



## Platforms in the Digital Economy: How to Preserve a Successful Ecosystem

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Rue de Trèves 45,  
1040 Brussels, Belgium

 +32 2 792 4750

 [www. ACTonline.org](http://www.ACTonline.org)

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# I. Introduction

Since its emergence, the app ecosystem has evolved to influence industries and enterprises across the economy. Past consumer-facing applications, apps represent the main drivers of the €6.6 trillion internet of things (IoT) revolution that will span across enterprise contexts and use cases.<sup>1</sup> App-driven IoT tools that collect data from sensors in real time have already enabled manufacturers, farmers, and other service providers to operate more efficiently and have contributed significantly to the economy; for example, the introduction of the app-driven mHealth solutions market is expected to reach €74.6 billion by 2022.<sup>2</sup>

ACT | The App Association (App Association) represents more than 5,000 small and medium-sized software app companies and informational technology firms across the €830 billion app ecosystem.<sup>3</sup> Our members leverage the connectivity of smartphones and devices to create innovative solutions that make our lives better. The App Association advocates for an environment that inspires and rewards innovation while providing resources to help our members utilise their intellectual assets to raise capital, create jobs, and promote growth.

Ultimately, apps are what drive the mobile economy, but they wouldn't be able to do so without the symbiotic relationship between apps and mobile platforms. Platforms facilitate key attributes that have led to the success of the app economy, which are:

- a. helping app innovators overcome extraordinary barriers to entry
- b. increasing competition in the app economy
- c. providing apps with immediate consumer trust
- d. supplying app makers with instantaneous strengthened intellectual property protections

This policy paper seeks first to distinguish between the different types of platforms that exist, before highlighting several aspects of the mutually beneficial relationship between the app economy and platforms and discussing policy options. We find that a policy approach that understands the nuances of the platform economy and promotes innovation and economies of scale is key to creating success stories in the app economy in Europe and abroad.

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1 Andy Noronha, Robert Moriarty, Kathy O'Connell, & Nicola Villa, *Attaining IoT Value: How To Move from Connecting Things to Capturing Insights*, Cisco (2014). Available at: <http://bit.ly/23Xa0rY>.

2 <https://www.prnewswire.com/news-releases/mhealth-solutions-market-worth-9049-billion-usd-by-2022-638289523.html>.

3 Roya Stephens & Adarsh Mahesh, *State of the App Economy*, ACT | THE APP ASSOCIATION (2018), at [http://actonline.org/wp-content/uploads/ACT\\_2018-State-of-the-App-Economy-Report\\_4.pdf](http://actonline.org/wp-content/uploads/ACT_2018-State-of-the-App-Economy-Report_4.pdf).

## II. Making a Meaningful Distinction Between Different Platform Types

Within the digital ecosystem, platforms differ widely based on the business model they maintain, the industries they serve, and ultimately, the utility they provide.<sup>4</sup> Despite the wide variety of platforms, there is a worrisome trend where regulatory bodies have not made any distinctions between platforms when trying to regulate them. Ignoring the unique structure and nuanced offerings of each platform, in favour of a uniform, monolithic interpretation of these entities, encourages a “one-size-fits-all” style of regulation that would inevitably harm the utility and potential of all players in the platform ecosystem. We have to take the nuanced and different offerings of each platform into account and refrain from categorizing all platforms in a single group when considering regulations.

For instance, eBay and Amazon provide a digital marketplace (E-Commerce) platform to enable consumers and companies to exchange goods effectively and efficiently. In many ways, their business model and the services they provide are similar to a traditional retail store that sells consumer goods, with the difference that Amazon and eBay provide this service online. These platforms are starkly different from Google, a business where 90 percent of its revenue comes from advertising.

Driven by an advertising business model, these platforms have more in common with TV stations and newspapers like Le Monde than with retailers like Amazon and Carrefour. Whether through its search engine, its YouTube video platform, or their Android operating system, Google’s mobile platform is in the business of using targeted advertising to link consumers with the products they want or need. Advertising also drives Facebook’s revenue, but the social networking platform operates differently in how it gathers information and treats its users.

