



 **ACT** | The App Association

The Impact of Platforms on Software Distribution: What Makes an Ecosystem Work?

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I. The Dynamic App Economy

In nearly a decade of existence, the app ecosystem has grown exponentially alongside the rise of the smartphone. Valued at \$950.6 billion,¹ the app economy is driven by app developers and innovators who depend on platforms to reach consumers around the globe. In 2016 alone, 3.4 billion people spent 1.6 trillion hours using apps across a variety of platforms,² and the reach of software applications continues to grow.

Since its emergence, the app ecosystem has evolved to influence industries and enterprises across the economy. In addition to popular gaming and consumer-facing applications, apps represent the main drivers of the \$8 trillion³ internet of things (IoT) revolution. App-driven IoT tools that collect data from sensors in real time have enabled manufacturers, farmers, doctors, and service providers to operate more efficiently, and have contributed significantly to the economy. In fact, mobile health apps were expected to add \$26 billion to the U.S. economy after the introduction of Apple's HealthKit and the GoogleFit platforms.⁴

The distribution of software to consumers and customers is not new – the personal computer (PC) revolution of the 1990s was built on software written by tens of thousands of engineers all over the world. If a consumer were to walk into any CompUSA, Micro Center, or Best Buy in 2000, they would have seen shelves of software for sale.⁵ Once internet connectivity became a standard feature in most private residences, consumers began to download applications from the comfort of their homes without having to step foot in a physical store. However, both physical points of sale and the ability to download software via the web never reached the scope of today's current app economy with more than 1 million different apps available for download across multiple platforms. This paper seeks to answer the simple question - what changed?

The single most important factor in the app ecosystem's dynamic growth and unrivaled success is the presence of established, curated platforms (e.g., Apple's App Store or Google Play for mobile – and Steam for games). Trusted app stores have served as a vital foundation for the growing uses of apps across industries and enterprises. Our in-house membership polling, market data, and research have identified three key attributes that led to the revolution in software distribution:

1. Reduction in overhead costs imposed by traditional publishers;
2. Instantaneous and cost-effective consumer trust mechanisms; and
3. Cost-effective access to a global market.

Today every successful platform for mobile, desktop, gaming, and even cloud computing must provide these features, or risk failing in the marketplace.

II. Software Distribution Before Platforms

A. Before Platforms, Distribution Overhead was a Much Higher Barrier to Small Software Startups

Much has changed since the earliest days of software written for computers that filled buildings and ran on punch cards - it took 62,000 punch cards in a stack nearly 40 feet tall to equal 5MB. Time on those punch card mainframes was precious and doled out in minutes to various users, who would wait for hours or even days just for a chance to run a single program. And while the PC revolution did away with punch cards and timeshare and allowed individuals to write software, distribution was still very expensive and very difficult to break into. In the early 1990s, a consumer could walk into a brick-and-mortar store to purchase software but how the software arrived on the shelves was an expensive and time-consuming proposition. Developers would write software

and either attempt to self-publish or contract with a publishing house to put the software into the market. The publisher would contractually obligate the developer to share a (very) large percentage of the sales, or provide up-front cash, to manage the printing of boxes, discs, inserts, advertising, marketing, and manuals. After the publishing house was engaged, the brick-and-mortar stores would require software companies to pay for space on the store shelves and to appear in newspaper inserts.

Most consumers are unaware that the physical real estate inside of a brick-and-mortar store is often “leased” to the product companies you see (e.g., if your company wanted to be on the end of an aisle (known inside the retail industry as an “end cap”), that store posed a fee for that shelf space. If you wanted to have multiple rows of your software on a shelf, that would cost additional money. Moreover, the publisher or the developer would be obligated to buy back any copies of the software that did not sell. In short, the developer or publisher paid to place the product, and they were required to reimburse the store if the product did not sell.

Bungie—developer of popular games Halo, Myth, Oni, and Marathon—chronicled in 1996 the difficult and sometimes oppressive distributor requirements placed on software developers that predated the platform ecosystem. Bungie found that when dealing with retail distributors, it was required to guarantee a competitive price, pay 3-6 percent of sales as a marketing fee in addition to \$10,000 for product launch marketing, pay shipping to deliver their products to distributors, and agree to buy back unsold products.⁶ Once contracts were negotiated, software developers were often required to spend additional money to have their products featured in catalogs or showcased on end cap displays in retail stores, all before the products were even seen by consumers.

