

The Economics of *Apple Inc. v. Pepper*

The Supreme Court wrestled with the economics of the “app economy” in recent oral arguments in the case of *Apple Inc. v. Pepper*.¹ The justices raised dozens of questions about the supply and demand of products and services in a multi-sided market consisting of consumers, developers, and platforms.

The legal question before the Court was who has standing to sue for antitrust injury from an app store’s commission on app sales charged to developers. The economics questions, however, are much broader. For example, how much of a fee charged by the platform is paid by developers and how much by consumers; to what extent is an app store a two-sided market and how does that matter for antitrust injury; and who, if anyone, has market power in this setting?

Who Pays the 30 Percent Commission?

Apple charges developers 30 percent of an app’s price for making it available for download from the App Store. Who pays this fee—developers or consumers?

The answer matters to the Court because, according to the landmark *Illinois Brick* decision, only the direct purchaser has standing to sue for antitrust damages in this case. Apple and the United States argued consumers cannot file class actions for damages because developers, not consumers, pay the fees directly to Apple. A group representing iPhone users who have purchased apps in the Apple App Store argued that consumers should have standing to sue because they pay the store for apps directly and the prices they pay are allegedly higher because of the fee.

The Economics

From a pure economics perspective, defining the “direct purchaser” as the party that pays the fee is nonsensical. A fee charged to the developer is one of many input costs into developing and distributing an app. The extent to which it is passed on to the consumer depends on the nature of supply and demand. The only cases in which the fee would be paid entirely by one group are when supply is either perfectly elastic or inelastic. When supply is perfectly inelastic—meaning the quantity produced and equilibrium price do not change in response to the fee—then the developer (producer) pays the entire fee. When supply is perfectly elastic—meaning the price increases by the amount of the fee—then the consumer pays the entire fee. However, in the real world few goods are perfectly elastic or inelastic, meaning that consumers and developers both pay a share of the fee.

Furthermore, because supply and demand characteristics differ by app, the share of the fee paid by consumers and developers is not the same for every app. The equilibrium sale price and quantity of each app reflects a unique interaction of supply and demand made possible in the App Store.

Economics Staff

Scott Wallsten, PhD

(202) 828-4405

swallsten@techpolicyinstitute.org

Robert Hahn, PhD

(202) 828-4405

rhahn@techpolicyinstitute.org

Thomas Lenard, PhD

(202) 828-4405

tlenard@techpolicyinstitute.org

Sarah Oh, JD, PhD

(202) 425-7725

soh@techpolicyinstitute.org

Lindsay Poss, MA

(202) 828-4405

lposs@techpolicyinstitute.org

Nathaniel Lovin

(202) 828-4405

nlovin@techpolicyinstitute.org

For Press Inquiries

David Fish

(571) 389-4446

dfish@techpolicyinstitute.org

Technology Policy Institute

409 12th Street, SW

Suite 700

Washington, D.C. 20024

¹ Oral Argument, November 26, 2018, https://www.supremecourt.gov/oral_arguments/audio/2018/17-204; Transcript, https://www.supremecourt.gov/oral_arguments/argument_transcripts/2018/17-204_32q3.pdf.

The Law

Regardless of the economics, *Illinois Brick* says only the direct purchaser can sue for antitrust damages, so the Justices were forced to argue about how to identify something that has no real economic meaning in this case.

Justice Ginsburg started by asking who, if anyone, was a first buyer in this case.² Mr. Daniel Wall, representing Apple, said the first sale was made to a developer with regard to the 30 percent fee.³ Justice Sotomayor said the first sale was made to a consumer because a consumer bought apps directly from an app store.⁴ Justice Kagan noted that a consumer's purchase of an app from an app store was a "one-step" transaction because there was one click from phone to app.⁵

Justice Kavanaugh began to highlight the difficulties of defining "direct purchasers" when he asked Solicitor General Noel Francisco if the case would be different if the store purchased apps from a developer first, then added the commission, then sold the app to a customer.⁶ General Francisco said that yes, the case would be different because in that hypothetical, the store set the price, but in this case, a developer sets the price of the app. He argued that if the price setter was an indirect party, then *Illinois Brick* would bar a claim of treble damages by consumers who lack proximate cause or direct cause of injury.⁷ Mr. David Frederick argued on behalf of iPhone users, contrarily, that consumers were paying higher prices because of the fee⁸ and suggested that whoever sets the price of the app—whether developer or store—is irrelevant to the consumer's injury claim. Justice Kavanaugh appeared skeptical that these hypotheticals should be interpreted differently.

