

The Apple Ecosystem in India

Its Value to Developers and Users

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Summary

The App Store in India is at the core of an ecosystem encompassing iOS app users and developers, and the resources and tools that Apple provides to help users and developers connect and interact in a safe and trusted environment.¹

This report estimates the total billings and sales facilitated by the App Store in India, focusing on app users, developers, and the business models and monetization strategies available to them. In addition, this report discusses the success and global reach of India-based developers as well as some important iOS platform policies, guidelines, and resources that facilitate the generation of economic value through the App Store.² These resources include the tools and services provided by Apple to developers and users, and policies that foster a safe and secure marketplace.

Billings and sales facilitated by the App Store in India amounted to more than ₹44,447 crore (\$5.31 billion) in 2024.³ For more than 94% of this amount, developers did not pay any commission to Apple.



India-based developers can reach a global user base through the App Store: In 2024, users from the App Store's 175 storefronts, downloaded apps from India-based developers more than 75.5 crore (755 million) times; 87% of developers in India were active on multiple storefronts and close to 80% of their App Store earnings came from users outside of India. India-based developers are also increasingly reaching a local audience: In the last five years, looking only at users in India, downloads from these users have more than tripled and earnings have increased more than fivefold.

The App Store provides a safe and secure environment for both developers and users in India. The App Store is governed by policies like the App Review Guidelines and processes that work to ensure that apps meet standards for privacy, security, and content. These policies can also help apps and developers comply with local regulations. On the developer side, Apple provides integrated hardware and software technology and developer tools, such as over 2,50,000 APIs, including as part of frameworks such as HealthKit, Metal API, Core ML, and Translate API. Apple also invests in education to help developers build apps. Additionally, the App Store's distribution, security and safety, discovery, payment, and analytics tools support developers in reaching users around the world. On the user side, Apple offers features that help users manage and protect their purchases, share purchases with family members, and manage their screen time. These guidelines, tools, and services benefit both developers and users, promoting growth in the number and quality of apps available to, and downloaded by, users, and in the billing and sales facilitated by the ecosystem.

The App Store's standard commission structure is transparent and simple and it covers all of Apple's technologies, tools, and services. The App Store commission structure applies to all developers selling digital goods and services in a given geography in the same way. The default commission rate is 30%, but the vast majority of app developers selling digital goods and services are eligible to pay a reduced commission rate of 15% on sales made via in-app purchases or paid downloads, e.g., through the Small Business Program. (Since 2021, all new developers and developers who earned up to \$1 million USD on the App Store in the prior calendar year are eligible to enroll in the Small Business Program.) Many developers monetize their apps in ways that do not entail Apple collecting a commission, such as selling physical goods and services, or through in-app advertising. In fact, a large majority of iOS app developers in India do not pay any commission to Apple.

1 The App Store, the users and developers, and the resources and tools that Apple provides are referred to as the "Apple ecosystem" throughout this report.

2 "India-based developers" refers to individual developers or developer teams with operational headquarters located in India.

3 Throughout this report, annual estimates are based on calendar years. Estimates of the billings and sales facilitated by the App Store in India are in crores of units. For reference, 100 crore is equivalent to 1 billion (i.e., ₹44,400 crore equals ₹444 billion). For units displayed in USD, the average exchange rate of Rupees to USD through 2024 was used (1 USD = 83.677).

Part 1 – A dynamic App Store ecosystem supported by local developers

Definitions of Billings and Sales

“Billings” refers to payments for paid downloads and in-app purchases, including subscriptions, that use Apple’s in-app purchase system. “Sales” refers to money spent by customers purchasing goods and services in general. I use the term “facilitated” to include the various ways in which apps contribute to generating billings and sales.

Methodology

“iOS apps” are defined in this study as apps on iPhone and iPad devices. Apps developed by Apple, such as Apple Music, as well as mobile browser apps, such as Google Chrome, are excluded from this analysis. Categories as presented in this report do not reflect App Store categories.

In-App Ad Sales

Estimates of in-app ad sales for iOS apps include revenue generated from the publishing of advertisements within apps only. Estimates do not include ad-network or other ad-tech revenue, advertising on mobile web (such as on mobile browser apps), or search advertising (such as Apple Search Ads).

In recent years, app usage in India has evolved, becoming central to the daily life of users throughout the country, with people using apps for everything from entertainment to grocery shopping, food delivery, financial transactions, etc. This trend is only expected to increase as the use of smartphones becomes more ubiquitous. This digital transformation can also be seen in how users in India interact with the App Store.

The App Store in India is dynamic: In 2024, on average, more than 2.2 crore (22 million) users visited the India App Store each week – double what it was three years ago. Throughout the year, iOS users in India downloaded apps nearly 110 crore (1.1 billion) times, which is also almost double what it was three years ago. A significant share of the App Store ecosystem in India is driven by the local developer community: 38% of the downloads by users in India in 2024 were for apps developed by India-based developers. This represents a 27% increase in the share of local downloads compared to five years ago.

In 2024, the overall size of the ecosystem, as reflected by billings and sales facilitated by the App Store, totaled more than ₹44,447 crore.

Of the ₹44,447 crore (\$5.31 billion), ₹2,527 crore (\$302 million), or almost 6%, came from digital goods and services consumed on iOS apps; ₹38,906 crore (\$4.65 billion), or 88%, were from purchases of physical goods and services made on iOS apps; and ₹3,014 crore (\$352.9 million), or 7%, were from in-app advertising on iOS devices. (See **Table 1**.)

Table 1: Estimated Billings and Sales Facilitated by the App Store Ecosystem in India, 2024 (INR, Crore)*

Digital Goods and Services**	₹2,527	6%
Physical Goods and Services	₹38,906	88%
M-Commerce		
General Retail	₹17,431	39%
Travel	₹11,429	26%
Food Delivery and Pickup	₹4,126	9%
Grocery	₹3,289	7%
Ride Hailing	₹2,631	6%
In-App Advertising***	₹3,014	7%
Total	₹44,447	100%

* Totals may not sum due to rounding.

** Billings and sales from digital goods and services are not the same as App Store billings. Sales from digital goods and services purchased elsewhere but used on apps on Apple devices are included, while billings from in-app purchases made via the App Store but used elsewhere are excluded. The estimate relies on third-party sources and Apple data. See Appendix for details.

*** iOS in-app ad revenue; does not include ad-network or other ad-tech revenue, advertising on mobile web, or search ads, including Apple Search Ads.

