

# MERGER THRESHOLDS IN THE DIGITAL ECONOMY

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## ABSTRACT

*For more than a decade, large digital conglomerates have engaged in multi-million-dollar acquisitions of nascent but innovative firms operating globally with almost no scrutiny from antitrust authorities around the world. The combination of economic forces arising from digital platform markets has created unique settings with markets prone to tipping and a transformation in the competition dynamics: from competition in the market to competition for the market. These distinctive dynamics and the technological conditions in which digital firms operate call for revisiting traditional merger notification thresholds. This paper argues that the main types of merger notification criteria used across jurisdictions are ill-suited to capture competitively significant transactions in the digital economy, signaling a major gap in merger control systems all over the globe. Therefore, urgent reforms are needed, especially as the trend for data-driven services and the concentration of economic power are likely to persist in the post-pandemic world to come.*

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## I. INTRODUCTION

We live in a time of astonishing progress driven by digital technologies such as computer power, cloud computing, big data, and artificial intelligence. Digital advances are providing an extraordinary boost to humanity's mental power, increasing our understanding of our physical and intellectual environments.<sup>1</sup> Where exactly these technologies will lead us remains uncertain, but for now they touch all aspects of our lives with the promise of revolutionary change and prosperity.

In the global economy, the array of digital technologies has led to a profound transformation of existing markets and to the creation of entirely new ones, leading to a shift in the composition of its main productive sectors. In the last decade alone, the technology sector outperformed all the other economic sectors, registering the largest absolute increase in terms of market capitalization.<sup>2</sup> Today, seven of the ten most valuable

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<sup>1</sup>See ERIK BRYNJOLFSSON & ANDREW MCAFEE, *THE SECOND MACHINE AGE, WORK, PROGRESS AND PROSPERITY IN A TIME OF BRILLIANT TECHNOLOGIES* 6-8 (2014).

<sup>2</sup>PwC, *Global Top 100 companies by market capitalization* 35 (2019), <https://www.pwc.com/gx/en/audit-services/publications/assets/global-top-100-companies-2019.pdf> (finding that during 2019, the technology sector market capitalization amounted to \$5,691 billion, representing a 434% change in terms of market capitalization of the current global top 100 companies from 2009 to 2019).

companies in the world participate in technology sectors.<sup>3</sup> All of the seven provide some of their leading services in digital platform markets.<sup>4</sup> Digital platforms such as social media, online search engines, and e-commerce sites are examples of multi-sided platforms that connect different but interdependent types of users, through an intermediary or matchmaker role.<sup>5</sup>

While the technology sector has provided substantial gains to consumer welfare and economic growth,<sup>6</sup> the rise of large digital platforms with significant and durable market positions has triggered a debate on the adequacy of antitrust law in the new economy. Market concentration at a given point in time does not necessarily mean inadequate competition, as markets may remain contestable.<sup>7</sup> However, the absence of new competitors for a number of years now in highly concentrated market structures suggests either significant entry barriers or exclusionary conduct, as high profits should have stimulated entry.<sup>8</sup>

One aspect of this debate focuses on cases involving the loss of nascent competition when large incumbents acquire small, but highly capable and disruptive, firms operating at the fringe of the market or adjacent markets. Commentators claim that large tech platforms may have engaged in acquisition sprees of immature, but innovative, start-ups with the objective of squelching competition, without the intervention of antitrust authorities.<sup>9</sup>

<sup>3</sup>*Id.* at 19. The Top 10 companies in terms of market capitalization for 2019 are: 1) Microsoft (Technology); 2) Apple (Technology); 3) Amazon (Consumer Services); 4) Alphabet (Technology); 5) Berkshire Hathaway (Financials); 6) Facebook (Technology); 7) Alibaba (Consumer Services); 8) Tencent (Technology); 9) Johnson and Johnson (Healthcare); and 10) Exxon Mobil (Oil & Gas).

<sup>4</sup>For example, LinkedIn, the App Store, Amazon.com, Google Search, Facebook, Alibaba.com, and Tencent QQ.

<sup>5</sup>See generally DAVID S. EVANS & RICHARD SCHMALENSE, *MATCHMAKERS: THE NEW ECONOMICS OF MULTISIDED PLATFORMS* (2016).

<sup>6</sup>Jason Furman et al., *Unlocking digital competition*, Report of the Digital Competition Expert Panel 38 (Mar. 2019), [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/785547/unlocking\\_digital\\_competition\\_furman\\_review\\_web.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/785547/unlocking_digital_competition_furman_review_web.pdf).

<sup>7</sup>See Voxi Heinrich Amavilah, *Baumol, Panzar, and Willig's Theory of Contestable markets and Industry Structure: A Summary of Reactions* 9 (Sept. 16 2012), [https://mpr.aub.uni-muenchen.de/41974/1/MPRA\\_paper\\_41974.pdf](https://mpr.aub.uni-muenchen.de/41974/1/MPRA_paper_41974.pdf).

<sup>8</sup>Luigi Zingales et al., *Stigler Committee on Digital Platforms*, Stigler Center for the Study of the Economy and the State, U. OF CHICAGO BOOTH SCH. OF BUS. 34 (2019), <https://www.publicknowledge.org/wp-content/uploads/2019/09/Stigler-Committee-on-Digital-Platforms-Final-Report.pdf>.

<sup>9</sup>See Mats Holmström et al., *Killer Acquisitions? The Debate on Merger Control for Digital Markets* 2 (Apr. 8 2019, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3465454](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3465454)); see also Bruce Hoffman, *Antitrust in the Digital Economy: A Snapshot of FTC Issues* 5 (May

There is no rigorous analytical study to support this claim, but over the last decade Microsoft, Apple, Amazon, Alphabet (Google's parent company), and Facebook made over 400 acquisitions globally.<sup>10</sup> The following table provides prominent examples of these deals:<sup>11</sup>

**Table 1. Examples of high-value acquisitions in the digital economy**

Year	Acquirer	Target	Transaction Value (USD)
2006	Google	YouTube	\$1.65 billion
2007	Google	Double Click	\$3.1 billion
2011	Microsoft	Skype	\$8.5 billion
2012	Facebook	Instagram	\$1 billion
2013	Google	Waze	\$970 million
2014	Apple	Beats Electronics	\$3 billion
2014	Google	Nest Labs	\$3.2 billion
2014	Facebook	WhatsApp	\$19 billion
2014	Facebook	Oculus	\$2 billion
2016	Microsoft	LinkedIn	\$26.2 billion
2017	Apple	Shazam	\$400 million
2018	Amazon	Ring	\$1 billion

Even though many of the acquired companies had a global reach, attracting millions of consumers across different jurisdictions, few of these transactions have been subject to merger review by antitrust authorities and none of them were blocked.<sup>12</sup> In a paradigmatic case, when Facebook acquired WhatsApp in 2014, WhatsApp had 465 million global users.<sup>13</sup> At the time, 49.8 million were located in Mexico,<sup>14</sup> 45 million in Brazil,<sup>15</sup> 40

2019), <https://www.ftc.gov/public-statements/2019/05/antitrust-digital-economy-snapshot-ftc-issues>.

<sup>10</sup>Furman et al., *supra* note 6 at 11-12, 91.

<sup>11</sup>*Id.* at 49.

<sup>12</sup>*Id.* at 12.

<sup>13</sup>H. Tankovska, *Number of monthly active WhatsApp users worldwide from April 2013 to March 2020*, STATISTA (Jan. 28 2021) <https://www.statista.com/statistics/260819/number-of-monthly-active-whatsapp-users/>.

<sup>14</sup>México 'ama' comunicarse por WhatsApp, EXPANSIÓN (Nov. 7, 2014), <https://expansion.mx/tecnologia/2014/11/07/mexico-el-pais-que-ama-usar-whatsapp>.

<sup>15</sup>Marcelo Teixeira, *All About WhatsApp in Brazil*, TECH IN BRAZIL (Mar. 6 2015), <https://techinbrazil.com/all-about-whatsapp-in-brazil>.

million in India,<sup>16</sup> 21.8 million in Germany, and 13.7 million in the United States.<sup>17</sup> Nonetheless, the transaction was reported to the antitrust authorities of the United States<sup>18</sup> and to the European Commission only upon referral.<sup>19</sup>

The acquisition of nascent competitors by large digital platforms raises the following anticompetitive concerns: 1) the acquisitions might have the sole purpose of eliminating nascent competition (i.e., "killer acquisitions"<sup>20</sup>); or 2) while the acquisitions do not eliminate nascent firms, as they continue to operate or the acquirer adopts their technology, human capital and other resources, the acquisitions help entrench the market power of the acquirer.<sup>21</sup>

In this context, the debate on the acquisition of nascent competitors in the digital economy has raised two new issues for merger control policy. First, do such acquisitions require revisiting current jurisdictional thresholds to ensure that competitively significant transactions in the digital economy are subject to merger review? Second, should the substantive analysis of digital mergers follow new theories of harm?

This paper focuses on the first issue. Section II describes the economic characteristics and competition dynamics of digital platform markets that call for changes in existing pre-merger notification thresholds. Section III describes existing types of pre-merger notification thresholds in different jurisdictions. Section IV analyzes whether the different types of merger thresholds generally in place across jurisdictions

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<sup>16</sup>Sandhya Keelery, *Number of monthly active WhatsApp users in India from August 2013 to February 2017*, STATISTA (Oct. 12, 2020) <https://www.statista.com/statistics/280914/monthly-active-whatsapp-users-in-india/>.