Justice Sotomayor also asked whether the order of payments mattered. She asked what would change if the store sold an app to a consumer, then passed on revenues to a developer, then asked for a 30% remittance payment from the developer for use of the store's distribution system.⁹ Mr. Frederick responded by suggesting that if a consumer purchased apps directly from a developer, the developer set prices freely, and the store asked for fees from the developer after the sale, then a consumer wouldn't be injured in the same way.¹⁰

Mr. Frederick implicitly acknowledged that fees may not be entirely passed through when he argued that injury to a consumer and injury to a developer could be different amounts.¹¹ Justice Gorsuch delved further into the nature of supply and demand by asking how courts could calculate damages when courts did not know if developers deducted the fee, in part or zero, from their own profits. What if a developer included the fee into the fixed cost of creating the app and did not raise prices for a consumer?¹² Were consumers claiming that the 30% commission paid by a developer was being 100% passed-through to a consumer, thus raising the price by 30%? If not, how should courts split the pass-through between the direct and indirect purchaser—whether the developer or consumer?¹³

Does the Apple App Store Have Market Power?

Justice Breyer noted that the only questions he needed to ask were whether monopoly power exists, and if so, who is injured? To Justice Breyer, questions about developers, consumers, pass-through, and allocation of damages were all irrelevant if plaintiffs could not prove market power. In other words, if Apple does not have market power then it does not matter who pays the fee because in that case a fee does not imply injury. Answering the question of market power required a discussion of the app economy, and especially app stores.

² Transcript at 4.

³ *Id.*

⁴ *Id.* at 5.

⁵ *Id.* at 21.

⁶ *Id.* at 30-31.

⁷ Transcript at 30.

⁸ *Id.* at 45-46.

⁹ *Id.* at 47.

¹⁰ *Id.* at 50.

¹¹ *Id.* at 35.

¹² The marginal cost of building an app is close to zero due to the replicability of software. The developer likely compares the stream of future revenues with the initial fixed cost of building the app. New versions and updates follow the first deployment of the app, but the initial cost of building the app is fixed.

¹³ Transcript at 39.

Is the App Economy Different from Traditional Economics?

Justice Breyer emphasized that the legal and economic questions in older antitrust cases are not so different from today's cases dealing with technology markets. Generally skeptical of new theories related to so-called two-sided markets,¹⁴ Justice Breyer asked why the App Store is different from any other type of distribution company. Is it different, he mused, than a hypothetical United Fruit Company paying banana farmers "a very low price plus 30 percent commission" and charging consumers that 30 percent commission?¹⁵

Justice Sotomayor, however, argued that an app store, mobile operating system, and device manufacturer are not like the vertically integrated brick suppliers in *Illinois Brick* that Justices Breyer and Kagan discussed.¹⁶ She called the app ecosystem a "closed-loop," with Apple as a "spoke," repeating her view that consumers are first purchasers of the 30% fee.¹⁷ *Illinois Brick* involved a vertical supply chain, while the app ecosystem is not entirely vertical.¹⁸ Mr. Wall argued that *Illinois Brick* itself was not just about defining vertical supply chains, but about limits on a pass-through theory of antitrust injury.¹⁹

How Would One Determine Whether the App Store Has Market Power?

Mr. Frederick argued that the App Store's requirement that developers set prices in \$0.99 increments proved market power. He said the store foreclosed developers from setting prices in smaller increments which could maximize their profits.