Another example is Apple, which, in contrast, receives the vast majority of its revenue from sales of its hardware and devices (e.g., iPhone, iPad, and Apple Watch), while also providing the App Store as a reliable portal for innovative apps, products, and games.<sup>5</sup> While Google’s Play store also provides developers with a platform for their apps, it receives a large share of its revenue through monetizing the anonymized data analytics it gains, in part, through the use of third-party apps on its platform.<sup>6</sup> Microsoft illustrates yet another revenue model as it sells software, hardware and services. This highlights how different these business models are from one another, despite all being platforms.

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<sup>4</sup> *See id.*

<sup>5</sup> Skye Gould, *Here’s Where Apple Really Makes Money*, Business Insider, <http://www.businessinsider.com/heres-where-apple-really-makes-its-money-2015-7> (22 Jul. 2015, 2:10 PM).

<sup>6</sup> Statista, *Google’s Ad Revenue from 2001 to 2016* (2016) <https://www.statista.com/statistics/266249/advertising-revenue-of-google/>.

These distinctions are important because they greatly affect how and why these platform companies engage with third-party app developers. We use the following sections of this policy paper to provide more detail about the importance of the app economy in Europe and how app developers interact with, and benefit from, mobile platforms.

### III. The European App Economy

The European Union's (EU's) app ecosystem is growing at an exponential rate. In 2014, the European Commission (EC) estimated that the app economy alone could contribute €63 billion and add 2.8 million direct jobs and 4.8 million supporting jobs to the EU economy by 2018.<sup>7</sup> The App Association recently performed an economic analysis of the French app market, the results of which are important for the EU as a whole. In France, app companies have already revolutionized retail markets by providing essential data to accommodate the growing demand in its online shopping marketplace.<sup>8</sup>

As the success of these innovative, market-driving app services is directly correlated to the ubiquity of smartphones that leverage digital platforms,<sup>9</sup> maintaining the integrity of the harmonious partnership between apps and platforms is vital to ensure the power and potential of the app ecosystem is realized. In France alone, we estimated that the app economy contributes:<sup>10</sup>

- 230,000 jobs across the whole economy;
- 77,000 direct app economy jobs;
- €22.6 billion in revenue; of which
  - €20.5 billion were direct contributions, such as €18.5 billion from m-commerce, €1.2 billion in advertising revenue, and €0.8 billion in paid downloads, subscriptions, and in-app purchases
  - €2.1 billion were indirect contributions. , Additional business for French companies generated by the intermediate consumption of mobile app developers represents €1 billion in revenue, and additional consumption by households brought about by the app economy in France was another €1.1 billion
- More than 53.6 million French citizens (77 percent) will use and depend on smartphones by 2022.<sup>11</sup>

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<sup>7</sup> [http://europa.eu/rapid/press-release\\_IP-14-145\\_en.htm](http://europa.eu/rapid/press-release_IP-14-145_en.htm).

<sup>8</sup> Ecommerce News Europe, *80% of All French Internet Users Buy Online*, (10 Dec. 2014) <https://ecommercenews.eu/80-of-all-french-internet-users-buy-online/>.

<sup>9</sup> <http://fr.nigelwright.com/media/2203/6214-france-consumer-goods-and-digital-may-2016.pdf>.

<sup>10</sup> [http://www.progressivepolicy.org/wp-content/uploads/2016/11/2016.06-Mandel\\_The-App-Economy-in-Europe\\_Leading-Countries-and-Cities-final.pdf](http://www.progressivepolicy.org/wp-content/uploads/2016/11/2016.06-Mandel_The-App-Economy-in-Europe_Leading-Countries-and-Cities-final.pdf) (finding 60 percent of French citizens shop online).; and <https://actonline.org/wp-content/uploads/Deloitte-The-App-Economic-en-France-EnglishVersion.pdf>

<sup>11</sup> Statista, *Number of Smartphones in France from 2015 and 2022*, <https://www.statista.com/statistics/467177/forecast-of-smartphone-users-in-france/> (last visited 1 November, 2017).