<sup>17</sup>*WhatsApp Users by Country, 2014, millions*, INSIDER INTELLIGENCE: EMARKETER (Feb. 2020), <https://pro-na1.emarketer.com/>.

<sup>18</sup>Competition in Digital Technology Markets: Examining Acquisitions of Nascent or Potential Competitors by Digital Platforms, S. Judiciary Subcomm. On Antitrust, Competition Policy and Consumer Rights, 116th S. 1, 4 (2019) (Questions for the Record for Bruce Hoffman).

<sup>19</sup>Regulation (EC) No 139/2004 Merger Procedure, Case No. COMP/M.7217 – Facebook/WhatsApp §§ 1, 9-12 (Oct. 3, 2014), [https://ec.europa.eu/competition/mergers/cases/decisions/m7217\\_20141003\\_20310\\_3962132\\_EN.pdf](https://ec.europa.eu/competition/mergers/cases/decisions/m7217_20141003_20310_3962132_EN.pdf). Article 1 of the Council Regulation No 139/2004 of January 20, 2004 on the control of concentrations between undertakings (the EC Merger Regulation) establishes turnover thresholds to determine whether a merger has a Community dimension and thus should be notified to the European Commission. Nonetheless, according to Articles 4(2) and 22(1) of the EC Merger Regulation, a merger that does not have Community dimension could also be notified to the Commission as requested by the firms acquiring control, the parties to the merger or the Member States, i.e., the referral system. Accordingly, the acquisition of WhatsApp by Facebook was notifiable under national notification thresholds of three Member States (including, Spain) and Facebook required that these proceedings were referred to the European Commission.

<sup>20</sup>See generally Holmström et al., *supra* note 9.

<sup>21</sup>See Furman et al., *supra* note 6, at 11.

are capable of capturing competitively significant transactions occurring in the digital economy. Finally, Section V draws some conclusions and implications for reform.

## II. DIGITAL PLATFORM MARKETS

Digital platform markets have a central role in the digital economy. As matchmakers or intermediaries, digital platforms have facilitated economic exchanges by lowering barriers created by geography and imperfect information.<sup>22</sup> Examples of popular and prominent digital platforms include Google's search engine, social media like Facebook, e-commerce sites like Amazon.com and mobile app downloads services such as Apple's App Store.

Expert panels across the world have recently analyzed the economics and competition dynamics of digital platform markets with final reports coming from Australia, Germany, the European Union, the United Kingdom, and the United States.<sup>23</sup> These reports show not only the international dimension of the debate, but also the convergence of views on the economics and competition dynamics of these markets.

The expert reports agree that digital platforms tend to present strong network effects, significant economies of scale and scope, an incumbency advantage flowing from data, and a global reach.<sup>24</sup> None of these features are new or unique to digital platforms, but their combination at scale presents new challenges for competition policy.<sup>25</sup> Namely, it has created markets prone to tipping, changing the competition dynamics from competition *in* the market to competition *for* the market. The following subsections elaborate on the economic characteristics of digital platform markets and the changes in competition and market dynamics arising from them.

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<sup>22</sup>See Furman, et al., *supra* note 6, at 11.

<sup>23</sup>See AUSTRALIAN COMPETITION & CONSUMER COMMISSION, *Digital Platforms Inquiry* (Dec. 2018), <https://www.accc.gov.au/focus-areas/inquiries-ongoing/digital-platforms-inquiry/preliminary-report>; see Heike Schweitzer et al., *Modernising the Law on Abuse of Market Power: Report for the Federal Ministry for Economic Affairs and Energy*, GERMAN BUNDESMINISTERIUM FÜR WIRTSCHAFT UND ENERGIE (2018), <https://www.bmw.de/Redaktion/DE/Downloads/Studien/modernisierung-der-missbrauchsaufsicht-fuer-marktmaechtige-unternehmen-zusammenfassung-englisch.pdf>; see generally Furman et al., *supra* note 6; see also Jacques Crémer et al., *Competition Policy for the digital era*, EUROPEAN COMMISSION, DIRECTORATE-GENERAL FOR COMPETITION (2019), <https://ec.europa.eu/competition/publications/reports/kd0419345enn.pdf>.

<sup>24</sup>See Crémer et al., *supra* note 23; see also Zingales et al., *supra* note 8, at 34-35.

<sup>25</sup>See Zingales et al., *supra* note 8, at 34; see also Furman et al., *supra* note 6, at 18, 22,

### A. Strong Network Effects

Digital platforms exhibit strong direct and indirect network effects.<sup>26</sup> Direct network effects tend to exist as the benefit of existing users increases with additional users.<sup>27</sup> For example, when new users are added to a social network, the existing users have the possibility of interacting with a greater number of persons, most likely enriching their experience.<sup>28</sup> Messaging services, dating services, and customer review sites are other examples of services enjoying direct network effects.<sup>29</sup>

Indirect network effects also occur in digital platforms where benefits to users on one side of the platform increase with additional users on the other side of the platform.<sup>30</sup> Ride-sharing services like Uber and DiDi are examples of platforms enjoying indirect network effects since a higher number of passengers allows drivers to make more trips, while a greater number of drivers benefit passengers as they experience shorter waiting periods. Other examples of platforms enjoying this type of network effects include online marketplaces, streaming services, and app stores.<sup>31</sup>

Indirect network effects are relevant on the internet because a great number of services are financed through advertising or commissions paid by business users.<sup>32</sup> Advertising or commission-based spaces become increasingly valuable when platforms have a large number of users, as such financing can be used to increase the quality of the platform and attract more users.<sup>33</sup>

Zero-monetary prices are also possible on digital platforms due to strong indirect network effects. These prices occur when users on one side of the platform can be subsidized if their participation attracts users on another side of the platform who will finance the platform.<sup>34</sup> This is the case of Facebook, where social media users interact on the platform at no monetary cost because their presence and data generate significant value for advertisers who will pay to the platform for access to the attention of social media users.

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<sup>26</sup>See Furman et al., *supra* note 6, at 35.

<sup>27</sup>See Furman et al., *supra* note 6, at 35; *see also* Holmström et al., *supra* note 9, at 10-

11.

<sup>28</sup>See Zingales et al., *supra* note 8, at 38.

<sup>29</sup>See Furman et al., *supra* note 6, at 35.

<sup>30</sup>See *id.*; *see also* Zingales et al., *supra* note 8, at 38.

<sup>31</sup>See Furman et al., *supra* note 6, at 35.

<sup>32</sup>See Zingales et al., *supra* note 8, at 22, 39.

<sup>33</sup>See *id.* at 39.

<sup>34</sup>See *id.*; *see also* Crémer et al., *supra* note 23, at 44.

Because of the link between size and value of services, large platforms are more efficient than smaller ones.<sup>35</sup> Analytical work has even shown that digital platforms may need to obtain a critical mass on both sides to launch successfully.<sup>36</sup> The competitive advantage arising from network effects derives from the difficulty users experience in coordinating migration to another platform, since there is no individual incentive to move to a new platform when there is a risk of losing the network externalities and being stranded.<sup>37</sup> If consumers on any side of a platform are able to switch to another service, or to use multiple services simultaneously (i.e., multi-homing), this advantage could be defeated.<sup>38</sup>

However, restrictions on switching and multi-homing do exist. For instance, consumers are limited by time constraints, the loss of personal data, inertia derived from strong preferences for default options, and the interoperability arising from differing systems and technical standards.<sup>39</sup>

Any attempt to challenge incumbents will therefore depend on the entrant's ability to attract a critical mass and generate its own positive network effects.<sup>40</sup> Network effects lead to the famous "chicken and egg" problem where in order to attract users on side A, the platform needs to attract users on side B, and vice versa.<sup>41</sup> To overcome this incumbency advantage, nascent firms in the digital economy tend to bet on strong growth rather than early monetization.<sup>42</sup> Many digital companies even experience early losses for several years until they achieve a critical mass of users.<sup>43</sup>

### B. Increasing Returns to Scale

Increasing returns to scale are also a relevant characteristic of digital platforms. The production of digital goods or services requires a fixed cost and a low or near zero marginal cost.<sup>44</sup> Thus, the average cost decreases

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<sup>35</sup>See Crémer et al., *supra* note 23, at 22.

<sup>36</sup>See David S. Evans & Richard Schmalensee, *Failure to Launch: Critical Mass in Platform Businesses*, 9 REV. OF NETWORK ECON. 1, 3, (2010), <https://www.degruyter.com/view/journals/rne/9/4/article-rne.2010.9.4.1256.xml.xml>.

<sup>37</sup>See Crémer et al., *supra* note 23, at 22.

<sup>38</sup>See Furman et al., *supra* note 6, at 35.

<sup>39</sup>See Furman, et al., *supra* note 6, at 36.

<sup>40</sup>See Crémer et al., *supra* note 23, at 5.

<sup>41</sup>See Crémer et al., *supra* note 23, at 32-36.

<sup>42</sup>See Crémer et al., *supra* note 23, at 32-36

<sup>43</sup>For instance, it took Twitter more than ten years to become profitable. See Kurt Wagner & Rani Molla, *Twitter is now consistently profitable*, VOX (Oct. 25, 2018), <https://www.vox.com/2018/10/25/18018046/twitter-q3-2018-earnings-profit-charts-user-growth>; see also Furman et al., *supra* note 6, at 37.