Apple does not collect a commission on purchases of **digital goods and services that happen outside of apps** (e.g., purchasing a subscription to a newspaper through a web browser), on **purchases of physical goods and services through apps** (e.g., when a user pays for a ride on a ride-hailing app or buys groceries online), **or on in-app ad revenue**.

Developers do not need to pay any service commission to Apple for more than 94% of the ₹44,447 crore in billings and sales facilitated by the ecosystem in India. That proportion is on par with what it is for developers in the rest of the world. (See **Appendix Table 1** for further methodological details.)

Digital goods and services: In 2024, billings and sales related to digital goods and services consumed on iOS apps in India were driven primarily by gaming and video streaming apps. As one of Asia's largest gaming markets, India experienced robust mobile game spending on the App Store. Video streaming platforms catered to diverse entertainment preferences. Meanwhile, dating apps, popular among young professionals, fueled demand for photo and video editing tools.

Physical goods and services: General retail is driving iOS-based in-app spending; travel, food delivery, grocery, and ride hailing are evolving. Shopping apps are among the most popular apps in India. In 2024, iOS-based spending on physical goods and services in India was dominated by general retail, highlighting the importance of mobile commerce in India.

With a surge in digital bookings for trains, flights, buses, hotels, and travel packages, the travel sector accounts for 26% of total App Store-facilitated billings and sales, a reflection of the digital transformation of India's travel services industry, which has enhanced convenience and personalization.

India's growing "gig economy" is showcased by the 22% of iOS app-based spending on food delivery and pickup, grocery deliveries, and ride hailing. "Quick commerce" is rapidly reshaping m-commerce in India.⁴ Thanks to digitization, ultra-fast delivery has become the norm for the industry in the country.ⁱ While these platforms primarily focus on fulfilling demand for groceries, food delivery, and personal care products, they are rapidly expanding to cover delivery of other types of products like over-the-counter and prescription medications.ⁱⁱ

In-app advertising: A large majority of in-app advertising on iOS apps was driven by ad spend on non-gaming apps, including social networking, messaging, media, productivity, and m-commerce apps. Advertisers in India are increasingly embracing the potential of in-app advertising to engage a wide and active audience.ⁱⁱⁱ

While this analysis captures the major app monetization strategies (see **Estimating the size of the App Store ecosystem**), the full economic impact of the App Store ecosystem extends beyond the estimates provided in this report, as the current methodology does not capture all of the ways in which the App Store ecosystem facilitates sales, or all of the benefits created by apps. For example, the App Store supports digital payment apps that use India's UPI technology as well as "companion apps" that raise the value of a company's goods and services, including smart home apps and health apps. In addition, the App Store positively impacts complementary sectors of the economy that benefit from increased demand for goods and services facilitated by apps on the App Store. As such, this analysis is a conservative estimate of the size of the App Store ecosystem.

4 "Quick commerce" is a form of rapid e-commerce and m-commerce model ensuring 10-30 minute delivery of high-demand items, such as groceries. It relies on hyperlocal warehouses, AI-driven inventory management, advanced logistics, and GPS tracking for efficient fulfillment.

Overall, these trends highlight India's growing digital consumption, where the App Store supports a diverse set of apps that provide entertainment, social connection, and personalization tools to Indian users.

Estimating the size of the App Store ecosystem

This study relies on the methodology to estimate the billings and sales facilitated by the App Store from the studies conducted by Borck, Caminade, and von Wartburg ([How Large Is the Apple App Store Ecosystem?, A Global Perspective on the Apple App Store Ecosystem](#), and [The Continued Growth and Resilience of Apple's App Store Ecosystem](#)).

Consistent with past studies, in this report, the direct monetization of apps represents a small fraction of the overall commerce the App Store facilitates, because developers can monetize their apps in several ways that do not involve payments through the App Store, such as:

1. Selling digital goods and services outside of the App Store for use within apps on Apple devices (e.g., news and magazine subscriptions, music and video streaming)
2. Selling physical goods and services through apps on Apple devices (e.g., food and grocery delivery or ride hailing)
3. Offering ad-supported content within apps (e.g., ad-supported games)

A complete description of the methodology used in this report is included in the Appendix.

Part 2 – The value of the Apple ecosystem for developers and users based in India

The App Store is a digital marketplace that allows app developers and users to interact and transact. It enables developers of all sizes, including small business and developers, to distribute apps (and updates) to a large base of users throughout the world. Users can download a variety of apps from many different developers. In addition to providing a global platform, the Apple ecosystem provides value to both developers and users through its continuing investment in technology, tools, and services to support the development of the ecosystem and by providing a safe, secure, and private platform that fosters trust between users and developers.

This section describes the success of India-based developers both globally and locally and explores the different tools and services Apple provides to users and developers in India.

The success of India-based developers on the App Store

India-based iOS Developers in 2024: by the numbers

75.5 crore+
downloads
worldwide in 2024

5x growth
in developer earnings
from users in India
since 2019



87%
of developers active
in storefronts
outside of India

79%
of earnings
from users
outside of India

Apple and the App Store help India-based developers succeed around the world

In 2024, users from all over the world downloaded apps from iOS developers in India more than 75.5 crore (755 million) times through the App Store, twice as many as five years ago. During the same time, the global earnings of India-based developers on the App Store more than tripled.⁵

"When we started building **Box Box Club** in 2022, we were just two motorsports fans eager to share our passion with the world. Over the years, **we collaborated with the Apple Developer Center and App Store teams in India to integrate widgets, Live Activities, accessibility features, and support for 17+ languages**—adopting the latest technologies to enhance our product. We also received valuable guidance from Apple’s design and engineering evangelists, helping us refine our interfaces and overall user experience."

Ranjith Ramanan,
Co-Founder of Arcade Club

The App Store’s global platform offers India-based developers the opportunity to distribute their apps to over a billion customers worldwide across the App Store’s 175 storefronts. India-based developers have taken advantage of this opportunity, successfully reaching a global audience: The vast majority, or 87%, had downloads from multiple storefronts — 27 on average in 2024 — and 43% of the 75.5 crore app downloads came from users outside of India. Further, the large majority, or 79%, of App Store earnings of India-based developers came from users outside of India.⁶ Developers who monetized on multiple storefronts had earnings from users on an average of 48 storefronts.⁷

A wide variety of apps from India-based developers have found success with global audiences. (See **Examples of apps from India-based developers that have found global success.**)

Many apps from India-based developers have also appeared on the most-downloaded apps charts in storefronts outside India. In 2024, apps from developers in India were in the top 100 most-downloaded apps in 70 storefronts outside of India. The platform that the App Store provides is particularly beneficial for small businesses in India, who can now more easily reach a global audience.