When we conducted a study of the entire European app economy in 2013, we found that 22 percent of the global production of app-related products and services came from the EU; and that European app economy generated revenues of more than €10 billion per annum.<sup>12</sup> Given the immense growth the app economy has experienced over the past couple of years, it is safe to say that these numbers have grown since then.

## IV. The Harmonious Partnership Between App Companies and Platforms

In nearly a decade of existence, the app economy has grown exponentially alongside the rise of the smartphone. Valued at €830 billion, the app ecosystem is driven by app developers and innovators who depend on platforms to reach consumers around the globe. Last year alone, 3.4 billion people spent 1.6 trillion hours using apps across a variety of platforms, and the reach of apps continues to grow.

In 2008, apps played a defining role in the evolution of smart mobile phones. By providing users with the ability to monitor their health, manage their finances and do a host of other activities on their phones, apps have opened a new world of innovation and opportunity for what was once a device to make calls and send text messages. The world's population is now outnumbered by smartphones and in 2018, 85 percent of EU citizens were using them. The rise of smartphones is inextricably linked to apps because apps add to smart devices' functionality and give value to the platforms on them. Similarly, the emergence of the platform had life-changing benefits for software developers and the app economy at large. In 2016, Apple's developer community had registered 13 million people, after adding 2 million developers in 2015 alone. The development of a trusted network continues to allow developers to directly engage with consumers and end-users and provides an important foundation for market access, consumer discoverability, product legitimacy, and overall growth.

### a. Platforms Help App Innovators Overcome Extraordinary Barriers to Entry

The app ecosystem has brought great benefits to society. Platforms allow smaller app companies to broaden their reach to new markets and customers. When smartphone devices were first introduced, a centralized software distribution platform did not exist. In the PC-driven world that preceded the smartphone era, early app companies were forced to develop, market, sell, and ship their products to reach consumers. Small app companies' core competencies often did not include these skillsets required to manage the overhead of online software distribution.<sup>13</sup>

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<sup>12</sup> The App Association, *The European App Economy: Creating Jobs and Driving Growth*, Report, <https://actonline.org/wp-content/uploads/2013/07/The-European-App-Economy.pdf> (Sep. 2013).

<sup>13</sup> Adam Jaffe & Benjamin Jones, *The Changing Frontier: Rethinking Science and Innovation Policy*, National Bureau of Economic Research, p. 234 (2015) Available at: <http://bit.ly/2fY637e>.

Without centralized platforms, app developers were forced to absorb significant costs, manage various relationships with third parties, and were beholden to costly rules and agreements even before their products were made available to a wide consumer base. These barriers to entry impacted hundreds of thousands of software developers and companies and resulted in higher prices and fewer choices for consumers around the globe.

Since their emergence, platforms have established one-stop shops that manage publishing, marketing, and distribution services, and mitigate costs for software developers of all sizes.<sup>14</sup> For example, the Apple App Store platform provides a service that facilitates financial transactions such as consumer billing and ensures the sale of all apps are compliant with relevant tax codes worldwide.

The service and security provided by platforms enables app companies to focus their valuable resources on developing and updating their products. Because platforms do not prohibit developers from selling their apps on multiple platforms, they are able to reach a broader consumer base and maintain sole ownership of their apps. Successful platforms, like Apple's App Store and Google Play, have revolutionized the app ecosystem by providing app developers ubiquitous access to a centralized framework to engage and secure visibility with the 3.4 billion app users worldwide.

With lower costs and barriers to entry, both fledgling and established app developers can succeed. For this reason, platforms have become one of the most innovative spaces in the internet-enabled ecosystem.<sup>15</sup>

French educational app company L'Escapadou has reached consumers around the globe through its use of mobile platform companies like Google, Microsoft, Apple, and Amazon, enabling the company to secure 1.3 million downloads and earn more than €1.4 million from app sales. Founder Pierre Abel specialized the language, content, and pricing of each of his apps based on consumers and market needs. He marketed them on different platforms to reach a variety of consumers around the world. In addition, the App Store provides the company with up-to-date analytics which L'Escapadou uses to develop reports on app sales and trends.<sup>16</sup>

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<sup>14</sup> *See id.* At p. 238 (2015) (writing “[t]he rapid emergence of many demanders, together with the very low barriers of entry created by the platform providers, has led to a rapid and very substantial expansion in the number of overall apps.”).

