losses through several years, it is a valid debate to consider how this situation would be sustainable over time and how new theories of harm can interact with this specific situation. This debate is far from being settled.

[64] This observation, and the ambiguity over the long-term impact of this strategy, was one of the central reasons leading to the dismissal of predatory pricing claims in India against Uber and Ola in the market for radio-taxi services. See *Fast-Track Call Cabs and Anr.v. Ani Technologie s Pvt. Ltd*, Case No. 6 & 74 of 2015.

4.4.3. Margin Squeeze

A third type of pricing conduct is margin squeeze: where the pricing by a dominant and vertically integrated company leaves such a small margin between its price for selling essential inputs to a rival and its downstream price that the rival cannot survive or effectively compete (OECD, 2009).

This concept provides an important complement to refusal to deal doctrine, in particular where the input at stake is not indispensable. At the same time, it is not univocally recognized by all jurisdictions: in the United States, for instance, it is necessary to have a duty to deal upstream or a predatory pricing downstream for a finding of antitrust infringement[65]. In BRICS countries, all authorities can pursue margin squeeze cases. The Brazilian Authority, on the other hand, mentioned that the arguments presented in *Pacific Bell Telephone Co. v. LinkLine Communications* were never formally considered in CADE´s jurisprudence.

For instance, in *Pacific Bell Telephone Co. v. LinkLine Communications*, U.S. Supreme Court understood that if there is no antitrust duty to deal or predatory pricing scheme, then, "a firm is certainly not required to price both of" its upstream (wholesale) and downstream (retail) "services in a manner that preserves its rivals' profit margins". Therefore, "recognizing a price-squeeze claim where the defendant's retail price remains above cost would invite the precise harm the Court sought to avoid in *Brooke Group*: Firms might raise retail prices or refrain from aggressive price competition to avoid potential antitrust liability".

[65] *Pacific Bell Telephone Co. v. LinkLine Communications*, Inc., 555 U.S. 438 (2009).

The Department of Economic Studies of CADE suggested that the Brazilian jurisprudence could deal with this sort of arguments in the future.

In the digital economy, authorities may analyze through the lenses of margin squeeze the practice of platforms or orchestrators of ecosystems like Apple Store or Google Play to charge developers a fee for access to their users, in particular where those orchestrators also operate downstream with similar applications. Following an effects-based approach, and in particular the as-efficient competitor test advanced by the European Commission in its Guidance Paper[66], in these scenarios (which include, for instance, the recent European Commission's investigation of Apple following a complaint by music streaming company Spotify in relation to the 30% fee taken by Apple for in-app purchases in the Apple store) the relevant question is whether the integrated player would be able to offer its services profitably if it had to pay the price it charges to its downstream customer (BOSTOEN & MANDRESCU, 2020). In this regard, South Africa tends to use the As Efficient Competitor test[67], while China stresses the importance of considering in digital markets the rationale of vertical integration, the fees charged across all sides and their impact on innovation.

4.5. Self-preferencing and differentiated treatment

Another challenge raised by digital technologies, and digital platforms in particular, relates to the fact that the informational infrastructure can be leveraged to promote specific products or services in downstream markets. In other words, vertically integrated digital platforms may give preference to its own products or services (self-preference). The concept of self-preferencing rose to prominence in the context of the European Commission's Decision in *Google Shopping*[68], which condemned Google for abusing its dominant position due to its more favorable positioning and display of its own

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[66] EUROPEAN UNION- E.C., Guidance on the Commission's enforcement priorities in applying Article 82 of the EC Treaty to abusive exclusionary conduct by dominant undertakings. OJ C 45, 24.2.2009, p. 7–20, 2009.
[67] See, for instance, the South African case: *Telkom from Internet Solutions ("IS"), Internet Service Provides Association ("ISPA") and Verizon South Africa,* 2013.
[68] Case AT 39.740—*Google Search (Shopping)*, Commission decision of 27 June 2017.

vertical search results over those of competing comparison-shopping sites. However, it is important to note that the Decision did not provide an exact definition of what constitutes more favorable treatment, including any threshold of significance of the differential treatment: it simply noted that, unlike competing price comparison services, Google's own price-comparison results were prominently positioned, displayed in rich format and never demoted by those algorithms; and that this conduct was capable of having, or likely to have, anti-competitive effects in the national markets for comparison shopping services and general search services. To that end, a crucial element of the theory of harm advanced by the European Commission was that the abuse of self-preferencing does not presuppose a finding of essentiality of the input that is the object of the differential treatment (i.e., the more favourable positioning and display).

In particular, platforms have a large user reach, extensive data collection capabilities (both in scale and speed), and a superior ability to direct consumers' attention, all of which warrants a stricter scrutiny of self-preferencing than other types of businesses (EUROPEAN UNION et al., 2021). However, it should not be forgotten that favoring oneself could be welfare-enhancing and therefore justifiable on efficiency grounds, as is the case for various forms of vertical integration: for instance, to eliminate double marginalization, to protect goodwill and reputation, or to benefit from economies of scale (SOUZA P. C., 2020).

In Brazil, in 2011, a complaint was received from the E-Commerce Media Group Information and Technology, which claimed that Google Searches would be inappropriately privileging its own thematic sites in the results of the organic search. In 2013, the complainant reported a change in the execution of the conduct: in that year, Google started to position Google Shopping results in a fixed way at the top or on the side of the search engine page, through ads with images – a model known as Product Listing Ads, or PLA. According to complaint, this could constitute alleged discriminatory treatment. In this case, however, CADE rejected allegations of exclusionary effects as it did not find evidence to support that theory of harm in the Brazilian context, where the conduct had been in place for seven years (although Commissioners split on their assessment of potential effects)[69].

In India, on the other hand, the CCI found an abuse of dominant position by Google in 2018 for two condutcts that can be charactertized as self-preferncing: (1) fixed positions for a particular category of search results, so-called "universal results" that are sourced from its own search verticals (in this regard, CCI only issued a cease-and-desist order, as the practice had already been discontinued); (2) prominent placement to Google's flights unit in general search results with a link that takes the user to Google's own specialized flight search service (here, the remedy was to require Google to display a disclaimer in the commercial flight unit box indicating clearly that clicking on the relevant link would lead to Google's flights page and not the results of any other third party service provider).

That said, BRICS authorities opined that there is no need to establish a specific prohibition against self-preferencing because it can be analyzed by the existing rules: in some cases, by the prohibition of discrimination (China and Russia), in others by general provisions on unilateral conduct (Brazil, India and South Africa). India has already issued decisions on this in cases involving Google[70], while Russia has recently settled its case with Yandex on this conduct (REUTERS, 2022).

Adding to that, the difficulties to administer an isonomic rule in "ranking services" in organic search of Google Search Engine was one of the reasons why CADE did not punish Google in Administrative Lawsuit 08012.010483/2011-94, where some website of price comparison were claiming to be discriminated in Google algorithm.

In addition to this specific theory of self-preferencing, the conduct of steering users towards one's own products or services can be framed as a violation of other recognized forms of abuse, unless it is justified. First, and most notably, it may be viewed as a refusal to deal, which is unlawful to the extent that the input that is the

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[69] *Google v. Ecommerce Group*, Case no. 08012.010483/2011-94, CADE Decision of 26 June 2019.
[70] *Matrimony. com Limited Vs. Google LLC & Others*, Case Nos. 07& 30 of 2012.

object of the refusal is indispensable to compete effectively in a downstream market and its sharing is feasible (this is known as the “essential facility doctrine”). Secondly, the same conduct can in certain circumstances be analyzed as tying: in particular, where consumers are coerced into using the platform’s downstream product or service as a condition for using the platform’s upstream service, which by its nature or commercial usage constitutes a separate product, and that leads to consumer harm. Third, the case can be brought under a theory of margin squeeze if the differential treatment increases rival costs (such as those of advertising) for the disadvantaged competitor(s): according to the effects-based approach, such a conduct is illegal when the platform could not offer its own product and effectively compete for end-users if it had to pay the price that it charges as-efficient-rivals for prominence.

When it comes to the form of self-preferencing related to strategic use of customer information, the circumstances in which traditional categories of abuse can be used is more limited. For instance, it is more difficult to rely on a margin squeeze theory if the platform does not sell in the market the strategic information it uses to give itself an advantage in a downstream market. Similarly, it is complex to articulate a tying offense if the collection of that strategic information is simply a byproduct of services offered by the platform upstream. While in principle it would be possible to frame as tying the requesting of permission to the *use* of that information downstream as a condition to benefit from the platform’s services upstream (CONDORELLI & PADILLA, 2020, p. 4), in practice, it is difficult to monitor the use of legally obtained information if such information is not of personal nature, and therefore outside the scope of data protection rules. As a result, it is more likely for these cases, particularly if strategic information concerns business customers, to be brought either under the essential facility doctrine or under the specific “self-preferencing” theory.

Another type of abuse that may arise from differential treatment is discrimination between the platform’s customers, specially on parameters other than pricing. This is a type of conduct that is in principle prohibited under the legislation of all BRICS jurisdictions, although there are some differences on the requisite elements to establish a violation. At least in Brazil, it is clear that this requires the establishment of some competitive harm (even if only potential), and not merely discrimination. In South Africa, the Competition Act sets up three cumulative conditions for a given action to be considered abusive discrimination[71]: (a) it is likely to have the effect of— (i) substantially preventing or lessening competition; or (ii) impeding the ability of small and medium businesses or firms controlled or owned by historically disadvantaged persons, to participate effectively; (b) it relates to the sale, in equivalent transactions, of goods or services of like grade and quality to different purchasers; and (c) it involves discriminating between those purchasers in terms of- (i) the price charged for the goods or services; (ii) any discount, allowance, rebate or credit given or allowed in relation to the supply of goods or services; (iii) the provision of services in respect of the goods or services; or (iv) payment for services provided in respect of the goods or services.

The South African statute also recognizes three different defenses for conduct involving differential treatment of purchasers, in particular if the dominant firm establishes that the differential treatment:

(a) makes only reasonable allowance for differences in cost or likely cost of manufacture, distribution, sale, promotion or delivery resulting from— (i) the differing places to which goods or services are supplied to different purchasers; (ii) methods by which goods or services are supplied to different purchasers; or (iii) quantities in which goods or services are supplied to different purchasers;

(b) is constituted by doing acts in good faith to meet a price or benefit offered by a competitor;

(c) is in response to changing conditions affecting the market for the goods or services concerned, including— (i) any action in response to the actual or imminent deterioration of perishable goods; (ii) any action in response to the obsolescence of goods; (iii) a sale pursuant to a liquidation or sequestration procedure; or (iv) a sale in good faith in discontinuance of business in the goods or services concerned.

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[71] Section 9 (1).

Furthermore, subsection (4) of section 9 establishes that the Minister responsible for the administration of the Act must make regulations […] setting out the relevant factors and benchmarks for determining whether a dominant firm's action is price discrimination that impedes the participation of small and medium businesses and firms controlled or owned by historically disadvantaged persons.

In India, the Act (in Section 4) does not define what constitutes discrimination, but contains a defense for any price or condition which may be adopted "to meet the competition".

In China, as well, the competition statute does not define what constitutes a discriminatory practice, but relevant parameters to assess discrimination are provided by the Guidelines on the Platform Economy: (1) Based on big data and algorithms, implement different transaction prices or other transaction conditions according to the ability to pay, consumption preferences, usage habits, etc. of the counterparty; (2) Implement differentiation standards, rules and algorithms; (3) Implement different payment terms and transaction methods. The same conditions mean that there is no substantial difference between the counterparty of the transaction in terms of transaction safety, transaction cost, credit status, transaction links, transaction duration, etc. At the same time, the Guidelines clarify that differences in the privacy information, transaction history, individual preferences, consumption habits and other aspects of the counterparty of the transaction obtained by the platform in the transaction do not affect the same conditions of the counterparty of the transaction; and provide a list of legitimate reasons that may be invoked to justify the differential treatment, upon consideration of the authority:(1) Implementation of different trading conditions according to the actual needs of the counterparty and in accordance with legitimate trading habits and industry practices; (e) Preferential activities carried out within a reasonable period of time for new users; (3) Random transactions based on fair, reasonable and non-discriminatory rules of the platform; (4) Other reasons that can prove the legitimacy of the act.

Before reviewing some of the main developments in BRICS jurisdictions on differentiated treatment, it is important to highlight within this category a subcategory of cases that have been called of "hybrid" (EUROPEAN UNION et al., 2021; GRAEF, 2019), where a platform differentiates among non-affiliated parties in an effort to favour its own business: for instance, because the disfavored party's activity is in tension with the business model of the platform, or because the platform uses the threat of differentiated treatment to incentivize the disfavored party to accept certain unfavorable conditions. In such a "hybrid" situation, it may be reasonable to extend the reach of self-preferencing in order to overcome the difficulties in the application of established categories of abuse, particularly due to the lack of vertical integration.

The Competition Commission of India *vide* its order dated 19.10.2022, imposed monetary as well as behavioral sanctions on MMT-Go (MakeMyTrip and GoIbibo) for abusing its dominant position and also for having anticompetitive arrangement with OYO (Oravel Stays Limited). The Commission found that the parity conditions (price parity and room availability parity impositions), in conjunction with exclusivity conditions and deep discounts, creates an ecosystem that reinforces MMT-Go's dominant position in the relevant market. *Firstly*, it helps MMT-Go to retain and further increase its network of users/travelers, who would increasingly use the platform for availing the best deals. *Secondly*, it impedes the competitive process between OTAs by limiting the competitive levers/instruments at the disposal of other portals who, for instance, cannot get better prices from hotels by offering lower commission rates. *Thirdly*, the consequent adverse effect on sale of rooms through other platforms/channels and their user bases, further accentuates the dependence of hotels on MMT-Go as well as the bargaining power imbalance that already exists between MMT-Go and its hotel partners. *Fourthly*, the increased sales through MMT-Go may lead to unilaterally determined higher commissions charged by it, giving it the ability to also pass on discounts which are admittedly funded through these commissions, which may adversely impact the prices at which the hotels rooms are being offered to end-consumers[72].

Apart from above, India is also investigating its largest online retailers Amazon and Flipkart for alleged anticompetitive activities like exclusive arrangements between smartphone brands and e-commerce platforms/ preferred sellers, selling exclusively on

[72] The detailed order can be accessed at https://www.cci.gov.in/antitrust/orders/details/1069/0.

these platforms along with linkages between preferred sellers and these platforms. Similar practices are also under investigation in the context of large online delivery platforms Zomato and Swiggy, particularly concerning the use of so-called “cloud kitchen" leading to promotion of private labels and preferential treatment. The same concern was raised in Brazil in the context of CADE’s investigation of Ifood in relation to meal vouchers (still ongoing). However, the concern of preferential access and use to data was dismissed in the Brazilian investigation. In India, CCI has also found a *prima facie* case of abuse leading to a full investigation of whether Apple has access to data collected from the users of its downstream competitors which would enable it to improve its own services, while such competitors have no access to this data for improvisation/ innovation of their own app.

In Russia, In January 2022, FAS settled a case involving Yandex, the leading search engine in Russia, for an alleged self-preferencing with its so-called “enriched search”, which gives users more detailed results on things like events and recipes. As part of the settlement, Yandex terminated the case without any fines, and set forth certain additional obligations for Yandex to support competition, including sharing information with the FAS, and warning to consumers with regard to Yandex’s impartiality, its search ranking factors, and its partner integration policy with Yandex search. In addition, it promised to establish a joint programme to support Russian technology companies in promoting their products and services, contributing 1.5 billion roubles ($19.6 million) to the Russian Fund for the Development of Information Technologies (REUTERS, 2022).

On another matter related to discrimination, in February 2022, FAS concluded that Alphabet abused its dominant position with regard to Youtube’s “sudden blocking and deletion of user accounts”. It found that the rules related to the formation, suspension, blocking of accounts and the circulation of user content on Youtube are non-transparent, biased and unpredictable (KOTOVA & EROFEEVA, 2022).

In South Africa, one relevant case involving allegations of differentiated treatment in digital markets is the one involving WhatsApp and GovChat, a chatbot service that allows the government to engage with citizens and provide government services such as health and education. In May 2021, the CCSA issued an interim injunction ordering WhatsApp to refrain from removing from its platform GovChat.

The suspension of the service for GovChat was due to an alleged violation of terms of service: WhatsApp observed that GovChat was *de facto* a communications platform for the government, whereas it is not a government owned entity, and it monetizes confidential information of citizens through the use of the platform. Despite the theoretical possibility for WhatsApp to apply terms of service in a way that would lead to suspension of GovChat, the Tribunal recognized the public interest nature of the service being provided by GovChat during the COVID-19 pandemic, holding that "*the balance of convenience favours the granting of interim relief to the applicants who provide an invaluable service."* (LODOLO, 2021).

Further, in March 2022, CCSA referred to the Competition Tribunal a complaint against Meta, the parent company of WhatsApp, for abuse of dominance relating to the removal of GovChat. According to the Commission, Facebook has imposed and/or selectively enforced exclusionary terms and conditions regulating access to the WhatsApp Business API, mainly restrictions on the use of data, and in doing so has refused to give a competitor access to an essential facility when it is economically feasible to do so (under section 8(1)(b) or 8(1)(c) of the Act). On these grounds, it requested the Tribunal to: (1) impose the maximum penalty permitted under the Act, being 10% of Meta's turnover; (2) interdict Meta from off-boarding GovChat; and (3) declare void exclusionary terms and conditions that are selectively applied in a manner that prevents potential competition by restricting access to the WhatsApp platform for potential competitors (LODOLO, 2022).

In Brazil, according to dissident opinion of Commissioner Paula Farani in Administrative Proceeding 08012.010483/2011-94, "the practice of self-preferencing" is the one that "the dominant agents grant preferential treatment to their own products or services when they compete with products and services provided by other agents that use the platform".

In another Brazilian Administrative Lawsuit (08700.003211/2016-94), Yelp complained that, in Google organic search, it was being relegated to a lower position compared to Google vertical products. General Superintendence closed the investigation, in Technical Note 20/2022/CGAA11/SGA1/SG/CADE, because it understood there was no evidence of competitive harm.

Also, Brazilian General Superintendence, analyzed the Case 08700.001797/2022-09 - *ABBT vs Ifood*, issuing the Technical Note 41/2022/CGAA1/SGA1/SG/CADE. In this case, ABBT complained that Ifood (an online food ordering and food delivery platform) was trying to enter in another market (market food vouchers) through the automatic registration of "iFood Benefits" as a means of payment on the iFood platform, regardless of the restaurant's acquiescence. The applicant (ABBT) understood that this practice would characterize illegal self-preferencing. General Superintendence understood that the investigation should be closed, because there was no evidence of anticompetitive harm. This case is still pending, after the initial dismissal by the General Superintendent of claims of anti-discrimination was successfully challenged in CADE's Tribunal by Commissioner Freitas da Lima, leading to the re-opening of the investigation.

Finally, it should be mentioned that, in the Brazilian Preliminary Investigation No. 08012.002034/2005-24, Paiva Piovesan reported that Microsoft was seeking to prevent the development of third-party software. However, CADE understood that there was no evidence of such claims and closed the case.

4.6. Tying (and Tech Tying)

Tying refers to forcing consumers to take a secondary product as a condition for buying a primary product, and can be of technical nature (for example through the integration of the two products, and the discrimination or degradation of interoperability for competitors) or merely contractual (for example, by requiring exclusivity or granting discounts in exchange for exclusivity). By contrast, bundling refers to situations where a product is sold in fixed proportions, and can be "pure" where the stand-alone items are not available to consumers, and “mixed” where consumers can also purchase stand-alone items (although for a higher per-unit cost).[73]

In the digital environment, it is possible that tying is accomplished through technological integration, which occurs when a company designs one product so that it functions only when used in conjunction with its own complementary products (GAYNOR, 2006). This tying practice is especially hard to analyze if it involves multisided markets (where one side, for instance, has zero price).

It can be difficult to draw the line between genuine and manipulated choice to use two tied products, especially in this context in which consumers do not pay for the secondary product and remain free to use the product of competing providers, and thus the only advantage for the tied product is that it is given more prominence: for instance, one may question whether consumers actually would not prefer to use a specific search engine instead of other search applications pre-installed in their Android-based device, which is a practice that has been found to constitute anticompetitive tying by the European Commission, the Russian Federal Antimonopoly Service, the Indian Competition Commission and the Turkish competition authority (ERDEM & MALINAUSKAITE, 2021).

CCI imposed a penalty on Google for abusing its dominant position in multiple markets in the Android Mobile device ecosystem, apart from issuing a cease-and-desist order and certain behavioural directions[74]. The Commission, *vide* its order dated

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[73] “Tying is the practice of requiring customers to whom goods or services are supplied to acquire other goods or services as a condition of that supply. Ties may be implemented through contractual obligations, but may also be arranged through the use of various discounts and rebates or customization tending to force a buyer to buy complementary products from the same supplier. Tying and bundling are sometimes used synonymously, though bundling is more often used to refer to situations where the seller determines the proportions in which two products are purchased”. (GIOTAKOS, 2014)

[74] Competition Commission of India. Order on 20.10.2022 in Case *Mr. Umar Javeed and Others Vs. Google LLC and Another*. Retrieved 1 December 2023 from https://www.cci.gov.in/antitrust/orders/details/1070/0.

20.10.2022 *inter alia* held that mandatory pre-installation of entire Google Mobile Suite (GMS) under Mobile Application Distribution Agreement (MADA (with no option to un-install the same) and their prominent placement amounts to imposition of unfair condition on the device manufacturers and thus in contravention of the Indian Competition Law. In another case, the Commission, vide its order dated 25.10.2022 imposed a penalty on Google for abusing its dominant position with respect to its play store policies requiring App developers to exclusively and mandatorily use Google Play's Billing System (GPBS) both for receiving payments for Apps and for in-App purchases, apart from issuing cease and desist order and certain behavioural directions[75]. At present, both matters are under appeal before appellate bodies.

The issue of prominence was discussed also in another case decided by CCI in August 2020, involving an alleged abuse of dominance position by WhatsApp. CCI considered the allegation that WhatsApp leveraged its dominance by bundling its messaging app with WhatsApp Pay, an app for digital payment relying on the Indian Universal Payment Interface, specifically by pre-installing it in WhatsApp. However, the case was dismissed the case on ground of lack of coercion: mere existence of an App on the smartphone does not necessarily convert into transaction/usage. In particular, to enable WhatsApp payment, the user has to separately register for it, accepting the respective terms of the service agreement and privacy policy and undertaking additional steps to link their bank account. The Commission also noted that there seems to be a strong likelihood of a status quo bias operating in favour of the incumbents in the payment market. In this respect, it has been noted that the CCI´s position is starkly in contrast with the approach to tying and status quo taken by the European Commission in cases involving Microsoft and Google. (SINGH & ABHI, 2021).