<sup>44</sup>See Furman et al., *supra* note 6, at 32; see also Zingales et al., *supra* note 8, at 35.

significantly as the user base increases, taking benefits from scale to the extreme.<sup>45</sup>

The capacity to reach large-scale at small cost derives largely from technological conditions, which give digital firms the ability to avoid physical distribution costs since goods and services on the internet can be delivered anywhere geographically with little or no cost.<sup>46</sup> This capacity has changed the dynamics of business growth in digital markets with nascent firms betting on large-scale expansion,<sup>47</sup> and supports concentration at a global scale.<sup>48</sup>

### C. Data Advantage

It is not novel that companies seek methods to understand consumer preferences. However, the scale and breadth of the data collected by large incumbents in digital markets is unprecedented.<sup>49</sup> In the new economy, access to data is crucial for artificial intelligence, smart online services, production processes, logistics, and targeted marketing.<sup>50</sup>

Incumbents tend to collect data as a byproduct of the normal functioning of their services.<sup>51</sup> The possession of large data sets allows them to improve quality and productivity as machine learning can be applied more effectively to extensive data sets.<sup>52</sup> For instance, goods and services can be improved by analyzing consumers' purchasing decisions and tailoring them for specific groups of consumers.<sup>53</sup> Insights gained from data can also lead to more efficient production and distribution processes through an increased ability to forecast demand and market trends.<sup>54</sup> Therefore, access to relevant data, in terms of scale, variety, and velocity gives incumbents a competitive advantage.<sup>55</sup>

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<sup>45</sup>See Crémer et al., *supra* note 23, at 2; see Zingales et al., *supra* note 8, at 39; see Furman et al., *supra* note 6, at 32.

<sup>46</sup>See Zingales et al., *supra* note 8, at 36; see Crémer et al., *supra* note 23, at 22.

<sup>47</sup>See Zingales et al., *supra* note 8, at 36.

<sup>48</sup>See Furman et al., *supra* note 6, at 32.

<sup>49</sup>See Furman, et al., *supra* note 6, at 23.

<sup>50</sup>See Crémer et al., *supra* note 23, at 2, 24.

<sup>51</sup>See Crémer et al., *supra* note 23, at 24.

<sup>52</sup>See Zingales et al., *supra* note 8, at 37; see Furman et al., *supra* note 6, at 23.

<sup>53</sup>See Furman et al., *supra* note 6, at 22, 33.

<sup>54</sup>See Furman, et al., *supra* note 6.

<sup>55</sup>See Furman, et al., *supra* note 6, at 34; see also Crémer et al., *supra* note 23, at 7.

### D. *Economies of Scope*

Strong network effects, increasing returns to scale, and access to relevant data can create significant economies of scope by allowing incumbents operating in one market to make a more efficient offering in another market. In particular, costs can be reduced and quality improved when digital firms offer services simultaneously across adjacent markets by taking advantage of existing customer and supplier relationships, branding, technical expertise, and the sharing and merging of data.<sup>56</sup>

For example, economies of scope can arise from the use of large-scale data and insights from machine learning that would allow incumbents to understand gaps in supply, which could lead to a more efficient expansion to new markets.<sup>57</sup> Moreover, to enter new markets, incumbents can leverage their existing and trusting user base to start with strong network externalities, eliminating the chicken and egg problem.<sup>58</sup>

This is why economies of scope have favored the development of ecosystems across adjacent digital markets, giving incumbents a competitive advantage.<sup>59</sup> Since nascent firms do not enjoy large and varied data sets, they do not have these advantages.<sup>60</sup>

### E. *Global Reach*

Digital goods and services tend to have a global nature since geographical barriers and constraints tend to be irrelevant.<sup>61</sup> Brick-and-mortar businesses generally face higher costs due to their need of physical presence and transportation costs. Costs in digital markets are more associated with legal and regulatory issues and language barriers in new jurisdictions.<sup>62</sup>

### F. *Markets Prone to Tipping*

When two incompatible systems compete, there is a tendency for one system to pull away from its rivals in popularity once it has gained an

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<sup>56</sup>See Furman et al., *supra* note 6, at 23, 32.

<sup>57</sup>See Zingales et al., *supra* note 8, at 37; see Crémer et al., *supra* note 23, at 2; see Furman et al., *supra* note 6, at 23.

<sup>58</sup>See Crémer et al., *supra* note 23, at 20.

<sup>59</sup>See Crémer et al., *supra* note 23, at 2; see also Furman et al., *supra* note 6, at 32.

<sup>60</sup>See Zingales et al., *supra* note 8, at 37.

<sup>61</sup>See Furman et al., *supra* note 6, at 32.

<sup>62</sup>See Zingales, et al., *supra* note 8, at 40.

initial edge.<sup>63</sup> This process is known as tipping in the economic literature and results in everyone using the same system.<sup>64</sup>

The combination of strong network effects, increasing returns to scale and scope, and the data advantage has led to a unique setting where digital platform markets are prone to tipping.<sup>65</sup> When markets tip, they create winner-takes-most or winner-takes-all environments, giving place to oligopolistic or monopolistic market structures.<sup>66</sup> The consequence is the creation of dominant firms and natural forms of market concentration.

After a market has tipped, only a highly innovative entrant may be able to overcome the incumbency advantage of established networks that led to the tipping.<sup>67</sup> Hence, markets prone to tipping will lead to competition *for* the market instead of competition *in* the market.<sup>68</sup>

### G. Barriers to Entry

Network effects, economies of scale and scope, and data resources create significant barriers for entrance to digital platform markets. Winners in digital platform markets obtain a huge cost advantage from the scale of their operations, as well as an enormous benefit advantage from the exploitation of data.<sup>69</sup>

In this context, other large existing platforms are the fittest to compete, as they enjoy economies of scope to expand to markets where there is already a winner.<sup>70</sup> Examples of attempts at entry by large digital companies exist, such as Alphabet's launch of Google Shopping to compete in e-commerce services with Amazon, and Microsoft's launch of Bing to compete directly with Google's search engine.<sup>71</sup>

A new entrant lacking scale and scope will not be able to compete as effectively.<sup>72</sup> Economies of scale and scope are difficult to obtain since the incumbent benefits from a positive feedback loop. The incumbent

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<sup>63</sup>Systems refer to collections of two or more components together with an interface that allows the components to work together. See Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. OF ECON. PERSP. 93, 105-06 (1994), <https://www.jstor.org/stable/2138538>.

<sup>64</sup>*Id.* at 105.

<sup>65</sup>See Zingales et al., *supra* note 8, at 35.

<sup>66</sup>See *id.* at 39; see also Furman et al., *supra* note 6, at 35.

<sup>67</sup>See Zingales et al., *supra* note 8, at 35.

<sup>68</sup>See *id.*

<sup>69</sup>See *id.* at 40.

<sup>70</sup>See *id.*

<sup>71</sup>*Bing Gives Microsoft a Boost, but Can It Compete with Google?*, KNOWLEDGE@WHARTON (Aug. 5, 2009), <https://knowledge.wharton.upenn.edu/article/bing-gives-microsoft-a-boost-but-can-it-compete-with-google/>.

<sup>72</sup>Zingales et al., *supra* note 8, at 40.

collects data that allows it to improve quality, and thus to gain scale, leading to positive network effects, which in turn allow it to gather even more data.<sup>73</sup> A new entrant will experience this in reverse, and as a vicious cycle, due to its inability to overcome the entry barrier.<sup>74</sup> Thus, the scale of the datasets collected constitutes a material barrier to entry to smaller firms.<sup>75</sup>

Barriers to entry are also created by consumer behavior.<sup>76</sup> Research on behavioral economics has produced convincing evidence that inherent behavioral biases affect consumers' decision-making and have effects on market outcomes.<sup>77</sup> Consumers can be manipulated to take advantage of their biases, which can slow their response to superior goods or services and thus make demand less favorable for an entrant.<sup>78</sup>

For instance, consumers tend to prefer immediate benefit relative to their future welfare.<sup>79</sup> Thus, they tend to use default services, give away privacy rights, or use the first search result even when a superior option is available a mere click or download away.<sup>80</sup> These tendencies can contribute to entrench market power of incumbent companies.

The combination of these factors has transformed the dynamics of competition into winner-takes-most or winner-takes-all markets. Hence, one of the most important sources of competition in digital platform markets is entry.<sup>81</sup> Small entrants face significant competitive disadvantages to obtain data and enter into positive feedback loops. Thus, the acquisition of nascent competitors could be very damaging for competition if in the but-for world entrants would have developed into major competitive threats or led to significant changes in the nature of the market.<sup>82</sup>

Moreover, as high barriers to entry exist, it is unlikely that digital markets will self-correct rapidly, especially if incumbents are able to use their monopoly profits to buy nascent competitors.<sup>83</sup> Large digital conglomerates can collect different dimensions of data on consumers that give them superior insights on competitive threats.<sup>84</sup> They are therefore in

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<sup>73</sup>See *id.*; see also Furman et al., *supra* note 6, at 33.

<sup>74</sup>See Zingales et al., *supra* note 8, at 40.

<sup>75</sup>See Furman et al., *supra* note 6, at 33.

<sup>76</sup>See Zingales et al., *supra* note 8, at 41-42.

<sup>77</sup>See *id.*

<sup>78</sup>See *id.* at 42.

<sup>79</sup>See *id.*

<sup>80</sup>See Zingales et al., *supra* note 8, at 42.

<sup>81</sup>See *id.* at 71, 88, 94.

<sup>82</sup>See *id.* at 88.

<sup>83</sup>See *id.* at 81.

