Response to the European Commission’s “Inception Impact Assessment for an Ex-Ante Regulatory Instrument of Very Large Online Platforms Acting as Gatekeepers”

INTRODUCTION

On behalf of the Center for Data Innovation (datainnovation.org), we are pleased to submit feedback to the European Commission’s roadmap titled “Digital Services Act package: Ex-ante regulatory instrument of very large online platforms acting as gatekeepers.” In this submission, we discuss a number of assumptions and claims the Commission’s proposal is based on, analyze the consequences of this proposal, and identify recommendations the Commission should consider.

The Center for Data Innovation is the leading think tank studying the intersection of data, technology, and public policy. With staff in Washington, D.C. and Brussels, the Center formulates and promotes pragmatic public policies designed to maximize the benefits of data-driven innovation in the public and private sectors. It educates policymakers and the public about the opportunities and challenges associated with data, as well as technology trends such as open data, cloud computing, and the Internet of Things. The Center is a non-profit, non-partisan research institute affiliated with the Information Technology and Innovation Foundation (ITIF).

BACKGROUND

In recent years, a number of discursive strategies, laws, and rules have reflected the growing sense among EU policymakers that digital platforms have been under regulated. In the EU, there is an ongoing debate as to if and how much the high degree of market concentration in digital markets should be tackled via ex-ante preventive measures.

The European Commission has been reflecting on whether it should adapt the enforcement of EU competition law with regard to platforms, data, and other aspects that it considers to be “digital issues,” including based on the Special Advisers’ report on “Competition policy for the digital era.” In addition, the European Parliament recently adopted its annual report on competition policy, calling for a review of the notion of “abuse of dominance.” In its communication on “Shaping Europe’s digital future” in February and when launching public consultations and roadmaps for its Digital
Services Act package in June, the Commission announced that it will explore ex-ante rules to ensure that “large platforms with network effects acting as gatekeepers” behave fairly towards their users.4

This response addresses the Commission’s request for feedback to feed into its impact assessment of a “gatekeeper proposal,” i.e., an ex-ante regulation targeting large online platforms acting as “digital gatekeepers.” The Commission’s intent is to set out options for a mechanism that would restrict “unfair” practices, such as by prohibiting “certain forms of self-preferencing” to limit the ability of platforms to vertically integrate their own services. It would also adopt stringent tailor-made remedies such as “platform-specific non-personal data access obligations” (i.e., mandatory data access), “specific requirements regarding personal data portability,” or “interoperability requirements.”5

FEEDBACK ON THE PROPOSAL

1. Proposed Ex-Ante Regulation Assumes That Large Platforms Harm European Consumers and Businesses

1.1 First assumption: Large platforms harm other businesses and consumers

The primary reason the Commission has proposed ex-ante regulation on large technology online platforms is because the Commission believes these companies harm EU businesses and consumers.

Specifically, the Commission argues that large platforms would hamper the development of a fully functioning digital single market and are detrimental to innovation. They would prevent business users from reaping the benefits of the digital single market. For instance, as suggested in the Commission’s proposal, traditional businesses’ dependence on online platforms would hamper their bargaining power to ensure a level playing field.6

According to the Commission, large platforms also harm consumer welfare and lead to “reduced consumer choice.” “Many innovative digital firms and start-ups find it difficult to bring ... alternatives to these large online platforms, to the consumer” and platforms “reduce the social gain from innovation.”7

But this critique is off the mark. These claims reflect a lack of recognition for the benefits large technology companies provide to other industries and consumers.
1.2 Reality: Large platforms benefit other businesses and consumers

Firstly, large platforms convincingly outperform other companies on vectors such as price-lowering and faster productivity growth, and they create enormous benefits that are too often overlooked, including higher-wage jobs with better benefits than small companies, more exports, and upgrades in product innovation. Enhanced regulation risks reducing many of these benefits.

Technology companies are also among those that invest the most in research and development. According to PwC, among the world’s 10 largest R&D spenders in 2018, Amazon and Alphabet topped the list, closely followed by Microsoft and Apple.

Large platforms have been beneficial to other industries. For instance, during the COVID-19 crisis, countless companies across virtually all sectors of the economy were able to send their staff home so they could work under safe conditions, while ensuring the continuity of their business, by using large platforms such as Microsoft Teams and Google Meet.