5 “Developer earnings” refers to the revenue that developers receive from monetizing their apps via paid app or in-app purchases, calculated as App Store billings net of Apple’s commission.

6 “Users outside of India” refers to users that are transacting outside of the India storefront.

7 Developers with total App Store earnings below ₹80,000 are excluded.

"As an app used by thousands of users everyday/every month, ease of use and simplicity play a pivotal role in our customer journey. **The support we have received from the App Store team has ensured that we build for scale, and optimize for App Store** using features such as offers, custom product pages, product page optimization, billing grace period etc. to give us the competitive edge, and our users a great experience."

Dhaval Sheth,
Chief Operating Officer
of Kiddopia

Examples of apps from India-based developers that have found global success



Kiddopia: A popular app focused on developing basic language, motor, and social skills in preschoolers in a gamified manner. Winner of several awards, including from parents associations, Kiddopia is one of the top kids' apps globally on the App Store with over 2,50,000 subscribers.^{iv}



IDZ: The IDZ developer team, focused on early learning apps, has developed a diverse portfolio of apps, including curriculum-based games, imaginary worlds, coloring activities, educational songs, storybooks, and games for toddlers, pre-K, and nursery kids. IDZ founders Aditya Mohatta and Nishant Mohatta have been involved with iOS design workshops at the Apple Developer Center in India.



Box Box Club: An app for car racing enthusiasts created by two developers who have seen impressive growth in recent years, Box Box Club integrates key Apple features such as Live Activities, App Shortcuts, widgets, watch complications, and translation tools, to offer users real-time race updates and exclusive content in 11 languages around the world.



LightX: An AI-powered photo and video editing application that leverages artificial intelligence to provide a wide array of creative tools. The app provides pre-designed, customizable and printable templates for photos and videos, both professional and personal. LightX's founders, who have achieved remarkable growth with their apps, are closely involved with the Apple Developer Center, including through participating in Core ML workshops.



Gameberry Labs: An award-winning startup developer of app-based classic board games, including Ludo STAR and Parchisi STAR, Gameberry Labs creates apps that help connect family and friends around the world. The developers have worked closely with the App Store on discoverability in the Middle East and North Africa regions.

Additional support and benefits of Apple's payment and commerce system

Apple's payment and commerce system makes it easier for developers to monetize locally as well as globally, supporting cross-regional payment processing and transaction management.

The App Store supports a large number of local payment methods, and allows developers to bill users in 44 currencies at no additional charge. That way, users do not need to incur foreign transaction fees when paying in their local currencies, regardless of where developers are based.

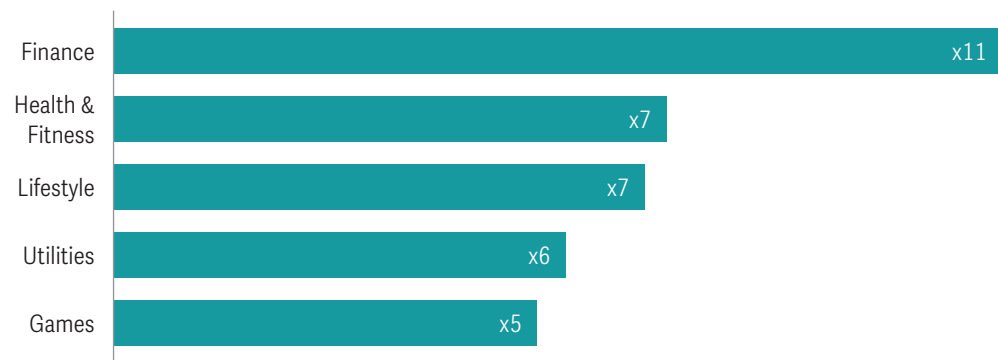
The App Store helps developers pricing globally, by suggesting prices in local currency, which are adjusted to account for local market factors.

Apple also administers tax on behalf of developers in over 70 countries and regions, and provides developers with the ability to assign tax categories, therefore reducing the administrative burden on developers, especially for those selling in multiple storefronts.

To facilitate global monetization, the App Store offers payment and commerce tools that make it easy for users outside of India to purchase apps from India-based developers, make in-app payments, or purchase subscriptions. This is particularly useful to small business who can benefit from these built-in tools and support. (See sidebar on **Additional support and benefits of Apple's payment and commerce system.**)

India-based developers have been successful across a diverse range of app categories. In 2024, the Games category was the top-earning app category for iOS India-based developers, with earnings growing more than fivefold over the last five years. During that span, many other app categories have also experienced rapid growth: On average, across all app categories with more than ₹1.5 crore (\$179,261) in earnings in 2019, developers saw their earnings increase more than fourfold by 2024. Finance apps such as those that help users manage their personal finances, track expenses, and check stock portfolios experienced the largest growth, with developers' earnings increasing 11-fold. Apps from the Health & Fitness, Lifestyle, and Utilities categories grew between six and sevenfold. (See **Figure 1.**) Other categories outside the top five have also grown significantly. For example, earnings from Entertainment apps, one of the largest categories in terms of total developer earnings, increased more than fourfold in the last five years.

Figure 1: Top 5 App Categories by Earnings Growth for India-Based Developers



Note: Top 5 app categories based on growth in earnings between 2019 and 2024. Categories with less than ₹1.5 crore total earnings in 2019 are excluded.

Apple and the App Store support the local growth and success of India-based developers

In addition to seeing growth from users around the world, India-based developers of iOS apps are seeing even stronger growth among local users. Compared to five years ago, downloads from iOS users in India have more than tripled and earnings from users in India increased more than fivefold. (See **Examples of apps from India-based developers that have had local success in India.**)

"The App Store has been a great one-stop platform for us to connect with a global audience. The experience is seamless, enabling us to scale efficiently and provide a smooth content experience for users. The App Store team is actively involved, offering industry benchmarks, and valuable insights that help us optimize our presence. Their support with featuring opportunities has significantly boosted our reach, helping **Chaupal** connect with an even wider audience."

Gurjit Singh Ghuman,
Business Head - Product,
Tech and Analytics of
Chaupal

Examples of apps from India-based developers that have found local success in India



Chaupal: With 22 official languages recognized in India, and over 100 spoken languages, Chaupal provides a popular video streaming platform focused on providing content in regional languages, including Punjabi, Haryanvi, and Bhojpuri to a global audience. With support from the App Store, Chaupal has been able to expand within India and overseas.