<sup>84</sup>See Zingales et al., *supra* note 8, at 71.

a better position than traditional businesses and rival entrants to determine which firms to block and how to grow.<sup>85</sup> Data resources combined with significant financial resources give large digital platforms the ability to produce free cash flows at a speed and level unprecedented, due to almost zero marginal cost, instant distribution, and global reach.<sup>86</sup> Thus, large platforms have the incentives and ability to acquire and block nascent competitors.<sup>87</sup>

### III. MERGER THRESHOLDS

Mergers and acquisitions<sup>88</sup> are subject to antitrust scrutiny since they are capable of hurting competition. The main anticompetitive effects of mergers that raise concerns under antitrust law allow the unilateral exercise of market power, creating market structures conducive to collusion or oligopolistic coordination, and eliminating potential competition.<sup>89</sup>

Consequently, most antitrust laws around the globe provide for merger control policies mandating authorities to scrutinize mergers that could have an anticompetitive result.<sup>90</sup> Under the consumer welfare standard, the economic harms that merger control seeks to prevent are the traditional ones of price increases, reductions in quality, and inhibited innovation.<sup>91</sup>

Merger control is a containment policy that rests on the idea that it is easier and more efficient to prevent the creation of anticompetitive effects prophylactically than to undo market structures or police anticompetitive conduct.<sup>92</sup> Nonetheless, merger control policies vary across countries. Some require the mandatory notification of mergers that meet the applicable thresholds before they go through, allowing antitrust authorities to review and block those mergers with predicted anticompetitive effects.<sup>93</sup> Thus, laws requiring the mandatory notification

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<sup>85</sup>*See id.*

<sup>86</sup>*See id.* at 75.

<sup>87</sup>*See id.*

<sup>88</sup>For simplicity, this paper refers hereinafter to "mergers and acquisitions" and any other form of concentration or combination of previously independent firms into one firm as "mergers," unless it explicitly states otherwise.

<sup>89</sup>*See* MASSIMO MOTTA, *COMPETITION POLICY, THEORY AND PRACTICE* 231 (Cambridge University Press 2004); *see also* EINER ELHAUGE & DAMIEN GERADIN, *GLOBAL ANTITRUST LAW AND ECONOMICS* 985 (Foundation Press, 3d ed. 2018).

<sup>90</sup>*See* sources cited *supra* note 89.

<sup>91</sup>*See* sources cited *supra* note 89.

<sup>92</sup>*See* ELHAUGE & GERADIN, *supra* note 89, at 995.

<sup>93</sup>Including the United States, the European Union, Brazil, Canada, Chile, China, Colombia, Egypt, India, Japan, Israel, Mexico, Russia, Saudi Arabia, South Africa, South Korea,

of mergers center on two elements: 1) the jurisdictional thresholds that determine the transactions that should be subject to merger review; and 2) the substantive test that determines if the transaction is pro-competitive or anti-competitive.

Other countries have voluntary notification systems where firms are not obliged to report their mergers.<sup>94</sup> However, if the transaction meets the jurisdictional thresholds, the antitrust authority can discretionally initiate an investigation.<sup>95</sup> Merging firms can voluntarily apply for clearance if they would like to avoid the risk of having consummated mergers challenged in the future.

In other cases, antitrust authorities have the ability to exercise residual jurisdiction, whereby within a limited time they can call for review or investigate mergers that fell below the notification thresholds but that could raise anticompetitive effects.<sup>96</sup> Residual jurisdiction rests on the recognition that some competitively significant transactions will fall under the thresholds and thus additional enforcement actions may be required.

Pre-merger notification thresholds serve as a screen to reduce the number of transactions subject to antitrust review, limiting the scrutiny to those mergers that have greater potential for anticompetitive effects. The objective of merger control policy is "to review those mergers where the marginal benefits of increased enforcement are likely to exceed its marginal costs."<sup>97</sup>

This balance ensures the administrability of merger control policies since it is unfeasible and undesirable that antitrust authorities engage in the review of all or most of the transactions of the economy. Agency resources are limited and the number of mergers in an economy may be overwhelming. Also, these resources could be devoted to investigating more pressing competition concerns, particularly since the filing of small transactions does not tend to result in enforcement action, as

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Taiwan, Thailand, and Turkey. See ELHAUGE & GERADIN, *supra* note 89, at 989, 993-97; see also MOTTA, *supra* note 89, at 37.

<sup>94</sup>See *infra* Table 2.

<sup>95</sup>Australia, New Zealand, United Kingdom, and Singapore maintain a voluntary notification system. See Background Paper by the Secretariat, *Working Party No. 3 on Co-operation and Enforcement, Local Nexus and Jurisdictional Thresholds in Merger Control*, OECD COMPETITION COMMITTEE, 9 (2016), [http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP3\(2016\)4&docLanguage=En](http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=DAF/COMP/WP3(2016)4&docLanguage=En) [hereinafter OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*]; see also, ELHAUGE & GERADIN, *supra* note 89, at 987.

<sup>96</sup>See Article 137 of the Mexican Federal Economic Competition Law.

<sup>97</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 6.

anticompetitive transactions are more frequent at the higher end of the thresholds.<sup>98</sup>

In addition to efficiency reasons, merger thresholds also play a fundamental role in giving markets predictability, transparency, and legal certainty. Besides establishing jurisdiction, they allow relatively low-value transactions to proceed without having to wait for regulatory proceedings, and thereby facilitate any necessary business restructuring or reorganization. Moreover, the thresholds allow firms involved in relatively smaller operations to avoid incurring additional transaction costs derived from merger control.

To achieve the objectives of merger control policy, the different regimes that require mandatory notification of mergers have designed and applied varying types of notification criteria. The following are the four main types of notification criteria identified around the world, which are based on:<sup>99</sup>

- 1) Market shares of the merging firms;
- 2) Assets of the merging firms;
- 3) Sales or turnover of the merging firms; and
- 4) Value of the merger transaction.

To illustrate the different types and combinations of the notification criteria, Table 2 includes examples of merger thresholds in various jurisdictions that will be referred to in the following sections:

**Table 2. Examples of merger thresholds in different jurisdictions**

<b>Jurisdiction</b>	<b>Notification Criteria</b>	<b>Merger notification thresholds (2020)</b>
Austria	Turnover and value of the transaction	The filing requirement applies if: (a) the combined worldwide turnover exceeds €300 million; the combined domestic turnover exceeds €30 million; and at least two firms involved achieved a turnover of €5 million each worldwide; or (b) the firms involved have a combined worldwide turnover of €300

<sup>98</sup>See Hoffman, *supra* note 9, at 7.

<sup>99</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 8.

		million; the firms involved have a joint Austrian turnover of €15 million; the value of the consideration for the transaction exceeds €200 million; and the target is active in Austria to a significant extent. <sup>100</sup>
European Union	Turnover	The filing requirement applies if: (a) the combined worldwide turnover of all the merging firms exceeds €5 billion; and the EU-wide turnover for each of at least two of the firms exceeds €250 million; or (b) the worldwide turnover of all the merging firms exceeds €2.5 billion; the combined turnover of all the merging firms exceeds €100 million in each of at least three Member States; the turnover for each of at least two of the firms in each of the three Member States previously mentioned exceeds €25 million; and the EU-wide turnover of each of at least two firms exceeds €100 million. These thresholds will be considered met unless each of the firms concerned archives more than two-thirds of their EU-wide turnover within one and the same Member State. <sup>101</sup>

<sup>100</sup>Section 9 (1), (2), (3), and (4) of the Austrian Cartel Act 2005.

<sup>101</sup>European Commission, *Competition: Merger Control Procedures*, 1 (Jul. 2013), [https://ec.europa.eu/competition/publications/factsheets/merger\\_control\\_procedures\\_en.pdf](https://ec.europa.eu/competition/publications/factsheets/merger_control_procedures_en.pdf).

Germany	Turnover and value of the transaction	The filing requirement applies if: (a) the combined worldwide turnover of all the firms concerned exceeds €500 million, the turnover in Germany of at least one of the firms concerned exceeds €25 million, and that of another firm concerned exceeds €5 million; or (b) the combined worldwide turnover of all the firms concerned exceeds €500 million, the consideration for the acquisition exceeds €400 million, the turnover in Germany of at least one of the firms concerned exceeds €25 million and neither the target nor any other firm concerned achieved a turnover in Germany exceeding €5 million, and the target has substantial operations in Germany. <sup>102</sup>
Mexico	Value of the transaction and firm size (a criterion that combines sales and assets)	The filing requirement applies if: (a) regardless of where it is executed, the transaction amounts directly or indirectly in Mexico to MXN 1,563,840,000 (approximately USD \$65.4 million); (b) the transaction

Only mergers involving firms that meet the turnover thresholds are subject to review by the European Commission, i.e., the European Commission dimension. Mergers that do not meet the turnover-based thresholds for European Union dimension might be subject to review under competition laws of the Member States, which could also be referred to the European Commission. *See* sources cited *supra* note 19.

<sup>102</sup>Section 35 of the Act against Restraints of Competition in the version published on 26 June 2013 (Bundesgesetzblatt (Federal Law Gazette) I, 2013, p. 1750, 3245), as last amended by Article 10 of the Act of 12 July 2018 (Federal Law Gazette I, p. 1151).