Another example is how a local pizza place or a small flower shop can appear at the top of Google Search results. These retailers could not afford to be on the front page of traditional outlets such as the Financial Times or on CNN, but they get to be featured on the world’s most popular website and manage their online presence so that potential customers can find them via Google Search or Google Maps, for free. Likewise, as much as it enables the provision of low-cost and high-quality services to consumers, large online advertising platforms enable content creators, app developers, and media companies to monetize content.

Online platforms have led some industries to be more innovative and competitive. For instance, mass media, entertainment companies and broadcasters are now creating alternatives to Netflix, such as Disney+, BeTV in Belgium, or MyCanal, OCS, and Salto in France. While retail still takes place in brick-and-mortar stores for the most part, grocery stores have started to transfer some of their services and products online, including by acquiring online platforms, as they were facing competition from companies such as Amazon and acquisitions of stores such as Whole Foods in the United States. In France, Carrefour has launched its own marketplace. Large platforms also engage in partnerships with retailers, such as Amazon with France’s Casino. In the United States, Uber has recently partnered with a public bus agency in California to develop on-demand public transportation.

Moreover, while EU enterprises are increasingly relying on online sales, only 17 percent have reported online sales of at least 1 percent of their turnover in 2018—suggesting that most have not even moved to e-commerce yet and do not depend on online platforms for their businesses. The existence of large platforms with established users will make it much easier and cheaper for these
companies to move online in the future. These platforms have a strong interest in attracting new businesses and, unlike brick-and-mortar stores, they do not face capacity shortages that limit their ability to add new sellers. In the relatively few cases where platforms do offer competing products, it is important to note that this typically lowers prices and increases choice and consumer welfare—the main goal and concern of antitrust policy. Competitors face similar competition challenges in other areas of the economy, and should not be protected when these occur on platforms.\textsuperscript{16}

Secondly, large platforms have been a boon to consumers and provide access to those who were previously underserved by other industries. They provide powerful information services that are free, easy to use, convenient, and integrated, which provides a seamless experience when sharing photos via email and messaging applications, or when shopping online or finding their way around.\textsuperscript{17}

Consumers can easily choose to switch as there exist many alternatives to large platforms. For example, Google’s search results for “flights” do not only include Google Flights but also other options such as Skyscanner, Expedia, and eDreams. Consumers can also use DuckDuckGo, Ecosia, or Qwant as an alternative to Google Search. In Europe, they can switch from Uber to Free Now, Taxify, or Cabify. And platforms are increasingly allowing their users to switch—as seen with Apple’s latest software changes for iOS which will let users change the default email app and browser.\textsuperscript{18}

2. Proposed Ex-Ante Regulation Assumes That Large Platforms Are Monopolies, Hoard Data To Gain Market Power, and Threaten “EU Sovereignty”

2.1 Second assumption: Large platforms are monopolies that hoard data and threaten European technological sovereignty

The second critique which the Commission raises is that large platforms’ practices and access to data distort competition on digital markets.

Specifically, the Commission alleges that large online platforms are dominant in the markets and act as monopolies. They “increasingly bundle a broad range of platform and other digital services into a seamless, data-driven offer.” As a result, “many innovative digital firms and start-ups find it difficult to bring innovative solutions.” “This raises a risk of reduced competition and dynamism,” especially through “market-distorting,” “unfair” practices such as “self-preferencing” (vertical integration). In addition, large platforms “take over competitors” and are responsible for so-called “killer acquisitions.”\textsuperscript{19} In other words, they prevent “Europe’s estimated 10,000 online platforms” from “scaling broadly” and innovating.
The Commission also argues that large tech platforms have increased their market power by accumulating “large quantities of data.” The charges are that by hoarding all the data where they possibly can, large companies would not be playing fair, benefit from the data they gather on one market they operate in, to be able to dominate on another market, prevent the development of EU homegrown data-driven business models which could otherwise rely on consumer data and enter the incumbents’ market.

The Commission concludes that EU companies are prevented from “contributing to the EU’s technological sovereignty.”

But these indictments reflect a misunderstanding of competition on digital markets, data, and the digital economy at large.