CricHeroes: A cricket scoring and streaming app that has made amateur cricket experiences accessible to millions of cricket fans. CricHeroes is deeply integrated with Apple's latest technologies, including Control Center widgets, Custom App icons, Live Activity on watchOS, and StandBy mode. CricHeroes is backed by partnerships with 58 International Cricket Council-affiliated and 20 Board of Control for Cricket in India-affiliated cricket associations.^v



Swiggy: A one-stop shop app for restaurant food delivery, pickup, and dining from over 1,96,000 local restaurants in more than 650 cities in India.^{vi} Swiggy supports a range of Apple technologies, including App Intents and App Shortcuts for seamless user interactions, Live Activities for real-time updates, Accessibility features like VoiceOver and Dynamic Type, and translation capabilities to cater to a diverse user base. The developers have also recently entered India's rapidly growing quick commerce market, with Swiggy Instamart, focused on delivery groceries in under 30 minutes.

Notably, India-based developers have also designed popular apps targeted at the growing quick commerce and gig economy in India and beyond. These apps provide essential on-demand services, making daily tasks more convenient for millions of users, while providing workers with access to flexible job opportunities. These apps offer grocery delivery, transportation options, and home and personal services through digital platforms, with Apple receiving no commission for those transactions (See **Examples of gig-economy apps from India-based developers.**)

Examples of gig-economy apps from India-based developers



Urban Company: Urban Company allows users to book professional services from more than 50,000 trained professionals, including home repairs, beauty treatments, and wellness services, in 60 cities across India, the UAE, Singapore, & the Kingdom of Saudi Arabia.^{vii}



Porter: Porter partners with 7,50,000 drivers to offer on-demand transportation of goods in more than 21 cities in India.^{viii} Users rely on Porter to rent mini-trucks for transporting goods, provide instant parcel delivery via bike riders, or book movers or long-distance goods transportation.

The App Store helps small businesses and developers more economically showcase and distribute their app to users. Small developers have found success on the App Store: Total App Store earnings of small developers who were active in 2021 increased by 74% between 2021 and 2024 (See **The success of small developers on the App Store.**)

Small Business Program

In January 2021, Apple launched the App Store Small Business Program, through which new developers and developers who earned up to \$1 million USD on the App Store in the prior calendar year can qualify for a reduced commission rate of 15%.

“As a mechanical engineer turned solo developer, I started from scratch with no coding background or industry connections.

Apple’s developer resources, design guidance, and powerful technologies like SwiftUI have empowered me to create apps like Lumy, reaching users worldwide.

The team at the Apple Developer Center has been especially helpful, always approachable and asking the right questions that help me improve my apps. **The App Store made it possible for an indie creator like me to turn passion into a sustainable career.** It’s heartening to receive emails from people across cultures sharing how my apps improve their daily routines.”

Raja V,
Indie developer of Lumy and Calzy

The success of small developers on the App Store

The Apple ecosystem supports the growth and success of small developers. In addition to developer education and support, Apple has provided since 2021 a reduced commission rate for small developers enrolled in the Small Business Program. (See sidebar on the **Small Business Program** for more details.)

The success of small developers can be seen in their growth in the last five years: More than half of developers who earned more than ₹1 crore (\$119,507) in 2024, were either not on the App Store or had less than ₹8 lakh (\$9,561) in earnings in 2019.^{8,ix} Additionally, total App Store earnings of small developers who were active in 2021 increased by 74% in the three years between 2021 and 2024.⁹

Examples of apps from small developers in the App Store Small Business Program



Lumy: Designed to track sunlight, sunset, and solar moon to help people their personal routines and outdoor activities, Lumy was created by independent Indian developer Raja Vijayaraman. This app won the “Apple Watch App of the Year” Award in 2024 and was part of Apple’s Developer Showcase in New York City in 2024. On iOS 18, Lumy can guide users to catch the sunset, or give themselves a break outside, based on the moods users document in the Health app.



Hitwicket Cricket Game 2025: A Cricket strategy game app used by over 15 million users across USA, India, UK, Australia, South Africa, Pakistan and over 109 other countries, Hitwicket Cricket Game 2025 won the App Innovation Challenge 2020 launched by the Prime Minister of India.^x



Tasks: Tasks, along with Karo, are successful productivity apps developed by Mustafa Yusuf, a solo Indian app creator, who often attended sessions and received guidance at the Apple Developer Center in Bengaluru. Both Tasks and Karo have both been featured on multiple App Store storefronts globally.

⁸ The ₹1 crore threshold was selected to account for local purchasing power in India.

⁹ The criteria for categorizing small developers are broader than those of the Small Business Program and include developers that do not sell digital goods and services directly on the App Store as well as developers that do not participate in the Small Business Program. A developer on the App Store is considered to be a small developer in a given year if it had fewer than one million downloads and less than ₹8 crore in earnings across all its apps in that year. Developers who never had more than 1,000 annual downloads from 2021 to 2024 are excluded. To limit the effect of a few large-scale successes driving the results, this analysis excludes developers that earned ₹15 crore or more in any year over the 2021 to 2024 period.

How Apple and the App Store provide value to developers and users

The value of the Apple ecosystem extends beyond the App Store itself. It also stems from Apple's platform technology, and the tools and services Apple provides to support users and developers. Apple's continuing investment in technologies and education has enabled developers to create high-quality and innovative apps.

Further, Apple's investments in the security, safety, and privacy of its ecosystem provides users the trust to download and use iOS apps. These guidelines, tools, and services benefit both developers and users, promoting the growth of the ecosystem.

The value and support that Apple provides developers

Beyond providing developers with a platform to reach a global user base, Apple's continuing investment in the iOS ecosystem facilitates the development and discovery of new apps, gives developers the ability to add new functionality to existing apps, and offers metrics to track app performance and engagement. More specifically, Apple provides support to developers in the following ways:

"At **CricHeroes**, we're committed to making grassroots cricket truly world-class. With millions of passionate cricketers relying on us, simplicity and innovation are at the heart of what we do. **The support from the Apple Developer Center team has been invaluable, enabling us to scale and integrate cutting-edge technologies like Apple's Image Playground API.** This has helped us deliver more personalized and engaging experiences for our users — something we're incredibly proud of."