		<p>results in the accumulation of at least 35% of the assets or capital stock of a firm whose annual sales or assets in Mexico exceed MXN 1,563,840,000 (approximately USD \$65.4 million); or (c) if the transaction results in the accumulation of assets or capital stock that exceeds MXN 729,792,000 (approximately USD \$30.5 million), and at least two firms concerned whose annual sales or assets in the country, individually or jointly, amount to MXN 4,170,240,000 (approximately USD \$174.5 million).<sup>103</sup></p>
Spain	Turnover and market share	<p>The filing requirement applies if: (a) the combined turnover in Spain of the firms involved exceeds €240 million during the last financial year, provided that the turnover in Spain of each of at least two firms concerned exceeds €60 million; or (b) a market share of 30% in Spain or a narrower geographic market is acquired or increases as a result of the transaction.<sup>104</sup></p>

<sup>103</sup>Article 86 of the Federal Economic Competition Law of Mexico. The monetary values are calculated according to the "*Unidad de Medida y Actualización*", that replaced the minimum wage referred to in Mexico's Federal Economic Competition Law. Currency exchange data provided by Morningstar as available in Google.com on May 14, 2020.

<sup>104</sup>Defense of the Competition art. 8(1)(a) (B.O.E. 2007, 15) (Spain), [https://www.boe.es/buscar/doc.php?id=BOE-A-2007-12946\\_](https://www.boe.es/buscar/doc.php?id=BOE-A-2007-12946_)

United States	Value of the transaction and firm size (a criterion that combines transaction value, sales and assets)	The filing requirement applies if: (a) the acquisition exceeds \$376 million, regardless of the size of the parties to the transaction; or (b) the acquisition exceeds \$94 million but no more than \$376 million, and the assets or annual sales of the acquirer and target exceeds \$188 million for one of them and \$18.8 million for the other. <sup>105</sup>
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Some jurisdictions, such as the European Union, have only one type of notification criterion in place, while others like the United States rely on two or more different types of criteria or a combination that are used in a complementary and simultaneous way. Nonetheless, the European Union has a referral system by which its Member States or the firms concerned in the transaction in some cases can refer review of the transaction to the European Commission once it has been captured at the national level.<sup>106</sup> Given the varying types of notification criteria and level of thresholds among the Member States, this referral system allows the European Commission to capture competitively significant transactions falling below its threshold and to experiment on their effectiveness.<sup>107</sup>

The actual level of thresholds also varies between jurisdictions that apply similar notification criteria. For instance, the pure transaction value-based notification criterion applied by both the United States and Mexico varies significantly. Mexico's value-based threshold amounts to

<sup>105</sup>Notices, 85 Fed. Reg. 4, 984-85 (Jan. 28, 2020).

<sup>106</sup>See *supra* note 19, at art.22(1).

<sup>107</sup>See Catriona Hatton et al., *Digital Markets and Merger Control in the EU: Evolution, Not Revolution?*, COMPETITION POLICY INTERNATIONAL, 4 (Feb. 19, 2018), <https://www.competitionpolicyinternational.com/digital-markets-and-merger-control-in-the-eu-evolution-not-revolution/> (arguing that the referral system and the thresholds at the European Union level, combined, allow the European Commission to assess the majority of relevant mergers); see also Cr mer et al., *supra* note 23, at 115 (recommending to the European Commission not to modify its turnover-based threshold until it is able to assess: a) how the transaction value-based thresholds introduced in Germany and Austria play out in practice; and b) whether the referral system is able to ensure that transactions of European Union relevance are ultimately reviewed by the European Commission).

approximately \$65.4 million, whereas the United States' threshold is equivalent to \$376 million.<sup>108</sup>

The level of the notification thresholds plays a fundamental role in the administrability and effectiveness of the merger control system. It should not be set so low that it captures too many transactions or so high as to fail to capture relevant transactions. Ideally, the design reflects a careful evaluation of the trade-offs between the resources available and the objective of reviewing as many problematic mergers as possible.

Relevant factors involved in setting appropriate threshold levels include the specific goals of a country's merger policy, such as the expected percentage of problematic mergers, the size of the economy, the ability to conduct a rapid review of transactions, the economic sectors that tend to raise competition concerns, the breadth of initial information requirements, and whether the authority retains residual jurisdiction.<sup>109</sup> The exchange rate of currencies also needs to be considered, as changes in the value of money can *de facto* lower or raise the level of the thresholds throughout time.

The definition of what is considered a merger transaction also affects the level of the threshold set. For example, a wide definition of merger transaction that will initially lead to a greater number of cases subject to merger review could be offset with a high notification threshold to balance the number of transactions under scrutiny.<sup>110</sup>

Finally, each notification criterion also has to establish a local nexus, i.e., a relation between the transaction and the jurisdiction.<sup>111</sup> A local nexus criterion ensures that transactions capable of distorting competition in a given jurisdiction are subject to merger control while avoiding those transactions with insufficient material impact in the given jurisdiction.<sup>112</sup> Reviewing competitively significant transactions and avoiding those that are not is equally crucial for the effectiveness of the merger control system. Local nexus is usually determined by activity in the territory of the firms involved in the transaction, such as local sales, assets, or turnover.<sup>113</sup>

Taken together, the notification criteria, the level of the threshold, the definition of what constitutes a merger, and the criteria for local nexus

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<sup>108</sup>See *supra* Table 2.

<sup>109</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 7.

<sup>110</sup>Directorate for Financial and Enterprise Affairs Competition Committee, *Definition of Transaction for the Purpose of Merger Control Review*, OECD, POLICY ROUNDTABLES 8 (2013), <http://www.oecd.org/daf/competition/Merger-control-review-2013.pdf>.

<sup>111</sup>See generally *id.*

<sup>112</sup>See *id.* at 12 n.3.

<sup>113</sup>See *id.* at 51, 94, 109, 200.

determine the effectiveness of merger thresholds and thus of the merger control system in place. The following section examines the effectiveness of the different types of notification criteria in relation to the economic and technological characteristics of digital platform markets.

#### IV. REVISITING MERGER THRESHOLDS

Given the competition dynamics of digital platform markets, one of the primary sources of competition for large incumbents comes from nascent firms. Nascent competitors in these markets may be small in terms of sales, assets, or turnover. However, their competitive significance may be better reflected by the scale of their expansion as they obtain increasing numbers of users and relevant data to overcome the incumbency advantages of large digital platforms.

Considering the existence of recurring high-value acquisitions of nascent digital firms serving millions of consumers across boundaries that have failed to trigger merger review in the jurisdictions where they operate, it is necessary to revisit the existing merger thresholds in place. This finding exhibits a major gap in the majority of merger control regimes.<sup>114</sup> The following subsections analyze this gap and the inherent challenges for each of the four main types of merger notification criteria arising from the technological conditions and competition dynamics of digital platform markets.

##### *A. Market Share-Based Thresholds*

Generally, in this type of notification criterion the filing requirement is triggered when the firms involved in the transaction will acquire or increase their market share to a certain percentage as defined by statute. In Spain, for example, this notification criterion is employed, setting the market share level at thirty percent.<sup>115</sup>

To determine market shares, it is necessary to define relevant markets. Otherwise, a market share standard is an arbitrary measure. This notification criterion is well suited to establish local nexus as a market definition generally considers product and geographic dimensions.<sup>116</sup> Nonetheless, it presents serious problems for merger control policy as it

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<sup>114</sup>*See supra* Section III.

<sup>115</sup>*See supra* Section III.

<sup>116</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 14.

does not provide legal certainty, predictability, and transparency to the markets.

First, consider that the market definition for antitrust purposes is an analytical device with no tangible presence or natural form, and does not necessarily conform to intuition, observation, popular conceptions of trade lines, or industry practices.<sup>117</sup> Relevant markets are abstractions used to facilitate the economic analysis of specific theories of anticompetitive harm.<sup>118</sup> Hence, relevant markets do not exist independently from theories of harm as markets are defined in terms of a problem or inquiry.<sup>119</sup> Since there can be multiple theories of harm under a given fact pattern, multiple relevant markets can be drawn to analyze the competitive effects of a conduct.<sup>120</sup>

Thus, there is a conceptual issue with merger thresholds based on market shares: requiring firms to define markets presumes a natural set of market boundaries or a correct way to determine markets from observation.<sup>121</sup> This creates the unrealistic expectation that firms involved in merger transactions can make an accurate prediction of how antitrust authorities will study and define the relevant markets.

Firms may also face other more mundane problems in their attempt to define relevant markets. For instance, they may not possess relevant information from other market participants or the expertise to employ the analytical tools to define relevant markets for antitrust purposes. Such difficulties may increase the transaction costs of most mergers, including those falling below the threshold.

Even if firms have the information to define markets, there are other technical concerns inherent to the market definition analysis. For example, the hypothetical monopolist test traditionally used to define markets requires knowing the extent to which a price increase would cause consumers to switch to another item. However, just as in the Cellophane

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<sup>117</sup>David Glasner & Sean P. Sullivan, *The Logic of Market Definition*, 83 ANTITRUST L.J. 293, 299 (2020) [https://sean-p-sullivan.com/attachments/papers/2020\\_lmd.pdf](https://sean-p-sullivan.com/attachments/papers/2020_lmd.pdf).

<sup>118</sup>*Id.* at 299-300.

<sup>119</sup>*Id.* at 299.

<sup>120</sup>*Id.*

<sup>121</sup>Glasner & Sullivan, *supra* note 117, at 298-300; *see also* Louis Kaplow, *Why (Ever) Define Markets?*, 124 HARV. L. REV. 437, 466 (2010) ("[T]here is no canonical, operational statement of the standard for determining what constitutes a relevant market and, a fortiori, no developed underlying rationalization for whatever the principle might be. In this regard, . . . [t]here is no corresponding concept in industrial organization economics that one might draw on to fill the void. (Some might regard the hypothetical monopolist SSNIP test employed in the U.S. Merger Guidelines and followed in other jurisdictions to be an exception. However, [...] this test constitutes a mechanism, not a pertinent criterion[.]").

fallacy,<sup>122</sup> it is difficult to determine what the competitive baseline price is, as current price levels might be already the product of market power. Thus, a hypothetical monopolist test provides no help in cases where there is a real problem with market definition. While this problem is already challenging for antitrust authorities who collect significant amounts of information from all market participants and possess technical expertise, it might be even more challenging and burdensome for merging firms that might not have access to that kind of information, generating uncertainty, increasing costs and delaying transactions.