<sup>15</sup> *See id.*

<sup>16</sup> *E.g.*, L'Escapadou, 2016 Report, Medium, <https://medium.com/@PierreAbel/2016-report-7a8d2a12e9ef> (2016).

## b. Platforms Increase Competition in the App Economy

The app ecosystem has come a long way since the smartphone was first introduced to consumers in 2007 when most of the apps on mobile platforms were more oriented towards supplementing the functionality the device itself lacked.<sup>17</sup> Fast forward 12 years and 85 percent of Europeans own a smartphone and apps are now making their devices “smart.”<sup>18</sup> Apps enable users to monitor their health, manage finances, and complete other tasks on the same phone that once only made their calls and sent their texts. Through the presence of platforms, apps provided a hand-held portal to the digital economy and added never-before-experienced value to mobile devices for their users.

The emergence of the platform also had life-changing benefits for software developers and the app economy at large. For example, Google Play currently contains approximately 2.8 million apps.<sup>19</sup> Consumer data and analytics tools provided by platforms also allow developers to improve and customize their services for their customer base, making it possible to engage and strengthen the developer-consumer relationship. Platforms enable SMEs to operate on a level playing field and have the same negotiating power as big tech companies when it comes to app stores/platforms, as the guidelines apply to all developers equally. This competitive environment makes the app economy one of the most innovative spaces in the internet-enabled ecosystem.

***“Platforms enable SMEs to operate on a level playing field and have the same negotiating power as big tech companies when it comes to app stores/platforms, as the guidelines apply to all developers equally.”***

A venture capital firm and App Association member recently recounted that in the late ‘90s, a software company had to spend about €8 million just to fully get up and running. Today, the advent of free or inexpensive cloud services, internet connectivity, and software tools have enabled startups to be initially funded with just a €75,000 cheque. Platforms help lower the barrier of entry for small app companies by shouldering the costs of privacy measures, security, and intellectual property protections for their users, thereby freeing up large amounts of capital that startups can use to build and grow their business.<sup>20</sup>

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17 E.g., ACT Board Chairman Mike Sax created an app that enabled the iPhone’s keyboard to turn sideways—a stock feature in every app and device maintaining an SMS capability.

18 GSMA, the Mobile Economy in Europe (2017) <https://www.gsma.com/r/mobileeconomy/europe/>

19 <https://www.statista.com/statistics/263795/number-of-available-apps-in-the-apple-app-store/>.

20 TEDx Talks, The New New Startup Economics: Stephen Forte at TEDxHKUST, Youtube (Apr. 2, 2013), [https://www.youtube.com/watch?v=t4IiYEtJU\\_s](https://www.youtube.com/watch?v=t4IiYEtJU_s).

### c. Platforms Provide Apps with Immediate Consumer Trust

Consumer trust is a critical aspect of a software developer's ability to bring a product to market and be successful, even more so for small companies. In the internet economy, immediate consumer trust is almost impossible without a substantial online reputation, and not attaining it spells death for any app company. The immediate consumer trust embedded into platforms' recognized brands allows small and medium-sized developers to clear the critical hurdle of achieving trust from consumer adoption, which only large established companies were previously able to do.

Trust implies that the consumer can be sure that the app actually does what it claims to do, the app is not malicious or dangerous, and that their sensitive data (such as credit card information or personal data) isn't put at risk by downloading the app. Without trust, consumers are unlikely to hand over a credit card or other essential information to an app company. Therefore, consumer trust and willingness to share information is critical for an app developer to succeed in the market. By virtue of being provided on a trusted platform, app developers gain valuable consumer confidence almost instantly.