Once the internet became a viable method for distributing software, certain costs-and-time problems were eliminated, but a new host of issues arose. Before the ubiquity of mobile platforms, the software ecosystem ran on personal computers. This forced early app companies, often with teams of one to two developers, to wear many hats to develop, market, and benefit from the sale of their products. App companies were not only required to write code for their products, but they were also responsible for:

1. managing their public websites,
2. hiring third-parties to handle financial transactions,
3. employing legal teams to protect their intellectual property, and
4. contracting with distributors to promote and secure consumer trust in their product.

The skillsets required to manage the overhead of online software distribution were often not “core competencies” of small development companies, and the additional steps cost app developers valuable time and money, with little tangible benefit.

Without centralized platforms, app developers were forced to absorb significant costs and manage various relationships to distribute their product to a wide consumer base. Much more complex than a direct developer-consumer exchange, software companies used distributors to reach and engage with end users. Developers had to sacrifice valuable time from product development to establish relationships with distributors and were beholden to strict and costly rules even before their products were made available to consumers.

In simplest terms, independent software developers either paid to offload the overhead to a publisher or absorbed the cost and uncertainty of sales internally. These barriers to entry impacted hundreds of thousands of software developers and companies around the world; thus, resulting in higher prices and fewer choices for consumers.

Mail-order distributions were one of those onerous costs. Bungie CEO Alexander Seropian reported:

“With entertainment software, a mail order company derives most of its profit from the advertising sales, not the product sales. A full-page ad in one of the big Mac catalogs cost about \$25,000 (times 150 pages is \$3.75 million... per month!). On a given month we may pay \$9,000 for an ad. For the mail order company to make more than that ad price they would have to sell over 1,200 units of product that month, which only really happens around Christmas. Consider MicroWarehouse, [formerly] a publicly traded company, which does around \$750 million a year. They produce four catalogs with a total of over 600 ad pages a month. This generates a mammoth \$180 million per year. The remaining revenue (\$570 million) generated by product sales, yields only a 20% margin. That makes the ending score \$180 million for ad sales, \$114 million for product sales. Remember this lesson, it repeats itself later.”⁷

While the concept of mobile platforms existed in both Blackberry and WindowsCE, it did not gather steam until 2008, when Apple paired its then-new iPhone with an integrated application storefront. Multiple companies quickly followed Apple’s direction and launched stores or marketplaces designed for various products. This created an entirely new internet-enabled economy that incorporated small businesses and reduced financial and temporal costs to developers.

B. Before App Stores, Building Consumer Trust Was Slow and Expensive

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. However, what does “trust” mean? In this context, trust refers to an established relationship between the app company and consumer where the consumer is assured of some simple elements:

1. The application does what it claims – it “works”.
2. The application isn’t dangerous or malicious.
3. User is not going to have credit card information or identity stolen by downloading the application.

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.

Long before the advent of digital commerce, consumer trust was a critical aspect of a software developer’s ability to bring a product to market.⁸ Prior to platforms, software developers often had to hand over their products to companies with a significant reputation to break through the trust barrier. Even “shareware” products that could be digitally distributed would end up partnering with trusted brands to gain consumer trust.⁹ For example, in 1996, developers of the computer game Ultimate Doom contracted with Chex cereal to augment its consumer base. Developers converted their game software to create the child-friendly game “Chex Quest.”¹⁰ Today, consumers can download most of these games, like Ultimate Doom, in app form on platforms like Apple App Store, Google Play, or game-specific, independent platform Steam. These platforms not only lower cost but can reach consumers beyond those who buy a particular brand of cereal or trusted product. Now, platforms are the trusted product.

But the trust mechanism provided by the platforms is not merely an aspect of size. Consumer trust requires constant maintenance and vigilance because loss of trust hurts platforms and the developers that depend on

them.¹¹ The immediate consumer trust embedded into platforms' brands, worth billions of dollars,¹² allows developers to clear the critical hurdle of achieving trust from consumer adoption.

C. Physical Protections for Digital Goods: Challenges to Safeguard Intellectual Property

Before the age of platforms, software developers struggled to safeguard their intellectual property against piracy and theft. Software companies faced serious challenges in protecting their products in retail stores because the licensing codes—unique codes provided with the software (usually provided in the instruction manual) to verify that the buyer is a licensed user—remained active and easy to steal. For example, popular shareware software company Ambrosia was forced to blacklist heavily pirated retail codes in 2008. In an interview the App Association's Morgan Reed had with Ambrosia's chief technology officer Matt Slot, Slot stated:

"...we made a change to our licensing system to allow for the sale of software in retail boxes in Japan. These codes are easier to steal, since they need to remain active while the software sits waiting to be sold at retail. We've only had to blacklist four pirated retail codes in our system, but attempts to use them have made up a whopping 75% of the total retail registrations logged by our system in the past two months. This shortfall of our retail venture likely limits the volume of business we can do in this space."