[75] Competition Commission of India. Order on 25.10.2022 in Case *(07 of 2020) XYZ (Confidential) Vs. Alphabet Inc. and Others, (14 of 2021) Match Group, Inc. vs. Alphabet Inc. and Others, (35 of 2021) Alliance of Digital India Foundation vs. Alphabet Inc. and Other*s .Retrieved 1 December 2023 from https://www.cci.gov.in/antitrust/orders/details/1072/0.

Another case that was closed finding no coercion was the Google integrated its free video conferencing service Meet into its free client mail service Gmail as a pre-installed service that can only be hidden, not deleted, by the consumers. CCI disimissed the allegation of abuse of dominance noting that there is no obligation to use Meet and that it is available without the Gmail ecosystem, as the consumer needs a Google account to use it, not necessarily a Gmail ID.

By contrast, CCI established a *prima facie* case of abuse of dominance in Case No. 24 of 2021 involving Apple's conditioning of its App store to the use of its own In-App Payment mechanism. CCI preliminary found these to be two distinct products (i.e., distribution service and payment processing service for in-app purchases). A similar allegation is currently being investigated in Brazil by CADE following a complaint by online marketplace Mercado Livre. Additionally, FAS Russia found in 2021 that restrictions by Apple on the ability of app developers to include links to external payment options constituted an imposition of unfair terms, reinforcing the effects of Apple's in-app payment restrictions, and this decision was upheld twice by courts (NEELY, 2023).

4.7. Concluding remarks of the debate about anticompetitive conducts

Some conducts that are more prominent in digital scenario were mentioned in this section.

When there is an explicit cartel agreement implemented through an algorithm, there seems to be little doubt about the illegality of this type of conduct, in all BRICS jurisdictions. However, for other conducts, it has been demonstrated - throughout this section - that there seems to be no unanimity in the BRICS regarding how to deal with this phenomenon.

Therefore, depending on the conduct, BRICS could have more or less similarities in how to deal with it, through competition norms. The purpose of this report, however, is not to serve as a normative guide, but only as a document capable of influencing debates and reflections regarding what is socially desirable in competitive terms in digital markets.

5. Efficiency and other defenses

Efficiency is an important concept, especially in merger and in conduct analysis, unless the conduct is per se illicit, such as cartels.

According to the OECD (2003), cartels: “harm consumers and have pernicious effects on economic efficiency. A successful cartel raises price above the competitive level and reduces output. Consumers (which include businesses and governments) choose either not to pay the higher price for some or all of the cartelized product that they desire, thus forgoing the product, or they pay the cartel price and thereby unknowingly transfer wealth to the cartel operators. Further, a cartel shelters its members from full exposure to market forces, reducing pressures on them to control costs and to innovate. All of these effects harm efficiency in a market economy”.

That is why CADE, through the decision of former Counsellor Luiz Carlos Delorme Prado, in the Administrative Lawsuit n. 08012.002127/2002-14, p. 9, considered that “cartels only generate negative effects of increased market power without any effect of increased efficiency. Therefore, cartels, particularly classic cartels, are unambiguously harmful to the well-being of consumers, and are consequently an illicit per se, without the possibility of any mitigation, on grounds of the rule of reason”.

Nonetheless, whenever efficiency arguments may be accepted (mergers and unilateral conducts), one needs to identify exactly what it means. However, the meaning of efficiency is disputed. According to Collin Dictionary:

Efficiency can be defined as the “ability to produce a desired effect, product, etc. with a minimum of effort, expense, or waste”[76].

Even if someone agrees with this specific definition, the use of broad terms, such as “desired effect” and “minimum waste or effort” can also render different

[76] https://www.collinsdictionary.com/dictionary/english/efficiency#google_vignette, verified in Sept., 8th, 2023

interpretations. As mentioned by Castro (2021) , and reflected in the following tables, there are different "standards" of what should be protected by Antitrust Law:

Standard	Important value	Explanation
Welfare standard	Surplus	Depending on how surplus is allocated or distributed, the use [or the obtaining process of] market power can be harmful (and unlawful) or not. As it will be explained in next table, there are a lot of ways to determine what is the rightful welfare standard.
Consumer choice	Range of options	According"to Lande, "the role of antitrust can best be understood in terms of a fundamental standard-the standard of consumer choice. The antitrust laws are intended to ensure that the marketplace remains competitive so that worthwhile options are produced and made available to consumers, and this range of options is not to be significantly impaired or distorted by anticompetitive practices. The antitrust laws thus ensure that the economy responds to the aggregate signals of consumer demand, rather than to government directives or the preferences of individual businesses. An optimal level of consumer choice, which has elsewhere be"en termed "consumer sovereignty" is the state of affairs where the "consumer has the power to define his or her own wants and the ability "to satisfy these wants at competitive prices. The concept of consumer choice even embodies some implicit notions about the rights of the individual in the broader society; it is implicitly part of the We'tern world's response to Marxism and the other totalitarianisms of the Twentie"h Century." (LANDE, 2001).
Multiple goal	Not predetermined	When Dworking questioned if wealth is a value to be protected by law , no matter what are the other consequences, he defended that there are other values that should be protected by law, rather than simple efficiencies concerns (DWORKING, 1980). According to Schwartz "The difficult question is not whether non-economic considerations are a proper, indeed conventional, component of the antitrust calculus, but how to take them into account" (SCHWARTZ, 1979, p. 1080). There may be Autorithies that think that Antitrust should protect the environment[77], sustainable development[78] and employment[79] as part of the efficiency test.
Competitive process	Process itself	As explained by "Jacobson "competitive process standard" [is] "articulated by Gregory Werden and others. Under this approach, practices and transactions that interfere with competition as a process would be prohibited, focusing only on economic effect, but without focusing on any particular welfare standard. Practices that do not impair the competitive process would not be prohibited, even if there is some negative impact on consumer surplus". (JACOBSON, 2015, p. 3)

Table 3 – Some standards about Antitrust goals

[77] *Exxon/Shell* (Case IV.33.640) Commission Decision 94/322/EC (1994)OJ L 144/20.
[78] *CECED (*Case IV.F.I/36.718) Commission Decision 2000/475/EC (2000) OJ L 187/47.
[79] *Syntehtic Fibers* (Case IV/30.810) Commission Decision 84/380/EEC (1984) OJ L 207/17, paras 37-38; *Stichting Baksteen* (Case IV/34.456) Commission Decision 94/296/EC (1994) OJ L 131/15, paras 27-28; *Ford/ Volkswagen* (Case IV/33.814) Commission Decision 93/49/EC [1993] OJ L 20/14.

Standard	Main question	Result
Price	Will price increase?	If yes, there is abusive MP
Consumer Surplus	Will CS decrease?	If yes, there is abusive MP
Producer Surplus	Will PS decrease?	If yes, there is abusive MP
Hillsdown	Will efficiencies generated exceed reduction in CS?	If no, there is abusive MP
Total Welfare	Efficiencies generated are lower than DWL?	If yes, there is abusive MP

CS = Consumer Surplus

PS = Producer Surplus

MP = Market Power

DWL = Deadweight loss

***Also it is possible to have some intermediate forms of balancing efficiencies, CS, PS or other variables, attributing, for example, specific weights for each observable variable (such as efficiencies, DWL, PS, CS or some other variable).*

Table 4 – Ranking of some Welfare Standards

In a nutshell, the debate about efficiency is intrinsically connected to the debate about what the goals are that antitrust should protect. However, as mentioned in the first section of this report, BRICS jurisdictions do not share the same understanding about this topic.

In mergers and unilateral conducts, it is interesting to understand the theories of harm in terms of price, quality, choice/variety and innovation. Other branches of economics, including game theory, behavioral economics, transaction-cost economics, and behavioral economics are often relied upon to explain the benefits of a merger or an allegedly anticompetitive practice (NEWMAN, 2019).

A useful exercise to be made is to compare the state of competition in the absence of the conduct or the merger itself: the so called “counterfactual” (GERADIN & GIRGENSON, 2012). Predictive models are also important tools to comprehend how efficiency defense can be used in specific situations.

Some parties could understand that it is particularly difficult to describe and explain in detail what is the nature of the efficiencies and to measure or quantify them in a dynamic market, such as digital ones (MAYER-SCHOENBERGER & PADOVA, 2016). The problem, however, to accept a non-quantified or non-quantifiable efficiencies to approve a merger or for the acquittal of a specific conduct has to do with the risks that society is willing to take in a situation of great uncertainty. That is why, normally, only quantifiable efficiencies are accepted as valid efficiencies in antitrust analysis.

Another topic is what is the appropriated timeframe to be considered by an antitrust analyst. The net effects (and the efficiency gains) of a merger or a conduct could occur in long or in short-term period. It is difficult to say, aprioristically, what would be the result to enlarge the timeframe of the antitrust analysis. One argument is that shorter time-horizons may benefit large conglomerates, who have the financial capabilities to sustain losses for a longer period. (GERMANY- BKA, 2019; KAHN, 2017). On the other hand, if losses (negative effects) are considered in long-term, efficiency gains (positive effects) should also be considered under a longer timeframe.

It should be noted that all BRICS jurisdictions recognize efficiencies as valid defenses in merger and in unilateral conduct cases, but in the case of South Africa these are not admitted for excessive pricing, minimum RPMs (resale price maintenance) and refusal to give access to an essential facility when it is feasible.[80] In India, the presumption of appreciable adverse effect on competition (AAEC) does not apply to joint ventures, if such agreements increases efficiency, while examining anticompetitive agreements and in such cases, the burden of proof is on the competition agency to demonstrate AAEC on the market. While assessing AAEC, the Indian competition agency places due regard to factors mentioned in Section 19(3) and 19(4) of the Competition Law[81].

In South Africa, the Competition Commission may grant an exemption for any agreements or practice if any restriction of competition it imposes is necessary to contribute to one of the following objectives[82]:

(i) maintenance or promotion of exports;

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[80] See section 3 of the Act
[81] The factors mentioned in Section 19(3) and 19(4) of the Act can be seen at https://www.cci.gov.in/images/legalframeworkact/en/the-competition-act-20021652103427.pdf
[82] Section 10 of the Competition Act.

(ii) promotion of the effective entry into, participation in or expansion within a market by small and medium businesses, or firms controlled or owned by historically disadvantaged persons;
(iii) change in productive capacity necessary to stop decline in an industry;
(iv) the economic development, growth, transformation or stability of any industry designated by the Minister, after consulting the Minister responsible for that industry;
(v) competitiveness and efficiency gains that promote employment or industrial expansion.

Similarly, in Russia, the law creates the possibility for the government to recognize as admissible actions (or inaction), agreements and concerted actions, transactions that do not create an opportunity for individuals to eliminate competition in the relevant product market, do not impose restrictions on their participants or third parties that do not correspond to the achievement of the goals of such actions, if their likely result is:

1) improving the production, sale of goods or stimulating technical, economic progress or increasing the competitiveness of Russian-made goods in the world commodity market;
2) obtaining by buyers of advantages (benefits) commensurate with the advantages (benefits) received by economic entities as a result of these actions (inaction), agreements and concerted actions, transactions.

In Brazil, the statute does not provide any specific defenses, but clarifies that there is no violation of competition law when dominance in the market is achieved by natural process and by being the most efficient economic agent in relation to competitors (Art.36, § 1).

In China, pursuant to article 20 of the Anti-Monopoly law, exemptions to the prohibition of agreements and concerted practices can be obtained in specific cases, specially:

(i) agreements made to improve technology, to research and develop new products.
(ii) agreements made for the purpose of improving product quality, reducing cost, improving efficiency, unifying standards, norms or specialize;

(iii) agreements made by small and medium-sized enterprises to improve operational efficiency and to enhance their competitiveness;
(v) agreements made to cope with economic depression, to mitigate a serious decrease in sales volumes or excessive overstock[83];
(iv) agreements made to achieve public interests, such as saving energy, protecting environment, relieving the victims of a disaster and so on;
(vi) agreements made to maintain legitimate interest in the cooperation with foreign economic entities and foreign trade;
(vii) other cases stipulated by laws and the State Council.

Furthermore, Chinese competition law offers in its Guidelines on the Platform Economy a number of defences to allegations concerning a few specific practices by platform operators, once again potentially lending themselves to reasons other than efficiency: (A) in the context of sales below cost[84]: (1) Development of other businesses within the platform within a reasonable period of time; (2) Promoting the entry of new commodities into the market within a reasonable period of time; (3) Attracting new users within a reasonable period of time; (4) Carrying out promotional activities within a reasonable period of time; (5) Other reasons that can justify the act. (B) in the context of refusal to deal[85]: (1) Inability to conduct transactions due to objective reasons such as force majeure; (2) Safety of the transaction due to the counterparty of the transaction; (3) Trading with the counterparty of the transaction will unduly detract from the interests of operators in the field of platform economy; (4) The counterparty of the transaction clearly stated or actually did not abide by the fair, reasonable and non-discriminatory platform

[83] It is important to stress that, for agreement falling within the scope of (i) to (v), defendants shall also prove that the agreements allow consumers to share the benefits derived from the agreements and will not entirely eliminate the competition in relevant market.
[84] Art. 13.
[85] Art. 14.

rules; (5) Other reasons that can justify the act. (C) in the context of exclusive dealing[86]: (1) It is necessary to protect the interests of the counterparty and consumers in the transaction; (2) It is necessary to protect intellectual property rights, trade secrets or data security; (3) It is necessary to protect specific resource inputs for transactions; (4) necessary to maintain a reasonable business model; (5) Other reasons that can justify the act. (D) In the context of tying and bundling[87]: (1) Comply with legitimate industry practices and trading habits; (2) necessity to protect the interests of the counterparty and consumers;(3) necessity to improve the use value or efficiency of commodities; (4) Other reasons that can prove the legitimacy of the act.

5.1. Concluding remarks of the debate about efficiency

As it was discussed in this section, efficiencies can be debated in unilateral conduct and merger analysis. This specific defense depends, heavily, on the interpretation of what are the goals to be protected by antitrust law. As BRICS jurisdictions presents divergent views over the goals of antitrust, they also present different approaches in terms of efficiency defenses.

6. Conglomerate mergers

In competition law, the term "conglomerate mergers" is used to refer to any merger that is neither vertical nor horizontal, as the products of merging parties are neither in the same product market nor inputs or outputs of one another: rather, they may be complements (i.e., goods that can or must be used together), weak substitutes (i.e., substitute goods that are not within the same product market) and otherwise unrelated products (OECD, 2020). The term may also be used in a more generic sense to include

[86] Art. 15.
[87] Art. 16.

mergers that are not purely conglomerate: they involve conglomerate concerns in addition to at least one horizontal and/or a vertical component.

Competition authorities typically view mergers of the conglomerate type with less suspicion because they do not lead to a change in market structure. The European Commission's Non-horizontal merger Guidelines of 2008 devote a specific section to conglomerate concerns[88], and a recent survey of 34 jurisdictions by the International Competition Network concluded that half of them specifically address such mergers in their guidelines (ICN, 2019)

Brazil submitted a note in the OECD roundtable on Conglomerate effects of mergers of 2020 , referring to conglomerate effects related to the use of portfolio power, primarily through tying and bundling, and reciprocal dealing (BRAZIL, 2020, pp. 1-7). It also recently published a Document (BRAZIL- CADE, 2023) identifying 61 conglomerate mergers notified to CADE during the period of 2012 and 2022.

Conglomerate mergers can give rise to both unilateral and coordinated effects, both of which in the context of conglomerates can be subsumed within the broader concept of "portfolio effects". The first type of concerns can be divided into seven main types of theories of harm: (a) leveraging through tying and bundling; (b) price discrimination through tying and bundling; (c) lower innovation incentives through tying and bundling; (d) competitive advantage as a result of economies of scale and scope; (e) competitive advantage through acquisition of sensitive information; and (f) reinforcement of one´s dominant position by preventing the acquisition or the effective use of strategically important complementors. To these, we should add the coordinated effects

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[88] According to such document, "12. First, unlike horizontal mergers, vertical or conglomerate mergers do not entail the loss of direct competition between the merging firms in the same relevant market. As a result, the main source of anti-competitive effect in horizontal mergers is absent from vertical and conglomerate mergers. 13. Second, vertical and conglomerate mergers provide substantial scope for efficiencies (…) 92. Whereas it is acknowledged that conglomerate mergers in the majority of circumstances will not lead to any competition problems, in certain specific cases there may be harm to competition. In its assessment, the Commission will consider both the possible anti-competitive effects arising from conglomerate mergers and the possible pro-competitive effects stemming from efficiencies substantiated by the parties. 93. The main concern in the context of conglomerate mergers is that of foreclosure." (EUROPEAN UNION, 2008).

theory (see section 6.2) and the acquisition of potential entrants and nascent competitors, which is specifically dealt with in section 6.3.

By contrast, this report does not discuss other theories of harm that were popular prior to the introduction of the US non-horizontal merger Guidelines, and that were abandoned as a result of sustained criticism: namely (i) the entrenchment doctrine, according to which economic power accrues to the merger entity as a result of increased financial power and brand recognition, both of which can be leveraged to compete aggressively in the target market; (ii) the reciprocal dealing doctrine, according to which both parties to the merger could induce their customers or suppliers to transact future business with the respective other merging partner; and (iii) the increase of aggregate concentration doctrine, which, as the name suggests, focuses on the concentration in the macro-economy in the hands of a few companies, as opposed to antitrust-relevant markets (GERMANY- BKA, 2006; CLARKE & DAVIES, 1983). While these theories of harm are not considered to be sufficient on their own, the underlying characteristics may nevertheless play a role in supporting one of the theories of harm about portfolio effects, as it will be explained in the following section.

6.1. Portfolio effects

“Portfolio effects” is a term used in antitrust parlance to refer to both the pro- and anti-competitive effects that may arise in mergers combining branded products: therefore, it is a neutral term which draws attention on the way in which combination of different product lines may facilitate anticompetitive conduct. This likelihood is particularly great if the merger unites products (i) in which there was considerable pre-merger market power; and (ii) which are either complements or display both low marginal costs and a high positive correlation across buyers in the values placed on the products (OECD, 2002).

There is some degree of convergence among BRICS jurisdictions around portfolio effects, which confer the ability to leverage one´s market power into a secondary market through tying and bundling. Brazil offered a specific point of view, mentioning also entrenchment effects due to economies of scale, loss of potential competition, aggregate concentration in the economy and coordinated effects. To that, one should add that the

Brazilian Horizontal Merger Guidelines makes explicit reference to diagonal mergers as well as to portfolio power, as follows (BRAZIL- CADE, 2016):

> Portfolio power may prevent the effective entry of new players, decrease the capacity to compete of already-established players, and facilitate anticompetitive practices. In markets strongly marked by economies of scope, firms with a bigger portfolio benefit from their lower average production costs than other competitors with less product variety. Owning an extensive portfolio may decrease costumer transactions costs, as they deal with a single firm, which offers several products and brands, instead of many smaller suppliers with one product each. Establishing a relationship with many suppliers generates relevant transaction costs:'every product's prices and conditions must be negotiated, contracts must be written and managed, etc. Nevertheless, this power may prevent smaller competitors from accessing to the market, as negotiating with them incurs in higher costs for customers. In the medium and long terms, the favoured firm may take advantage of this condition and exercise the market power obtained, rising the prices of its products and, possibly, gaining market share from smaller firms in the segment. This player may use its wide portfolio to implement aggressive strategies and eliminate its competition in the market, reducing prices in a segment in which it wants to gain market share while offsetting the losses in other markets (cross subsidization). A wide portfolio has important effects for players in terms of marketing. A firm that offers several products maximises its brand awareness and marketing efficiency, since by advertising one product all others are also promoted.

To analyze portfolio effects, India considers foreclosure, preferential treatment to the entities in which parties have a stake, likelihood of entrenched presence in the ecosystem conferring ability/incentive to create barriers to entry/expansion for other stakeholders and reduced pressure on innovation. China referred, more generally, to the ability, motive and possibility of concerned undertakings to exclude or restrict competition, either individually or jointly, and to exclude or restrict, through their control over one or more markets, competition in other markets. Below, a systematization of portfolio concerns is presented.

6.1.1. Leveraging through tying and bundling

The theory of harm that is most typically associated with conglomerate mergers is market foreclosure through tying and bunding. This happens when a firm with market power in a relevant market merges with another that is active in a related market, and has the ability and incentive to foreclose competition through tying or bundling its market power into that secondary market[89].

Whether this theory will hold depends on a contextual assessment of market power, including a consideration of important factors such as the degree of multi-homing and buyer power, the cost of producing the secondary unit, and the likely reactions of competitors both in terms of price (for instance, more aggressively competing on the single products) and non-price strategies (for instance, forming alliances that allow to compete in the sale of the tied or bundled products).

Furthermore, the degree of foreclosure will depend on the existence of a sufficiently large common pool of customers between the tying firm and the target firm who is selling the secondary product, and the significance of the subset of consumers that would buy the second product in the absence of the tie-in or bundle. The latter evaluation can be complex, as it requires the testing of consumer preferences, possibly in relation to different price and product configurations, over the short period of time that is available for merger assessment.

Even in the presence of possible coercion, however, it is necessary to examine whether the merger entity would have not only the ability, but also the incentive to

[89] "Foreclosure" in this context refers to more than a mere hindrance to competition: a sufficiently large fraction of output must be affected by foreclosure, which is unlikely to occur if there remain effective single-product players in either market, or the few remaining single-product rivals have the ability and incentive to expand output. See EU Non-Horizontal Merger Guidelines, para. 113

engage in such strategy (and how the merger would alter these incentives). In this regard, agencies can take into account a number of factors, including the existence of network effects and the potential to deploy big data analysis across multiple market (SOUTH AFRICA- CCSA, 2020b). To make this determination, they may consider the ownership structure of the merged entities, the type of strategies adopted on the market in the past and the content of strategic internal documents, such as business plans (EUROPEAN UNION- E.C., 2008).

One example of application of this theory in digital markets in Brazil involved the economic concentration between Stone, a leading payment provider linked to card acquiring services, and Linx, a provider of business management solutions[90]. CADE´s concerns in analyzing the transaction included two theories of harm, one relating to access to competitively sensitive information (discussed below, in section 8.1.6) and another one relating to the possibility of making more difficult the integration of Linx´s management software with other provider of acquirer solutions. However, this theory was dismissed both by the General Superintendent and by CADE´s Tribunal by noting that there wasn´t much overlap between the customer bases of the two firms, which implied that there was little incentive for tying or other foreclosure strategies: Stone´s customers were small and medium size enterprises, whereas Linx had medium and big customers with significant bargaining power, which could result in the adoption of their own business management solutions. Furthermore, customers demonstrated willingness to switch to different acquirer solutions in case of interoperability issues.