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Without platforms, consumers would be unable to benefit from the thriving sharing economy. The sharing economy depends on trust in transactions that provide consumers with temporary access to a service provider's underutilized service or skill.<sup>21</sup> Innovative apps like BlaBlaCar, Runtastic, Transferwise, and Citymapper have enjoyed great success,<sup>22</sup> and similar travel, car-sharing, and finance apps have the potential to increase the global revenue of the sharing economy from €12.5 billion in 2014 to €279 billion by 2025.<sup>23</sup>

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21 DHL, *Sharing Economy Logistics*; DHL (2017) Available at: <http://bit.ly/2xfWIiq>

22 Amanda Augustine & Anthony Quinones, *Technology and Trust: How the Sharing Economy is Changing Consumer Behavior*, BBVA Compass, p. 2 (Nov. 19, 2015) Available at: <http://bit.ly/1PPNQUG> (writing “seven years after its founding, Airbnb has expanded to over 190 countries and 34,000 cities with a catalog of over 1.5 million listings. This year they are expected to increase bookings to over 80 million by the end of 2015 from 37 million in 2014.”).

23 DHL, *Sharing Economy Logistics*; DHL Trend Research (2017) Available at: <http://bit.ly/2xfWIiq>



The potential for this industry, therefore, depends on consumer trust, which is easily provided to app developers by showcasing their products on trusted platforms.<sup>24</sup> Platforms, on the other hand, maintain a valued brand through constant vigilance in their respective curation processes and have become a trusted product themselves. The immediate consumer trust embedded into platforms' brands, worth billions of dollars, allows developers to clear the critical hurdle of achieving trust from consumer adoption.

For Barefoot&Co, a corporate startup studio in Belgium, platforms and app stores function as a filter that guarantees quality standards for consumers. According to Barefoot, operating systems updates respond to the need for digital companies to adapt to the latest technological developments. This process maintains and ensures quality standards for apps and allows users to benefit from the latest features. Complying with such developments brings positive effects for both app developers and users while strengthening the consumers' trust.

#### d. Platforms Strengthen Intellectual Property Protections

Before the age of platforms, software developers struggled to safeguard their intellectual property (IP) against piracy and theft. Software companies faced serious challenges in protecting their products in retail stores because the licensing codes remained active and easy to steal. For example, in 2016, the commercial value of unlicensed software in Western Europe was €9.9 billion.<sup>25</sup>

Although license control by platforms has drastically improved the landscape for small developers, piracy is still a serious issue for app makers – the app economy still loses €2.5 – 3.3 billion from the theft of apps.<sup>26</sup> Much of this theft comes through apps or services that are built to hack or displace legitimate app stores and platforms, often described as “sideloading.” Legitimate applications are stolen, their copy protection is removed, and the apps are placed in illicit stores for download where no revenue goes to the original developer.

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24 Augustine, *supra*. note 13 at p. 3 (writing “[w]hat is even more significant is the ability of the modern sharing economy to get users to overcome any trust gap between them and a stranger by establishing trust in the connection process itself... The impact technology has had is to not only reduce search and transaction frictions, but also to help bridge that trust gap between users.”).

25 [https://globalstudy.bsa.org/2016/downloads/studies/BSA\\_GSS\\_US.pdf](https://globalstudy.bsa.org/2016/downloads/studies/BSA_GSS_US.pdf)

26 John Koetsier, *App Developers Losing \$3-4 Billion Annually Thanks to 14 Billion Pirated Apps*, Forbes (Jul. 24, 2017, 5:55 PM). Available at <https://www.forbes.com/sites/johnkoetsier/2017/07/24/app-developers-losing-3-4-billion-annually-thanks-to-14-billion-pirated-apps/#5f3729e960da>.

Platforms provide dispute resolution mechanisms when apps are introduced into the store that are either outright copies or do not have the proper license for use. App developers can then leverage these mechanisms to confront entities that have allegedly infringed their intellectual property. Without these mechanisms, developers are left with the oppressive and expensive burden of copyright infringement litigation in court, which can leave the legitimate IP owner with several thousand euros per month in legal fees, and months or years of time diverted from company matters.

App developers and copyright holders have benefited from platforms' cost-effective avenues to distribute and protect the integrity of their products. Platforms provide a vital, cost-effective avenue for app developers and copyright holders to dispute and address intellectual property theft and infringement.