In digital platform markets, these issues can be even more pressing, as the analytical tools that have been developed to define relevant markets are based on price mechanisms, such as the small but significant non-transitory increase in price or SSNIP test used in the hypothetical monopolist test.<sup>123</sup> As discussed earlier, digital platform businesses tend to offer services at zero-monetary prices.<sup>124</sup> This situation requires developing new analytical tools or adapting the existing ones to define markets with these characteristics.

Commentators have proposed using similar analytical tools based on quality measures.<sup>125</sup> Nonetheless, there is no guidance and consensus on a precise measurement of quality that would make these tools operational.<sup>126</sup> Moreover, consumers often have trouble recognizing changes in quality, such as changes in digital privacy or internet security.

Quality also has a strong subjective dimension, as changes in quality depend heavily on consumer preferences.<sup>127</sup> Thus, a given change in quality can be perceived differently by different consumers. For example, an increase in a platform's ability to monitor and record a consumer's digital activity could equate for some to a reduction of privacy and thus consumer harm. However, for others it could lead to benefits from the ability to make highly informed purchasing decisions or from a reduction in the time spent making purchasing decisions. The SSNIP test and other analytical tools based on price mechanisms assume that it is undesirable

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<sup>122</sup>See generally *United States v. E.I. du Pont de Nemours & Co.*, 351 U.S. 377 (1956) (referring to a judicial decision where the market definition analysis did not consider that a monopolist already sets supracompetitive prices that cannot profitably raise any further). Since the Court considered monopolistic prices in its market definition analysis, it led it to define an excessively broad market and, in turn, failed to identify market power when it was present.

<sup>123</sup>United Nations Commission on Trade and Development, *Competition Issues in the Digital Economy*, ¶ 14, TD/B/C.I/CLP/54 (May 1, 2019).

<sup>124</sup>See *supra* Section II.

<sup>125</sup>For example, a small but significant non-transitory decrease in quality test or SSNDQ test.

<sup>126</sup>Crémer et al., *supra* note 23, at 45.

<sup>127</sup>Crémer et al., *supra* note 23, at 47.

for consumers to pay more for a product or service, which is a less debatable assumption than possible harms arising from changes in quality-related characteristics.

Also, by virtue of their rapidly evolving technologies, digital platforms create dynamic market environments that promote fluid and rapid-changing relations of substitutability and significant partial overlaps with different services.<sup>128</sup> These environments pose another problem for market definition, as market boundaries are not as clear as they may be in brick-and-mortar markets.

Given these complexities, expert reports have even recommended putting less emphasis on market definition in cases concerning the digital economy.<sup>129</sup> While merger thresholds based on market shares have traditionally been unfit for the brick-and-mortar markets as they are far from a bright-line test, they are even more troublesome for the digital economy and should be abandoned in favor of promoting predictability, legal certainty, and transparency.

### B. Assets-Based Thresholds

Some jurisdictions establish merger thresholds based on the accumulation of local or worldwide assets. This notification criterion tends to be used cumulatively with other criteria such as turnover, or to be associated with market shares and transaction value.<sup>130</sup>

Several jurisdictions across the world consider the acquisition of assets as a merger transaction only if it results in structural changes with a certain durability in the market.<sup>131</sup> In other jurisdictions, it is even required that there be a transfer in control of the assets that clearly generates attributable revenues, which excludes, for example, transfers of customer lists.<sup>132</sup>

Other jurisdictions use more flexible approaches where any assets that impact the competitive process are considered part of the merger transaction, such as single trademarks or domains.<sup>133</sup> Inquiring into the

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<sup>128</sup>Crémer et al., *supra* note 23, at 47.

<sup>129</sup>Crémer et al., *supra* note 23, at 3.

<sup>130</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 13.

<sup>131</sup>Directorate for Financial and Enterprise Affairs Competition Committee, *Definition of Transaction for the Purpose of Merger Control Review*, OECD, POLICY ROUNDTABLES, 8 (2013), <http://www.oecd.org/daf/competition/Merger-control-review-2013.pdf>.

<sup>132</sup>*Id.*

<sup>133</sup>*Id.*

competitive effects of the assets' transfer might, however, blur the line between jurisdictional and substantive analysis.<sup>134</sup>

Merger thresholds based on local assets have traditionally been thought to provide objective criteria for local activity and thus to create an adequate local nexus.<sup>135</sup> Nonetheless, in the digital economy, they do not constitute a good proxy to determine local activity because digital businesses often require low or no physical presence in the digital markets where they operate. As discussed earlier, technological conditions allow digital businesses to avoid physical distribution costs and to obtain a global scale at low cost.<sup>136</sup>

The problem with this criterion is that a firm with assets that are not physically present or registered within a given territory would not have those assets be counted towards triggering the threshold. Therefore, even when user bases and data sets are deemed as assets for purposes of establishing jurisdiction, this notification criterion will fail to take into account all the physical or intangible assets located or registered abroad and by which the companies operate in a given territory. An example of this kind of asset is computer servers, which can be physically located in a given territory, but provide services in any part of the globe.

In sum, the economic weight and competitive significance of a digital company is not effectively captured by merger thresholds based on assets, since they are not suited to determining the level of domestic activity in a given jurisdiction.

### C. Turnover/Sales-Based Thresholds

Merger thresholds based on turnover or sales generally refer to a company's total revenue from the sale of goods and services.<sup>137</sup> This notification criterion provides an objective measure of the potential impact of a transaction in the market, as it is easy for companies to determine, usually by means of audited accounts, prepared income states or balance sheets.<sup>138</sup>

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<sup>134</sup>*Id.*

<sup>135</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 13.

<sup>136</sup>*See supra* Section II.

<sup>137</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 10.

<sup>138</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 10.

Local and worldwide turnover notification criteria can be found in place in the majority of jurisdictions across the world.<sup>139</sup> The worldwide turnover criterion focuses on firms' size globally as an element that helps to determine the competitive relevance of a merger. However, this criterion is generally applied in combination with other criteria better suited to establish local nexus.<sup>140</sup>

Regarding local turnover, if set at an appropriate level, this notification criterion is traditionally considered a good proxy of the firms' real economic weight and able to establish local nexus appropriately.<sup>141</sup> This, in turn, has allowed it to capture competitively significant transactions in brick-and-mortar markets, increasing legal certainty and reducing costs.

Nonetheless, as the combination of economic features of digital platform markets has changed the dynamics of competition in these markets, the economic weight of companies operating in the digital economy in many cases is not well captured by their turnover. As mentioned previously, one of the primary sources of competition in many digital platform markets is entry by nascent firms.<sup>142</sup> Given that digital platform markets tend to be characterized by competition *for* the market, these companies bet in strong growth first rather than early monetization.

Strong growth arises in the form of large-scale expansion to generate a critical mass that will allow the entrant to benefit from network externalities. In consequence, companies in digital platform markets may not generate high revenues at an early stage, and may even incur losses for an extended period, but their weight in the economy and their competitive potential may be significant as they increasingly gain users and data. Thus, merger thresholds based on turnover or sales do not capture the competitive significance of such firms.

Even when each jurisdiction takes into account its specific economic conditions and policy objectives, this gap may be significant, as the majority of merger control regimes around the globe rely on thresholds based on firm revenues.<sup>143</sup> Apart from the European Union and its Members States, which have a referral system that gives them some

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<sup>139</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at Annex to the Background Paper by the Secretariat.

<sup>140</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 12.

<sup>141</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 10-11.

<sup>142</sup>See *supra* Section II.

<sup>143</sup>See OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at Annex to the Background Paper by the Secretariat.

flexibility to experiment with different types of notification criteria, countries relying on turnover criteria are likely to overlook competitively significant transactions having effects in their digital markets.

#### D. *Transaction Value-Based Thresholds*

The notification criterion based on the value or size of the merger transaction is uncommon across jurisdictions.<sup>144</sup> It generally refers to the purchase price and all the benefits associated with the merger, including money payments, deferred payments, transfer of voting rights, securities, tangible and intangible assets, liabilities accepted by the acquirer and any consideration linked to conditions, among others.<sup>145</sup>

While the precise value of the transaction may not be as clear cut as other criteria, it is still considered an objective criterion that is relatively easy to ascertain and available to the firms involved.<sup>146</sup> However, this criterion presents particular benefits and challenges with regard to capturing relevant mergers in the digital economy.

In digital transactions, it is fundamental to consider the importance of data in merger control because business models tend to be characterized by the formation of potentially valuable commercial data sets that have not yet greatly impacted turnover.<sup>147</sup> The value of a merger transaction is able to take it into account, since the purchase price may reflect not only the going concern value, but also the economic potential of the target, including its future profits and its potential for competition.<sup>148</sup> The underlying idea is that a high price paid for a company with low turnover

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<sup>144</sup>Currently, from the OECD members, only the United States, Germany, Austria and Mexico have in place a notification criterion based on the value of the transaction. See OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 15; see also Section 35 of the Act against Restraints of Competition (June 26, 2013) (Bundesgesetzblatt (Federal Law Gazette) I, 2013, p. 1750, 3245), as last amended by Article 10 of the Act of 12 July 2018 (Federal Law Gazette I, p. 1151).