Other examples of this leveraging theory can be seen in the decisions by the Chinese competition authority in *KLA/Orbotech* and *Infineon/Cypress*, both regarding semiconductor products. The competition authority feared that the merged entity would engage in tying, and as a result conditioned approval to commitments involving not only a duty not to make tie-in sales, but also to continue supply the products, refrain from engaging in unfair dealings (including a duty to deal on FRAND terms) and in the latter case ensure that the automotive-

[90] See Administrative Proceeding nº 08700.003969/202-17.

grade NOR flash memory complies with commonly accepted for interface, as well as permitting competitors to be compatible with their flash devices.

A specific application of a technical tying that results in exclusive access to the aquired assets can be found in the concentration involving the acquisition by Microsoft of Activision Blizzard that was authorized by CADE. In particular, CADE assessed whether the merger would increase Microsoft´s incentives to foreclose its digital ecosystem to competitors in several markets by making Activision Blizzard´s games (especially Call of Duty) exclusive to the Xbox ecosystem (consoles, digital stores, subscription services). However, the Office of the Superintendent-General concluded that Microsoft would not have the incentive to do so, because that would result in a decrease in the number and variety of games available on its platforms, potentially making the Xbox ecosystem less appealing to customers[91]. Furthermore, even if Microsoft decided to limit the Xbox Game Pass Subscription service to first-party content, competitors in the game console markets would still have access to alternative distribution channels such as digital stores (PlayStation Store, Nintendo eShop and the Xbox Store), competing subscription services (on consoles, primarily PlayStation Plus) or even physical game distribution[92]. Nevertheless, it should be mentioned that CADE's conclusion refers to the competitive situation in the Brazilian market, which present different characteristics from those existing in markets where the transaction was approved only upon the adoption of a suitable remedy (namely, the United Kingdom and the European Union).

Similar to *Microsoft/Activion* in this regard is also Google's acquisition of Fitbit, which was approved by the CCSA upon certain conditions. In this case, the CCSA was concerned that Google, as a dominant provider of the Android operating system for smart

[91] *Microsoft/Activision*. Case no. 08700.003361/2022-46, Office of the Superintendent-General of CADE, October 6, 2022, Technical Opinion no. 23/2022/CGAA3/SGA1/SG/CADE, para. 263.
[92] Id., para 261.

phones, would exclude competitors of Fitbit (suppliers of wristwearable devices) from accessing its Android operating system or frustrate the functionalities of the companion apps of Fitbit competitors from operating optimally on Android OS[93].

The last step of the analysis involves a consideration of the possible efficiencies involved in such conduct: tying can be justified by the internalization of positive externalities arising from the sale of complementary products, both on the production and on the consumption side. However, the fact that a concentration is the only way of achieving such externalities cannot be taken for granted, having to be proven to the requisite legal standard (see below, section 6.4).

6.1.2. Price discrimination through tying and bundling

A third theory of harm has to do with abusive price discrimination accomplished through tying and bundling, that could implemented due to a specific merger. For example, dynamic tying (that is, tying of a consumable product to a durable product) can be used to impose a higher price to higher-volume consumers; alternatively, pure bundling (that is, the selling in a package of multiple products that are not available on a stand-alone basis) can be used to force consumers to pay up to their average willingness to pay for the two budled products, effectively cross-subsidizing between them. The effects of these practices depend on the specific characteristics of the market in question: in particular, the OECD suggested screening out differential pricing that expands output or can be justified by dynamic incentives to innovate, and condemning differential pricing when it involves partitioning strategies (as, for instance, taking steps to prevent arbitrage, distinguising between sophisticated and naïve customers, or gathering and analyzing data

[93] South Africa- Department of Trade, Industry and Competition, Government Gazette no 45250, October 1, 2021, p. 71. Commission Notification to Approve With Conditions the Transaction Involving Google LLC (USA) e Fitbit Inc. (USA). Case no. 2020SEP0045.

on individual consumer's willingness to pay) designed to increase average mark-ups and hence the dominant firm´s market power (OECD, 2016, p. 14).

6.1.3. Lower innovation through tying and bundling

The fourth theory of harm has to do with the innovation effects of tying and bundling on competing producers, either in the primary or in the secondary market(s).

This concern is particularly significant where entry is sequential (that is, entry in the tying market is a pre-requisite to entry in the tied market) and where innovation plays an important role in the tied market, thus requiring significant investment that may not be feasible to a competitor that needs to undertake a second-level entry (OECD, 2020, p. 28). To reach such conclusion, it is important to establish the type of innovation at stake, and particularly whether it is sustaining or disruptive, so as to assess the magnitude of investment that is likely to be required to effectively compete in that market[94]. Furthermore, since the integration arising from tying and bundling may actually result in greater innovation or other efficiencies by the merged entity, a careful analysis of the direction and intensity of innovation is warranted to support the application of this theory of harm.

This theory was followed by CADE in its assessment of the *Bayer/Monsanto* merger[95], which involved a life sciences company with core competencies in the areas of health care and agriculture, and an agricultural company providing seeds, biotechnology traits and crop protection. In addition to a handful of horizontal and vertical issues, the merger raised conglomerate concerns relating to seeds and crop protection products, and to the increased capacity of offering integrated solutions for smart farming.

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[94] According to the founders of this distinction, sustaining innovations tend to maintain a rate of improvement, giving customers "something more or better in the attributes they already value", while disruptive innovations "introduce a very different package of attributes from the one mainstream customers historically value, and they often perform worse along one or two dimensions that are particularly important to those customers. See Bower and Christensen (1995).

[95] Merger nº 08700.001097/2017-49

According to the latter theory of harm, in particular, the merged entity would expand the capacity of the digital platforms that merging parties already utilize to create linkages between seed traits and transgenic events or treatment products, with the aim to offer in the medium-long term integrated solutions based on smart combination and optimized use, agronomic advise and digital agriculture solutions; this would essentially disrupt the existing competitive paradigm shifting the focus of competition from isolated herbicides or biotechnology events to a competition between systems, and thereby significantly raise barriers to entry in the medium to long run.

While CADE stressed that any potentially restrictive effects on competition from tying and bundling must be weighted with positive effects such as increase of countervailing power, possibility of entry and any resulting efficiencies, it concluded that conglomerate effects reinforced the concerns (especially of horizontal nature) outlined with regard to the markets for seeds and pesticides, and therefore imposed remedies (such as non-discrimination, transparency and duty not to tie or bundle) to address those concerns.

A similar position was also taken by the Indian Competition Commission, which saw digital farming technology an important enabler for integrating businesses in neighboring or complementary markets[96]; and by the Russia´s Federal Antimonopoly Service, who suggested that in markets that are heavily dependent on ongoing technological developments and innovation competition, 'market power' should be conceived as the projection of the innovative potential of the merging entity (BRICS COMPETITION CENTRE, 2019).

6.1.4. Competitive advantage as a result of economies of scale and scope

A fifth theory of harm has to do with the increased ability of the dominant company to reap benefits accruing from its larger scale and its engagement in related activities. One should be particularly careful with this theory because, in principle,

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[96] Order under Section 31(7) of the Competition Act, 2002, on Combination Registration No. C-2017/08/523, 14 June 2018

efficiencies should not be seen as problematic. However, the possibility that such efficiencies be used to the detriment of consumers, in certain cases in the event of exit of a competitor from the market, has been documented (MOTTA & VASCONCELOS, 2005; NEVEN, 2007). In the context of digital ecosystems, one can expect this to occur more frequently, due to the complementarities between ecosystem products and services, the path dependency associated with sourcing requirements from within the ecosystem, and the importance of obtaining scale to benefit from network effects.

Both CADE and the Indian Competition Commission applied the theory in the context of the *Bayer/Monsanto* merger, holding that the merged entity would obtain a competitive advantage in the distribution of its seeds and crop protection products: this would enable it to obtain more favorable conditions and better financing, and give it the incentive to discriminating among distributors, in addition to foreclosing by tying and bundling.

Similarly, CADE saw variety and complementarities of the products of merging parties in *Tigre/Condor*[97] as a factor that can shape consumer preferences and therefore become a competitive advantage, further increased by exclusivity clauses with distributors, resulting in market foreclosure.

Another example is offered by the decision by the South African Competition Commission in *MIH/WeBuyCars*[98], where media conglomerate Naspers attempted to acquire a controlling share in WeBuyCars, a car-buying platform. The theories of harm considered by the Commission included self-preferencing, the combination of different datasets, economies of scale and scope in advertising, generating capital and technology solutions, and feedback effect (SOUTH AFRICA, 2020c). In particular, due to Naspers´ important presence in the market for providers of generalist classified advertising and in specialized automotive online advertising services, the competition authority expressed the concern that WeBuyCars would obtain an advantage in Naspers´ platform for

[97] *Tigre S/A - Tubos e Conexões e Condor Pincéis Ltda*., Merger n. 08700.009988/2014-09
[98] *Competition Commission and MIH eCommerce Holdings (Pty) Ltd; We Buy Cars* (Pty) Ltd · Case number: LM183Sep18/DSC065Jul19.

classified ads, Autotrader (in addition to privileged access to sensitive data), and ultimately prohibited the transaction. CADE also explicitly recognized in its Guide on Horizontal Merger (BRAZIL- CADE, 2016) that there are advantages derived from economies of scope, such as advantages of lower advertising costs and lower transaction costs in relationship with suppliers, which may constitute a barrier to entry and ultimately lead to exercise of market power, such as reducing prices in a segment in which the merged entity wants to gain market share while offsetting the losses in other markets (cross subsidization).

In face of the difficulties involved in distinguishing positive and negative effects related to economies of scale and scope, it is important to note that authorities need not resort to long-term speculations in order to establish that acquisitions that lead to a consolidation of an existing ecosystem may pose threat to competition. In fact, they have recently begun considering ecosystem expansion theories to challenge conglomerate mergers based on the innovation potential of the parties involved.

A first couple of examples from 2021 are CADE´s decisions in *Magalu/Kabum!*[99] And *IF Capital Ltda. (Americanas S.A.)/Hortigil Hortifruti S.A.*[100]In the first case, a major e-commerce marketplace acquired one of the greatest video-games site, and CADE considered possible portfolio effects. However, it ended approving the transaction without restrictions, on grounds that the retail sector in Brazil is highly competitive and without significant barriers to entry for new players, besides the fact that there were a number of strong players that could rival Magalu´s portfolio power.

The second concentration involved one of the largest retailers in Brazil, with an important network of physical stores and a thriving e-commerce channel, where it also offers payment and logistic services, acquiring a retailer with 73 physical stores in four

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[99] *Magazine Luiza S.A. and Kabum Comércio Eletrônico S.A.*, Case No. 08700.003780/2021-05, Office of the General Superintendentof CADE, October 19, 2021.

[100] *IF Capital Ltda (Americanas S.A)/Hortigil Hortifruiti S.A.*, Case no. 08700.004481/2021-80, Tribunal of CADE, September 17, 2021.

different Brazilian states and significant online presence, both in its own channel as well as third parties' marketplaces. Although the Superintendent General proposed the unconditional approval of the transaction, and the Tribunal ultimately endorsed this position, Commissioner Paula Farani Azevedo objected to it by introducing for the first time in CADE´s jurisprudence the concept of competition between "digital ecosystems", and noting the pivotal role of scope economies and the importance of dynamics such as network effects, clustering, multi-homing and network bridging to enable the emergence of competitive forces in ecosystem markets[101].

Up until 2022, it was observed that CADE´s jurisprudence on conglomerate mergers may have played insufficient attention into ecosystem effects (ZINGALES & RENZETTI, 2022). In 2023, however, the concept of ecosystem entered into main stage in CADE´s jurisprudence with the decision in *Microsoft/Activision*[102], of which we have already discussed one theory of harm (see supra, section 8.1.2). A second theory of harm considered by CADE was whether the transaction would increase considerably the size and diversity of Microsoft´s first-party game catalogue, which would include Activision Blizzard´s successful franchises in addition to games developed by Microsoft´s own studios and their recently acquired Zenimax.

The increased portfolio of games could reduce Microsoft´s demand for third-party content in its ecosystem, thereby reducing the distribution channels available to other game publishers and thus possibly foreclosing the Xbox ecosystem to third-party content. However, the Office of the General Superintendent dismissed the concern as it did not find any impeding factors to entry of new players and unfettered competition in the market, even in a scenario where the model of game streaming becomes popular

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[101] Id., Opinion of Comissioner Paula Farani de Azevedo, para. 22-24.
[102] *Microsoft/Activision*. Case no. 08700.003361/2022-46.

worldwide, and it identified the presence of strong sophisticated players in cloud gaming services which are well positioned to rival Microsoft´s ecosystem[103].

It is interesting to note that the same acquisition was initially blocked in the United Kingdom, due to the concern that it would give Microsoft too much of a strong position in the nascent cloud gaming market[104]. However, the Competition and Market Authority ultimately approved the transaction when resubmitted for re-consideration, upon Microsoft´s concessions to divest the cloud rights of Activision games to French game publisher Ubisoft Entertainment[105].

It should also be mentioned that a conglomerate merger was recently blocked by the European commission precisely on the basis of ecosystem expansion theory[106]. The transaction involved the acquisition by Booking Holdings, Inc., a dominant OTA in the European market, of Flugo Group Holdings AB (eTraveli), the second largest supplier of flight OTA services in the region. Starting from the premise that Booking is dominant and competing OTAs are unable to exert significant competitive pressure, the Commission pointed out that eTraveli is an important customer acquisition channel and concluded that the transaction would reinforce network effects and barriers to entry and expansion in the hotel OTA market. Booking attempted to assuage competition concerns by committing to offer customers an option to book hotels through Booking’s competing

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[103] Id., Office of the General Superintendent, October 6, 2022, Technical Opinion no. 23/2022/CGAA3/SGA1/SG/CADE, para. 300.

[104] Microsoft and Activision Merger Inquiry Order (August 22, 2023). Retrieved August 31, 2023 from https://assets.publishing.service.gov.uk/media/64e3764a3309b7000d1c9bd7/Microsoft_Activision_-_Final_Order.pdf

[105] Anticipated acquisition by Microsoft Corporation of Activision Blizzard (excluding Activision Blizzard’s non- EEA cloud streaming rights) Decision on acceptance of undertakings in lieu of reference (October 13, 2023). Retrieved October 28, 2023 from https://assets.publishing.service.gov.uk/media/652863e32548ca0014ddf20b/Full_text_decision__final_acceptance_of_UILs_.pdf.

[106] Mergers: Commission prohibits proposed acquisition of eTraveli by Booking. European Commission Press Release September 25, 2023. Retrieved October 20, 2023 from https://ec.europa.eu/commission/presscorner/detail/en/ip_23_4573.

hotel OTAs on the eTraveli flight offerings screen, but the European Commission rejected this offer, considering it too difficult to implement effectively and monitor in practice.

6.1.5. Competitive advantage as a result of the acquisition of commercially sensitive information

A sixth theory of harm has to do with the abuse of commercially sensitive information that was available to one of the merging parties. This information may relate to consumers (for instance, a database involving preferences through which consumers can be targeted), but also to other sellers or complementors on the platform (for instance, information relating to the performance of competitors on the platform). The challenge with this theory of harm is about the assessment of two important components: first, the extent to which the information is commercially sensitive, i.e. the extent to which the information is of such nature that its disclosure could result in serious harm to an undertaking[107]; and second, the extent to which it is likely to be used to gain a competitive advantage. Importantly, this two-step framework implies that, even where information is accessible, its use may be unlikely when it is practically constrained by the application of rules that are external to antitrust, such as those relating to privacy and data protection law. The most controversial question, in this regard, is whether the existence of rules that prohibit the re-use of the information without a specific authorizaton should be considered a sufficient deterrent to the ability and incentive of firms to take advantage of such information.

CADE considered this to be the case in the acquisition by leading e-commerce platform Magalu of the fintech Hub[108], who provided payment services for 5 years for

[107] EUROPEAN UNION- E.C., 2008. See Case COMP/M.1879 — Boeing/Hughes (2000); Case COMP/M.2510 — Cendant/Galileo, point 37; Case COMP/M.2738 — Gees/Unison, point 21; Case COMP/M.2925 — Charterhouse/CDC/Telediffusion de France, point 37-38; Case COMP/M.3440 — EDP/ENL/GDP (2004).
[108] *Magalu/ Hub,* Merger n. 08700.000060/2021-80

one of Magalu´s competitors. Here, the main conglomerate concern related to the strategic use of information on the transactions made within Mercado Pago, but CADE´s tribunal concluded that the existence of a prohibition to process this information for purposes other than those specifically identified by the Central Bank Regulation, together with the applicability of data protection law and the absence of prior infringments by the merging parties, were sufficient to dispel such concern. In contrast, on the occasion of SBF´s acquisition of the majority of shares of Nike om Brazil[109], CADE conditioned approval upon a commitment to preserve the confidentiality of information of Nike´s customers.

Similarly, in *KLA/Orbotech*, the Chinese competition authority required the merged entity to put in place in the process control equipment market measures to protect the information of deposition and etch equipment manufacturers from Orbotech. Even stricter was the approach of the South African competition commission in *MIH/WeBuyCars*[110], which prohibited the transaction on grounds including the privileged access by the acquired firm to information on private car sellers in another platform (OLX) owned by the acquirer, and market-related data on automobile dealers collected by another platform (Autotrader) owned by the acquirer.

Finally, the concentration between Stone and Linx deserves to be mentioned again (see supra, section 6.1.2), as in it CADE discussed the significance of the information that was being aquired from Stone, concluding that it would not provide a competitive advantage. This was found to be the case not only because the relatively small amount of information in question- such as the list of acquirers that provided services to a given customer, the volume of transactions and of expected revenues within that acquirer, and

[109] *SBF/ Nike*, Merger n. 08700.000627/2020-37
[110] See Competition Tribunal Confirms the Prohibition of Naspers Purchase of Webuycars. Press Release (27 March 2020). Retrieved 1 December 2023 from http://www.compcom.co.za/wp-content/uploads/2020/03/COMPETITION-TRIBUNAL-CONFIRMS-THE-PROHIBITION-OF-NASPERS-PURCHASE-OF-WEBUYCARS.pdf.

the percentage charges -, but also because such information have become available for all financial players within the Open Banking program.

Another case dealing with the acquisition of competitively sensitive information in Brazil is *Claro/ Serasa*, concerning an agreement between a credit scoring agency and a telecom operator to use the data collected by the latter in the former's line of business[111]. Here, CADE considered the possibility that the agreement would lead to foreclosure, but dismissed it on grounds that similar information can readily be found from other market participants, that it would not affect the indipendent conduct of the merging parties in their own markets, and that it enables the offer of new products and services with improved quality.

6.1.6. Reinforcement of one´s dominant position by preventing the acquisition or the effective use of strategically important complementors

A seventh and final theory of harm relating to portfolio effects concerns the strategic acquisition of strategically important complements to prevent competitors from gaining foothold in the market. This theory builds upon the recognition of the ability of dominant firms to invest in entry-deterrence mechanism (SALOP, 1979), and that the acquisition of startups is one of such mechanisms available to the incumbent. In particular, a strategy aimed at preventing access to the startup technology when the latter is more useful to competitors than to the incumbent generates three types of social costs (BRYAN & HOVENKAMP, 2020): first, the reduction of competition that is intrinsic in foreclosure of competitors from the strategic technology at issue; second, a shift in the direction of innovation, especially when this forms part of a repeated pattern, as it incentivizes startups to build their technology with a bias in favor of improving all incumbent´s products, as opposed to facilitating catch-up by laggard(s); and third, a reduced purchase price for startups in the long run, to the extent that laggards exit the market in response to the implementation of this strategy.

[111] Merger case n. 08700.006373/2020-6.

Similar concerns have been expressed in the specific context of platforms by describing the conduct of “platform annexation,” which refers to a practice where a platform takes control of adjacent tools, products, or services and operates them in a way that interferes with efficient multi-homing among platform users : this is for instance what Google did with its acquisition of Doubleclick, which it used to preference itself and steer consumers away from competing ad exchanges (ATHEY & MORTON, 2022). Here, we are not necessarily talking about startups, but more broadly about the acquisition of tools that promote consumer mobility presents the same kind of concerns about entry-deterrence mechanisms. Differently from the acquisition of startup technology, the theory of harm depends on the ability of the acquirer to alter the functioning of the relevant tool to hinder effective mobility. This is not always possible, as the likelihood of success of this strategy is inextricably linked to the market power of the tool, and the ability of consumers to detect and react to the biasing or deterioration of the tool´s function.

Therefore, while the theoretical basis for these concerns is sound, its practicability will depend on the characteristics of the market in question. Understanding the strategic importance of a complement requires information not only from the acquirer and the target, but also from actual and potential competitors, with a view to understanding the viability and timeliness of a counterfactual acquisition, or the continuation of the target business as independent and the availability of its services to third parties. It should be added also that in both cases, the concern is augmented by the existence of network effects, which make entry-deterrent mechanisms more appealing and likely in the digital sphere.

6.2. Coordinated effects

The concern for coordinated effects of conglomerate mergers can be explained by reference to two different scenarios (OECD, 2020):

First, in concentrated markets, the existence of a tied or bundled offer may effectively soften competition by allowing oligopolists to divide up the market between those consumers who are willing to pay for a bundle (to be served by the merged entity), and those who are not (who will buy the product by the other oligopolists).

Second, even without a tie-in or bundle, the existence of structural links between undertakings operating in different markets may improve their ability to coordinate their behavior. While this effect increases with the acquisition of confidential information generated by interlocking directorates and a common ownership structure, this is not a pre-requisite for the application of the theory: the mere increase of multi-market contacts between (conglomerate) firms increases their ability to retaliate for possible deviation from a collusive equilibrium. In the context of digital ecosystem, however, one can expect that the use of a common infrastructure will enable not only a better coordination, though the terms of trade dictated by the orchestrator, but also a better detection of deviating conduct through its content moderation mechanisms. Therefore, a crucial question to be asked in this context is to what extent the ecosystem orchestrator actively moderates (both *ex ante* and *ex post*) the behavior of its complementors.

The general framework for assessing coordinated effects is the same as the one applicable to horizontal mergers, its pillars being (i) the easiness of reaching terms of coordination and monitoring deviation from those terms; (ii) the ability to use a credible deterrent mechanism in case of deviation; and (iii) the reaction of outsiders such as customers and competitors (EUROPEAN UNION, E.C., 2008).