App Association member and game developer Dan Russell-Pinson credits his ability to confront and take down an infringing app from the App Store to the availability of dispute resolution mechanisms on platforms. After recovering from the shock of discovering a copycat of his app and spending a lot of time researching options, Dan determined that Apple's Content Dispute process was his best course of action to address the copycat company and have the app removed.<sup>27</sup>

## V. Burdensome Regulatory Intervention Disrupts the Virtuous Cycle Between Platforms and Apps

Platforms have enabled a diversity of app companies to compete and succeed in the digital economy. By 2021, the dynamic app ecosystem is projected to be worth €5.2 trillion,<sup>28</sup> the product of a fruitful and symbiotic partnership between app companies and platforms. The internet has long run on the consensus amongst platforms, app companies, and other stakeholders to engage in a manner that supports competition, which in turn supports market access, creates legitimacy, fosters consumer choice, and nurtures consumer trust.<sup>29</sup>

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27 <https://actonline.org/2017/08/30/omg-someone-copied-my-app-what-do-i-do-now/>

28 Hugo Delgado, *The App Economy Forecast: A \$6 Trillion Market in the Making*, App Annie (2017) Available at: <http://bit.ly/2xfDqtB>.

29 Stuart Brotman, *Multistakeholder Internet Governance: A Pathway Completed, and the Road Ahead*, Brookings Institute Center for Technology and Innovation (2015) Available at: <http://brook.gs/2yuG6DZ>.

As a result, all players in the ecosystem are guided by the economic principles of supply and demand, rather than encumbered by government bureaucracies that cause unnecessary market distortions.<sup>30</sup> Commitment to these pro-competitive values has created an environment that is flexible and supportive of ever-evolving innovations in technology.<sup>31</sup> As the platform economy continues to develop with both new technologies and innovative business models, the regulatory environment around platforms must remain flexible and future-proof.

Designing regulation based on the notion of “platform neutrality,” as for example the French regulatory body Conseil National du Numérique (CNNnum) has suggested, would mean regulating all platforms under a monopoly-style framework to address “harms” that cannot be adequately proven or measured without making meaningful distinctions between different types of platforms. This approach would be contrary to the current success of apps on platforms, and it would hurt small app companies in Europe and around the world. Therefore, any regulation addressing platforms should commit to the pro-competitive values of the app ecosystem and take into account the diverse nature of different business models of platforms. Any regulatory approach that does not consider the distinctions between platforms hurts the success of the app economy and hinders both the emergence of new business models and the continuation of existing ones.

In the app economy, small and medium-sized enterprises (SMEs) and small developers are able to compete with big tech companies as they both have the same negotiating power when it comes to app stores and platforms, as the guidelines apply to all developers equally. The notion that the terms and conditions within developers’ contracts with mobile platforms are unfair ignores the fact that platforms save our members significant costs and help them succeed as explained in previous sections. Government intervention into platforms must be based on demonstrated harms, not hypotheticals or activist assumptions, in order to allow the symbiotic relationship between app developers and platforms to continue to flourish.

The main platforms, such as Apple’s App Store and the Google Play store, also do not prohibit developers from selling their apps on multiple platforms.<sup>32</sup> App companies maintain sole ownership and creative rights to the apps they make available on platforms, allowing them to remain unencumbered by their host platforms and enabling them to reach a broader consumer base. Developers actively choose their platform based on their app’s particular functionalities and needs.<sup>33</sup>

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30 Nancy Vallejo & Pierre Hauselman, *Governance and the Multi-Stakeholder Processes*, International Institute for Sustainable Development, at p. 5 (2004) (writing “[t]he viability of a multi-stakeholder process is not only determined by its inclusiveness, but also its capacity to deliver its objectives, that is, its effectiveness. Better, the process should be efficient, i.e., able to deliver the objectives well and fast.”)

31 Internet Society, *Internet Governance – Why the Multistakeholder Approach Works*, Website (2016) Available at: <http://bit.ly/2xVGkXz>.

32 Statista, *Number of Apps Available in Leading App Stores as of March 2017*, Statista. (Sep. 19, 2017) Available at: <http://bit.ly/2dycQpS> (finding 2.8 million apps on Google Play, 2.2 million on Apple’s App Store, 669,000 apps on Windows Store, and 600,000 apps on Amazon).