As a result, Ambrosia was forced to sacrifice substantial time and money, on top of the profits lost from the egregious piracy, to bolster customer support and technical systems to combat further piracy attempts of their license codes. Prior to platforms, mail services and retail stores provided the only means to engage and reach interested consumers, but developers' struggle to protect software IP hurt their code and seriously limited their volume of business and bottom line.

So how did the price of software go from an average of \$50 per unit to \$1 or free?: Disintermediation thanks to mobile platforms

Today, app developers use platforms as a one-stop shop to manage the protection, advertisement, sale, and distribution of their products. Platforms provide a resource-saving alternative to retail stores and bestow app developers with more autonomy over their product and relationship with their consumers.

III. The Beneficial Partnership Between Apps and Platforms

In 2008, apps played a defining role in the evolution of mobile phones as a platform. Once a device to make calls and send text messages, the smartphone was revolutionized by apps that provided the added ability to monitor health, manage finances, and a plethora of other activities. Today, the world's population is outnumbered by mobile phones,¹³ and more than 80 percent¹⁴ of Americans own, and depend on, smartphones. The rise of smartphones is inextricably linked to apps because apps give value to platforms on smartphone devices.

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.¹⁵ The establishment of a trusted network allowed developers to directly engage with consumers and end users, and provided an important foundation to secure market access, consumer trust, developer autonomy, dispute resolution, consumer analytics, and to lower their overhead. Marc Fischer, founder of Dogtown Media, an ACT | The App Association member, noted, "[platforms] are a conduit for developing, launching, and scaling our digital products. We would not have a business without them."

A. Apps Have Instant Access to Foreign Markets

Successful platforms, like Apple's App Store or Google Play, have changed the app ecosystem by providing app developers ubiquitous access to a broader swath of consumers. Platforms provide a centralized framework

for app developers to engage and secure visibility with the 3.4 billion app users¹⁶ worldwide. With lower costs and barriers to entry, both fledgling and established app developers can succeed. For example, French educational app company L'Escapadou secured 1.3 million downloads and earned more than \$1.5 million from app sales,¹⁷ a success attributed to the centralized nature of platforms. Founder Pierre Abel specialized the language, content, and pricing of each of his apps based on consumers and market needs, and marketed them on different platforms to reach a variety of consumers around the world. Apple's App Store is available in 155 countries around the globe.¹⁸ By virtue of Apple hosting an app company's product on its platform, Pierre's company now has immediate access and reach to the same markets as Apple for a nominal fee without having to build a brick-and-mortar store or pay for an expensive international ad campaign.

B. Platforms Establish Immediate Consumer Trust for Startup App Companies

As apps play an increasingly integral role in our daily lives, consumer trust is at the heart of their widespread adoption.¹⁹ By virtue of their product being on a trusted platform, app developers gain valuable consumer confidence. 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.²⁰ Innovative companies like Uber and Airbnb have enjoyed great success,²¹ and similar travel, car-sharing, and finance apps have the potential to increase the global revenue of the sharing economy from \$15 billion in 2014 to \$335 billion by 2025.²² The potential for this industry depends on consumer trust, provided to app developers by showcasing their products on trusted platforms.²³

C. App Developers Maintain Complete Autonomy When Hosted on Platforms

Platforms provide greater autonomy to app developers. App companies dictate their own marketing and pricing models, whether free with in-app purchases, subscription-based sales, or one-time purchase.²⁴ In return, platforms charge a nominal fee to utilize their service to reach a broad set of consumers, which promotes a virtuous cycle of innovation.²⁵

Though 90 percent of apps made available on Apple's App Store are free,²⁶ the platform provides tangible, cost-saving benefits for revenue-based app developers. For example, Apple issues a 30 percent fee on apps that have an upfront cost or provide in-app purchases, which is later lowered to 15 percent each year thereafter for subscriptions.²⁷