6.3. Acquisitions of “potential” and “nascent” competitors

Another reason why conglomerate mergers may be problematic is that they may be an attempt by an incumbent to pre-empt market entry by a potential competitor. This concern is, under certain circumstances, considered as part of horizontal merger policy: “potential competitor” refers to an entity that could use its existing assets to enter the market without incurring significant sunk costs, or where it would be very likely to incur the necessary sunk costs to enter the market in a relatively short period of time (EUROPEAN UNION, E.C., 2008). This means that an acquisition will not raise concerns under the horizontal merger guidelines if the target is not able to enter the market in a short period of time (usually one to two years), which a recent retrospective analysis of digital merger has criticized as insufficient to assess future market success, even in the fast-moving digital landscape. (ARGENTESI, et al., 2019). Furthermore, according to the EU Guidelines on Horizontal Mergers, for a merger with a potential competitor to have significant anticompeitve effects it must either already exert a significant constraining influence or be very likely to grow into an effective competitive force, in addition to there being an insufficient number of other potential competitors to maintain competitive pressure after the merger.

CADE´s guidelines are slightly more open-ended, focusing *among other factors* on whether one of the firms is on the brink of entering a market, whether it has relevant assets which may easily be used to return to the market without incurring significant sunk costs, and whether it can bear the costs needed for entering the market in a relatively short term (BRAZIL- CADE, 2016). All these Guidelines thus appear to equate the position of a potential competitor to that of a nascent competitor, although one can logically identify differences between the two: the former includes a competitor that has already left the market or that is not yet producing the product through which it could compete with the incumbent, whereas the latter´s product already exists in the market but has not yet turned into an effective competitor (YUN, 2020). In the United States, a third category of competitor is also recognized as part of the concept of potential competitor, which is the so-called “perceived” potential competitor: this is a case where there is a potential competitor on the fringes of the market that, absent the merger, would serve to constrain prices of current competitors even if it never actually enters the market[112]. However it also has been noted that the burden of proof for succeeding with a potential competition theory of harm in the United States is a substantial one, requiring a showing of three elements in each of the two sub-categories of actual potential competitors and perceived potential competitors (SALOP, 2021). For the former, it must be shown that (1) the relevant market is oligopolistic; (2) absent the acquisition, the acquiring firm would have entered the market in the near future either de novo or through acquisition of a little company; and (3) such entry by the acquiring firm carried a substantial likelihood of ultimately producing deconcentration of the market or other significant procompetitive effects. For the latter, it must be shown that (1) the relevant market is “substantially concentrated;” (2) the acquiring firm has the “characteristics, capabilities, and economic

[112] *United States v. Falstaff Brewing Corp*, 410 U.S. at 537

incentive to render it a perceived potential de novo entrant;" and (3) the "acquiring firm's premerger presence on the fringe of the target market in fact tempered oligopolistic behavior on the part of existing participants in that market."

Agencies seemingly include all three the above-mentioned scenarios when applying special caution in the analysis of mergers involving a "maverick", i.e. a firm that plays a disruptive role in the market, departing from the use of market shares and concentration index (HHI). According to Brazilian Horizontal Merger Guidelines (BRAZIL- CADE, 2016):

> Maverick firms are those with a disruptive degree of competitive rivalry. They usually have low production costs and prices, pushing market prices down, or are inventive firms that foster ongoing innovation in their industry. Therefore, their independent presence in the market can help control the prices of firms with larger market shares. CADE may consider, for instance, that a merger that involves a firm with a strategy of cost, innovation, or niche leadership may reduce the industry's current or potential competition levels, reduce rivalry, and discourage innovation in the market at issue, regardless of whether its HHI is low.

An example that encapsulates this approach is CADE´s assessment of *Itau/XP*[113], where one of the biggest traditional banks in Brazil aquired arguably the most well-known representative of the "digital banking revolution". XP operated as an open platform for investments[114] which aggregates and distributes many investment products, such as

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[113] Merger nº 08700.004880/2017-64.

[114] Investment products are usually built by banks and distributed by their own networks. For instance, Itaú would not offer to its clients any investment products developed by a rival bank. Only products developed by Itaú would be available for their customers. In order to have access to a wider array of investment opportunities, customers would have to have accounts in several different banks. This is a closed platforms for investments and was the reigning model in Brazil until a few years ago. The open platform model

investments funds, treasuries and also stock markets, offering an intuitive home broker solution for its clients. Despite the low market share of XP, CADE was concerned with the possibility of market discrimination by XP in the distribution of financial products: the platform could have incentives to foreclose rival banks and distribute only products developed by Itaú. As a result, CADE imposed a range of behavioral remedies for the clearance of the transaction.

Another relevant case to mention from Brazil is the acquisition by Naspers (owner of leading food delivery app iFood) of control in Delivery Hero[115], a German company of the Rocket Internet SE group focused on online food-delivery service. Here, it is worth noting that CADE recognized that iFood held a dominant position at the time, and that several competitors of iFood ended up being acquired in their nascent stages. However, the transaction itself did not raise concerns, because the target's market share was very low and the relevant market was in constant expansion, in part due to the lack of entry barriers. Nevertheless, it was highlighted tha the market required close monitoring, particularly to the extent that iFood's acquisition of startups in the sector were to become a consistent pattern: this would likely prevent anyone to develop sufficient capabilities to rival iFood in the market.

The European Commission also used the concept of mavericks (as a firm with high likelihood to disrupt the market) as one of the circumstances in which it could extensively analyze non-horizontal mergers resulting in combined market share below 30% and a post-merger HHI below 2000, in addition to: the involvement of a firm with significant potential expansion in the future; the existence of significant cross-ownership amog market participants; and indications of past or ongoing coordination or facilitating practices (EUROPEAN UNION- E.C., 2004, para. 26). CADE adopts similar criteria, but in addition to those, flexibilizes the use of the HHI when concentration levels are

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introduced by XP altered drastically the market for investments in Brazil. Being an open platform means that XP distributes investments products developed by several different financial institutions in the same place. The customers thus only need to sign up to XP's platform to access different investment products.

[115] Merger n. 08700.007262/2017-76 (*Naspers Ventures B. V., Rocket Internet SE and Delivery Hero*).

inconsistent with the actual competitive dynamics and when the transaction involves portfolio effects (BRAZIL- CADE, 2016), which puts dynamic competition front and center in the assessment of conglomerate effects.

Even if an acquisition were to be scrutinized as an horizontal merger, the question remains on how competition on innovation is to be assessed. Although there is no univocal link between concentration and innovation, the prevalent view is that, in the absence of merger-specific synergies or other efficiencies, a merger between two rivals is likely to reduce the intensity of innovation competition (KOKKORIS & VALLETTI, 2021). This may be relatively easy to establish when the merger involves transaction in which late stage pipeline products of one of the merging parties overlap with existing or pipeline products of the other. By contrast, the assessment is more difficult if the merger involves early R&D efforts of the parties which have not yet taken shape of concrete products, or which do not yet have a high probability of successful commercialisation (EUROPEAN UNION, 2018): here, one possibility is to define the locus of competition as an"innovation space", which is a broad concept that has been criticized for doing away with the need to identify a relevant market (PETIT, 2019). In any case, to determine whether the discontinuation, delay or re-orientation of overlapping areas of research, or even the reduced incentive to do future R&D, is a likely outcome of the merger, it will be necessary to determine whether the merging parties are indeed important and close innovators with similar R&D capabilities, in a sector where innovation is an important parameter of competition, where the number of effective innovation players can be reliably identified and is limited, and where the barriers to entry are high (EUROPEAN UNION, 2018). This creates a measurability challenge, at the very least in determining what constitutes an appropriate horizon to compute the relevant effects of the merger. While there is no uniformity among BRICS jurisdictions on the time-frame for assessing potential entry in mergers, all authorities highlighted the need to take into account the specifics of the industry: for instance, India generally considers two years but may also consider 3 to 5 years depending on the case specificities, but a shorter time-frame may be used in digital markets- a conclusion shared by China for markets with high R&D and innovation. On the other hand, South Africa may adopt a longer time horizon in such cases. Brazil typically uses 1 to 2 years, but may look into the 5 previous years history in order to make a prognostic assessment about the evolution of the market in the future.

One potential source of valuable information in making these determinations of the likelihood of entry are stock prices and other financial information: indeed, investors often see market developments before other market participants. BRICS authorities do make use of financial information, for instance, to understand the rationale of the merger or the post-merger plans (South Africa), to ground requests for information to parties (Russia), and to detect possible non-notified transactions (India, Russia). However, stock prices are typically considered secondary information, as was stressed by the Russian and Brazilian competition authorities. Finally, China said that this type of information can be seen as part of its parameter for merger assessment as "the influence over access to the market and economic development".

6.3.1. Killer acquisitions

Within the realm of mergers affecting potential competition, there is a subcategory of concern, called "killer acquisitions", that involves the acquisition of an innovative target and termination of the development of the target's innovations to preempt future competition. Recent research (CUNNINGHAM, EDERER, & MA, 2021, p. 5) in the pharmaceutical sector has shown that about 46 to 63 acquisitions (between 5.3 percent and 7.4 percent of all acquisitions in the analyzed sample) every year are "killer acquisitions". Furthermore, this research found that (i) incumbents are four times more likely to acquire pharmaceutical projects that can develop into potential direct competitors to their existing or future products than other comparable targets, that (ii) they are twice as likely to discontinue or kill these projects, and that (iii) these effects are concentrated in already less competitive markets. Interestingly, those whose value was 5% below the US FTC's turnover threshold were 11.3% more likely to be killer acquisitions than those that were 5% above the threshold.

From a procedural standpoint, this points to one possible shortcoming of merger control: in most jurisdictions, the obligation to notify the competition authority about an intended acquisition depends on meeting a threshold based on the turnover generated by the merging parties in the preceding business year. Considering the risk of killer acquisitions, this may lead to transactions with potential anticompetitive effects flying under the radar of competition authorities even if the acquisition price is substantial- an element which may warrant attention from the authorities (MC LEAN, 2021). The problem may be particularly significant in the digital sector, due to widespread use of non-monetary pricing and the increasing focus on the achievement of scale before monetization. Taking this into account, it is important to highlight the Competition Amendment Act of 2023 in India, which introduces an additional duty to notify transaction based on their value in connection with acquisition of any control, shares, voting rights or assets of an enterprise, merger or amalgamation.

However, independently of the existence of a prior notification duty and a standstill obligation pending approval, authorities have the power to challenge consummated mergers to restore competition. In Brazil, for instance, art. 88, §7º, of Law no. 12,529/2011 contains a “clawback” provision, according to which CADE may request that the Parties submit non-mandatory mergers to CADE in up to one year after the deal was closed.

Furthermore, China can order the reversal of an illegally consummated transaction (art. 58 of the Antimonopoly Law) and can open investigation also for non-notifiable obligations. Similarly, Brazil can impose fines and open administrative proceedings in case of the consummation of transactions that had been notified and subject to a standstill obligation, as well as in the case of false or misleading information provided in the merger assessment process. India has the ability to examine consummated transactions that were otherwise notifiable but not notified for up to 1 year from the date such combination has taken effect, for assessment of any likelihood of an appreciable adverse effect on competition. South Africa can do that only with regard to small mergers within 6 months. Furthermore, recently South Africa published Guidelines on small merger notifications, where it clarifies that it will require the notification of all small mergers which meet any of the following criteria:

- at the time of entering into the transaction any of the firms, or firms within their group, are subject to an investigation by the Commission in terms of Chapter 2 of the Act;

• at the time of entering into the transaction any of the firms, or firms within their group, are respondents to pending proceedings referred by the Commission to the Competition Tribunal in terms of Chapter 2 of the Act;

It will also require that it be informed of all small mergers and acquisitions where either the acquiring firm, the target firm, or both, operate in one or more digital market(s) provided at least one of the following criteria are met:

• the consideration for the acquisition or investment exceeds R190 million [116]provided the target firm has activities in South Africa;

• the consideration for the acquisition of a part of the target firm is less than R190 million but effectively values the target firm at R190 million (for example, the acquisition of a 25% stake at R47.5mn) provided the target firm has activities in South Africa and, as a result of the acquisition, the acquiring firm gains access to commercially sensitive information of the target firm or exerts material influence over the target firm within the meaning of section 12(2)(g) of the Act;

• at least one of the parties to the transaction has a market share of 35% or more in at least one digital market; or

• the proposed merger results in combined post-merger market share at which the merged entity gains or reinforces dominance over the market, as defined by the Competition Act.

A last resort strategy to challenge acquisitions that reveal to be anticompetitive is through conduct proceedings, which provide the advantage of enabling competition

[116] The equivalent of 11.020.946 USD on Nov. 15th, 2022.

authorities to detect anticompetitive issues arising from the accumulation of a series of transactions which may not be problematic on their own (WILDER, 2019). The problem of potentially missing a broader pattern when examining an individual transaction was recently identified in a by CADE in the context of the acquisition by Naspers of Delivery Hero[117], suggesting that further acquisitions of startups by the acquirer ought to be closely monitored in order to prevent such strategy from becoming a barrier to entry.

From a substantive perspective, while the pattern of acquisitions in the pharmaceutical industry is concerning, one cannot take it as conclusive evidence of anticompetitive effect: in principle, a transaction of this kind may have been motivated by the need to acquire assets other than the target´s product, such as its brand, technology or talent. In the latter case, the acquisition is also called "acqui-hire" (COYLE & POLSKY, 2012). For instance, a study of acquisition by GAFAM over a 3 year period (2015-2017) concluded that 100 of the 175 acquisitions made by the GAFAM acquisitions led to discontinuation a year after closure; however, it also found that a large number of these acquisitions were driven by the desire to purchase valuable R&D inputs, such as the technology, IP rights and/or people of the target firms (GAUTIER & LAMESCH, 2020). Indeed, this confirms the view taken in the EU Special Advisers´ Report that frequently the project of the bought-up start-up is integrated into the "ecosystem" of the acquirer or into one of their existing products (CREMER, DE MONTIOYE, & SCHWEITZER, 2019). The integration may produce large enough benefits that outweigh the concern behind the elimination of competition between the acquirer and its target, but this remains essentially an empirical question. All in all, although it may be difficult to rely on the killer acquisition theory of harm in the absence of further evidence relating to antitrust-relevant markets involved in a transaction, it appears that the possibility of this should at least be considered as part of merger policy.

The key element for the casuistic assessment is the identification of the relevant counterfactual(s): for instance, would the target enter the market disruptively, and would

[117] *Naspers limited & Delivery Herlo AG*, Merger No. 08700.007262/2017-76.

the acquirer be able to develop the product internally? Would the target be able to obtain funding elsewhere? Additionally, agencies can look for evidence of a “killing” strategy in contemporaneous internal documents, and examine the existence of factors that incentivize this strategy, such as: savings from reducing duplication or from switching production into the more efficiently produced product; diversion ratios in the event of a product closure, and profitability of a shut down more generally (OECD, 2020c, p. 33).

6.3.2. “Reverse” killer acquisitions

In addition to acquisitions involving the shutdown of the target, a concern arises with acquisitions of potential competitors that “effectively extinguish the standalone effort of the buyer to expand in a particular space because the target immediately provides it with those capabilities”(CAFFARRA, CRAWFORD, & VALLETTI, 2021): these can be called “reverse” killer acquisitions because the killing involves a product or capability of the acquirer, rather than the target´s. The reason why they may be problematic from a competition standpoint is that they involve a reduction of competition on innovation, which can only be justified on efficiency grounds under limited circumstances (see below, section 3). While this reduction is specifically addressed by antitrust agencies’ guidelines on mergers between horizontal competitors, it might escape scrutiny whenever the merging parties are found to be neither operating in different product markets, nor constraining each other in relation to existing product markets.

Here, again, it is difficult to make predictions without sufficient information about the transaction in question. Much like in the context of “regular” killer acquisitions, the agencies can focus on the identification of the relevant counterfactual(s), drawing on market characteristics as well as evidence of a “reverse” killing intent from contemporaneous documents.

That said, it is fair to say that these “pre-emptive” acquisition theories are often brought together with portfolio effects theories: one example is the merger that was prohibited in September 2020 by the South African Competition. There, the Commission obtained in Court a prohibition against the acquisition by Nasper´s controlled MIH eCommerce Holdings of WeBuyCars (Pty) Ltd, a platform for the online sale of used vehicles, on grounds that (1) absent the merger, another entity controlled by Nasper would enter the market as an effective competitor; and (2) the merger would strengthen WBC´s position due to portfolio effects. With regard to the fist point, it was noted that the technology available to Naspers thanks to its car-buying business in other jurisdictions made it a "formidable entrant" into that business with the appropriate funding, techjnology and a proven track record of entering into emerging markets. However, the entry did not happen as Webuy cars appeared to seize the opportunity to avoid the fierce competition by being bought by Naspers[118].

6.4. Efficiencies in conglomerate mergers

Efficiency defenses can be raised potentially against any of the theories of harm described above, by demonstrating verifiable consumer benefits, their specificity to the merger as well as the likelihood (and timing) of pass-on to consumers. Examples of efficiencies are cost savings in production or distribution, the development of new or improved products or services, gains of positive externalities or elimination of negative externalities, and the creation of countervailing market power.

BRICS authorities identified a wide range of defenses as common in digital markets, including: that the merger would promote innovation and increase consumer welfare (China); and that it would expand transaction opportunities or integrate physical and virtual channels (Brazil). Furthermore, China devised specific factors in its Guidelines on the platform economy to determine the competitive impact of concentration of operators in the economic field of the platform (thus ultimately affecting their legality), while also reminding that in bilateral or multilateral platforms it may be necessary to conduct a comprehensive consideration of the bilateral or multilateral

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[118] Case No. LM183Sep18, paras. 400-402.

operations of the platform, as well as other operations carried out by operators, and an assessment of the externalities of direct and indirect networks[119].

In the context of conglomerate mergers, efficiencies may arise from the integration of complementary activities or products. One often cited example, which also applies to vertical mergers, is the elimination of double marginalization: in other words, a decrease in the aggregate mark-up of two products that were previously sold independently- as with integration, the seller of a product is forced to take into account the diversion effects that arise from charging a high price for the complimentary product it sells.

While the theory behind this efficiency is sound, the unconditional endorsement of this particular efficiency in the US Guidelines on Non-Horizontal Mergers has been one of the main causes leading to the withdrawal of those Guidelines by the US Federal Trade Commission (UNITED STATES - FTC, 2021). In particular, critics have pointed out that this theory works only under the assumption that the integration concerns two

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[119] See Art. 20, which lists the following: (1) The market share of the operator in the relevant market. In addition to the turnover as the index, you can also consider the proportion of transaction amount, transaction number, number of active users, clicks, usage time or other indicators in the relevant market, and comprehensively evaluate the market share over a longer period of time as appropriate to judge its dynamic change trend.
(2) The operator's control over the market. The concentration of operators involved in bilateral or multilateral platforms may require a comprehensive consideration of the bilateral or multilateral operations of the platform, as well as other operations carried out by operators, and an assessment of the externalities of direct and indirect networks.
(3) Concentration of relevant markets. You can consider the development status of the relevant platform market, the number of existing competitors and market share, etc.
(4) The impact of the concentration of operators on market entry. Market access, the difficulty of operators obtaining necessary resources and necessary facilities such as technology, intellectual property rights, data, channels, users, etc., the scale of capital investment required to enter the relevant markets, the conversion costs of users in fees, data migration, negotiation, learning, search and other aspects, and the possibility of entry. , timeliness and adequacy.
(5) The impact of operator concentration on technological progress. You can consider the competition of competitors in the existing market in innovation such as technology and business models, the impact on the innovation motivation and ability of operators, and whether the acquisition of start-ups and emerging platforms will affect innovation.
(6) The impact of the concentration of business operators on consumers. After concentration, the ability and motivation of operators to improve commodity prices, reduce commodity quality, reduce commodity diversity, damage consumers' ability and scope, treat different consumer groups differently, and improperly use consumer data to harm the interests of consumers.
(7) Other factors that the anti-monopoly law enforcement agencies under the State Council think should be considered to affect market competition. Including the impact on other operators and the development of the national economy.

products which are sold above the competitive price and in fixed proportion -meaning that the downstream firm sells exactly what it buys (KWOKA & SLADE, 2020) and that empirical evidence suggest that skepticism is needed with regard to the realization of these efficiencies (BAKER et al., 2019; SALOP, 2018).

Nevertheless, pro-competitive benefits go beyond downward pricing pressure, as integration can allow the seller of one product to benefit from economies of scope or other positive externalities that derive from improvements in the sales of a complementary product (EUROPEAN UNION- E.C., 2008). Efficiencies include an increase in innovation, which may be more difficult to quantify. However, this includes also simply the merging parties´ ability to appropriate a greater fraction of the benefits relating to the firm´s innovations, for example through the licensing of intellectual property (UNITED STATES, 2010): recognized efficiencies are, for instance, clearing access to intellectual property that was blocking a follow-on innovation or allowing better returns to IP owners –at least, to the extent that this stimulates more innovation (BRICS COMPETITION CENTRE, 2019; UNITED STATES- DOJ & FTC, 2017).

Where the products are not themselves complementary, there may still be efficiencies related to the opportunities to spread joint and common costs across a broader range of customers; through, for instance, risk balancing across differing risk cycles, investment in product coordination to address the “hold up problem” (that is, the ability of a contracting party to exploit the weaker bargaining position of another contracting party who has made a sunk, relationship-specific investment) and through the adoption of more efficient production processes (SOUTH AFRICA, 2020c). In digital markets, the low marginal costs and the ability to re-deploy across different markets assets such as algorithms and data increase the likelihood of producing efficiencies of this kind. For example, the combination of different datasets or data processing capabilities can provide the merged entity with an advantage over competitors to improve on products in a way that cannot be matched, and not necessarily in the same market: access to multiple data sources can improve the overall quality of the database and contribute to greater economies of scope (SOUTH AFRICA, 2020c). Additionally, the combination of products and services brings about consumption benefits, such as the convenience of a one-stop shop (KLEMPERER & PADILLA, 1997) and the status and guarantees that come from being part of a certain value network.

However, it remains crucial to demonstrate how consumers will obtain the benefits derived from such efficiencies, and to what extent these are merger-specific, i.e. they would not be achieved in the absence of the merger. If in the counterfactual scenario they could readily be achieved (for instance, within two years) through effort, internal changes of the merging parties or a merger with a different firm that has potentially less anticompetitive effects, then the efficiency is not merger-specific (BRAZIL- CADE, 2016). Efficiencies cannot simply be about enhanced interoperability between the products of the merging parties or the expansion of output through advertising.