33 <https://www.rishabsoft.com/blog/cross-platform-app-tools-infographic>.

Ultimately, if governments take on the responsibility to regulate and set the rates platforms can charge app developers, then companies lose their autonomy to make market-based decisions specific to the company and consumer needs. Any decision-making process related to platform regulation needs to include business users through consultations and institutional dialogue. Moreover, multiple governments on the member state and EU level getting involved simultaneously risks legal and market fragmentation. For small companies, clear, transparent, and harmonized rules are crucial to access and success in international markets.

Applying a “one-size-fits-all” regulation to the platform ecosystem, and by default, the nascent app economy would disrupt the virtuous cycle between these two entities. Not only would it implement unnecessary barriers to entry for app companies, but it would also spark a decrease in competition and harm the job market. Innovators want to grow the millions of jobs added to the European market by the app economy,<sup>34</sup> however, burdensome regulations complicate employment opportunities,<sup>35</sup> and thus could hinder the success of the EU’s digital economy. Such regulatory efforts could turn the virtuous cycle between platforms and apps into a linear pathway towards true platform monopolization if it does not judiciously observe the nuanced relationship between apps and mobile platforms. In a platform neutrality paradigm, all terms are dictated by the government or the monopolist, leaving app developers and innovators without autonomy and jeopardizing their avenues to success. In the dynamic digital ecosystem, monopoly-style regulation has never yielded an increase in competition or innovative outcomes. Regulators should encourage competition rather than stifle it.

The growing symbiotic partnership between platforms and app companies is the causal element for the €830 billion app economy’s extraordinary growth. This relationship should be facilitated and nurtured through market-based solutions, almost unfettered by government intervention attempting to regulate the business practices of consenting, private parties. This will ensure that the app economy continues to grow and innovate as we move into the next generations of technology.

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34 [http://www.progressivepolicy.org/wp-content/uploads/2016/11/2016.06-Mandel\\_The-App-Economy-in-Europe\\_Leading-Countries-and-Cities-final.pdf](http://www.progressivepolicy.org/wp-content/uploads/2016/11/2016.06-Mandel_The-App-Economy-in-Europe_Leading-Countries-and-Cities-final.pdf) (finding 60 percent of French citizens shop online).

35 Roslyn Layton, Which Open Internet Framework is Best for Mobile App Innovation, Aalborg University, p. 204-211 (2017) [http://vbn.aau.dk/files/255922611/PHD\\_Roslyn\\_Layton\\_E\\_pdf\\_rettet.pdf](http://vbn.aau.dk/files/255922611/PHD_Roslyn_Layton_E_pdf_rettet.pdf).

## VI. Policy Recommendations and Conclusions

The App Association respectfully suggests that regulators conduct ex-post assessments of specific market failures rather than implementing ex-ante restrictions. Platforms provide app developers and other SMEs with many benefits and have helped to generate extraordinary growth in the app economy. Because of platforms, developers experience lower overhead costs, have greater consumer access, can enter the market more easily, and are able to protect their intellectual property more efficiently.

If further regulatory action cannot be avoided, we encourage policymakers to ensure that it achieves the following goals:

- **Avoid legal and market fragmentation** because clear, transparent, and harmonized rules have the effect of enhancing access for small enterprises to international markets;
- **Take into account the diverse nature of different business models of platforms**, as regulatory approaches that fail to do that hurt the success of the app economy and hinder both the emergence of new business models and the continuation of existing ones;
- **Create a future-proof, and flexible regulatory environment**, as the platform economy continues to evolve with both new technologies and the development of innovative business models;
- **Involve business users in the decision-making process** through consultations and institutional dialogue.

A system of co-regulation that includes all stakeholders and relies on an industry-based code of conduct has the practical advantage of providing regulators with insights to which practices require their attention, if there are any. A flexible policy approach that understands the nuances of the platform economy and promotes innovation and economies of scale, rather than over-prescriptive *ex-ante* legislation, is the key to create European success stories in the app economy.