Platforms also do not proscribe developers from selling their apps on multiple platforms.²⁸ This enables app companies to reach a broader consumer base. App companies maintain sole ownership rights in the apps they showcase, allowing them to remain unencumbered by platforms hosting their products. App developers may place their app on multiple platforms to increase market penetration while maintaining creative rights to their products and safeguarding their intellectual property. Developers actively choose their platform based on their apps particular functionalities and needs.²⁹

Without question, when a consumer purchases an app through any platform, the consumer is the customer of the app company, not the company that owns that platform. By the nature of their name, mobile platforms provide a helpful access point for small business app developers and tech innovators to reach a wide set of customers. Before the advent of mobile apps and platforms, app developers (i.e., software developers) and companies did not have the benefit of centralized platforms to showcase their products to consumers. As outlined above, app developers were required to manage their website, handle financial exchanges like credit card transactions, and implement promotions and advertisements to build consumer trust in their products or hire third-party contractors to do so. These tasks were not part of an app company's core competencies, and they cost small app shops valuable time and money. Today, platforms provide a centralized framework to showcase, sell, and distribute apps, while allowing app companies to maintain ownership of their products and

relationships with their consumers. Thus, platforms serve as an important, resource-saving alternative to other modes of consumer engagement.

D. Platforms Provide Cost Effective and Time Efficient Dispute Resolution Processes for Small Business App Companies

In the age of retail software distribution, companies struggled to secure and protect their intellectual property from theft and copyright abuse. Platforms provide an important framework for app companies to engage with consumers and confront and address entities that have infringed their intellectual property. For example, Apple's platform provides a content dispute mechanism³⁰ that allows app companies to submit a claim to connect with entities that have allegedly violated their intellectual property. While maintaining a database of all the apps it hosts, the platform provides a mechanism that reduces the hurdles companies must go through to tackle copyright infringement.

Without the dispute resolution mechanisms of platforms, app companies are often left with an untenable alternative: copyright infringement litigation in court. Litigation poses an oppressive burden on app developers, particularly small businesses with limited resources. Within these cases, the rightful owners of the copyright may be faced with several thousand dollars per month in legal fees, the expense of new license compliance,³² and months or years diverted from company matters, not to mention the cost if the litigation is unsuccessful.³² 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 Dan Russell-Pinson, developer of geography app Stack the States, credits his ability to confront and take down an infringing app to the availability of dispute resolution mechanisms on platforms. Of his infringement saga, he wrote:

“After recovering from the shock of discovering a copycat of my app, I spent a lot of time researching my options. I determined that Apple's Content Dispute process was my best course of action to address the copycat company and have the app removed. Apple provides a platform to submit a claim to the App Store Legal Team if you find yourself in a situation where an app or an ad violates your intellectual property rights... It is vital that you make your complaint, and your requests, clear. If you want the offending party to change the name of their app, request that specifically. If you want Apple to remove the offending app from the App Store, then explicitly ask for that at the end of every email correspondence to them.”³¹

Although license control by platforms has drastically improved the landscape for small developers, piracy is still a serious issue for app developers – every year, the app economy loses \$3-4 billion from the theft of apps.³³ 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 an illicit store for download where no revenue goes to the original developer. Moreover, even in the world of free, ad-supported applications this criminal activity still occurs with the original application's ad network stripped away and replaced by a pirate ad network that siphons the ad revenue to the pirate app developer.

E. Platforms Provide Consumer Analytics for Apps to Better Serve Their Customers

Platforms help strengthen consumer relationships by providing app companies with important consumer data to better their services. On Google Play, Google Analytics provides app companies with data points to determine the number of consumer downloads and in-app purchases. Platforms also enable developers to explore where their apps' users are located, when their content was downloaded, and the referral source by which the app was accessed. Most platforms provide invaluable analytics for the apps they host to better engage and understand their customers. App development shops like Birmingham-based App Association member MotionMobs depend

on platform-provided data points to assess how consumers use their apps and identify methods to improve user experience.

F. Platforms Lower the Barrier of Entry for Small App Companies

As previously described, software companies incurred an extraordinary financial burden to bring their products to market before the introduction of mobile platforms. For instance, they had to engage in costly and time-consuming marketing campaigns to establish consumer trust and contract others to process financial transactions for them.³⁴ Platforms have since created a one-stop shop that mitigates these costs so that more small businesses, like our members, can participate in the app economy.³⁵

A Silicon Valley-based venture capital firm and App Association member recently recounted that in the late '90s, a software company had to spend about \$10 million just to 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 \$100,000 check. 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.³⁶

This is why the app economy is rife with competition and one of the most innovative spaces in the internet-enabled ecosystem.³⁷ For example, Apple's App Store provides a service that facilitates financial transactions (such as billing to consumers) and provides assurance that all of the apps sold are compliant with relevant tax codes—something that software developers had to handle themselves. Popular platforms also may choose to absorb credit card fees to prevent the cost from being transferred to the developer, but for this platform-enabled service, it would fall on the app developer to handle each and every transaction; again, falling outside the bounds of an app developer's core competencies.