As explained by OECD, "it may be particularly easy for firms to implement technical ties by limiting the interoperability of competitors' products within a system (or simply to refrain from undertaking the effort or sharing the information necessary for interoperability, which can be distinguished from tying). The degradation of interoperability was a key theme in several recent mergers, including Microsoft/LinkedIn (…) and Broadcom/Brocade (….), as well as Intel/McAfee, and Qualcomm/NXP." (OECD, 2020, p. 24).

An efficiency may be cognizable if interoperability is also granted to rival products, which can also be imposed as part of an appropriate remedy[120].

6.5. Concluding remarks of the debate about conglomerate mergers

In this section, we analyzed how BRICS jurisdictions deal with conglomerate mergers. Specifically, we analyzed portfolio effects; coordinated effects; acquisition of potential and nascent competitors; and efficiency arguments. In sum, it was possible to verify that the analysis of conglomerate mergers may imply the use of new theories of harm, and there is a need to deepen this debate in the years to come.

[120] See, for instance, SAMR´s decisions in *NVIDIA/Mellanox* and *Infineon/Cypress*.

7. Remedies in Digital Markets

This section provides an overview of the remedies that may be imposed by competition authorities following an infringement, or as a condition for the approval of a merger, with a particular focus on digital markets. To that end, it begins with an introduction to the concept of remedy, discussing their scope, the underlying goals and the most common types of classification (Section 7.1). The report then moves to make some preliminary considerations on remedy design, in particular to highlight concerns of effectiveness, precision and participation (Section 7.2) and continues by addressing specific types of remedies (section 7.3). The latter are discussed both theoretically and in the context of specific examples. The final section (7.4) is devoted to an important activity to be undertaken after the imposition of a remedy: monitoring.

7.1. Scoping and classification of remedies

In legal jargon, remedy (from Latin *re-* "again"- and *mederi* -"to heal") refers to a procedure that is available to "right" a wrong committed with the violation of a substantive legal rule. Although this concept tends to assume different connotations depending on the specificities of the legal system under examination, some basic characteristics should be highlighted in this particular context.

First of all, it should be clarified that the present benchmarking deals with a particular type of remedies: those available *to a competition authority*, not those available to private litigants in a court of law (or in a court of equity, in the case of common law jurisdictions). This puts one type of remedy, damages awards for competition law victims, out of scope of the present analysis[121]. However, it does not mean that competition

[121] This is without prejudice to the possibility for a competition authority to seek damages in court where it has been a victim of an infringement. One example of this is the European Commission´s lawsuits in Belgium and Luxembourg against the perpetrators of the elevator cartel: see European Commission, ´Commission goes to court over damages suffered from elevators cartel´, Press Release (24 June 2008), at https://ec.europa.eu/commission/presscorner/detail/en/IP_08_998.

authorities cannot facilitate compensation of victims as part of their remedial action: for instance, by considering restitution as a mitigating factor when imposing a fine, or conditioning upon it the immunity for leniency. These are sometimes called “hybrid remedies”, as they use public enforcement avenues to promote private interests and, depending on their structure, promote and blend different enforcement aims simultaneously (IOANNIDOU, 2020).

Secondly, the goal of competition law remedies is to cure, correct, or prevent unlawful conduct. This is generally interpreted to mean that remedies ought to be distinguished from the imposition of fines and individual sanctions, due to the latter´s punitive character (OECD, 2006, p. 7). By contrast, so-called “declaratory remedies”, whereby the legality of a particular practice is established, may still be considered to fall within the remedy toolkit, contributing to general deterrence without any punitive element.

“Prohibitive remedies” are perhaps the most intuitive response to an anticompetitive concern, either merely enjoining a particular conduct (in which case, they may be called “negative” prohibitive remedies) or providing concrete directions on how the infringing conduct is to be ended (hence, “positive” prohibitory remedies (VON-PAPP, 2022).

In some cases, a remedy may involve requiring the firm to take affirmative steps to restore the *status quo* before the implementation of the conduct at issue: for instance, in a recent *interim relief* decision[122], the South African Competition Tribunal imposed to a group of allegedly boycotting banks to restore the accounts of the applicants pending the finalization of the investigation. Similarly, in a case involving an unlawfully consummated acquisition of equity in China Music Group by Tencent Holdings Limited[123], SAMR ordered Tencent to "declare the concentration [unlawful] in accordance with the law" and "operate in compliance with the law and establish a sound long-term mechanism for fair participation in the market competition".

[122] *Mohammed Iqbal Surve and Others vs. Nedbank Ltd and Others IR153Dec21.*
[123] GSJC[2021] No. 67.

Authorities may also need to go beyond “cease and desist” remedies that mirror the anticompetitive concerns in order to eliminate the persisting effects of an anticompetitive conduct: in these cases, they adopt “restorative remedies” to re-establish the conditions of effective competition in the market. Although there may be some overlap between the two concepts, restorative remedies should not be confused with so-called “fencing-in” remedies, that are explicitly admitted in some jurisdictions[124]: remedies prohibiting conduct that would in itself be lawful, but which has a sufficient nexus to the unlawful conduct in which the concerned undertaking(s) engaged to justify a prophylactic prohibition (VON-PAPP, 2022). They should also not be confused with so-called “flanking measures”, which are measures designed to monitor or enhance the effectiveness of a remedy (RITTER, 2016), and thus cannot be adopted simply on their own. In any case, it is a general principle that remedies can be adopted cumulatively (RITTER, 2016) .

Thirdly, a distinction should be made between remedies in conduct cases and in merger proceedings, because of their quintessentially different nature: in the former, the analysis is retrospective, i.e. focused on conduct that has already taken place and therefore needs to be enjoined; in the latter, it is prospective, i.e. focused on the probability of future conduct, implying that the remedy must take a precautionary approach to the possible emergence of such conduct. This helps explain the preference of competition authorities in conduct cases for behavioral remedies[125]- i.e., remedies that set constraints on the use of property rights by the concerned undertaking(s)-, and in merger cases, for structural remedies -i.e., remedies that modify the allocation of property rights and create new firms, such as divestiture of assets. The following analysis discusses the concept of remedy as a whole, without an explicit division between conduct and merger cases, while acknowledging specific distinctions between the two situations where appropriate. More

[124] US law recognizes this possibility to prohibit the "same type or class" of acts that created the violation "or whose commission in the future, unless enjoined, may fairly be anticipated from the defendant's conduct in the past." See US DOJ, 2008 (withdrawn); see also *National Labor Relations Board v. Express Publishing*, 312 U.S. 426 (1941).

[125] This preference is most clearly articulated in the framework of the European Union by the following sentence in art. 7 (1) of Regulation 1/2003: ‘Structural remedies can only be imposed either where there is no equally effective behavioural remedy or where any equally effective behavioural remedy would be more burdensome for the undertaking concerned than the structural remedy´.

central to the following classification of remedies is the distinction between structural and behavioral, which is guided by the following factors:

- Structural remedies are generally more clear-cut, easier to implement and to monitor. However, in conduct cases, they may involve significant up-front design costs, and still significant monitoring costs. Perhaps most importantly, there may be situations where structural solutions are too blunt a tool in certain markets: this is the case when they are not narrowly tailored to the anticompetitive concern in question and involve the sacrifice of important efficiencies. They also may not always be feasible due to the characteristics of the market or industry: for instance, due to the absence of suitable purchasers; limited options to create or support a viable standalone business; risk of significant customer attrition; or risk that a purchaser will be unable to carry on the business going forward (UNITED STATES- DOJ, 2004). Even where the purchaser is suitable in technical terms, a divested party has an incentive to make sure that it is not a competitive firm: in fact, it may act to reduce the competitive pressure in the implementation of the remedy, particularly when the remedy involves some form of ongoing relationship with the divested company- for instance, in terms of technical assistance or the provision of an input. Also, a notable problem in the implementation of structural remedies is the increase in the risk of collusion between the divested and the acquirer due to the greater reciprocal transparency.

- Behavioral remedies offer less drastic solutions to address the anticompetitive concerns that have been identified, and thus are preferred to structural remedies when the latter are unfeasible or would sacrifice important efficiencies (as is more common in vertical foreclosure cases). They also may be used in conjunction with a structural remedy in order to facilitate transition to a competitive structural solution, or support its existence (UNITED STATES- DOJ, 2004), but not as a protracted solution for a persistent competitive problem. Like structural remedies, they carry their own risk of overreach resulting in distortive effects on competition: if not designed properly, they may prevent the concerned undertaking(s) from efficiently responding to changing market conditions or from otherwise engaging in pro-competitive conduct. Compared to structural remedies, they typically involve higher monitoring costs: not only the direct costs that are associated with monitoring adherence to the terms of the commitment, but also the indirect costs associated with efforts by the concerned undertaking to evade the remedy's "spirit", while not violating its letter[126]. As a matter of incentives, this may be expected if the remedy is at odds with the concerned undertaking´s effort to maximize profits (UNITED STATES- DOJ, 2004). For these reasons, it is important that authorities only accept behavioral remedies if their workability is fully ensured by effective implementation and monitoring, and they do not risk leading to distortive effects.

A final distinction should be made regarding the timing and nature of remedies: one can distinguish between remedies adopted at the end of an infringement proceeding and remedies adopted during an ongoing proceeding, be it one merger control or conduct. This latter type of remedy can be further divided in two types:

- *interim* measures, that are necessary to avert an imminent danger or risk of irreparable harm to competition in conjunction with a probability of success on the merit (based on a *prima facie* case). This type of remedy may be particularly strategic in the context of digital markets characterized by strong economies of scale, network and tipping effects, as it presents two distinct advantages: its provisional nature, which allows the authority to experiment innovative solutions and revoke them when necessary, and its adaptability, which enables the authority to more easily incorporate information brought by the market players during the fact-finding (MACEDO, GUIMARÃES, QUEIROZ, & WERBERICH, 2021). *Interim* measures in conduct cases are available to all BRICS authorities except in Russia and China, where only courts can grant them. Where available, *interim* measures are conditioned to the requirements of *fumus boni iuri* and *periculum in mora*.

- voluntary commitments, that can be offered (and may be accepted or refused by the authority) to address the authority´s competition concerns. The crucial advantage in the adoption of these commitments is that it is not constrained by the strictures that are imposed to the authority when ordering to adopt specific measures: this allows it to obtain more

[126] An example is the circumvention of a pricing remedy by degrading the quality of the respective product.

quickly the cessation of the infringing conduct and any appropriate remedial measures, which can be particularly important in digital markets due to their fast-moving nature. With respect to BRICS countries, it should be noted that voluntary (also known as “negotiated”) remedies are not available in Russia when dealing with conduct cases, and also not available in China when it comes to horizontal price fixing of commodity prices, limitation of production or sales of commodities and allocation of raw material markets. In South Africa, they are appropriate where the severity of the harm is minimal and there is cooperation, or cases with a low chance of success, and any other cases in which the applicant proposes them. In India, settlement and commitment decisions have been introduced under the Competition Amendment Act of 2023, providing for the authority’s discretion in the acceptance of these voluntary remedies and establishing that the proposing party has no right to appeal. In Brazil, voluntary commitments in cartels or in incentives to uniform conduct require admission of guilt and payment of specific value to the fund for collective defense. However, in relation to other types of conducts, these obligations are not required to accept voluntary commitments to redress the wrongdoing.

7.2. General considerations in remedy design

In general, the preferred remedy will be the one that accomplishes the remedial goals, while minimizing the costs of administration and minimizing the risks of chilling efficient conduct and incentives to innovate. Accordingly, it is crucial from the outset to identify the remedial objectives and develop a plan to achieve them, understand the industry and anticipate the concerned undertaking(s)´s likely response, identify any possible side effects and administrability issues, and develop a detailed framework for implementation (KOVACIC, 1999).

Even when an appropriate substantive remedy has been crafted, it may be necessary to conceive of adequate flanking measures to ensure compliance: this includes, for instance, the submission of regular compliance reports to the agency, record-keeping and transparency obligations, non-compete and non-solicitation obligations, prohibition of re-acquisition, appointment of a special monitor, provision of adequate capital, assets, personnel or training, the accessibility of records and employees, the imposition of fines in case of non-compliance, and possibly even the implementation of an antirust compliance program within the concerned undertaking (GERMANY- BKA, 2017). Furthermore, in order to ensure adaptability of the remedy over time to changing conditions, it is customary to establish a revision clause that allows to take into account supervened facts. This is particularly important in the context of technology-intensive and fast-moving markets, where it may be difficult to anticipate future developments.

One way of achieving greater precision in the crafting of appropriate remedies is to conduct an *ex post* review of the effectiveness of remedies. This review can be of two different natures: either focused on one specific case, shortly after the remedy is implemented, or more comprehensively together with other cases, to assess the competition authority´s remedy process, which is something that is periodically done by some competition authorities (ICN, 2016). At least one author suggests that *ex post* review should be done systematically also in conduct cases, so as to achieve the goal of restoring effective competition (TURNER, 2020).

Others advanced the proposal to require merging firms to provide post-merger data on their structure and operation for some reasonable period of time, in order to facilitate retrospective analysis (KWOKA & VALLETTI, 2021). The regular provision of this data would facilitate post-merger challenges as part of conduct enforcement: an example of this is the recent complaint failed by the Federal Trade Commission requesting the undoing of Facebook´s WhatsApp and Instagram acquisitions (UNITED STATES- FTC, 2021b). A complementary mechanism to enhance the effectiveness of merger control is to require merging companies to provide prior notice of otherwise non-reportable acquisitions, particularly if there is reason to believe that an acquisition may be competitively significant in the wake of the transaction[127]. It is worth noting that this concern is particularly strong when it comes to big technology companies, having led to recent legislative proposals to require prior notification of all transactions or of all transactions in the digital sector for firms with a particularly strong market presence,

[127] An additional institutional mechanism to address this issue is to enable authorities to challenge *ex post* these kinds of transactions within a limited time horizon, as is the case for Brazil and India (where this is possible within one year from the completion of the transaction).

respectively called firms with “strategic market status” (UNITED KINGDOM, 2022) or “gatekeepers” (EUROPEAN UNION, 2022).

One contested issue concerns the bounds of discretion that authorities have in imposing remedies that go beyond the mirroring of the established anticompetitive conduct. If the goal is to restore effective competition in the market, it may not be sufficient to simply stop the abuse: it might be necessary to modify the underlying incentive structure of the undertaking, lower the entry barriers, or simply subsidize one or more harmed competitors or customers (MAIER-RIGAUD, HELLSTROM, & BULST, 2009).

However, the scope for discretion is limited by the application of the proportionality principle with regard the burden that the remedy imposes on the concerned undertaking(s): for instance, in EU law, the principle requires: (i) an assessment that the measures are appropriate and necessary in order to achieve the objectives legitimately pursued; (ii) that when there is a choice between several appropriate measures recourse is made to the least onerous; and (iii) that the disadvantages caused are not disproportionate to the aims pursued[128]. To the surprise of some, the Court of Justice in *Alrosa* upheld the principle even in the context of voluntary commitments offered by undertakings during an infringement procedure, with the caveat that in such scenario the principle only requires the authority to ensure that the set of commitments it makes binding on the undertakings is not more onerous than any other set of commitments offered that still meet the competitive concerns expressed in the preliminary assessment[129].

A corollary of the proportionality principle is that a particular remedy cannot be imposed where several means exist to bring the infringement to an end, which typically translates in the Commission requiring undertakings to propose an effective remedy that meets certain principles (RITTER, 2016). The challenge in such cases, however, is to ensure that the proffered remedy is adequate to effectively comply with those principles,

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[128] Case C-331/88, *Fedesa*, judgment of 13 November 1990, ECLI:EU:C:1990:391, para. 13.
[129] Case C-441/07 P, *Commission v. Alrosa*, judgment of 29 June 2010, ECLI:EU:C:2010:377.

which may be difficult when the enforcer is in a position of asymmetry of information and expertise, as was arguably the case in the EU´s *Google Shopping* and *Android* decisions.

In Russia, general principles followed in remedies are concerned with their enforceability. The Brazilian Guide to Antitrust Remedies (BRAZIL- CADE, 2018) informs that the main principles that contribute for the effectiveness of antitrust remedies and that should be considered during negotiation of Merger Control Agreements are proportionality, timeliness, feasibility and verifiability. In relation of feasibility and verifiability, Brazilian Guide to Antitrust Remedies (BRAZIL- CADE, 2018) has the following instructions:

> 2.1.3 Feasibility
>
> A remedy will only be effective if feasible in its different steps. The structural remedy, for instance, must be defined so that the assets to be sold change controllers without loss of competitive effect and can act as a real competitor in the relevant market(s) adversely affected by the transaction. The remedy shall be monitored, present actual means of resolution of incidents, and provide assurance on the mechanisms of compliance over time. Remedies that cannot be monitored during the regular course of the businesses or government activities, raise concerns that can be settled only at significant costs, raise doubts on responsibilities, or provide a great risk of not being fulfilled cannot be considered feasible. The risks associated with the design, appliance and monitoring of remedies regard, for instance, the absence of buyers for assets or non-controlling interests, the insufficiency of assets effectively competing after disposal, the possibility of omission or circumvention of monitoring or distortion of the required terms for compliance with the restriction, and regulatory impediments to fully comply with the remedy.
>
> 2.1.4 Verifiability
>
> The proposed remedies must be verifiable. The verifiability regards (i) means to ascertain obligations; (ii) feasibility of monitoring the actions taken by the applicants efficiently and effectively; (iii) check consequences, if necessary; and (iv) identifying the subjects of the

> actions necessary to achieve the agreed or imposed remedies. The design of a verifiable remedy reduces implementation risks and facilitates the pursuit of compliance through appropriate judicial means in the event of non-compliance

China also understands that feasibility is an important principle in terms of antitrust remedies. Rationality to address the harm is another principle which is recognized in South Africa and Russia, which is linked to the "effectiveness" principle recognized in China, and is specified in terms of "proportionality" in Brazil. Timeliness is another important concern, being explicitly recognized in Brazil, in China and in India. Finally, Russia clarified that structural remedies are aimed at reducing market power of the merged entity and balancing composition of market participants and ensure the development of competition.

Another contested issue is whether, in order to determine the necessity of a preventative measures, one needs to focus exclusively on oversight by a competition authority: the extent to which the effectiveness of the remedy can legitimately rely on private actions may depend on the functioning of the private enforcement mechanism, as well as the factual circumstances of the case. Participation of third parties during the design of the remedy can enable a more complete assessment of this aspect, as well as on broader questions of effectiveness of the proposed remedy.

For this reason, authorities typically grant ample participatory rights during the remedial process: for instance, the EU Implementing Merger Regulation provides for the participation in the process of 'third parties', which includes those having a 'sufficient interest' in the Commission's procedure, such as customers, suppliers, competitors, members of the administration or management organs of the undertakings concerned or recognized workers' representatives of those undertakings (LIANOS, 2013). As a practical matter, the Commission sends out a non-confidential summary of the proposed remedies together with a questionnaire addressed to interested third parties, and often organizes calls or meetings with interested third parties in order to clarify responses.

However, unlike market tests in antitrust investigations, market testing of merger remedies is not a public process, and the Commission does not publish a general invitation to comment. Furthermore, the fact that even under market tests competitors do not get access to the full description of the remedy may hamper their ability to verify the data or point out any misrepresentations. This has led to criticism, in particular concerning the remedy in the *Google Shopping* case, that the EU has not closed the information asymmetry gap about the technicalities of the product and services in question and their interplay with the market (HÖPPNER, 2020). An alternative, and more structured, model of participation prior to the adoption of a negotiated remedy is the one that has been put in place by the United States with the so-called Tunney Act, which in the attempt to address abuses in consent review procedures by the antitrust division standardized the steps before the entry of a consent decree (CARSON, 2020).

The Tunney Act requires that the antitrust agency files with a district court the proposed decree, at least 60 days prior to its entry into force, as well as any written comments relating to such proposal and respective responses by the United States, any other materials and documents which the United States considered determinative in formulating such proposal, and a "Competitive Impact Statement" (available to anybody upon request) containing a host of information that assist in understanding the competitive impact of the decree[130]. Based on this filing and potentially on additional information received through testimonies by the parties, appointment of special master and experts, seeking input from third parties, and examining witnesses and documents, the court must determine prior to the consent decree´s entering into force whether it is in the "public interest", a term which

[130] In particular, a Competitive Impact Statement according to 15U.S.C.§16(b) requires the following type of information: (1) the nature and purpose of the proceeding; (2) a description of the practices or events giving rise to the alleged violation of the antitrust laws; (3) an explanation of the proposal for a consent judgment, including an explanation of any unusual circumstances giving rise to such proposal or any provision contained therein, relief to be obtained thereby, and the anticipated effects on competition of such relief; (4) the remedies available to potential private plaintiffs damaged by the alleged violation in the event that such proposal for the consent judgment is entered in such proceeding; (5) a description of the procedures available for modification of such proposal; and (6) a description and evaluation of alternatives to such proposal actually considered by the United States.

includes a consideration of the impact of the decree upon competition in the relevant markets, the public, and individuals alleged to be injured, as well as its clarity and enforceability[131]. While this model leaves to the court´s discretion what additional inquisitory tools are appropriate to make the public interest determination, the preoccupation has been expressed that this may generate uncertainty and delays if the courts opt to allow for full evidentiary hearings, with cross examination, or hold multiple hearings separated by several weeks to allow for rebuttal cases (CARSON, 2020).

The involvement of market participants in the remedy design happens in all BRICS jurisdictions except in Russia and India, and with some differences across the remaining countries. In China, this is only obligatory in merger cases, whereas in conduct cases it is done only if the authority considers that the suspected behavior affects an unspecified majority of operators, the legitimate rights and interests of consumers and the public interest. However, the information about a merger must be published on the parties´ website and major newspapers when it is found *prima facie* to cause adverse effects on competition.

Finally, special consideration should be placed on international cooperation. To the extent that an investigation has been opened by a competition authority in a sister jurisdiction, it is especially important to conduct consultations aimed at streamlining and minimizing inconsistencies (and perhaps even creating synergies) in remedy design.

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[131] In particular, 15U.S.C.§16(f) provides that, in making its public interest determination, the court may—
(1) take testimony of Government officials or experts or such other expert witnesses, upon motion of any party or participant or upon its own motion, as the court may deem appropriate;
(2) appoint a special master and such outside consultants or expert witnesses as the court may deem appropriate; and request and obtain the views, evaluations, or advice of any individual, group or agency of government with respect to any aspects of the proposed judgment or the effect of such judgment, in such manner as the court deems appropriate;
(3) authorize full or limited participation in proceedings before the court by interested persons or agencies, including appearance amicus curiae, intervention as a party pursuant to the Federal Rules of Civil Procedure, examination of witnesses or documentary materials, or participation in any other manner and extent which serves the public interest as the court may deem appropriate;
(4) review any comments including any objections filed with the United States under subsection (d) concerning the proposed judgment and the responses of the United States to such comments and objections; and
(5) take such other action in the public interest as the court may deem appropriate.