Abhishek Desai,
Co-Founder of CricHeroes

- **Integrated hardware and software technology and developer tools and services:** Apple has released over 2,50,000 APIs, including as part of frameworks such as HealthKit, which provides a secure option for apps to create apps based on user health data; the Metal API, which can improve performance and make cutting-edge, graphics-intensive designs possible (used by NotesHelf 3); Core ML, which allows developers to integrate machine learning models into their apps (used by NaadSadhana), and Translate API, which provides in-app translation tools (used by SignEasy). (See **Examples of apps by India-based developers that use Apple technology and features.**)
- Tools like **Xcode** and **Swift** have been designed to support developers in app development, including the visual design, adoption of features and frameworks, and troubleshooting issues. And testing tools such as **TestFlight** connect developers and users during the app's testing phase. The limited number of Apple devices and operating systems minimizes fragmentation, making it easier to develop apps, since iOS apps need to be designed for a small number of devices and operating system versions.^{xi}
- **Distribution:** The App Store enables developers to distribute their apps to all iOS users around the world via a single platform. The App Store also makes sure users receive the latest features and security updates. In 2024, the App Store facilitated an average of more than 66 billion app updates each week worldwide and more than 2 billion updates for users in India.
- **Trust and safety:** A marketplace that is trusted and secure allows users to confidently download apps, helping developers reach more users. Particularly as digital threats become more common, Apple's App Review policies and history of

continual investments in technologies to monitor and prevent fraudulent activity help enhance this trust. Additionally, developers benefit from reduced fraud: Between 2020 and 2023, Apple prevented over \$7 billion of potentially fraudulent transactions globally — a safeguard that also supports developers in India, many of whom depend on revenue from international users. The App Store’s policies can also help apps and developers comply with local regulation.

- **Discovery:** Developers can use tools to drive discovery and user engagement. The App Store facilitates this process through product pages (e.g., ratings and reviews on the App Store, and the ability to create custom product pages for developer marketing and promotions that highlight different app features for different users), advanced search functionality (e.g., natural language search, search suggestions), curation and personalization (e.g., App of the Day), optimization and data analytics (e.g., the app developer dashboard, offline marketing optimization), and product pre-orders (which allow users to pre-order apps before launch).
- **Payment and commerce:** The App Store allows users to pay with different payment methods, including UPI (with Autopay), Internet banking, and App Store closed loop digital gift cards (available through leading e-commerce platforms and digital wallets). Moreover, the App Store allows for payment in foreign currency, tax handling through App Store Connect, family sharing, and parental controls.
- **Analytics:** The App Store offers analytic tools that allow developers to track their app’s performance, engagement and usage, analyze trends, track the performance of marketing campaigns, and compare benchmarks to similar apps. These benchmarking tools are designed to preserve the privacy of other developers’ data while providing actionable insights for developers to better reach their target audience.
- **Developer education and support:** Developers benefit from support, guides and documentation provided by Apple, and the ability to connect with Apple experts. Apple interacts with developers in India through a variety of channels, including workshops designed to help them build faster, more efficient apps. These workshops focused on optimizing app performance, enhancing accessibility, and educating developers on new features developed by Apple that can help improve users’ experiences, such as Apple Intelligence, Apple’s suite of AI tools, or Apple’s App Intents, a framework of tools that developers can leverage to integrate their apps with Siri, Spotlight and other system-wide features.

Apple invests in the next generation of Indian developers through the Apple Developer Center in Bengaluru, which promotes awareness of the latest Apple technologies, designs best practices, and supports developers in creating world-class apps. Through the Apple Developer Center, Apple has reached over 2,000 students across India, and over 500 developers based outside of tier-1 cities in India. Apple has also introduced iOS student developer program, an industry and

"Noteshelf is the preferred note-taking app for millions of users worldwide, and we're committed to delivering the best user experience possible. **The Apple Developer Center in Bengaluru has played a crucial role in this journey**—offering valuable insights into our app's UX and enabling us to be early adopters of new Apple technologies such as Interactive Widgets and Apple Intelligence."

Rama Krishna,
Founder of Fluidtouch

academia partnered initiative designed to build and nurture iOS developer talent in India. By collaborating with Indian universities—such as the SRM Institute of Science and Technology and Galgotias University—on areas of access to technology, curriculum, improved pedagogical approaches, and industry best practices, the initiative leverages Apple’s learning resources to help students learn iOS app development and gain critical tools to launch their careers in the developer industry.

"At **SignEasy**, every tap and swipe in signing and sending documents is designed to feel effortless. **The Apple Developer Center in Bengaluru has played a big part in making contract management easy for millions of our mobile users.** Their guidance has helped us scale smoothly, make the app more intuitive, and bring in the latest Apple features like Message Translation, Control Center shortcuts, and Apple Pencil Pro support. With their collaboration, we’re excited to keep raising the bar for user experience, delighting individuals and businesses worldwide."

Santhosh,
Head of Mobile Business
of SignEasy

Examples of apps by India-based developers that use Apple technology and features



SignEasy: A leading eSignature app designed for seamless signing and sending of documents. This app is available, thanks to Translate API, in 24 languages, is integrated with Control Center actions, Lock Screen widgets, supports Spotlight actions, and leverages Apple Intelligence to provide AI functionality.



Noteshelf 3: This app helps users take handwritten & audio notes, annotate PDFs, and effectively organize their notes. NoteShelf 3, originally developed by founder Rama Krishna in 2010 but having grown into a company with over 35 individuals, is localized in 8 languages, provides seamless iCloud Sync, widgets, Siri integration, Vision framework, and Spotlight indexing for enhanced searchability across all Apple platforms.



NaadSadhana: A groundbreaking app developed by Sandeep Ranade and available exclusively on iOS, NaadSadhana uses AI to help musicians practice, perform, and create music by providing real-time musical accompaniments on 26 different instruments. Winner of the Apple Design Award in the Innovation category, NaadSadhana conducts vocal analysis, which requires heavy processing, by relying on Apple’s processing power without prohibitive battery life impact.



Meditate: A meditation app, originally developed for Apple Watch with guidance from the Apple Developer Center, Meditate is a meditation timer, tracker, reminder, and motivator. Meditate leverages Apple technologies, including SwiftUI, StandBy, widgets, Live Activities, and Controls. Meditate was a 2024 Apple Design Awards finalist for its visuals and graphics.

Apple charges developers a commission, which covers all the technologies, tools, and services made available to developers.^{10,11} The commission structure is simple, transparent, and applies to all developers selling digital goods and services in a given geography in the same way:

- By default, developers of digital content, services, and subscriptions earn 70% of sales from paid apps and in-app purchases, and Apple collects a 30% commission. The standard commission rate has not changed since the launch of the App Store.
- Apple has introduced a reduced commission rate of 15% and expanded eligibility over time. The reduced rate applies to several categories of sales, including sales from subscriptions after the first year and sales from developers enrolled in the Small Business Program (See sidebar **Small Business Program**, p. 11). The vast majority of India-based developers selling digital goods are eligible to pay a reduced commission rate.