IV. The Meaningful Distinction Between 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. For instance, eBay and Amazon provide a digital marketplace 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 “digital IKEA.” This platform type is starkly different from Google, a business where 90 percent of its revenue comes from advertising. Driven by an advertising business model, platforms like Google Play have more in common with TV stations and newspapers like the Washington Post than with retailers like Costco and Walmart. Whether through its search engine, its YouTube video platform, or apps on 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 is also Facebook's revenue driver, but the social networking platform operates differently in how it gathers information. For instance, Facebook collects and stores personal data through what its users share, click, or “like” on its website or mobile app as well as through third-party apps that pair its users' Facebook profiles with those apps' services.³⁸ The Apple mobile platform is yet another kind of entity, because Apple both provides consumers with hardware like phones, tablets, computers, and watches, while also serving as a reliable portal for innovative apps, products, and games.

In the context of mobile platforms, companies like Apple and Google provide app developers an access point to consumers around the globe. However, they are distinct from one another, especially when it comes to their respective business models and how they generate revenue. For example, Google receives a large share of its revenue through monetizing anonymized data analytics it gains, in part, through the use of third-party apps on its platform.³⁹ This is in contrast to Apple, which receives almost all of its revenue from the sale of its devices (e.g.,

iPhone, iPad, and Apple Watch).⁴⁰ This subtle distinction is important because it greatly impacts how and why these platform companies engage with third-party app developers. For instance, these various business models dictate the curation and collection practices of each platform; it truly depends on from where the revenue stream derives value.

There is a concerning trend where factions of the EU and its member states' regulatory bodies have failed to make such distinctions. As described earlier, platforms differ widely in the digital ecosystem based on the business model they maintain, the industries they serve, and the utility they provide.⁴¹ The European Commission's (EC's) Inception Impact Assessment (Assessment)⁴² intends to build upon its "Digital Single Market" strategy that uses the EC's alleged antitrust authority under Article 114 of the Treaty of the Functioning European Union to enforce against platforms it feels is causing harm to competition. However, the Assessment's use of the term "online platform" fails to make any meaningful distinctions to measure the variety amongst platforms, which is a necessary component to measure markets for purposes of antitrust enforcement.

V. The Future of the App Economy Depends on Sensible Legal Frameworks

The internet has long run on a consensus amongst platforms, app companies, and other stakeholders to engage in a manner that supports competition. Commitment to these values provides a space for all actors in this ecosystem that creates legitimacy, fosters consumer choice, and nurtures their trust. As a result, stakeholders are unencumbered by government bureaucracies, and instead guided by the economic principles of supply and demand.⁴³ This has created an environment that is flexible and supportive of ever-evolving innovations in technology.⁴⁴ However, in the United States, there are two key court cases that, if upheld or left unclarified, could cut to the core of this symbiotic relationship.

A. *Apple v. Pepper*

Apple is appealing a Ninth Circuit decision to the United States Supreme Court that it believes misapplies the direct-purchaser rule—a rule that determines who can sue in an antitrust case.⁴⁵ In this case, the Ninth Circuit held that consumers had the ability to sue Apple directly for the purchase of a \$1.00 app because it, in effect, treated Apple as a mere reseller of third-party apps when consumers purchase them off of the App Store. This decision radically expands the eligible parties that may seek antitrust class action relief against digital commerce companies that use mobile platforms. Under Section 4 of the Clayton Act, "any person who shall be injured in his business or property by reason of anything forbidden in the antitrust laws may sue...and shall recover threefold the damages by him sustained."⁴⁶ By virtue of the clause "any person," courts may apply the statute broadly. However, Illinois Brick limited that definition by only permitting courts to grant antitrust standing under Rule 12(b) (6) if the plaintiff is the direct purchaser of the company that overcharged as opposed to "others in the chain of manufacture or distribution."⁴⁷

To support its conclusion, the Ninth Circuit's interpretation of consumers as direct buyers from Apple explicitly decided to ignore that Apple or platform companies do not possess ownership rights in the third-party apps they host or set the price of the app. This is wholly inconsistent with the way in which app developers and platforms interact. Within this relationship, platforms are only entitled to the agreed upon percentage of the app developers' fee they pose to consumers. Aside from this fee, platforms have no ownership rights in that app. All creative rights solely belong to the app developer and are uninhibited by the platform. Moreover, when a consumer signs a "terms of service" for each app he or she purchases, the app's developer maintains sole responsibility for any breach of those terms. Therefore, with these factors in mind, Apple cannot be a reseller of apps by any definition.