2.2 Reality: Policymakers misunderstand competition on digital markets

EU competition regulators incorrectly believe that concentration necessarily reduces innovation. But there is no empirical evidence to support this belief in the economic literature. In addition, regulators continue to use a structural approach to analyzing competition, focusing on the size of companies and the number of competitors in a market. But that is the wrong approach when it comes to digital and data-driven markets, which tend toward concentration, not due to anticompetitive actions but because they are characterized by network effects where the value of a firm’s services grows as they get larger, and “with large positive spillovers from having many consumers use the same product.” In other words, their concentration is usually pro-innovation, and this is why and how they provide consumer benefits (including free services). Big firms are big precisely because scale holds the key to maximizing consumer welfare. Travelers use Airbnb because homeowners are using the platform, and vice versa. Moreover, the result of this growth is diminishing costs, increased investment in R&D, and increasing value from which consumers usually are, again, the main beneficiaries. For example, as a result of there being one major social networking platform (Facebook), one major professional networking platform (LinkedIn), and one major micro-blogging platform (Twitter), consumers do not have to post twice to share information with their personal networks.

In many markets, platforms do not harm competition, but rather encourage it as they reduce the costs of entry on markets that were not previously data-driven, for instance by reducing information and trade costs for entrepreneurs. If a local pizza place or a small flower shop’s details are on Google Maps, their information is also made visible on Google Search, for free.

If advocates are going to make charges of monopoly, they should at least correctly define the relevant market. For free, ad-supported services, that market is advertising—and here digital leaders
have comparatively little power. Consider that Google and Facebook together hold just 25 percent of the ad market. In addition, while one can say that Google may be dominant in the Android market, it is not on the smartphone market if one includes Apple. A platform that may be dominant on one market is not necessarily dominant on the other ones where it operates.

The case for tougher antitrust enforcement is weak also because each of the prominent Internet companies do face competition in at least some of their markets. For example, Google, Amazon, and Facebook compete with each other and other online and traditional media such as TV broadcasters for ad revenue.

They also all compete against each other and with companies that may be digital or not, for usefulness and convenience. Businesses can choose other trading partners than large online platforms, which other companies could topple in the future. Facebook could become less of a major player with time in the social networking space, since it has lost popularity among young people, and as the market features LinkedIn, Twitter, Snapchat, TikTok, e-mail, various chat services (Signal, Telegram), Pinterest, and even Fortnite. Google as a search engine competes with Bing, Yahoo, DuckDuckGo, and Qwant, and as a browser with Firefox, Baidu, and Brave.

Large platforms are vulnerable to competition, whether from adjacent markets, new entrants, or foreign competitors. It is all-too easy to forget erstwhile tech giants such as IBM, Dell, and Microsoft were once seen as nearly invincible—and today’s giants are even more vulnerable because compared with past technology leaders, there is much less to keep customers from switching when a more compelling innovation emerges. In addition, they face formidable foreign competition, which, in the case of China, is backed by their host governments. As recent history shows, old titans can get toppled by the next generation of companies which disrupt them or when unexpected events occur. Airbnb or Yelp did not do very well during the COVID-19 crisis.

By traditional measures, large tech platforms do not have the negative impacts monopolies have such as low output, nor do they have the same practices, such as charging consumers high prices, and unlike some monopolies, are at the source of many innovative products and services. Their acquisitions, far from “killing innovation,” have led to innovations that would have never surfaced given the limited ability of startups to scale and survive in the EU in particular. Android and YouTube are such examples. If Facebook and Instagram had stayed independently owned, these apps would have been less enjoyable to consumers because of ad saturation.

2.3 Reality: Data does not confer market power

EU policymakers consider data as a so-called barrier to entry providing market advantage, but data is a poor proxy for assessing online market power. Far from a monopolistic resource, and unlike most
goods, data is non-rivalrous: Many different companies can collect, share, and use the same data simultaneously, several times, in different ways. Data is widely available, cheap to collect, and loses value rapidly. Data is not scarce in itself—the expertise to analyze it and generate insights is. A digital company’s success is based on how it manages to use data, based on an innovative idea that makes the difference. For example, Google, which entered a market where Yahoo and Altavista were well-established and had large bases of users, tailed a strategy to use the data available in a way that was more appealing to users: Instead of a long index of pages classified by themes, Google created a page rank algorithm. This led to superior search quality and results, while making it more difficult for people to spam search engine result pages. MySpace had a head start on Facebook when it came to collecting user data, but Facebook quickly surpassed MySpace in popularity because it created a better product.