7.3. Specific remedies

7.3.1. Line of business restrictions

Sometimes, the anticompetitive problems are limited to specific sectors of the market or the assets that are being acquired. In this situation, it is possible to specify remedies that would restrict the activities of the parties involved in a specific line of business. Indeed, line of business restrictions (or LOBRs) have been defined in a dedicated report OECD report as:

> remedies that limit the activities that a firm can undertake. They include separation restrictions ranging from structural to behavioural separation (accounting, functional or legal). However, there are also alternative behavioural restrictions such as mandating access, non-discrimination obligations and mandatory standards on portability and interoperability. LOBRs are used to address concerns that competition is likely to be prevented, restricted or distorted in a number of different ways. These include concerns that dominance is leveraged to exclude rivals in another downstream market, for example through discriminatory selfpreferencing (equivalent to margin squeeze) or refusal-to-deal. The risk of such exclusionary abuses also arises from mergers that might make such conduct likely. (OECD, 2020b), p. 2)

In the same report, the OECD Competition Committee analyzed the appropriateness of these restrictions in the case of digital platforms, and in particular search engines, social networks and digital retail networks (OECD, 2020b, pp. 16-19).

(i) Divestiture

Divestiture or structural separation is the remedy that most significantly interferes with an undertaking´s property rights, and implies the sale of a business or a set of assets. In principle, divestiture of an existing standalone business is preferred, as it has a demonstrated success competing in the relevant market and typically possess all the physical assets, personnel, customer lists, information systems, intangible assets, and management infrastructure necessary for the efficient production and distribution of the relevant product (UNITED STATES- DOJ, 2020).[132] However, authorities may also seek, where necessary, divestiture of assets that involve more than an existing standalone business[133] or that do not form part of it[134]: the transfer must involve all assets needed to effectively compete in the relevant market. When it comes to intellectual property, licenses must generally be exclusive, irrevocable and non-terminable with no ongoing royalties and requiring little to no ongoing commitments; however, deviations from this benchmark occur in situations in which use of the IP by the divested firm is necessary to achieve efficiencies that are otherwise not obtainable (ICN, 2016). For instance, the grant of an exclusive but time-limited license to a brand in exchange for a commitment not to use such brand after that period may be sufficient to allow the licensee to transfer the customers from the licensed brand and subsequently retain them under a different brand (so-called "rebranding commitments") (EUROPEAN UNION- E.C., 2008).

Divestiture is the preferred solution (BRAZIL- CADE, 2016; EUROPEAN UNION- E.C., 2008; UNITED STATES- DOJ, 2020), and, according to some, the only truly effective option for problematic mergers (KWOKA & WALLER, 2021). Indeed, these scholars have proposed moving to a "Fix It or Forget It" (FIFI) policy for mergers that raise anticompetitive concerns, under which authorities would only have two options: either the concerns are solved through an offer for upfront divestiture of more than *de minimis* nature, or the merger would be blocked. To prevent strategic behavior, no further negotiations would be permitted (KWOKA & WALLER, 2021) .

Outside the merger context, the conventional view is that the use of this remedy is to be treated as last-resort option that is fraught with difficulties. However, this solution is increasingly being proposed as a prophylactic measure to align with the history of regulation

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[132] This guidance is inactive; the manual was withdrawn in April 2022.
[133] For example, where there is uncertainty over the implementation of a preferred divestiture option, concerned undertaking(s) might be requested to propose a second alternative divestiture (the so-called "crown jewel") which must be implemented if the first proposal cannot be implemented within the given time-frame. See e.g. EUROPEAN UNION- E.C. (2008).
[134] For instance, when the remaining assets are already in possession of the potential purchaser, or readily obtainable on the market. See e.g. UNITED STATES, 2020, section III (3), p. 10 – Note that this guidance is inactive: the manual was withdrawn in April 2022.

of critical industries (KAHN, 2019), and to deal with the exorbitant power accumulated by dominant companies through unlawful acquisitions (KWOKA & VALLETTI, 2021).

The first point highlights the necessity of separation to eliminate conflicts of interest, prevent dominant firms from leveraging government-granted advantages to enter new markets, preserve system resiliency, promote diversity, prevent administrability hurdles that are intrinsic to behavioral solutions, and limit concentration of power as a goal in itself -including to prevent excessive political influence. For instance, this remedy was recommended by the CCSA in property online classifieds where it was found that major estate agents, through a consortium, have held shares in one of the leading property platforms. This shareholding required them to guarantee the platform, among other things, a certain percentage of listings. It was found that this arrangement creates a conflict of interest for the platform and the estate agents, and puts other platforms, especially smaller platforms, at a competitive disadvantage. Given that there was not any other less intrusive remedy that could possibly address this concern, divestiture was recommended. It should be noted that, unlike other remedies that can be imposed by the CCSA in a market inquiry, divestiture requires confirmation by the Competition Tribunal, given the implications of the remedy.

On the second point, the suggestion was made that acquisitions that have been authorized but have proven to be anticompetitive must be undone, and that, where this is not appropriate or feasible, that separation is done following the “fault lines” that delimit important separable parts of the firm: for instance, requiring Facebook to sold Instagram and WhatsApp, and Google to sold the ad serving business that it developed following the acquisition of Double Click.

Others (GILBERT, 2021) reject even the more moderate of these proposals, contending that, while such separations would be technically feasible, they could sacrifice important efficiencies and slow down investment in new technologies or services: for instance, the integration of supply-side ad serving with other Google activities gives the company the ability to monitor and add value to advertising services, and Google’s ownership of an extensive portfolio of digital advertising services can avoid or mitigate markups that would occur if independent firms offered these complementary services.

While foregone efficiencies would have to be convincingly substantiated to bar the adoption of a particular remedy, perhaps the strongest objection against these divestitures is that they would require further (behavioral) line of business restrictions in order to prevent the concerned undertakings from using their market power in the non-divested segment to exclude rivals in the divested business. Indeed, both the need to complement structural and behavioral measures and the difficulty of monitoring the latter type of commitments are widely recognized, and may be even more pronounced with the fast technological development of the digital economy. However, it seems imprudent to outrightly discard structural measures on the basis of general characterizations, which suggests that a more in-depth look at these arguments ought to be made with reference to the specific circumstances of the practice and the industry in question.

(ii) Functional separation

A less intrusive alternative is the obligation for an undertaking to place relevant business or assets under an independently operated business entity, which may be a subsidiary of that undertaking. However, it has been noted that if that entity is a wholly owned subsidiary, the effects of the separation may be limited, as its CEO and board still have the duty to consider the returns to the same shareholders when making decisions (BIGGAR, 2017). An example of this remedy in South Africa is the *Telkom* case[135] where the competition Tribunal ordered the separation of wholesale and retail segments of the Telkom business. Similarly, in China, in the case of Seagate's acquisition of Samsung's hard drive business, the law enforcement agencies required Seagate to form an independent subsidiary responsible for independent pricing of the hard drive products produced by legacy Samsung company and independent sales under the Samsung brand.

Since functional separation is normally imposed on vertically integrated undertakings to prevent leveraging, it is customary to impose the obligation for that business entity to treat all customers equally, without favoring their downstream products:

[135] Telkom settlement 2013- Case number: CR044Oct09/SA037Jun13.

neither in its terms and conditions, nor in timescales, systems and processes (BEREC, 2011, p. 4). To ensure that, the remedy must determines the boundaries of the transactions, which involves several granular decisions about how the separated firm is to operate, e.g. who is to report to whom (governance), who is permitted to talk to whom and about what topics (Chinese walls), what systems can be shared between the separated business and its retail affiliate and which ones must be duplicated (separation of Operational Support Systems, or OSS), and who is remunerated for what- including, for instance, to what extent the operators of the upstream and downstream divisions are incentivized to maximize the performance of their own divisions versus the performance of the firm as a whole (CRANDALL, EISENACH, & LITAN, 2010).

(iii) Accounting separation

An even less intrusive alternative is so-called "accounting" separation: the imposition of specified accounting conventions for allocating the costs and revenues of upstream and downstream services into separate baskets, which is generally done to allow regulators to set the prices for upstream services offered by a vertically integrated firm. This remedy increases the transparency of input prices but does prevent leveraging or discrimination (BEREC). In fact, this is the least intrusive type of remedy involving separation in some form, in a scale that may be broken down in further layers to reflect the governance choices made to support functional separation. To appreciate that, one can find inspiration in Martin Cave´s definition of separation, namely the "six degrees of separation‟ set out in Table below.

Degree	Separation option	Description
6	Ownership separation	As 5 but with different ownership.
5	Legal separation (separate legal entities with the same ownership)	As 4 but with a separate non-executive board.
4	Functional separation with localised incentives and/or separate governance arrangements	As 3 plus different managers‟ incentives and different governance mechanisms.

3	Functional separation	Physical separation of businesses and new business practices, e.g. new office location, new brand, separate OSS, separate management info systems.
2	Virtual separation	First form of equivalence of access as internal and external customers are treated equally. No physical separation of the businesses.
1	Creation of a wholesale division	The incumbent has a separate wholesale division which supplies upstream inputs to competitors. The retail arm still has a preferential way to access products. No equivalence of access.
0	Accounting separation	Costs and revenues of upstream and downstream products are allocated in different baskets. Preserves efficiency of vertical integration but increases transparency, while it does not provide guarantees against discrimination.

Table 5: Six Degrees of Separation. Adapted from (CAVE, 2006).

We can expect the application of this framework to digital markets to raise some challenges for competition authorities, especially in the monitoring of Chinese walls and in the calculation of competitive benchmarks in "zero-price" markets. However, these complications do not eliminate the utility of this model, particularly if the right flanking measures (auditing, reporting and accounting requirements) are adopted. What is more crucial is to decide what governance measures would be appropriate to prevent self-preferencing by vertically integrated businesses (especially platforms and ecosystem): the authority may be empowered to enforce the remedy order provisions unilaterally or in court, but it may not have the information or the capacity to investigate complaints with quick turn-around. To be effective, functional separation is likely to require an adequate complaint and dispute resolution mechanism, which must be of independent nature to prevent conflict of interests. This departs from the current practice of platform businesses on the application of their rules, as their dispute resolution mechanisms typically do not meet the independency requirement. When that is the case, an authority could require the undertaking to establish an independent body with adjudicatory functions, in some form similar to Meta´s recently created Oversight Board. Alternatively, the remedy order could attribute to an arbitrator the competence to make binding decisions over such disputes. Finally, another way of addressing conflicts of interests via a remedy is to impose the creation of a heterogeneous corporate board involving representatives of the stakeholders affected by the undertaking decision, in addition to the undertaking itself, invested with the power to take key decisions such as product selection and exclusion, pricing, and distribution practices (HOVENKAMP, 2021).

(iv) Firewalls/Chinese walls[136]

Vertical firewalls involve the restriction of transfers of information from one business or asset of the company to another[137], and therefore may be considered as remedies in cases involving the leveraging of valuable information. While appropriate in principle, these measures raise doubts in terms of implementation and oversight: contacts and exchanges of information are quite common within the same corporate group (GERMANY- BKA, 2017, p. 50), casting doubt on the ability of an authority (or even a third party, such as monitoring trustee) to verify compliance. Since doing this would require "continued control" over the merged entity, the German authority does not consider this a suitable remedy (GERMANY- BKA, 2017, p. 49), in line with the interpretation given in a court case on the matter[138]. Other authorities (BRAZIL- CADE, 2018; UNITED KINGDOM- CMA, 2018) recognize that the asymmetry of information over the behavior of merging parties compromises the effectiveness of this remedy.

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[136] These two terms are used interchangeably throughout this text.
[137] This may involve a range of restrictions in information flows and use of shared services, physically separating premises and staff, and regulating transfers of management and any permitted interactions between relevant staff. See CMA´s Guide on Merger Remedies (UNITED KINGDOM C. -C., Merger Remedies, 2018), para. 7.25.
[138] BundesKartellamt, decision of 27.10.2005, B6-86/05 – *PVN/Buch und Presse/MSV*.

In the context of unilateral conduct, a notorious remedy involving the prohibition to transfer data from one division of the company to another is the *Bundeskartellamt´*s decision in the Facebook case, which was found to have abused its dominant position by imposing unfair terms and conditions to its users that involved the collection of data from third party sites without adequate consent[139]. Following this finding, the authority ordered Facebook to come up with a technical solution which ensures that transfers of such data onto Facebook is stopped, with the exception of those based on a free and informed consent of each concerned user.

In the BRICS context, a remedy of data segregation was imposed in the *J3/Bus Serviços de Agendamento* merger, which involved the acquisition by an online platform dedicated to the sale of highway bus tickets, of another one which sold the same tickets and also enabled integration with the online travel agencies (OTAs) through an API[140]. Here, in order to prevent a competitive advantage to the merged entity due to access to the OTAs´sales data, parties committed to include in their privacy and data protection policies data engineering and governance rules that impeded access to such information to the team responsible to promote sales of bus tickets in the online platform Clickbus[141].

In South Africa, this remedy was imposed as a condition for the clearance of Google's acquisition of Fitbit, which was approved conditional upon a series of behavioral commitment by Google, to be monitored "by an independent Trustee who will have the necessary skills, competencies, and technical abilities to monitor these conditions"[142]. These conditions included a commitment to keep Fitbit data separate from existing Google data, to not automatically use Fitbit data in any Google services, and to allow South African users to decide whether or not to allow storage of their "measured body data" in their Google or Fitbit accounts. Another segregation remedy was imposed

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[139] BundesKartellAmt. Decision under Section 32(1) German Competition Act (GWB) in case against Facebook (2019). Available at https://www.bundeskartellamt.de/SharedDocs/Entscheidung/EN/Entscheidungen/Missbrauchsaufsicht/2019/B6-22-16.pdf?__blob=publicationFile&v=5

[140] *Bus Serviços de Agendamento S.A., J3 Participações Ltda.,* Merger no. 08700.004426/2020-17.

[141] Settlement agreement of 28 January 2022, SEI 1015284.

[142] *Google/Fitbit*. See supra, note 93.

in the context of the Online Intermediation inquiry as applied to e-commerce, where self-preferencing concerns were found to exist and to distort competition between the retail arm of Takealot (the largest eCommerce marketplace in South Africa) and marketplace sellers. Thus, Takealot was ordered to implement a segregation of Takealot marketplace from Takealot retail. As part of this segregation, each division is expected to have its own divisional manager who reports directly to the CEO of the company. Takealot is also required to put in place measures that would ensure that employees in its retail division do not have access to non-public marketplace seller data. The CCSA also recommended that any large global eCommerce business that enter the South African market, such as Amazon, also implements the above remedial actions.

(v) Access and non-discrimination remedies

Access remedies imply an obligation to grant access to key infrastructure, networks, technology and essential inputs. Due to the significant interference with a company´s property rights, great caution should be used in the imposition of this type of remedy, as otherwise the mere prospect of it can undermine the incentives to build the shareable asset. This requires an authority to balance the short-term effects of the remedy with the long-term effects on investment: the need for *ex post* appropriability is not invariably strong, with one example in the opposite sense being when the facility has been created through public funding or is protected by weak intellectual property rights (ROOIJEN, 2010). When warranted, mandated access serves both the preventative purpose of addressing leveraging concerns, and the restorative aim of facilitating entry by competitors. It is common to request that such access be provided on (fair) reasonable and non-discriminatory (F/RAND) conditions, which in itself raises questions about how those qualifications are to be interpreted and enforced in a particular case. In fact, non-discrimination remedies are not accepted in certain jurisdictions (ICN, 2016) . Here we do not attempt to answer these questions, which can typically be resolved through court or arbitration- hence the importance of including a provision for such mechanism in the remedy. Alternatively, a remedy may grant competitors free access, as occurred recently in CCSA's *Google/Fitbit* merger decision with regard both to the fitness data (subject to consumer consent) and the Application Program Interfaces containing the information needed for interoperability between the Android ecosystem and competing wristwearable devices. It may be also a matter of granting qualified access, if legitimate reasons for refusals can be conceived in crafting the remedy. For example, in the case involving Apple´s opaqueness in rejecting third party parental control software, FAS ordered Apple to remove from its documentation provisions that give it the right to reject (deny) third-party apps in the App Store for any reason, even if they meet all the requirements. The remedy also required Apple Inc. to ensure that in-house apps do not take precedence over third-party apps, and that developers of parental control apps can distribute apps to the App Store without loss of important functionality.

In South Africa, in the context of the Online Intermediation Inquriy, CCSA imposed non-discrimination remedies that involves price-setting in the food delivery and online classifieds segment. The market inquiry found the existence of discriminatory practices by leading platforms which had the effect of preventing or restricting competition between business users, particularly extensive price discrimination exercised by the leading platforms in property and automotive classified (based on the volume of listings that an estate agent or car dealer brings) and food delivery (based on the size of restaurants). To address these competition concerns, the CCSA imposed non-discriminatory remedies, including the following:

- The leading property and automotive platforms are to introduce packages for smaller business users (the most affected group by the discriminatory conduct) with a certain number of leads or listings (e.g., 30 listings) and such a package must be priced on average at a per lead or listing level no higher than 15% above the average of all other business users with more than 30 listings. The remedy substantially reduces the price discrimination that has endured for many years in online classifieds.

- Similarly, in food delivery, the leading food delivery platforms are required to take various measures that will improve the position of independent restaurants in terms of commission fees, and in so doing place them in a position closer to national and international restaurant chains.

Hereinafter, we briefly discuss two types of access remedies are likely to be of particular importance in the context of the digital economy: access to data and access to algorithms.

It is undeniable that access to data is crucial for competition and innovation in the digital economy (OECD, 2019b). At the same time, it may reduce incentives for competitors to become market leaders, thereby becoming subject to the same data access regulations. Taking the example of mandated sharing of click-and-query data of a dominant search engine like Google, it has been argued that this may lead to less investment in improving that search engine´s algorithm, and less innovation by rivals too, thus leading to a reduction of consumer welfare (DADSON, SNODDY & WHITE, 2021).

According to Resende and Castro (2022), investments can be affected by remedies that determine the forced sharing of property, as entrants generally appropriate rewards (upside), leaving owners of the shared infrastructure responsible for losses (downside). When forced sharing is established, entrants can easily enter and exit the market, as they do not incur sunk costs, and can free-ride on incumbent´s investments.Thus, on the one hand, it is worth assessing whether it is really desirable to impose this type of remedy. Furthermore, from a pragmatic point of view, there may be non-trivial issues regarding its implementation.

A first difficulty pertains to the scope of the obligation. Obviously, access to a large dataset will not be necessary if only a specific subset of such data is needed to allow competition in-the-market to unfold. However, determining the appropriate scope and level of granularity may be challenging: for instance, would the selection be on the basis of the sector in which the undertaking operates? On the basis of the number of data points for each individual in the dataset? On the basis of the commercial value of such data or its availability from other sources in the market? The necessity of a particular configuration of the obligation may be difficult to demonstrate, particularly due to the likely absence of empirical findings about the relative utility of the data in the hands of the concerned undertaking for the purposes of the production process of its competitors. The relative utility of such data to the undertaking´s production process may be a useful indicator, however, and it is likely to be more readily available. Accordingly, a critical part of the remedy design is to ensure meaningful participation of the undertaking in the design of the remedy, with the disclosure of documental evidence to that end. To facilitate that, a competition authority could outline concerns based on general industry or market characteristics that are indicative of the relative importance of data, and let the undertaking proposing an access remedy bear the burden to prove the need to restrict the scope of its application.

A second challenge is the interaction of the remedy with data privacy considerations. In particular, concerns arise if the data to which access is being sought are of personal nature, as it implies that the sharing of such data will need to comply with the applicable data protection rules- first and foremost, being grounded on a lawful legal basis. For this reason, the involvement of a data protection authority in crafting the terms of the remedy is highly recommended (ZINGALES, 2018).

One seemingly intuitive way to align the remedy with data protection law is to condition the sharing upon the consent of the data subjects: in this case, the sharing would replicate the dynamics of banking and financial services with the rise of Open Banking. However, the details of what constitutes a valid consent can be controversial: for instance, it may be that a mere opt-out does not suffice.

The data sharing remedy imposed in France in 2017 by the competition authority in consultation with the data protection authority to former monopolist GFD Suez with regard to its customers ‘consumption data offers an interesting example of a practical solution to this problem that may not be possible under modern data privacy legislation, such as the General Data Protection Regulation (GDPR): the sharing was permitted based on the communication of the transfer to users and the offering of an opt-out, which does not meet the threshold of a statement or by a clear affirmative action demanded by the legislation (GRAEF, THOMBAL, & DE STREEL, 2019). The GDPR imposes a high bar establishing that “ When assessing whether consent is freely given, utmost account shall be taken of whether, inter alia, the performance of a contract, including the provision of a service, is conditional on consent to the processing of personal data that is not necessary for the performance of that contract”[143] and that “consent should not provide a valid legal ground for the processing of personal data in a specific case where there is a clear imbalance between the data subject and the controller”[144], both of which may jeopardize the validity of consent in the context of a standardized mass contract.

Similarly, following the reasoning of the *Bundeskartellamt* in its *Facebook* decision, the insufficiently conspicuous notice of consent to collect data in third party sites may invalidate any respective data transfer. An alternative legal basis for the processing of personal data may be compliance with a legal obligation, which would be the remedy (KATHURIA & GLOBOCNIK, 2019); however, this solution does not cover the further processing by the beneficiaries of the data, leaving a gap which might frustrate its effectiveness.

Finally, a third option is the reliance on the legitimate interest[145], both of the controller (in not being subject to a fine) and of third parties (to benefit from a more competitive environment), but this may not be sufficient to outweigh the interest and fundamental rights of the data subjects not to have their data duplicated and distributed to competitors (GRAEF, THOMBAL, & DE STREEL, 2019). However, this legal basis may nevertheless be suitable if the data controller adopts safeguards for data subjects ‘rights and interests, such as the use of anonymization or pseudonymization techniques, providing additional notice(s) and consent, an unconditional right to opt-out, increased transparency, expanded data portability, and avoiding use of research data for actions about individual (EUROPEAN UNION- A29 WP, 2014).Furthermore, a design feature for the remedy which could make the legitimate interest basis more viable is create a regulatory sandbox aimed to grant access not to all competitors, but

[143] Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ L 119, 4.5.2016, p. 1–88, art 7 (4).
[144] Ibid., recital 43
[145] However, this legal basis is not available for the processing of “special categories” of data, such as those revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, or data concerning health or data concerning a natural person’s sex life or sexual orientation. See art. 9 (1) of the GDPR.

only those who commit to a particular data use: this particular design feature of the remedy could be used to ensure (at least on paper) both its competitive relevance and its compliance with data protection principles (ZINGALES, 2022). In the most extreme cases, access could be granted only *in situ*, in other words accommodating queries for such data within the dataset of the original contributor, which has the advantage of preserving the contextual elements that enhance the value of the data in question (PARKER, PETROPOULOS, & VAN ALSTYNE, 2021).