<sup>145</sup>See OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 10-12.

<sup>146</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 15.

<sup>147</sup>*Competition policy: The challenge of digital markets*, Special Report by the Monopolies Commission pursuant to Section 44(1)(4) of the Act Against Restraints on Competition, MONOPOLKOMMISSION, 106 (June 1, 2015), <https://www.monopolkommission.de/index.php/en/press-releases/52-competition-policy-the-challenge-of-digital-markets>.

<sup>148</sup>*Id.* at 10.

indicates the competitive significance of the transaction or the competitive potential of a business model.<sup>149</sup>

A clear example of a start-up focused on early growth rather than the development of a profitable business model is WhatsApp. At the time of its acquisition by Facebook in 2014, it had a user base of 450 million, but almost no turnover.<sup>150</sup> Despite the low turnover, the purchase price was \$19 billion USD.<sup>151</sup>

The biggest challenge for transaction value-based thresholds arises in global or transnational mergers, because this criterion is not helpful to establish local nexus. For merging firms, it is uncommon and quite complex to break down the value of a global transaction to a specific jurisdiction.<sup>152</sup> The different analytical methodologies and approaches that could be used for that purpose will undermine the legal certainty of the merger control system.<sup>153</sup>

Take for instance Mexico's transaction value-based threshold, which refers to a transaction that amounts in its territory to approximately \$65.4 million USD, regardless of where it is carried out.<sup>154</sup> For cross-border transactions, the firms concerned have to determine the value that is attributable to the business in Mexico. This is a huge task, as there are different valuation methods available. While none of this is new, the inability to establish local nexus is a particularly pressing issue in the digital economy given that businesses tend to have global reach.

To establish local nexus, transaction value-based thresholds require additional and complementary objective criteria that help to determine the significance of the transaction in a domestic economy. Thresholds based on the value of the transaction traditionally use a local effects test or

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<sup>149</sup>Bundeskartellamt and Bundeswettbewerbsbehörde, *Guidance on Transaction Value Thresholds for Mandatory Pre-merger Notification*, ENGLISH COURTESY TRANSLATION, 24 (July 2018), [https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Leitfaden/Leitfaden\\_Transaktionschwelle.pdf?\\_\\_blob=publicationFile&v=2\\_](https://www.bundeskartellamt.de/SharedDocs/Publikation/EN/Leitfaden/Leitfaden_Transaktionschwelle.pdf?__blob=publicationFile&v=2_)

<sup>150</sup>Martin Schallbruch et al., *A new competition framework for the digital economy Report by the Commission 'Competition Law 4.0'*, FEDERAL MINISTRY FOR ECONOMIC AFFAIRS AND ENERGY, 63 (Sept. 2019), [https://www.bmwi.de/Redaktion/EN/Publikationen/Wirtschaft/a-new-competition-framework-for-the-digital-economy.pdf?\\_\\_blob=publicationFile&v=3\\_](https://www.bmwi.de/Redaktion/EN/Publikationen/Wirtschaft/a-new-competition-framework-for-the-digital-economy.pdf?__blob=publicationFile&v=3_)

<sup>151</sup>*Id.*

<sup>152</sup>*See Valuation Methods*, CORP. FIN. INST., <https://corporatefinanceinstitute.com/resources/knowledge/valuation/valuation-methods/> (last visited Mar. 17, 2021).

<sup>153</sup>*See id.* There are several valuation methods for companies that are accepted and widely used by the industry, including: 1) discounted cash flow analysis; 2) comparable company analysis; and 3) precedent transactions analysis.

<sup>154</sup>*See supra* Section III.

exemptions that take into account local turnover or assets.<sup>155</sup> In the case of Mexico, when a transaction does not establish the value corresponding to its territory, the merger guidelines issued by Mexico's Federal Economic Competition Commission refer to two complementary thresholds that rely on local sales and assets to capture relevant global transactions.<sup>156</sup> Nevertheless, as previously discussed, a complementary criterion based on turnover or assets will fail to capture the economic weight or competition potential of firms operating in digital markets.<sup>157</sup>

Hence, to determine local nexus in the digital economy, besides a complementary and objectively quantifiable criterion, transaction value-based thresholds should also consider the relevant economic characteristics of digital markets, such as the number of monthly or daily active users in a given jurisdiction. Criteria based on the number of local users ensures that mergers with no material nexus to a jurisdiction are avoided and at the same time that those mergers that could affect local consumers are scrutinized. Moreover, this type of criterion relates to data, which is a significant input and a key characteristic of the new economy, and, therefore, it could serve as a proxy of the competitive significance of a digital company.

In this regard, in 2017 Germany and Austria, respectively, introduced notification criteria based on the value of the transaction as a complement to their traditional turnover-based thresholds.<sup>158</sup> These transaction value-based thresholds determine local nexus if the target has "substantial operations" in Germany or if the target is "active to a significant extent" in Austria.<sup>159</sup> While these indicators of domestic activity are open-ended, they allow to cover transactions across different sectors.

Recent empirical research has shown that in the pharmaceutical industry in the United States, forty-five acquisitions per year are carried out by incumbents with the sole purpose of killing the development of new rival drugs or projects.<sup>160</sup> High-value acquisitions in this sector might reflect the economic potential of patents that have not impacted turnover yet and thus will not be captured by notification criteria based on turnover or sales.

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<sup>155</sup>OECD Background Paper, *Local Nexus and Jurisdictional Thresholds in Merger Control*, *supra* note 95, at 15.

<sup>156</sup>Federal Economic Competition Commission, *Guidelines for the Notification of Concentrations*, COFECE, 17 (2017), [https://www.cofece.mx/wp-content/uploads/2019/02/guia-0042015\\_not\\_concentraciones-DGC-VF1.pdf](https://www.cofece.mx/wp-content/uploads/2019/02/guia-0042015_not_concentraciones-DGC-VF1.pdf).

<sup>157</sup>*See supra* Sections IV.2, IV.3.

<sup>158</sup>*See* cases cited *supra* note 107; *see also supra* Table 2.

<sup>159</sup>*See supra* Section III.

<sup>160</sup>*See generally* Colleen Cunningham et al., *Killer Acquisitions*, J. OF POL. ECON. (forthcoming 2021), <https://ssrn.com/abstract=3241707>.

The problem turns out into the vagueness of German and Austrian tests. In order to provide legal certainty to firms and markets, these thresholds need to determine: 1) the geographic attribution of the "operations" or "activities"; 2) the measurement criteria for the operations or activities; and 3) the level of operations or activities that will be deemed "substantial" or "significant".<sup>161</sup> To this effect, the Bundeskartellamt and the Bundeswettbewerbsbehörde, the German and Austrian antitrust authorities, issued a joint guidance paper with preliminary considerations.

To determine the operations or activities attributable to their territories, the joint guidance paper refers that "[...] *the activity of a company is attributable to the place of intended use. This is usually the place where the customer is located, i.e. where the customer's offices are, because this is where competition with alternative providers takes place.*"<sup>162</sup> Thus, in the digital sector a domestic operation or activity is presumed if, for example, domestic users consume the goods or services of a company as opposed to the position of the server.

The measurement criterion of domestic level of operations or activities is based on the target's market-related activities. The guidelines apply different criteria to different sectors in line with industry standards.<sup>163</sup> Even when there is no definitive list for the digital sector, the measurement criteria to determine local activity refers to monthly or daily active users or to the number of unique visitors.<sup>164</sup>

In this way, the joint guidelines determine the geographical allocation of domestic operations or activities and, in a somewhat vague manner, its measurement criterion. However, they do not provide any specific guidance with respect to the level of domestic operations or activity that will be enough to be considered significant or substantial. To this effect, the joint guidelines refer that marginal activity on a domestic market is not sufficient to reach a significant level of domestic activity<sup>165</sup> and that "[a] *threshold cannot be quantified in the abstract at present because there is as yet little case practice.*"<sup>166</sup>

While the recognition of the lack of experience to determine a specific level of domestic operations or activities is understandable, it is of the utmost importance to start exploring and defining objectively quantifiable criteria to this effect. Otherwise, the firms involved in transactions may err in the side of caution and notify all their mergers,

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<sup>161</sup>See *infra* notes 162-66 and accompanying text.

<sup>162</sup>Bundeskartellamt & Bundeswettbewerbsbehörde, *supra* note 149, at 21.

<sup>163</sup>*Id.* at 20.

<sup>164</sup>*Id.* at 21.

<sup>165</sup>*Id.*

<sup>166</sup>Bundeskartellamt & Bundeswettbewerbsbehörde, *supra* note 149, at 25.

unnecessarily increasing the burden for companies and wasting limited agency resources.

It is important that these quantitative limits are defined in technical criteria or guidelines, without having to resort to the political process of legislatures. To adapt to the dynamic digital environment, antitrust authorities will need some degree of flexibility to periodically review and modify these criteria to ensure their effectiveness. Authorities should also have the mandate to work in consultations with the industry to define the relevant criteria and the appropriate levels. If the institutional design ensures the existence of highly technical antitrust authorities, they would be well positioned to perform regular revisions of merger thresholds.<sup>167</sup>

The relevance of nascent competitors in digital platform markets has also triggered a discussion in the United States regarding the appropriate level of the transaction value-based threshold.<sup>168</sup> Commentators have suggested lowering the transaction value threshold to capture the acquisition of nascent competitors.<sup>169</sup> Some consider that because the acquisition of small firms is not subject to pre-merger review, as they fall below the threshold, agencies are often unaware of them and, even while they maintain residual jurisdiction, the result might not be as optimal for the consumer as if the transactions had been subject to ex-ante regulation.<sup>170</sup>

If digital platform markets are not likely to self-correct rapidly, and if nascent firms are the primary source of competition in these markets, a higher level of intervention might be justified, as its benefits could well outweigh its costs. In these circumstances making sure that monopolists are not able to buy an entrant for a share of monopoly profits should be a priority for competition policy.