2.4 Reality: The goal of technological sovereignty is nonsensical in the digital economy

“Technological sovereignty” is a narrative that has emerged in the discourse of EU policymakers in recent years. But it is a counterproductive strategy which will penalize the competitiveness of both EU and non-EU companies, create more uncertainty, and fragment the entire digital ecosystem. One reason is that ring-fencing the digital economy is nonsensical, given that its geography is global, collaborative, and interconnected. Interdependence of businesses is mutually beneficial for businesses and consumers. For instance, global platforms offer services to local firms, such as search habits, cultural trends, or traffic patterns, which these firms can use to tailor to their consumers’ needs and demands. According to the OECD, the digital economy “is increasingly becoming the economy itself,” and does not work in isolation: Every business in today’s world integrates some aspects of the digital economy. The success of EU firms depends on cross-border data sharing and globalized supply chains, and the prosperity of EU companies and global innovation are not mutually exclusive. As the world’s largest exporter of digitally-enabled services, the EU should not fear, but rely on this exchange.

3. Proposed Ex-Ante Regulation on Large Platforms Is Based on the Assumption That Current Competition Tools Are Not Enough

Not only is the EU wrong about the facts, but it is also wrong that current competition tools are insufficient to address potential problems.

The Commission’s proposal for an ex-ante regulation reflects concerns that the safeguards built into competition, consumer, and privacy laws would no longer address the dominance of platforms in new digital markets. In other words, the proposal for an ex-ante regulation operates on the assumption that these markets are not contestable. The EU has spent the last five years levying
fines on big tech under the previous Commission’s mandate—but to EU policymakers, current antitrust enforcement is not enough, and they now want greater and new sweeping tools.

But additional tools such as ex-ante regulatory measures targeted to large platforms might create overlaps and inconsistency in implementation. But more importantly, the Commission already has significant competition and antitrust powers. Current tools are addressing potential problems sufficiently and traditional competition policy is working. It is on the basis of antitrust law as it is currently designed that the European Commission sanctioned platforms such as Google (by imposing a €2.4 billion fine regarding its comparison shopping service), that it recently opened probes against Amazon (about its “dual role” as a marketplace and seller of products) as well as investigations into Facebook and Apple. Competition law is not blind to current practices that may be alleged worthy of investigation.

Another problem is that European regulators continue to use competition policy to pursue objectives unrelated to competition. Last year, Germany’s competition authority asserted that Facebook’s data practices are abusive because of its market dominance and prohibited Facebook from combining and using user data from different sources. This decision (recently backed by Germany’s Supreme Court) has set a precedent that could further limit the ability for digital platforms to share data—which they need, in order to scale and compete. Such choices may inspire EU policymakers to use competition policy to interfere in other areas for purposes other than competition. But deploying competition policy as an economic “Swiss army knife,” such as to address consumer data protection and by combining antitrust and privacy concerns, would create overlapping and duplicative rules and introduce further constraints, complexity, and confusion for regulators, businesses, and consumers. This would further hold back innovation and Europe’s growth in the digital economy.

4. Proposed Ex-Ante Regulation on Large Platforms Will Create Unintended Consequences on EU Competitiveness, Innovation, and Consumer Welfare

Implementing ex-ante measures on large platforms will be problematic for the entire business ecosystem.

First, there can be false positives findings of antitrust (i.e., when authorities find violations of antitrust law when the conduct did not harm competition), which could hinder efficient economic development. Indeed, it will be difficult to show and prove the probability that conduct would lead to harm or a clear market trend that would lead rivals to exit. The breadth of presumption and the delays are likely to be significant, while there is a deficiency in authorities’ understanding of digital
markets and the regulatory cost of ex-ante measures is, contrary to most ex-post measures, irreversible.

Second, along with intervention errors, additional restraints and stricter obligations will likely affect innovation as they may prevent innovative business models from emerging, including in Europe. Indeed, they will raise the threshold for other players (including European contestants) to enter the market, harness network effects, and scale. For instance, if the Commission’s goal is to restrain vertical integration practices, platforms would have to undergo an audit to prove that adopting these will have a pro-competitive effect on the market. But an ex-ante competition tool is a blanket regulatory solution that would not establish any differences between business models. It would apply to all companies across the board, whether they are guilty or not, and whether their behavior is reprehensible and suspicious, or not. As many companies risk falling into this broad scope, such a type of regulation would disadvantage businesses beyond large platforms, discourage entrepreneurs to create their own, make it less likely for smaller platforms to expand in Europe, and even force others to change their business models entirely. In addition, limiting the ability of platforms to vertically integrate their own services will amount to disentangling features that are convenient to users.