Additionally, if the Supreme Court accepts the Ninth Circuit's interpretation, then it is endorsing the idea that consumers can object to terms from upstream negotiations, having one of two effects for our member companies: (1) to mitigate the threat of consumers suing platform companies for prices of apps, platform companies will engage in setting the price for our member companies' products or at least want more control over that aspect of their business models; or (2) platforms will not impose their nominal fees and, by extension, the services that come with it. The former situation would force app developers to release control over how they price their products. However, the latter produces losers at each stage because app developers would then have to absorb the exorbitant overhead costs they experienced before the advent of mobile platforms. In either scenario, these results could yield fewer choices and higher prices for the consumers buying apps on mobile platforms, Apple's included.

*B. Ohio, et al. v. American Express*⁴⁸

In this case, the U.S. Supreme Court attempted to address issues related to measuring indirect network effects within "two-sided" platform markets.⁴⁹ As the Supreme Court articulated in the case, the hallmark of a two-sided market is an intermediary platform providing a service to facilitate the transaction between consumers and enterprises. The Supreme Court held that state agencies must examine both sides of the market in which the platform participates to evaluate whether it is harming competition.⁵⁰ Although we generally agree with that result, there are some concerning elements within the Supreme Court's opinion in this case that should cause many developers pause. This is especially true if the Court intends to categorize mobile platforms (e.g., Apple's App Store or Google's Play Store) as a two-sided market in the context of consumers purchasing mobile apps. This is because, in fact, they may not be, particularly if the transaction is indeed the product as it was for American Express in this case. In the context of mobile platforms, the transaction is not the platform's "product" as defined by the Court in *Amex*, because platforms are not directly interfacing with consumers the same way a credit card company does for purposes of completing a transaction when consumers purchase third-party apps.

At this point, it is unclear as to whether the Court intended their test in the case to apply to the mobile platform market because their test is made specifically for two-sided markets and not ones where there are at least three distinct markets (possibly four if we include wireless carriers) to perform one transaction. The relevant markets for mobile platforms are: 1) the consumer to credit card company market; 2) the platform company to app developer market; and 3) the credit card company to platform company market. In the context of a credit card company, a Visa or Mastercard charges a rate to both the consumer (i.e., the interest from the monies it credited to the card user) and the vendor (i.e., the card's vendor fee) to manage the one transaction. However, mobile platforms do not operate that same way, because, unlike the vendor who alone dictates the price for everything in her store, platforms do not have a say on the app developer's price for his or her app; the app developer does. Additionally, mobile platforms only impose its fee on app developers it hosts and does not charge the consumer separately for every transaction when downloading an app where the developer has either imposed an upfront subscription fee or subsequent in-app purchases. The obvious question then becomes what does the Court consider the "transaction" and who is actually curating it for purposes of determining competitive harm. Thus, when purchasing an app at least three parties actually facilitate this transaction; the platform company manages the consumer's purchase for the developer who originally set the price for the app and the consumer's credit card company manages the transaction for them.

If a court interpreted this decision broadly to include mobile platform markets, it could make buyers of apps the sole customer of platforms, which, as we described above, has serious implications for our members and the customers they serve. Therefore, we encourage courts moving forward to read this case narrowly because it is rather indiscernible for courts at this time to define how they should measure harm for purposes of antitrust injury analysis in the mobile platform context due to this crucial distinction platforms have from credit card companies.

Conclusion

Apps drive the mobile economy, but the relationship between apps and mobile platforms is symbiotic. Moreover, mobile platforms provide apps with:

- lowered overhead costs;
- greater consumer access;
- simplified market entry; and
- strengthened intellectual property protections.

The growing symbiotic partnership between platforms and app companies is the causal element for the \$950.6 billion app economy's extraordinary growth. This relationship should be facilitated and nurtured through market-based solutions, almost unfettered by government intervenors 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.

End Notes:

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