This issue is an empirical matter and should be addressed within a cost-benefit analysis, as previously discussed. The appropriate level of thresholds for review depends on several factors, such as the size of the economy, the available resources, and the existence of particularly problematic economic sectors. Thus, the decision to lower the threshold in a given jurisdiction should be subject to these considerations as well as to an assessment of the competitive dynamics of specific sectors. Lowering

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<sup>167</sup>For instance, Mexico's Federal Economic Competition Commission (COFECE for its acronym in Spanish) is a constitutionally autonomous institution, whose Commissioners are picked by the Executive from a pool of candidates that have previously passed a technical examination designed by the country's Central Bank and the National System of Statistical and Geographical Information, which in turn are constitutionally autonomous Mexican institutions.

<sup>168</sup>See Hoffman, *supra* note 9, at 7.

<sup>169</sup>Hoffman, *supra* note 9, at 7.

<sup>170</sup>Zingales et al., *supra* note 8, at 88.

the thresholds to review more transactions is a costly decision, as all the transactions would have to be individually screened out. However, less entry of nascent firms might be particularly damaging for consumers in specific sectors of the economy, including in digital platform markets.

For some countries the decision to lower the transaction value-based threshold to capture the acquisition of start-ups might not be necessary considering specific market conditions. The United States has been able to capture some of the most prominent tech acquisitions because five out of the seven major digital platforms and an important number of unicorn companies are based within its territory, which reduces the need of reforming its threshold based on transaction value.<sup>171</sup>

Other jurisdictions considering transaction value-based thresholds also need to take into account the currency in which the thresholds are established. When reviewing transactions valued in a foreign currency, which is common in the digital economy given businesses' global reach, fluctuations in exchange rates could *de facto* lower or increase the thresholds. For example, from July 2014 to June 2020, the period in which the current Mexican Federal Economic Competition Law has been in force, the Mexican peso has lost seventy-seven percent of its value to the United States dollar, passing from 12.96 pesos per dollar to 22.97.<sup>172</sup> As merger thresholds are set in pesos by the Mexican legislation, transactions valued in dollars that fell below the Mexican thresholds in 2014 nowadays must be notified. This is quite relevant for highly integrated economies with no common currency, such as those in the NAFTA region, but it also speaks to the need of a more flexible system to establish jurisdiction for merger control.

In sum, transaction value-based thresholds are able to capture relevant transactions occurring in the digital economy, including, the acquisition of nascent firms. Nonetheless, not every notification criterion based on the transaction value is well suited to address this issue. In their design, special attention has to be put to the criteria to determine local nexus, which is particularly challenging in immature and continuously changing markets, such as many digital markets.

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<sup>171</sup>See *supra* Section I.

<sup>172</sup>Banco de México, *Daily U.S. dollar-MXN exchange rate historical series (CF373)*, ECON. INFO. SYS. (2020)

[https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=6&idCuadro=CF373&accion=consultarCuadro&locale=en\\_](https://www.banxico.org.mx/SieInternet/consultarDirectorioInternetAction.do?sector=6&idCuadro=CF373&accion=consultarCuadro&locale=en_)

## V. CONCLUSION

In the last decade, a number of large technology companies have engaged in multimillion-dollar acquisitions of nascent digital firms serving millions of consumers across jurisdictions.<sup>173</sup> These transactions have gone through with little or no scrutiny from antitrust authorities around the world, signaling a major gap in the majority of merger control regimes.<sup>174</sup>

Traditional merger control systems, including merger notification thresholds, were not designed with the main features of the new economy in mind, namely: 1) the technological characteristics of digital businesses, such as low distribution costs, the absence of need for a physical presence, and global reach; and 2) the dynamics of digital platform markets, where nascent firms maintain business models that prioritize strong growth rather than monetization and are an important source of market contestability.<sup>175</sup>

These characteristics and market dynamics create a disconnection between sales, turnover and assets, and the economic weight or competitive relevance of a digital firm. Therefore, traditional notification criteria provided in merger thresholds are incapable of capturing the competitively significant transactions that have been occurring in the digital economy for more than a decade. Legislators and policymakers need to revisit the notification criteria currently in place and institute reforms. This is a particularly pressing issue because the technology sector has become the primary productive sector of the world economy, and there is a growing consensus that market power in the digital economy can become entrenched.<sup>176</sup>

There are different policy options available, including setting low-level thresholds, creating sector-specific thresholds, or strengthening the enforcement of the residual jurisdiction. While there are no optimal or correct merger thresholds for all jurisdictions, as specific circumstances and challenges determine their effectiveness, thresholds based on the value of the transaction are more fit than other criteria to capture the economic weight and competitive significance of digital firms. The German and Austrian merger thresholds' reforms point in the right direction, but further steps are needed to determine with greater certainty the impact of a transaction in a given jurisdiction.

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<sup>173</sup>See *supra* Section I.

<sup>174</sup>See *supra* Section I.

<sup>175</sup>See *supra* Sections II, III.

<sup>176</sup>Zingales et al., *supra* note 8, at 43.

Accordingly, the design of a transaction value-based threshold should take into account some of the lessons learned during the last decade in different countries:

- A transaction value-based threshold should be applied complementarily to other thresholds based on more objective and quantifiable criteria, such as turnover, sales or assets, which work better in mature and stable markets and tend to be an accurate measure of local nexus;
- The value of the transaction should be set globally, since requiring merging firms to break down the value by jurisdiction will undermine the legal certainty of merger control systems as different valuation methodologies are available;
- To determine local nexus, a transaction value-based threshold should use ancillary objective and quantifiable criteria based on standard indicators measured by each industry; in digital markets, different measurement methods can be used, including a certain number of unique visitors or active users;
- Given the rapid changing nature of digital markets and the factors influencing value-based thresholds, such as currency fluctuations, authorities should work in consultations with the industry to determine the applicable notification criteria and design flexible systems that allow regular revisions of the criteria and levels of thresholds established.

Other policy options are also available, including the proposal of the Digital Competition Expert Panel recommending the Competition and Markets Authority to require digital companies with a strategic market status to notify all their intended acquisitions.<sup>177</sup> While this is a straightforward alternative, imposing asymmetric regulation will create resistance and significant litigation that may slow down any effort for reform. To make this kind of proposal operational, important legislative reforms will be needed requiring greater political consensus, which in many countries may not be available.

The tradeoff of reforms to merger thresholds would be that digital firms operating transnationally will face increased transaction costs. Nevertheless, this would not be exclusive for the digital economy since it already happens for firms operating globally. Additionally, problems from the extraterritorial reach of jurisdictions would become more common

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<sup>177</sup>Furman et al., *supra* note 6, at 95.

until there is an international antitrust regime, such as having the legal possibility of imposing remedies to a firm that does not have significant assets or turnover in a given territory.

Nonetheless, there is no good reason today for competitively significant transactions occurring in the digital economy to be out of the merger control system in each of the jurisdictions where they have an effect. Especially, it should be considered that market conditions differ across jurisdictions and thus tailor-made antitrust analysis could be relevant in some cases for specific markets.

This is not to say that high-value transactions in the digital economy are anticompetitive. Start-up acquisitions can be exit strategies for founders and investors or they can provide valuable resources for the development and launch of innovative products and services. However, antitrust authorities should be able to determine whether the transactions are welfare enhancing, reflecting efficiencies and future profits, or welfare detrimental, ensuring that incumbents maintain monopoly profits. All in all, under the consumer welfare standard, antitrust authorities need to make sure that consumers within their jurisdictions enjoy the benefits of competitive digital markets even when the firms operating in them do not have significant assets, sales or turnover in their territories.

Adapting merger thresholds to the digital economy could be a strategic way for antitrust authorities to become familiar with digital markets. Starting investigations for anticompetitive conduct in digital markets could be a tremendous challenge, especially, considering that most antitrust authorities have little or no experience in digital markets and large digital conglomerates have overwhelming amounts of resources and experience that allows them to face any antitrust investigation effectively. Nonetheless, in many cross-border or global mergers, obtaining jurisdiction through the merger control system would allow less experienced authorities to study the issue first-hand while awaiting the decisions on the same transaction made by more experienced authorities. This sort of deference could help authorities to prepare for future digital mergers with a significant and particular effect in their jurisdictions.

In the near future, an increasing number of companies will participate in the digital economy and the COVID-19 pandemic may accelerate this transition. In the post-pandemic world to come, it is likely that the trend for data-driven services and the concentration of economic power in few large companies will persist.<sup>178</sup> Therefore, antitrust laws

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<sup>178</sup>See *The changes covid-19 is forcing on to business*, THE ECONOMIST (Apr. 11, 2020), <https://www.economist.com/briefing/2020/04/11/the-changes-covid-19-is-forcing-on-to-business>; see also Matt Phillips, *Investors Bet Giant Companies Will Dominate After Crisis*,

around the globe need to undergo urgent reform to adapt to the new economy. Reform to merger thresholds can be a strategic starting point in several jurisdictions.