Third, forcing companies to share their data without laying out the specifics overlooks security issues. The Commission wants to have more control over large platforms’ data access policies and ensure they share this data with competitors. But it is unclear about what companies should share, with whom, and on which grounds, and should factor in the various risks that come with it—such as intellectual property and cybersecurity issues, legal uncertainty caused by a lack of clear guidance, and compliance costs (such as by ensuring the reuse and sharing of datasets mixed with personal and non-personal data do not violate data protection rules). In addition, while it can be beneficial, sharing data is not always useful as such. For example, a company may be sharing a dataset which has to be anonymized to comply with the GDPR. Not only is the process of anonymization unclear in the privacy law—the more personal data is anonymized, the less useful it may become for business users.

5. Proposed Ex-Ante Regulation on Large Platforms Reflects a Discriminatory Strategy

Rather than tackling problems, the Commission’s proposal aims to tackle companies—specifically by putting a straitjacket on large technology platforms. This is a discriminatory strategy, driven by protectionist motives. Indeed, the Commission aims to examine and cumulate a set of threshold criteria for ex-ante measures: The number of unique users, the number of transactions, the number of visits, the geographical scope, and market value. As a result, only a handful of platforms will fall into this scope, and they are likely to be large American and Chinese technology platforms, not European platforms.
What is more, putting big tech companies on trial for alleged dominance is paradoxical to previous developments seen in other industries in the past which have not led to antitrust push back. For instance, high-end department stores such as Selfridges were once relentless innovation machines which swallowed old-fashion retailers, and their concept has dominated high street shopping for a good 150 years.\textsuperscript{48} Other business models used to dominate their markets, but the practices have not changed. The EU is currently planning to bring a case against Amazon for competing with business users of its marketplace store—even though this is a common strategy in retail.\textsuperscript{49} Bundling, tying, or self-preferencing are not new practices. Brick-and-mortar grocery and discount chains have long sold a large share of their private-label products, feature them in the most prominent shelf space, use data and placement the way Amazon does, and charge other brands fees for premier display space. Large online platforms like Amazon are not doing anything any other supermarket chain is not doing. To compete, other brands are racing to deliver better products or cheaper products to consumers, and as a result, consumers are getting a better deal.

Finally, protectionist policies such as ex-ante measures would amount to the EU acting like China and, such an overreach risks isolating the bloc. The EU’s ex-ante regulation would act as a barrier to entry the way China’s Internet content provider license (ICP) does. Indeed, setting up a company in China requires registration by the Chinese government, to obtain an ICP.Foreign companies can apply for this license, but they seldom get it.

6. The EU Should Tackle the Real Hurdles to its Competitiveness Instead

If the EU has at heart to seize the full potential of the digital economy, increase consumer benefits, and create a nurturing ecosystem for its companies, the EU should adapt or adopt the right policies and address the real obstacles head-on.

6.1 Adopt evidence-based policies that focus on conduct

When it comes to the digital economy, the right policy for the EU should allow online platforms to exercise the market power they have acquired legitimately, in order to maintain incentives for R&D, new product introduction, productivity gains, and entry into new markets, all of which promote long term economic growth.\textsuperscript{50}

Rules should be responsive to evidence. EU policymakers should pursue sound, fact-based policy rather than one driven by anecdotal evidence and special interests like technological sovereignty. Evidence-based policy can preserve the EU’s core antitrust principle of objectivity and promotion of efficiency.
Competition authorities should focus on systemic issues rather than on one category of players. They should focus on conduct, abuse, practices likely to distort the competitive process such as predatory prices or exclusivity clauses, rather than using structural approaches to analyzing competition.\footnote{51}

Antitrust policy should take innovation effects into account. EU competition authorities acknowledge them in theory but tend to rarely assess them in practice, while these could justify mergers between data-driven companies to accelerate the development of technologies that are critical in the digital economy—such as AI.\footnote{52}

Finally, the Commission’s proposal is part of a broader raft of new initiatives for a more vigorous enforcement of antitrust tools, including a new competition tool, with which an ex-ante legal framework for online platform risks overlapping.