Many developers monetize their apps in ways that do not entail Apple collecting a commission, such as selling physical goods and services or through in-app advertising, as many game developers do. In India, the vast majority of app developers do not pay any commission to Apple.

Apple provides value to its users in India

The security, safety, and privacy provided to users on the App Store, along with tools that allow users to manage their apps, have been important for the growth in iOS app downloads and usage over time. Apple's unique approach integrates hardware, software, and other services to provide users with a secure, private, and user-controlled experience to discover and enjoy new apps. Therefore, Apple designs policies, rules, and programs to promote the safety and utility of the App Store marketplace.

Apple has invested in the development of policies to foster user trust and the deployment of resources to enforce them. Apple reviews every app and the app updates as part of App Review, working to ensure high standards for privacy, security, and content. For example, as part of these efforts, Apple removed or rejected 40,000 apps in 2023 from developers worldwide who engaged in bait-and-switch activity (a known tactic where fraudulent developers submit an app that appears compliant for review, then switch it to a deceptive version once it has been approved). Apps and in-app content also need to meet the App Review Guidelines, be periodically updated, and not represent a privacy risk for users. The App Store's automatic app updates also ensure that users have the latest and most secure version of apps. Compared to the early 2000s, when downloading software

¹⁰ For sales made in some countries, due to local laws and regulations, developers can elect to pay only for a subset of Apple services.

¹¹ In addition, to upload apps, Apple charges developers a \$99 USD fee for the Apple Developer Program. These fees are fixed and do not affect the commission rate on paid app downloads or in-app purchases, including subscriptions.

came with the risk of getting a misleading product or infecting one's device with a virus, App Store users face far lower risks when downloading or updating apps. In India, fostering trust between users and developers is critical for the success of a digital platform such as the App Store.^{xii}

Apple's privacy features have also helped protect users in India. The App Store safeguards user privacy through App Tracking Transparency, which requires apps to get the user's permission before tracking their data across apps or websites owned by other companies, and Privacy Nutrition Labels, which require every app on the App Store to give users an easy-to-view summary of the developer's privacy practices, giving users key information about how an app uses their data. These privacy features apply to Apple's own apps as well.

Apple and the App Store also provide value to users by giving them tools to manage their app content and usage, which fosters trust by giving them more control. These include purchase management tools, family sharing and protection tools, and screen time tools:

- **Apple gives users the ability to manage and protect their purchases.** The App Store provides convenient, safe, and secure payments. Through the App Store, users can track and manage payments for subscriptions and in-app purchases all in one place—including cancelling subscriptions. If a user encounters an issue with a purchase they made with an app downloaded from the App Store, Apple Care is available to provide support and issue refunds.
- **Apple provides tools for families and kids,** including as Family Sharing, which allows families to share purchases, and the "Ask to Buy" feature, which allows parents to approve or decline purchase requests, to protect kids. App Store policies enforce strict guidelines around data collection and security on apps in the Kids category. For example, these apps may not send personally identifiable information to third parties or contain third-party analytics or advertising. And if these apps include links outside of the app, a parental gate must be included. Some third-party app stores appear to have less stringent policies and review procedures for family apps, which has led to instances of apps targeted at children showing inappropriate content and bypassing parental consent for purchases.^{xiii}
- **Users and parents can use Apple's Screen Time tool to track and manage their or their kids' app activity.** With features like App Limits, users can set time restrictions on specific apps to promote healthier app usage. For parents, Screen Time provides additional control over their children's screens by allowing them to set app limits, schedule downtime, and review detailed activity reports.

Conclusion

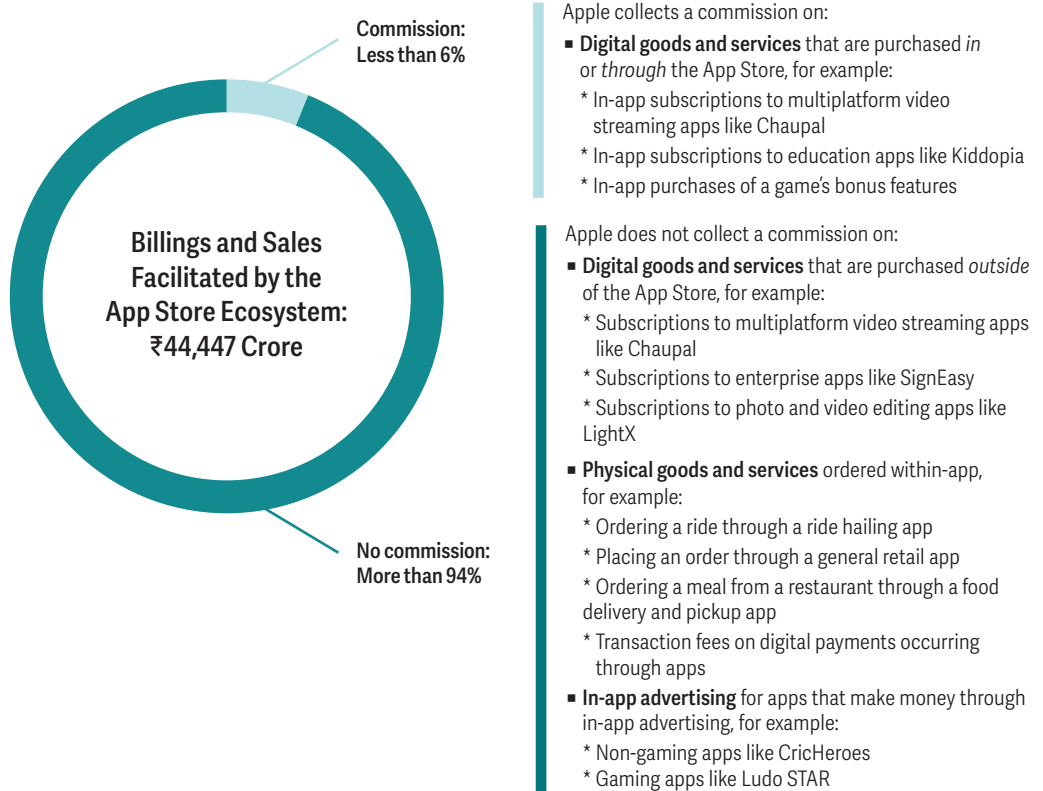
The App Store in India is at the core of the Apple ecosystem, connecting developers and users through a secure and trusted digital marketplace. In 2024, the App Store facilitated over ₹44,447 crore (\$5.31 billion) in billings and sales in India, and developers do not pay any service commission to Apple for more than 94% of that amount.