An ´access to algorithm´ remedy may be practically even more difficult to administrate and to monitor because of the complexity of algorithmic system, which involve the combination of several components and are thus often not entirely predictable even to the designers involved. Furthermore, forced sharing may generate tensions with another legal regime that is often in tension with competition law: intellectual property law. This is because algorithms can be covered by copyright, patents, or trade secrets. In the case of algorithms protected by copyright or patents, the authority can impose compulsory licensing without compromising the value of the intellectual property in question: copyright and patent rights can still be asserted outside the specific circumstances of the Order, and third parties are prevented (subject to possible defenses and limitations) from using those algorithms outside the scope of the licenses. On the other hand, in the case of trade secrets, the mere disclosure to third parties has the potential to undermine the commercial value of the information, and therefore the trade secret itself. Therefore, it is crucial that authorities carefully consider the inclusion in the remedy package of appropriate safeguards to preserve the confidentiality of the information that is subject to disclosure by way of algorithm sharing.

(vi) Tendering

Tendering refers to the process of selection of the supplier of a good or service by asking several companies to present their offer. It can be implemented in at least two different ways: one is where the tendering is done with a competitive bid, and the auctioneer selects the winner(s); the second is where tendering simply means the presentation of several options to the final consumer, which is who makes the selection. The latter type of remedy was adopted as a commitment in the European Commission´s

Microsoft (Browser) case[146], while the former was used both, while the latter was used both in the *Google Shopping*[147] and in the *Google Android*[148] case (which was paralleled by a similar case in Russia, with the difference that there the remedy was applicable to all devices, not only newly acquired devices- see PEREZ, 2017). To appreciate the rationale behind the imposition of the latter type of remedies, which allows the antitrust infringer to profit from their implementation, it is worth noting that authorities tend to adopt more "light touch" for unilateral conduct cases that fall outside the application of the essential facility doctrine, where access remedies are considered more appropriate (OECD, 2020b, p. 35). In fact, when talking about self-preferencing or discrimination, what is sought is not access, but equal treatment.

The *Microsoft (browser)* case involved the tying of Microsoft´s browser (Internet Explorer) to its operating system Windows, which the Commission found to be an abuse of dominant position. To address the Commission´s concerns, Microsoft offered a five-year commitment with regard to the availability of non-Microsoft Browsers in current and future users of Windows: first, to make available within the European Economic Area a mechanism in Windows 7 and its successors that enables OEMs and users to turn Internet Explorer off and on; second, to distribute through a Windows Update a choice screen to all users of Windows XP, Windows Vista and Windows 7 in the EEA who have Internet Explorer set as their default web browser, whereby they will see the icons of the twelve most widely-used web browsers and will be able to select which one of those they choose to download as default. The commitments included the presentation of an introductory screen to explain what a browser is, and allowed users to obtain more information about each browser before triggering the download. To prevent bias towards one browser or another, Microsoft would display the browsers in random order; however, in order not to overload users with choice, it would present in the first screen only the five most widely-used browsers, while seven more would be visualized when the user scrolls sideways (BUHR, BULST, FOUCAULT, & KRAMLER, 2010). The list of browsers

[146] Commission Decision of 16 December 2009 (Case COMP/C-3/39.530 – *Microsoft* (tying)).
[147] Commission Decision of 27 June 2017 (Case AT.39740- *Google Shopping*).
[148] Commission Decision of 18 July 2018 (Case AT.40099 — *Google Android*).

would be updated every six months, and both the Commission and Microsoft were given the power to review the remedy within two years in case of failure or changed market circumstances. In 2014, when the commitment expired, the numbers showed that Internet Explorer´s share of the market declined by 20% each year, with the main beneficiary of that decline being Google Chrome (GORE & ROOIJEN, 2021).

Google Shopping is more controversial in relation to the remedy that were applied: having established that Google´s integration of its comparison shopping results on the general search result list and the non-application to those results of ranking rules that were applied to other price comparison service, the European Commission ordered Google within 90 days to bring its "self-preferencing" conduct to an end and to refrain from engaging in any act or conduct with the same or equivalent object or effect on all elements that have an impact on the visibility, triggering, ranking or graphical format of a search result in Google's general search result pages (art. 3). It also required Google within 60 days to of the specific measures through which it intends to comply with this Decision, and report periodically over its implementation (art. 4). Several criticisms have been raised of this approach. For one, it remained unclear whether Google would be free to set up its ranking and selection ("triggering") criteria, so long as those are applicable indistinctively both to its products and services and to those of its competitors (ZINGALES, 2018b).[149]". Secondly, it was not clear if granting access to search results in exchange for a fee calculated through a competitive auction would constitute an effective remedy, particularly as this does not necessarily lead to more price-comparison sites being able to compete with Google Shopping if they have to sacrifice most of their profits in order to win the auction.

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[149] The Commission affirmed at para 440 that "[it] does not object to Google applying *certain* relevance standards, but to the fact that Google's own comparison-shopping service is not subject to those same standards as competing comparison-shopping services." (emphasis added), which suggests that the use of certain *other* criteria may be problematic. This appears to be confirmed by para. 537, according to which "the Commission does not object to Google applying specific criteria *per se*, but to the fact that Google *prominently positions and displays* results only from its own comparison-shopping service and not from competing comparison-shopping services" (emphasis added).

Interestingly, the uncertainty over what the appropriate remedy might be led Google to offer three different set of commitments, by way of a negotiated solution to address the Commission´s competitive concern during the investigations. In the last commitment package, which then Commissioner for Competition Joaquín Almunia declared being inclined to accept before he received negative feedback in the market testing, Google offered to provide links to three rivals next to any Google´s own specialized result (and with the same visibility) on desktop searches, and one in the case of mobile searches, in both cases with the continued ability to charge for inclusion in its specialized search services through an auction mechanism (ALMUNIA, 2014). Despite the failure of these proposals, however, the remedy chosen to implement the principles of the infringement decision was remarkably similar: Google decided to offer inclusion in results as a service, with no limitations on the fee that can be charged by way of remuneration. To do that, Google shifted since 28 September 2017 its comparison-shopping operations to a separate entity, forcing it to compete with other comparative shopping sites ("CSS") for access to each specialized search result (the so-called "shopping unit"), and subjected the whole process to ongoing monitoring by the Commission, with the assistance of technical experts, and periodic reporting over the status of the implementation. While this may appear to guarantee equal treatment in principle, several loopholes were highlighted by critics of the remedy:

- first, four months into the remedy period, it was reported that as many as 99% of Shopping results were held by Google (BENCH-CAPON, 2018) (SCHECHNER & DOZDRIAK, 2018). Google sought to address the problem of insufficient participation by adopting a wide definition of CSS that included the intermediaries that had been managing Google Shopping campaigns for years, and offering discounts of 30% to merchants who would switch from its own service to those offered by competing CSS (HÖPPNER, 2021).
- Second, as one could anticipate from the economics of online ad auctions (VARIAN, 2009), a search engine is able to extract the vast majority of its competitors' profits: it was recently reported that profits for CSS from commissions for clicks on such products results (i) have decreased by 46.5% since the launch of Google's compliance mechanisms; and (ii) are currently half of that of clicks on generic search results (HÖPPNER, 2021).

- Third, one can be suspicious of the degree to which the functional separation of the shopping services prevents Google from dominating the auctions, particularly as the parent company could redistribute profits to its shopping entity through transfer pricing (RAFF & RAFF, 2017)

In line with this criticism, a coalition of technology companies sent a letter to the EU Commissioner for Competition complaining about the continuation of Google´s abusive conduct, in addition to pointing out its replication in vertical search markets such as online recruitment services and vacation rental services (EUROPEAN NEWS PUBLISHERS ASSOCIATION, 2020). To this, one should add that the General Court´s appeal judgment clarified that the case does not concern "access" to the Shopping units, but rather, self-preferencing of Google´s own CSS on Google´s general search results case: this implies that it is about the conditions at which access is given, and not merely the fact that access is granted (HÖPPNER, 2021). It thus remains to be seen to what extent the European commission will continue to consider this remedy effective to address the anticompetitive concerns. In this respect, it is also interesting to note that the Commission considered in the supplementary Statement of Objections it sent to Google in 2016 that access to the Shopping Unit would need to be set at a fixed nominal charge of € 0.01 per click, but this requirement did not appear in the final decision (VESTERDORF & FOUTOUKAKOS, 2018) . On the other hand, the tender document for the recruitment of the trustee, issued on 28 June 2017, suggested that the monitoring exercise involves ensuring that any fee imposed is "economically sustainable for competing price comparison shopping service", a principle which is not contained the decision and therefore lacks binding legal value (VESTERDORF & FOUTOUKAKOS, 2018) .

In Brazil, Former CADE´s President, Alexandre Barreto de Souza, when analyzing a case 08012.010483/2011-94 against Google, considered that there was no evidence that Google was self-preferencing itself. On the other hand, according to his opinion, even if it were concluded that the conduct was reprovable, it was not be enough for the Antitrust Authority to give the order to "cease the conduct" without presenting viable and effective alternative for it.

I also emphasize that the design of antitrust remedies is, in this specific sense, a task in constant construction, as there is no pre-conceived formula to indicate ex ante what the standard format of remedies applicable to each situation would be. Each circumstance therefore requires an individualized and in-depth assessment by this Council in order to address intervention measures that are proportionate, solid, effective and objectively measurable. In this case, **I do not consider the remedies currently being discussed to be capable of satisfactorily addressing any anti-competitive concerns in accordance with Cade's recent jurisprudence**. (…)

Given the above, what to do? How to balance all pertinent considerations in a scenario where there do not seem to be appropriate solutions? Stop Google from displaying search results? Require that Google show specific results on its page? Which results? All of them? So, tomorrow, if a new entrant creates a new website, no matter how inefficient it may be, will it be guaranteed its presence on the first page of Google? Under what parameters and criteria should this competition authority act in this sector? How, ultimately, should Cade resolve any potential competition concerns in this market? Which measures and which impositions, therefore, should be considered appropriate?

(…)

All the issues that were discussed in the case at hand reflect a desire that is shared by this Council and by all antitrust authorities around the world. How to deal with the complex issues relating to the digital economy? These concerns are present, without exception, in all discussions held in international competition defense forums and debates: for example, in the Organization for Economic Co-operation and Development ("OECD"), in the International Competition Network ("ICN") and in the BRICS Group (Brazil, Russia, India, China and South Africa). However, difficulties arise precisely when we deal with concrete cases, in particular, regarding what signs and evidence appear to us in each investigation.

A third notable remedy in digital markets that provides important lessons with regard to tendering is the one adopted in *Google Android* in July 2018, where the European Commission ruled that Google abused its dominant positions in the markets for licensable smart mobile operating systems and for Android app stores by tying its search app and its Chrome browser to the Play Store. The Decision ended with a remedy order formulated in a way that is almost identical to the one imposed in Google Shopping: it required Google to bring the infringement to an end, to refrain from repeating in equivalent conduct, and to notify the Commission of the proposed solution. In October that year, Google announced that it would change its licensing practices by allowing device manufacturers to develop non-compatible (so-called "forked") smartphones and to license the Google suite independently from the Google Search app or the Google Chrome browser – however, in such cases they will be subject to a paid licensing agreement (LOCKHEIMER, 2018).

The company also announced new commercial agreements to partners for the non-exclusive pre-installation and placement of Google Search and Chrome. However, the most controversial part of the remedy was precisely in relation to the tendering that Google began to offer since August 2019, as an addition to the initial remedy package. In this announcement, Google explained that it would show Android users a screen allowing them to choose their preferred search engine. The choice screen, rolled out during the set-up process or through a notification when entering the Google Play store after receiving an update, would give four options: one being to choose Google Search, and the three being the winners (displayed in random order) of an auction mechanism run on a by-country basis where search providers state the price that they are willing to pay each time a user selects them from the choice screen in the given country. Only in case of insufficient bids, would Google grant free admission to any remaining slot, randomly selecting from a pool of eligible search providers.

It is crucial to note that the limited number of participants in an auction significantly increases the likelihood that the auction is fully subscribed, which in turn implies a higher magnitude for the profit-sacrifice effect described above in *Google Shopping*. Furthermore, the *de facto* imposition of a tax to entry in this market made it practically impossible to gain market share for search engines with a different business model, such as privacy-oriented Duckduckgo (which does not track search data) and Ecosia (a company whose mission is to fight climate change by planting more trees in areas affected by deforestation). The increasing evidence of this dynamic, in addition to the very limited effects of the remedy in terms of market shares (NGUYEN, 2021), prompted the European Commission to request a further update to the remedy, which was announced in June 2021 and operationalized since September 2021. Similar to the *Microsoft (browser)* remedy, with this update Google began to offer participation in the choice screen for free, and with the following set-up: in the first screen view, users will see the top five search providers (including Google, where applicable) in that country; in the second screen view, that can be obtained clicking "next", users will see up to seven more search providers, again in random order. Presumably, this configuration was designed as a compromise between providing choice and convenience to the user, as explained by Commission officials in the Microsoft (browser) case. In addition to this improvement, the new version of the remedy contains a commitment by Google that assuages the concern about its capture of competitively sensitive information through the auction; it also eliminated from the list of eligible search providers its syndication partners (i.e., search providers who show Google's own search results and search ads), addressing cross-subsidization concerns analogous to those discussed above for the *Google Shopping* remedy (HAUSFELD, 2021).

(vii) Mandated interoperability and data portability

Another frequent remedy in digital markets, suitable to address concerns related to leveraging and to undo the competitive impact of network effects, is the imposition of obligations to ensure that the information technology of the concerned undertaking(s) remains interoperable with the products of competitors (see e.g. EU Remedy Notice, para. 65). Not only does this obligation facilitate the attainment of minimum scale for competitors in downstream markets, it also enables multi-homing in the same relevant market of the concerned undertaking(s): in this sense, we can distinguish between vertical and horizontal interoperability (KERBER & SCHWEITZER, 2017). We also briefly discuss below data portability, and its relation to interoperability.

Interoperability can be defined as the ability to transfer and render useful data and other information across systems, applications, or components (GASSER, 2015). The combination of transmission and analysis involves several layers of the so-called Open

Systems Interconnection model (OSI model)[150], requiring the achievement of various levels of interoperability[151]. At a minimum, one should distinguish the lower and the upper layer, pointing to a division between infrastructural interoperability and data interoperability. While infrastructural interoperability enables IoT devices to exchange data under common network protocols, data interoperability concerns more directly users and developers of IoT applications, allowing them to meaningfully connect the interfaces of those applications.

At the infrastructure (lower) layer, interoperability is achieved through the use of common protocols for the conversion, identification and logical addressing of data to be transmitted over a network. The most common standards in this layer are Ethernet and TCP/IP. Protocols are also used for communication between computer programmes over telecommunications equipment, through common languages such as HTTP for web content, and STMP, IMAP and POP3 for emails (ROOIJEN, 2010). At the application (upper) layer, interoperability is attained by reading and reproducing specific parts of computer programs, called interfaces, which contain the information necessary to "run" programs in a compatible format. However, different interfaces are needed depending on who actually "runs" the program[152]: if it is from the perspective of the user/consumer of the

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[150] Open Systems Interconnection model (OSI Model) is a conceptual model that defines a unifying standard for the architecture of networking systems. For more information, see http://www.tcpipguide.com/free/t_TheOpenSystemInterconnectionOSIReferenceModel.htm

[151] More specifically, the interoperability required at the different layers concerns the following:
-At the physical layer (#1), the definition of hardware specifications; the transformation of local data into bits that can be sent over the network; and the actual transmission of those data over the network.
- At the data link layer (#2), the establishment of the functions required for the establishment and control of logical links between local devices on a network; and the procedures used by devices to control access to the network medium.
- At the network layer (#3), the logical addressing and the routing of data across a series of interconnected networks.
- At the transport layer (#4), ensuring that various software applications can all send and receive data using the same lower-layer protocol implementation.
- At the session layer (#5), ensuring the persistent logical linking of two software application processes, to allow them to exchange data over a prolonged period of time.
- At the presentation layer (#6), compressing, encrypting and translating different formats of representing data.
- At the application layer (#7), implementing the functions that are needed by users of the network and issuing the appropriate commands to make use of the services provided by the lower layers.

[152] According to the Posix Open Systems Reference Model, these interfaces can be of four types: (a) Human/computer interface services; (b) Information interchange services; (c) Communication services; and (d) Internal system services.

computer program, user interfaces are relevant to the extent that they enable him or her to visualize and deploy a specific set of commands or modes of interaction with the program, that can potentially be replicated into another (different) application. Importantly, although this kind of interoperability can increase a program's utility to the user, it is not *required* for the purpose of its technical functioning. Most choices for user interfaces are indeed dictated not so much by functional elements of the program, as by the pursuit of the goals of user friendliness, aesthetical appeal and promotion of brand-specific features.

From the perspective of the developer of a computer program, the relevant interfaces for interoperability are the APIs, i.e. any well-defined interfaces which define the service that one component, module or application provides to other software elements (SOUZA, REDMILES, CHENG, MILLEN, & PATTERSON, 2004). However, interoperable APIs do not necessarily imply the ability of either users or developers to meaningfully relate the outputs of interoperable computer programs, unless they are expressed in the same language (most commonly, JPEG for images, HTML for webpages, PDF for documents and MP3 for music). This can be achieved through the so called "data interfaces", which are responsible for restoring and retrieving data in a specific format (ROOIJEN, 2010).

From the above, it is apparent that interfaces at each of these layers[153] serves different functions, all of which are relevant for the deployment and development of IoT applications. For our purposes, this is important because the mechanisms by which interoperability is achieved or prevented at one layer may be significantly different from those at other levels of the technology stack. This has particular relevance for the governance of the Internet of Things, where the production of the consumer value will depend not only on the connection between objects (infrastructural interoperability), but also on their ability to request information and action to each other (syntactic interoperability) and extract meaning from the information exchanged (semantic

[153] A mention should be made of another category of interfaces, which was briefly touched upon in the description of lower layer interoperability: the so called "communication interfaces", which connect the upper layer to the lower layer through standard languages such as the above-mentioned HTTP, STMP, IMAP and POP3.

interoperability), as well as the possibility for consumers to export those data to yet other technological platforms (data portability) and to transfer and render useful data across systems without incurring legal liability for accessing and processing those data (legal interoperability). Both legal and technical constraints must be taken into account for the attainment of the more comprehensive notion of "effective" interoperability. In particular, interoperability information can be protected through a patent, copyright, or a trade secret. Furthermore, copyright and database protection can be used to control the use in an IoT application of data or data structures taken from another. Finally, data protection law may determine the extent to which information can be extracted and re-utilized without the consent of the data subject, and therefore potentially constitutes a further obstacle to legal interoperability. Accordingly, the design of an interoperability remedy will need to consider how to ensure that the assertion of rights over information does not undermine effectiveness. Furthermore, a remedy should consider its interaction with existing data protection rules, including the necessity to set data portability standards. Indeed, while the right to data portability is provided under data protection legislation, its effectiveness remains limited in the absence of agreed upon standards concerning what constitutes a "structured, commonly used and machine-readable format" (WONG & HENDERSON, 2019). Sometimes, by preventing the creation of the standard, incumbents essentially raise their rivals' costs relative to their own (GAL & RUBINFELD, 2019, p. 23). Finally, it is important to bear in mind that the effectiveness of data portability in reducing barriers to entry is hindered also by the limited scope of the ported data (due to privacy constraints), the limited economies of scale that can be derived from portability exercised by a subset of consumers, and the presence of strong network effects (OECD, 2021).

One example of a remedy imposed in the BRICS concerning interoperability is the Brazilian case involving Bradesco[154]. Bradesco is a bank that was investigated for

[154] Administrative Procedure No. 08700.004201/2018-38.

allegedly raising obstacles to portability of customers´account data to fintech provider Guiabolso. As a solution, Bradesco committed to develop interfaces that would allow GuiaBolso to access Bradesco's systems, through previously established encrypted communication, upon user consent[155]. Importantly, the remedy included specific obligations on deadlines for compliance, the availability of the connection interface with minimum requirements of quality and stability of access, technical documentation with necessary interoperability specifications, as well as a dedicated test environment.

In China, interoperability was imposed in the decision to approve Nvidia's acquisition of the equity of Mellanox Technology with restrictive conditions. Here, SAMR required the merger entity to continue to ensure the interoperability of Nvidia's GPU accelerators with third-party network interconnection equipment and third-party accelerators. The Chinese anti-monopoly enforcement agency will specify the products, technologies or services that leads to competition concerns in the decision to attach restrictive conditions and the restrictive conditions proposed by the notifying parties and reviewed/approved by the anti-monopoly enforcement agency as being able to address competition concerns. The undertaking will on the basis of the restrictive conditions submit a detailed implementation plan, which will be specifically implemented after an assessment by the law enforcement agency (and the monitoring trustee). The monitoring trustee (if any) will supervise and inspect the daily implementation and report to the law enforcement agency. Undertakings usually need to submit periodic reports on its compliance with the restrictive conditions.

In South Africa, the CCSA imposed measures that facilitate access and interoperability in the context of the Online Intermediation Inquiry, where the authority identified interoperability concerns in relation to the listing engine software used by estate agents to manage listings and feed onto their websites and those of property classifieds. The CCSA found that a substantial number of estate agents that wish to use alternative listing engine software face considerable practical barriers that eventually discourage

[155] Cease and Desist Agreement No.. 08700.003425/2020-47.

them from using such alternatives. Moreover, the leading platforms require estate agents to pay additional monthly fees for feed in from external listing engine software, which discouraged estate agents from exploring alternative listing engine software. As a result of these practices, smaller platforms that offer alternative listing engine software are foreclosed from the market. To address these concerns, the CCSA imposed remedies that require the leading platforms to take measures that facilitate access and interoperability with third party property classifieds at no extra costs, including the scraping of the monthly feed in fee demanded from estate agents.