To estimate monopoly rents from the \$0.99 pricing policy, an economist would need to show that the developer's profits would be higher if the developer could sell more paid apps at prices not permitted in the app store, say \$0.32 or \$0.55 or \$0.77,²⁰ than he or she could at discrete price points of \$0.99 or \$1.99. Because app downloads are heavily skewed towards free apps, rather than paid apps, an economist might find a competitive price, perhaps at \$0.10 or less, that is a breakeven point for developer profits between fewer sales of an app at the \$0.99 price and more downloads of \$0 price apps sold as freemium apps with in-app purchases.

Does the Google Play Store Compete with Apple's App Store?

If one believes that apps are themselves a market, then part of an appropriate market definition will include the platforms from which one can get the apps. The more significant the competition the App Store faces, the less likely it is that any parties could incur damages from it. The largest two platforms for app distribution are Apple's App Store and Google's Play Store.

The European Commission (EC) recently concluded that the two platforms do not compete.²¹ The EC claimed that upstream competition between Apple and Android devices does not constrain anticompetitive conduct in the downstream app market.²² Specifically, the EC said

¹⁴ *Id.* at 11 (Breyer, J.); *id.* at 34 (Roberts, C.J.).

¹⁵ *Id.* at 12.

¹⁶ *Id.* at 13.

¹⁷ *Id.* at 27.

¹⁸ Transcript at 14.

¹⁹ *Id.* at 14.

²⁰ *Id.* at 24.

²¹ European Commission, *Antitrust: Commission Fines Google €4.34 Billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google's Search Engine*, July 18, 2018, http://europa.eu/rapid/press-release_IP-18-4581_en.htm.

²² *Id.* ("Nevertheless, the Commission investigated to what extent competition for end users (downstream), in particular between Apple and Android devices, could indirectly constrain Google's market power for the licensing of Android to device manufacturers (upstream). The Commission found that this competition does not sufficiently constrain Google upstream for a number of reasons...").

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that the iOS and Android operating systems do not compete with one another upstream,²³ and therefore, the Apple App Store and Google Play Store do not compete with each other downstream.²⁴

The EC's view on competition, however, is remarkably un-nuanced. Only if users do not and cannot ever choose between them would it be correct to say that Android and iOS do not compete. Moreover, for the EC's view that the app stores do not exert competitive pressure on each other, it must also be true that if users do choose between Android and iOS they do not take into account the app stores in their decisions.

In reality, consumers may take into account the quality and offerings of app stores when deciding what device to buy. An iPhone user might have purchased a Samsung Galaxy phone, or any other Android phone, and vice versa. The degree to which the app stores compete is also determined by how frequently consumers switch from one to another and the frequency with which new consumers enter the market. An iPhone user might switch or upgrade phones tomorrow to buy apps from the Google Play Store.²⁵

The degree of competition between app stores, mobile operating systems, and devices is an empirical question that presumably would best be measured and determined with data.

Conclusion

Apple Inc. v. Pepper raises important questions about the economics of doing business in the app economy as well as the usefulness of the *Illinois Brick* "direct buyer" rule in multi-sided platform settings. As digitization continues to transform markets for goods and services, the Court will continue to ask questions about how digital commerce differs from traditional commerce.

The Supreme Court will decide *Apple Inc. v. Pepper* in the coming months and add to the legal and economic understanding of so-called two-sided markets. Regardless of what the Court decides on the issue of antitrust standing, economists will need to keep talking about incentives in digital marketplaces and the growth of app ecosystems in global markets.

²³ *Id.* ("As a licensable operating system, Android is different from operating systems exclusively used by vertically integrated developers (like Apple iOS or Blackberry). Those are not part of the same market because they are not available for license by third party device manufacturers.").

²⁴ *Id.* ("For similar reasons to those already listed above, Google's app store dominance is not constrained by Apple's App Store, which is only available on iOS devices.").

²⁵ The switching costs argument is weaker today than it was in the early days of 2G and GSM phones. Today, mobile carriers offer data and number portability, and flexible financing and subscription plans. The European Commission disagrees with this view, *id.* ("Android device users face switching costs when switching to Apple devices, such as losing their apps, data and contacts, and having to learn how to use a new operating system...").