Additionally, India-based developers can reach a global audience through the App Store. In 2024, apps from India-based developers were downloaded over 75.5 crore (755 million) times worldwide, and almost 80% of the earnings of these developers came from users outside of India. Developers in India are also experiencing rapid growth among users in India, with downloads tripling and earnings increasing over fivefold in the past five years.

Apple supports this ecosystem and the reach and growth of Indian developers through tools, services, and policies—ranging from APIs and developer frameworks to App Review Guidelines—that promote privacy, security, trust, and innovation and benefit both users and developers. The large majority of Indian-based developers can use these tools and services for free or benefit from reduced rates, further empowering them to succeed on a global stage.

Appendix

Appendix Table 1: Breakdown of Where Apple Collects a Commission on Billings and Sales Facilitated by the App Store



Methodological approach

The study considers three primary app monetization strategies that developers rely on:

- **First, to sell and distribute digital goods and services.** Sales and distribution of digital goods and services can occur through the App Store in the form of paid app downloads and in-app purchases, or through the sale of digital content and subscriptions from multi-platform apps that allow for the use and consumption of the app, both in the App Store ecosystem and elsewhere. Examples of apps using this monetization strategy include those for gaming, dating, video and music streaming, fitness and health, and news and magazines. (See estimates in **Table 1**, “Digital Goods and Services.”)
- **Second, to sell physical goods and services through the app.** Apps using this monetization strategy are m-commerce apps generally, including apps for ride hailing, food delivery and pickup, grocery delivery and pickup, general retail, and travel. (See estimates in **Table 1**, “Physical Goods and Services.”)
- **Third, to sell in-app advertising.** Examples of apps using in-app advertising as their primary monetization strategy are social network and short video sharing apps. (See estimates in **Table 1**, “In-App Advertising.”)

Different methodologies and data sources are used to estimate billings and sales facilitated by the App Store ecosystem for each of these monetization strategies. Data sources include data from Apple, app analytics companies, market research firms, and individual companies. To ensure the reliability and robustness of the estimates, key inputs are validated and compared from different data sources.

While this analysis captures the major app monetization strategies, it does not capture all of the ways in which the App Store ecosystem facilitates sales, or all of the benefits created by apps. For example, it does not capture benefits that companies derive from “companion apps” that raise the value of their goods and services, including smart home apps and health apps.

Sales and distribution of digital goods and services

Developers can choose to monetize their iOS apps in different ways, which has implications for the appropriate way to estimate total sales that the App Store facilitates. For example, some developers can choose to monetize their iOS apps only through the App Store, and those apps can only be used on the iOS platform. For these types of apps, App Store billings are equivalent to sales generated by the app. For iOS apps that sell digital goods and services only through the App Store, this study counts total billings,

which include Apple's commission.¹² Billings represent the total amount customers pay.¹³ For these categories, the study relies on Apple billings data.

Other developers may choose to monetize their iOS apps outside of the App Store—through the reader rule for instance—while the content would be consumed on an iOS app. Some monetize both through the App Store and other platforms or devices, and the app content can be consumed on multiple devices. In both cases, purchases and consumption are not device specific and purchases may not reflect where the consumption of the product or service happens. To illustrate how purchases may not adequately reflect consumption, consider for example a subscription to the video streaming service Chaupal. A user can purchase a subscription to Chaupal on their desktop or mobile browser, for example, but watch most of the content through the Chaupal app on iOS devices. In this instance, App Store billings would be zero and would understate the value of the Chaupal product enjoyed through apps on Apple devices.

When purchase and use differ significantly, App Store billings do not reliably measure engagement with iOS apps and a different approach is used for attributing the appropriate share of billings and sales to the App Store ecosystem. In those cases, estimates rely on the proportion of use that occurs on apps in the App Store ecosystem to estimate how much of the total sales of multi-platform apps (App Store plus non-App Store) is facilitated by the App Store ecosystem.

For several categories of apps, this study estimates the volume of sales facilitated by the App Store ecosystem: video streaming, e-books and audiobooks, newspapers and magazines, and enterprise. This study also considers variation in users' app consumption habits across categories, using third party research. For example, consumers often listen to audiobooks through apps on mobile devices, while they are more likely to stream videos on smart TVs. Additionally, when the data is available, variation in the consumption patterns of iOS (and non-iOS) users by app type is taken into account. Estimates of total sales rely on inputs from third-party sources, typically market research firms.^{14,xiv} The sales are apportioned using the share of content consumed in apps on any platform, based on information collected from marketing surveys, company reports, or data on usage patterns.^{xv} Finally, usage is apportioned to Apple iOS devices specifically using the iOS market share for each device category in India.^{xvi}

Enterprise apps, which allow businesses and organizations to provide tools and capabilities on smartphones and tablets, are treated differently than consumer apps. Usage patterns are more heterogeneous for enterprise apps than consumer apps and app- and desktop-based usage of enterprise products tend to be more integrated. This study

¹² In 2024, Apple's commission rate was 30% for the sale of digital goods and services; for subscriptions, it was 30% for the first year and 15% for any subsequent years. Developers who made up to \$1 million USD (approximately ₹8.37 crore) in 2023 for all of their apps, as well as developers new to the App Store, qualify for the Small Business Program and pay a reduced commission of 15%.

¹³ App Store billings for 2024 are in Indian Rupees.

¹⁴ Estimates from third-party sources reported in US Dollars are converted into Indian Rupees using average annual exchange rates published on the US Internal Revenue Service website.

estimates sales from eight major enterprise apps or families of apps – Microsoft Office 365, Google Workspace (i.e., enterprise versions of Google productivity tools such as Gmail and Google Docs), Adobe (Acrobat), Dropbox, Box, and Webex. The analysis also includes an aggregate market-level estimate for mobility management apps, which allow employees to securely access business content. The sales are apportioned to the Indian market using statistics from Statista.

Total billings and sales facilitated by the App Store across digital goods and services categories are shown in **Table 1** (“Digital Goods and Services”).

Sales of physical goods and services through the app

Many developers monetize their apps by selling physical products through their apps. These include apps that let customers purchase physical goods and services. This study broadly refers to these as m-commerce apps.¹⁵ The group includes apps for general retail, ride hailing, food delivery and pickup, grocery delivery, and travel. Total sales facilitated by the App Store across physical goods and services categories are shown in **Table 1** (“Physical Goods and Services”) with a breakdown by categories.