In India, an example of interoperability imposed as a remedy comes from Combination Case C-2018/10/609 and C-2018/10/610. Both Den and Hathway were Multi System Operators (MSOs) active in provision of Cable TV services, a distribution platform for transmission of television channels to end consumers. Here, the voluntary undertakings offered by the merging parties include the following:

i. There will not be any technical re-alignment due to the proposed combination which will result in change in customer premises equipment of existing subscribers of Den and Hathway for services being currently availed by them from the respective companies.

ii. In case, due to the proposed combination, there is any technical re- alignment which will result in change in customer premises equipment to enable the existing subscribers to continue availing from Den and Hathway the services currently being availed by them, then the Parties undertake that the cost of such technical realignment and / or the change in customer premises equipment will not be borne by such customers and the same will be borne by the Parties.

iii. Post the proposed combination, the customers would be free to choose anytype(s) of services or their bundle i.e., between broadband, Cable TV and telephone, offered by the respective companies.

iv. In relation to the above, the Parties also undertook to provide an annual compliance report for a period of five (5) years from the date of receipt of the order of the Competition Commission of India approving the proposed combination.

As both *Bradesco* and *Den/HAlthwa* illustrate, a governance structure to ensure compliance with interoperability promises may represent a very important aspect of the remedy package.

7.3.2. Other remedies

(i) Declarations of illegality

Declaratory remedies are useful to enhance legal certainty in fast-moving markets, particularly where the investigated conduct presents sufficient novelty such that its permissibility may not be reasonably foreseen. As an example, this was the strategy adopted by the European Commission in its *Motorola* decision[156], whereby it determined that is illegal for a patent holder who has agreed to license its standard-essential patents on FRAND terms to seek injunctive relief against a willing licensee. It was the first time that the authority dealt with this type of practice, and there was no similar case in the past which could provide valid guidance. However, to be clear, cease-and-desist orders can be used also beyond situations involving novel types of conduct.

(ii) Change or termination of existing contracts

The need to change or terminate existing contract is almost inevitable part of remedial measures in a variety of situations. This is particularly the case for exclusive long-term supply agreements which may foreclose either, up-stream, the input for competitors or, down-stream, their access to customers (EUROPEAN UNION- E.C., 2008).

One note of caution with regard to the adoption of these remedies is that authorities should strive to minimize the detrimental effects that may be caused to

[156] Commission Decision of 29 April 2014 (AT.39985 – *Motorola - Enforcement of GPRS standard essential patents*).

innocent third parties on the basis of the termination or amendment of the contract. To that end, it may be appropriate to differentiate the application of the measure depending on the time-horizon of each contract and the prospects for renewal. CADE undertook this differentiated assessment in the *interim* measure imposed in the *iFood* case, where the remedy involved a set of measures designed to eliminate or reduce the restrictive effect of exclusivity clauses between a food delivery platform and its partner restaurants[157]. In particular, CADE distinguished three situations: (a) with regard to new restaurants or restaurants already in iFood's marketplace without exclusivity clause, prohibited the entry into contracts including such clause until CADE has rendered a decision on the merit; (b) with regard to restaurants already in iFood's marketplace with exclusivity clause, allowed iFood to maintain the contract in place and, in case of expiration, renew them only with an exclusivity clause limited to up to 1 year (renewable) and only if this is in the interest of both parties; (c) with regard to restaurants already in iFood's marketplace with exclusivity clause and whose contract renewal does not include an exclusivity clause, prohibited the inclusion of such clause in later contract renewals. This differentiated approach to exclusivity contract allowed the authority to prohibit the conclusion of new contracts of the type, while at the same time preserving existing ones and limiting renewals to a specified set of cases where the autonomy of the dominant firm´s business partner can be guaranteed. It should also be noted, as mentioned above in section 4.3, CADE ultimately settled the case by signing a cease-and-desist agreement with iFood relating to the use of exclusive contracts, which involves the commitment by iFood not to sign exclusivity agreements with restaurants that generate sales in more than 25% of online food delivery (and 8% in certain municipalities), and in any case requiring that such agreeements involve benefits for the restaurants, that they expire after 2 years (only renewable after a period of quarantine) and that they do not restrict the ability of selling through channels other than food marketplaces.

[157] Preparatory Procedure No. 08700.004588/2020-47 - *Ifood.com Agência de Restaurantes Online S. A.*

(iii) Removal of links with a competitor

In certain cases, it may be appropriate to order the removal of links with a competitor: for instance, where corporate law in the relevant jurisdiction allows it, by waiving the rights linked to a minority shareholding such as representations on the board, veto rights and information rights which may have an impact on competitive behavior (ICN, 2016) . This remedy can be appropriate in the context of conglomerate mergers, joint or in conjunction with other obligations, where the acquisition of sensitive information is the main concern. Furthermore, it can be used to address concerns relating to collusion or coordinated effects.

(iv) Transparency

In certain cases, particularly where an infringement or an anticompetitive concern hinges upon a finding of insufficient transparency, the imposition of specific disclosure rules may constitute an appropriate remedy. One should distinguish, however, transparency vis a vis the customers of a firm and transparency *vis a vis* a regulatory authority. The latter is frequent in regulated industries in order to facilitate monitoring over potentially problematic conduct, including possible ways of evading the applicable regulatory requirements (UNITED STATES- DOJ, 2020), and therefore naturally lends itself to cooperation between the antitrust enforcer and the regulator in the design and enforcement stage. The former is less common, but mostly occurs when a dominant company puts its business partners at disadvantage by not defining sufficiently clear rules of engagement, and thus retaining the discretion to apply them inconsistently (and potentially, discriminatorily). The former type of transparency remedy has also significant implications for collusive conduct, often leading to price increases by creating focal points (BRAZIL- CADE, 2018). An example of a remedy involving transparency is the settlement concluded between FAS Russia and Google in 2022 relating to the allegedly opaque conditions for blocking of accounts: here, the remedy involved both general transparency of such conditions (a list of grounds) and a notification procedure for affected users. Similarly, in the *Apple- parental control* case of 2020, FAS Russia required Apple to remove clauses in the App Review Store Guidelines that allowed it to arbitrarily reject and prevent any third party from entering the App Store.

(v) Shutdowns

Another possible restorative remedy could consist in the temporary shutdown of the firm´s activities, for the time sufficient to enable competitors to gain market share. A milder version of this is the prohibition to participate in certain public biddings, which can be imposed as a result of previous misconduct in such processes. In light of the substantial interference with the right to conduct business, and the risk of violating the principle of legality by prohibiting otherwise legal conduct (thus becoming a so-called "fencing-in remedy"), it is important that the application of this remedy remains narrowly tailored to the infringement in question. For instance, proponents of this remedy caution that the shutdown need not apply to all users of the incumbent firm, in particular if the aim is to expose users to other services- in which case, multi-homing users can be excluded from the application of the remedy where feasible (GAL & PETIT, 2021). However, at the same time, this approach may generate tension with a constitutionally guaranteed right to non-discrimination, and thus deserves further discussion.

(vi) Subsidization

Subsidization of a competitor is a more controversial way of restoring the loss of competition in the relevant market. An example of this remedy can be found case in one of the early cases of US antitrust law, where the Court ordered divestiture of the government-owned plants leased to Alcoa to restore "free independent private enterprise, discourage monopoly, [and] strengthen small competitors", and a majority of those plants were sold to competitors at a discount (GAL & PETIT, 2021, p. 25). Subsidization would not necessarily have to be on financial terms: while Alcoa´s example involved discount, in a more technological and data-intensive environment this could also mean attributing a higher share of data appropriation and giving a more privileged position in the ranking, or any other preferred treatment which would translate into a competitive advantage. Some suggest that this remedy could be used to promote business model differentiation: for instance, if a dominant platform has an ad-funded business model that enables it to provide zero-price services, financing a more privacy-focused competitor would increase welfare by adding choice (GERADIN & KATISIFIS, 2021), provided this is something consumer want. Others echo this sentiment going as far as saying that subsidization can encourage the rise of more sustainable alternatives even despite contrary revealed preferences of consumers, when the authority takes a clear public stance against a certain practice: for instance, steering away users from addictive technologies (ROSENQUIST, MORTON, & WEINSTEIN, 2021).

As one can gather from these significantly different positions even among proponents of this solution, this is a very challenging remedy to implement, and for several reasons.

First, and most importantly, one cannot guarantee that the beneficiary of the subsidy will stay in the market as an independent firm after the subsidy, in which case the remedy would only have been a cause of transfer of wealth, without the desired effects on the market in question. Also, the remedy might create a channel for coordination between the infringer and the beneficiary, particularly where it involves repeated contacts, and to that extent it might create bigger problems than those that it seeks to solve.

Second, it is not clear who exactly should be the beneficiary of this subsidization: does it have to be a current competitor? Or is it more appropriate to take a dynamic approach and consider also actors who are not yet in the market, but have the potential to enter through product differentiation, as typically occurs in markets with network effects? (BRESNAHAN & GREENSTEIN, 1999; GAL & PETIT, 2021). Even letting aside these dynamic considerations, the timing of the assessment of competitive potential is not a straightforward question, as two approaches are possible: either a rigorous “but-for” approach, where the companies that were strongest prior to the infringement would be the most obvious beneficiaries; or a more forward-looking approach, favoring the strongest competitors or customers at the time of the decision customers (MAIER-RIGAUD, HELLSTROM, & BULST, 2009).

Third, the task of determining who the strongest competitor might be is riddled with difficulties. For one, it involves counterfactuals about the evolution of the market in the absence of this artificial intervention, and this may be complicated by the interaction with other remedies that might be imposed to the infringing firm: for instance, if the exercise of market power by a dominant firm is constrained through a cease-and-desist order, does this lead to a type of competitive pressure that deviates from the natural evolution of the market? If so, should the authority use this sought-after equilibrium as benchmark of competitiveness, or the one existing under a "natural" state? It is also important to understand the relevant -and sometimes conflicting- dimensions of competition at play. For instance, if consumer demand for quality and innovation outweighs that for lower prices, the relevant parameter will be the number and quality of features that are or can be offered by competitors. Similarly, if consumers are more privacy-aware, the offering of more control over the collection and use of their personal data may be more relevant in establishing who is a worthy upcoming competitor; but perhaps not so much so if that involves a significant price increase. However, the settlement agreed upon in 2022 between FAS and Russia´s leading search engine Yandex (see supra, section 6.5) illustrates the possibility to use this remedy to subsidize not necessarily a competitor, but rather the local ecosystem of start-ups that may have been harmed by the conduct in question.

Fourth, the amount of appropriate subsidization would also depend on the characteristics of the relevant market: for instance, the fact that the actual or potential entrant needs to overcome significant network effects suggests that a more incisive subsidization is needed in the short term. By contrast, in other settings requiring a strong subsidization in a short period of time may violate the principle of proportionality. Ultimately, the important tension between proportionality and effectiveness in the face of uncertainty suggests that this remedy may be more prone to judicial challenges than more consolidated types of remedies. While a competition authority can seek to include in the remedy provisions designed to assuage the above-mentioned concerns, it is virtually impossible to eradicate some of these tensions- which involve, essentially, picking winners with a significant margin of discretion, and can thus lead to arbitrariness. As a result, this remedy should be used with utmost caution.

(vii) Nudges

A remedial measure that is likely to become increasingly important, in an environment where consumer actions are intermediated through the interfaces of digital products and services, is to regulate the specific features that the concerned undertaking(s) provide to users to facilitate the exercise of choice. Both the scope and the goals of this remedy can be quite wide-ranging, as these interventions in the market mechanism may be appropriate to address a variety of possible anti-competitive concerns: not only can they be used when the conduct concerns specifically distorting the choice environment (as was the case, for instance, in the European *Google Shopping* case), they can also be a soft mechanism to restore competition in the market after foreclosure or a means to promote a more balanced and competitive environment in the context of captive consumers. “Nudge” is a comprehensive term that refers to any aspect of the choice architecture that alters people’s behaviour in a predictable way without forbidding any options or significantly changing their economic incentive (THALER & SUNSTEIN, 2008), or, according to a more recent definition, any way of influencing choice without limiting the choice set or making alternatives appreciably more costly in terms of time, trouble, social sanctions, and so forth (HAUSMAN & WELCH, 2010). The essential feature of these interventions is that they take account of flaws in individual decision-making (also called “behavioral limitations”) to steer the target in a particular direction, whilst leaving him or her free to decide. Nudges that respect the limits imposed by these definitions, and thus do not involve coercion, are in principle permitted. Nevertheless, a company may be enjoined from nudging users in a particular way or even required to nudge against its own interest in order to ensure contestability (LANCIERI & NETO, 2021).

7.4. Monitoring

A last topic that deserves being addressed is the proper weight that should be placed in remedy design on the challenges related to monitoring, i.e., oversight on the implementation of the remedy. Typically, the monitoring exercise is grounded on specific provisions of the remedy order (so-called ancillary provisions or flanking measures) which provide for reporting duties, as well as auditing and enforcement powers for the authority. Furthermore, non-structural remedies rely on the competition authority´s ability to enforce the remedy provisions unilaterally, in court or through a dispute resolution mechanism, which may also be available to third parties (ICN, 2016) . In some jurisdictions, violations may also be enforced through civil penalties (ICN, 2016) and even criminal sanctions, in case of knowing and willful disobeyance

(UNITED STATES- DOJ, 2020). In some cases, responsibilities for enforcement of consent decrees are assigned to a separate governmental department (BRAZIL-CADE, 2018; UNITED STATES- DOJ, 2020).

As discussed above, monitoring challenges are markedly more pronounced in the case of behavioral remedies, leading to a clear preference for structural remedies in the merger context (although in some jurisdictions, such as the US, this preference does not apply to conglomerate mergers) (UNITED STATES- DOJ, 2020). However, even in case of divestiture an authority will need to ensure compliance, notably by reviewing the sales process, the financial and managerial viability of the purchaser, any documents related to the sale, and any relationships between the purchaser and defendants which may inhibit the purchaser's ability or incentive to compete vigorously (UNITED STATES- DOJ, 2020). This is typically done by appointing a monitoring trustee, which in this case may be specifically called "divestiture process monitoring trustee". Such an appointment can also be done to supervise the compliance of behavioral commitments, supervise the management and preservation of the assets as a separate business (in which case, it will be a "preservation monitoring trustee"), supervise the splitting of the assets or personnel of the divested business from those of the businesses retained by the parties in the case of carve-out (a "carve-out monitoring trustee") and guide and supervise the activities of the operating trustee (also called "hold separate monitoring trustee" or "independent manager"), which in turn manages the day-to-day operations of the business to be divested (BRAZIL- CADE, 2018). Trustees are usually compensated by the concerned undertakings but must be independent from them and solely act on behalf of the authority, even if their appointment can be made both by the authority or by a court overseeing the remedy (ICN, 2016). Importantly, their mandate must be specifically tied to the obligations imposed in the remedy and not delegate the decision-power of the authority, as the EU *Microsoft* case illustrated. Trustees and any additional technical experts that may be necessary to assist them can play a significant role in creating a culture of compliance, particularly if they make early contact with top-level management to explain the importance of cooperation (HIMES, NIEH, & SCHNELL, 2021). They can also be a mechanism to facilitate international cooperation, either through appointment of a common trustee by multiple authorities or through the adoption of common or complementary reporting obligations.

In non-structural remedies, it is important that effectiveness be ensured without a continued control of the market conduct. This is an explicit requirement for merger remedies in Germany, which has rendered inappropriate common remedies like access, sales restrictions and Chinese walls, organizational obligations (e.g., legal unbundling within a corporate group), obligations to make or refrain from making particular investments, obligations not to exercise certain shareholder rights, long-term supply obligations and price caps (GERMANY- BKA, 2017). To avoid that, an acceptable behavioral remedy must require a conduct that has an effective and sustainable effect on the market conditions, in order to permanently remedy the competitive harm (GERMANY- BKA, 2017, p. 12). More generally, to facilitate achievement of the remedial objectives, it is important that the provisions imposing behavioral obligations are clear and precise, seeking to prevent interpretative issues that involve delays and possible minimization or evasion of the obligations (ICN, 2016). This can in part be done by referring to useful benchmarks, such as common or reasonable terms in similar product markets or industries, although it is recognized that anticipating possible complications is more challenging in dynamic markets (ICN, 2016) . For this reason, it is prudent to include revisions clauses that allow for remedies to be justifiably modified, upon request of the concerned undertaking(s) and following a specified procedure. Substantive modifications due to significant and permanent changes in market conditions may require authority or court approval, while in some jurisdictions non-substantive or limited modifications (particularly where the concerned undertaking(s) can show that they do not impede the implementation of the remedies adopted or that they were not able to meet deadlines due to factors outside their control) may be adopted informally (ICN, 2016) .

It should also be noted that monitoring need not be conducted exclusively by the authority or a monitoring trustee on its behalf, and can be carried out in two additional ways:

- First, it is common for the authorities to make the commitment enforceable by industry participants, such as customers and competitors, through a fast-track dispute resolution mechanism. However, this mechanism is only useful if these participants have sufficient information and objectivity to accurately assess the behavior of the concerned undertaking(s), which is not always the case (especially as far as directly affected competitors are concerned). Furthermore, the costs of the dispute resolution mechanisms might act as deterrent, which highlights the crucial importance of defining the cost allocation in order to set the appropriate incentives.

- Second, remedies may prescribe conduct that falls within the competence of a non-antitrust regulator, in which case the respective regulatory agency may play a significant role in the monitoring phase (in addition to participating in the design phase). It has been suggested that the involvement of such regulators should be part and parcel of a remedy in certain situations, particularly those that require substantive and ongoing monitoring (LANCIERI & NETO, 2021). At the same time, it should be recognized that coordination between different agencies may generate tensions, especially when the law holds that the action of the antitrust agency is pre-empted where a regulatory agency has authority to regulate competition (KWOKA & MOSS, 2012). To enhance the effectiveness of inter-institutional cooperation in remedy design and implementation, the stipulation of dedicated cooperation agreements between the relevant authorities is recommended, including provisions to deal with exchange of confidential information (ZINGALES, 2018) and a specific duty to cooperate and a reciprocal duty to consult in the respective areas of competence (UNITED KINGDOM-CMA, ICO, OFCOM & FCA, 2021). In BRICS countries, collaboration with other regulators in setting the remedies is possible, typically on a case-by-case basis: for instance, in South Africa, the involvement of the Department of Economic Development in the design of the merger remedy occurred in the glass container market in 2020. However, in other jurisdictions this collaboration is more institutionalized: for instance, in China, the State Council has established an Anti-monopoly Committee, which is responsible for organizing, coordinating and guiding antitrust work, and includes competition agencies and other government departments[158]. In Brazil, several inter-institutional agreements have been signed facilitating this type of cooperation[159]. In India, the Competition Act specifically provides for inter-regulatory consultation mechanisms. A statutory authority can make a reference to the CCI where in the course of a proceeding before such statutory authority an issue is raised by any party that any decision which such statutory authority has taken or proposes to take is or would be, contrary to provisions of Competition Act. It is further stated that the Statutory authority may suo moto also make a reference to the Commission on issue that involves any provision of the Competition Act or is related to promoting the objectives of Competition Act. Similarly, the Commission can also make reference to any statutory authority where in the course of a proceeding before the Commission an issue is raised by any party that any decision which, the Commission has taken during such proceeding or proposes to take, is or would be contrary to any provision of the Act whose implementation is entrusted to a statutory authority. The reference may also be made by the Commission *suo moto* on any issue that involves provisions of an Act whose implementation is entrusted to a statutory authority (Sections 21 and 21A of the Competition Act).

8. Final remarks

This report aimed to map some relevant discussions. There was no intention in this document to create any type of normative or binding prescription on BRICS jurisdictions. Indeed, each legal culture has its own way of implementing antitrust analysis and remedies, taking into account the peculiarities of its legal regime and its

[158] The authority highlighted that the Committee attaches importance to strengthening communication and cooperation with industry authorities, regulatory bodies and judicial organs, with focus on the formulation of laws and regulations, assessment of market competition conditions, formulation of anti-monopoly guidelines and strengthening of anti-monopoly supervision and enforcement, so as to jointly improve the legal system for fair competition and jointly maintain the order of market competition.

[159] http://antigo.cade.gov.br/acesso-a-informacao/convenios-e-transferencias/acordos-nacionais.

market reality. On the other hand, revisiting much of what is happening around the world and especially in the BRICS countries, it is possible to map some principles and discussions that may be interesting to deepen, such as those discussed here.

Throughout this document, some discussions on the relevant market within the scope of digital markets were presented, as well as the assessment of market power of agents, new conducts, efficiencies, conglomerate effects and antitrust remedies. This is a photograph of subjects that are in constant evolution, and which, precisely for this reason, can always be revisited or reassessed from different hermeneutical lenses, specifically depending on the jurisdiction, the market reality and the characteristics of the analyzed cases.

On the other hand, as it is possible to find synergies between decisions of different authorities in increasingly interconnected markets, this type of mapping seeks to identify minimum analytical principles to be debated at the international level, especially between countries within the relevance of the BRICS.

A few topics stand out as important commonalities across BRICS jurisdictions:

1. The application of traditional tools for market definition is challenged by the tendency of digital markets to be highly dynamic and innovative, interconnected and non-price centric. These challenges often lead to adopting a less definitive posture with regard to market definition, and placing more emphasis on market power assessment.
2. Alternative indicators are being developed to capture the nature of market power in digital markets: for instance, focusing on the ability to unilaterally impose terms and conditions, the possession of key datasets, and the ability to influence choice through online architecture and lack of transparency.
3. Whereas algorithmic collusion scenarios may raise additional analytical complexities, BRICS authorities do not see substantial obstacles in applying their prohibitions on anticompetitive agreements to such conducts.
4. Across Platform Parity Agreements and Exclusive Dealing Arrangements represent a shared concern, particularly when undertaken by players with significant market power in online commerce.

5. Technological tying may be more common in the digital realm, due to dominant companies' ability to use choice architecture to steer consumers towards the acquisition and use of secondary products and services.

6. Self-preferencing and differentiated treatment raise similar concerns in digital markets, which are accentuated by the rise of firms controlling multi-product ecosystems.

7. The concerns for conglomerate mergers are more pronounced in the digital environment, due to broader spillover effects across markets. This leads authority to examine different kinds of theories of harm, typically concerned with portfolio effects or the acquisition of nascent and potential competitors.

8. Remedies in digital markets often demand a more proactive role by antitrust agencies in maintaining and restoring a competitive scenario, particularly if network effects are significant and markets are highly dynamic.

9. Interim measures and negotiated remedies (such as voluntary commitments) may provide an advantage of speed and learning-by-doing. However, appropriate monitoring and review of these measures are essential for effectiveness and deterrence.

10. More work is needed to improve understanding of the relevance of different kinds of efficiencies in digital markets and ecosystems, including innovation and sustainability.

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