6.2 Adopt the right framework for intervention

In cases where companies restrict data access solely for the purposes of reducing competition, policymakers can and should intervene. For example, some airlines restrict third party access to their flight availability and pricing data.\footnote{53} Doing so prevents specific online travel agencies (OTAs) such as Booking.com and Expedia and metasearch engines such as TripAdvisor and Trivago, from allowing consumers to easily compare fares across multiple airlines.\footnote{54} There is nothing inherently anti-competitive about having proprietary data; however, where there is no legitimate business justification to restrict access to data and where doing so reduces competition and market transparency, a regulatory requirement to make data available would not inhibit business operations.\footnote{55}

Regarding data access as a justification to resort to ex-ante measures, the EU should shift the focus that is currently on big tech, and instead, consider the following framework to evaluate whether to intervene: First, does the company have exclusive access to data? Second, is the company limiting access to this data in ways that harm consumers? Third, does the company operate in the absence of a legitimate business justification? Ideally, policymakers should promote the use of this framework through industry led-initiatives, whereby stakeholders representing different business models—for instance banks and third-party personal finance apps—would oversee the decision-making process.

6.3 Deliver the digital single market, invest in digitalization of businesses, and capitalize on existing assets

First, the EU should address the fragmentation of the digital single market, as it is one of the main reasons why the bloc has been unable to nurture scalable data-driven business models.\footnote{56} More
broadly, the EU should address the drivers that negatively impact the development of its tech industry, including: The lack of financing and venture capital investment for the promotion of existing innovation; the overreliance on bank financing; the lack of reliance on equity financing; onerous and inconsistent bankruptcy laws that tie up human and financial capital for long periods of time. It should also nurture a culture of digital entrepreneurship; this involves advancing digital literacy and digital skills among its workforce.57

The second priority should be investing in digitalization of European businesses and governments.58 This transformation is especially essential to EU competitiveness as companies that embrace digital transformation are the most productive, spur growth, and provide higher paying jobs.59 Unfortunately, adoption of digital technologies among EU companies remains low. Less than a fifth of EU companies are highly digitized and only 12 percent of them use big data analytics.60 The average cloud adoption rate across the EU is only 21 percent.61 Industries such as healthcare—where only half of general practitioners have used electronic networks to transfer prescriptions to pharmacists and only 40 percent exchange medical data with other healthcare professionals—are ripe for digital transformation.62 One reason Europe lags in digital adoption is that larger firms tend to adopt technology faster, but Europe’s long legacy of giving preference to smaller enterprises means that Europe has a larger share of these businesses.63

Finally, rather than adopting defensive policies targeted at a handful of actors, and although it has yet to catch up in the global technology race, the EU should gain confidence in its assets: It has a booming startup scene, expertise in frontier tech, and tech talent. The EU’s criticism of large online platforms is happening while its tech scene is finally taking off and as tech companies, such as fintechs, are starting to take up promising positions in the digital economy.64


5 A set of rules that will target platforms specifically, and which will codify what they cannot do and what they must do. This list will likely make it more difficult for platforms to “self preference” and “plug their own services” and tackle the “most favored nation” clause (the roadmap of the Commission specifies: “certain forms of self-preferencing; acceptance of supplementary commercial conditions that by their nature have no connection with the underlying contractual relationship”).


7 Ibid.


19 European Commission, "Proposal for a regulation—Digital Services Act package: Ex-ante regulatory instrument of very large online platforms acting as gatekeepers,”

20 Ibid.
21 Ibid.


It makes even more sense as transatlantic data flows remain the world's highest. The United States exports $120 billion of digitally-enabled services from Europe and imports $200 billion of these services to Europe. The EU is, with the United States, the world's largest net exporter of such services. Over half of digitally deliverable services imported by the United States from the EU were used in the production of U.S. products for export, which demonstrates the interconnectedness of both industries. See Anthony Luzzatto Gardner, "Stars with Stripes: The Essential Partnership between the European Union and the United States" (2020).


Thibault Schrepel, "The (coming) Amazon probe proves antitrust hipsters to be wrong" (Le Concurrenlististe, November 19, 2018), https://leconcurrenlististe.com/amazon-hipster/.
48 Rod Cooke, "Visionary Leadership and Emotional Management" — "Chapter 4: Business Models Destroyed! In Retail" (Arena books, September 6, 2016).
63 Bob Violino, "Large enterprises are adopting emerging tech at much higher rate than small companies" (ZDNet, October 10, 2018), https://www.zdnet.com/article/large-enterprises-are-adopting-emerging-tech-at-much-higher-rate-than-small-companies/.

64 Michael Stothard, "How Europe can dominate the next decade of tech" (Sifted, June 23, 2020), https://sifted.eu/articles/european-tech-startups/.