In India, mobile apps are an important m-commerce channel due to their convenience.^{16,xvii} Apps from retailers allow consumers to browse and purchase physical goods directly in the app and offer delivery. In addition, mobile apps—including those for ride hailing, food delivery and pickup, grocery delivery and pickup, and mobile pickup ordering—have been central to the creation or expansion of certain business models.

Sales on m-commerce apps do not happen through Apple’s in-app purchase system.¹⁷ Third-party data estimates the volume of sales of physical goods and services from transactions on mobile apps.¹⁸

For many of the m-commerce categories, this study relies on Statista’s Digital Market Outlook and Mobility Market Outlook data for online sales revenue. For general retail, estimates come from EMARKETER.

For each app category, the total volume of e-commerce or m-commerce sales relies on estimates of third-party sources, typically market research firms.^{xviii} This study then apportions the volume of sales, if necessary, to purchases that occur via smartphone and tablet apps. For example, for online food delivery and pickup, customers may place orders via an app, a mobile browser, or a desktop browser. The share of each app category’s sales that occur via mobile apps are estimated using information collected from marketing

15 M-commerce refers to the buying or selling of goods and services on mobile devices, either through mobile apps or mobile browsers.

16 In India, more than 80% of online retail is mobile.

17 Since the launch of the App Store, Apple’s policy has been to not charge a commission on sales of physical goods and services or advertising.

18 The sales associated with purchases made on mobile browser apps are excluded.

surveys or data on usage patterns.^{xix} Finally, usage to Apple platforms is apportioned based on the overall iOS share market share.^{19,xx}

In-app advertising

In-app advertising is a frequently used and effective method of monetizing apps whereby developers publish advertisements within their apps. This is a common monetization strategy for game apps. These apps tend to be free to download and use, but in-app advertising can also be a complementary monetization strategy for paid apps or apps with in-app purchases.

Users have been spending more and more time on their mobile devices, particularly using apps, which has led to an increased share of digital marketing expenditures going toward in-app advertising. Given that apps are used frequently throughout the day—for example, during commutes or moments of downtime—in-app advertising allows advertisers to reach users in ways that other marketing channels cannot. Compared with mobile web, the app environment is a more effective way for advertisers to reach their audiences, with in-app advertisements allowing for personalized and contextually relevant ad messages.

Technology research firm Omdia estimated that in-app ad sales for iOS apps were \$0.4 billion (approximately ₹30,100 crore) in India in 2024.^{xxi} This estimate includes revenue generated from the publishing of advertisements within apps only and excludes advertising on mobile web (including mobile browser apps), search advertising, and Apple Search Ads. Omdia derived this estimate based on ad sales reported by large digital advertising firms, and then used data analytics from mobile ad platforms to apportion the iOS share, limited to in-app advertising only (i.e., by removing mobile web advertising), and to adjust for ad price differences between the iOS and Android app platforms. This study uses Omdia's research for in-app ad sales.

Additional dimensions not included in estimates

The App Store has also made it easier and more secure for consumers to sign up for subscriptions and make purchases of digital goods and services. This may lead to incremental sales for app developers regardless of the platform chosen by users to consume the digital goods and services. Apps have also allowed traditional firms and industries to expand their offerings of a wide range of products via connected devices—devices that typically require the use of apps to control and monitor them. The App Store has enabled a new generation of home devices like smart thermostats and doorbells, for example, as well as new possibilities for health like connected blood pressure cuffs, smart scales, and even hearing aids.

¹⁹ Apportioning by iOS market share almost certainly results in a conservative estimate because owners of iOS devices tend to spend relatively more than owners of Android devices.

About the author



Viswanath Pingali is a professor in the economics area at the Indian Institute of Management Ahmedabad (IIMA). His research interests include digital markets, competition law, and healthcare. His articles have appeared in publications such as the International Journal of Industrial Organization, Economics and Political Weekly, and Journal of Health Economics. He teaches courses on microeconomics, game theory, and behavioral economics and has received the SRK Distinguished PGPX Faculty Award in 2019. Dr. Pingali has provided extensive consultancy to renowned corporations, including ONGC, Tata Motors, Mahindra, Competition Commission of India (CCI), and leading law firms in India, on matters related to competition and economics. He has a PhD in economics from Northwestern University (USA) and MS in quantitative economics from Indian Statistical institute (Calcutta, India).

Sources

- i Binmile, "Quick Commerce Business Model Explained: Key Strategies for Success in a Fast-Paced Market," 2024.
- ii The Economic Times, "Zepto expands into pharmacy, wellness space," 2025.
- iii Statista, "In-App Advertising – India".
- iv Nazara Technologies Limited, "25th Annual Report 2023-24".
- v CricHeroes Pvt Ltd, "Cricheroes: Your Cricket Matters".
- vi Swiggy, "Annual Report 2023-24".
- vii UrbanClap Technologies India Pvt. Ltd., "About Us".
- viii SmartShift Logistics Solutions Pvt. Ltd., "Porter".
- ix World Bank, GDP per capita, PPP (current international \$).
- x Metasports Media Private Limited, "Hitwicket".
- xi Infinum, "Android Development is 30% More Expensive Than iOS. And We Have the Numbers to Prove It!," October 27, 2015.
- xii Chadha, Nishant, Viswanath Pingali, and D. Daniel Sokol, "Small Firms and Digital Platforms," September 16, 2023.
- xiii National Online Safety, "What parents need to know about The App Store," September 2018.
- xiv Statista, "Digital Market Outlook"; other market research.
- xv Comscore, "US Share of App Minutes and Unique Visitors, 2022 and 2024"; Quantum Marketer, "Spotify Statistics 2025: Users, Market Share, Growth & Revenue"; Company Annual Reports; other market research.
- xvi Statcounter.
- xvii Businesswire, "India Online Retail Market Forecast 2023-2028 Featuring Amazon, Flipkart, Meesho, Myntra, Blinkit, Swiggy, Zomato, Nykaa, , Ajoio, and Zara - ResearchAndMarkets.com," September 27, 2024.
- xviii Statista, "Mobility Market Outlook"; Statista, "Digital Market Outlook"; EMARKETER, "Country Retail mCommerce Sales."
- xix J.P. Morgan, "2021 E-Commerce Payments Trends Report"; other market research.
- xx Statcounter.
- xxi Omdia, "App Ecosystems Forecast – 2023–2028," March, 2024.