

APPS ACROSS AMERICA

The Economics and Ecosystem of the Mobile App Market



July 18, 2012

Background

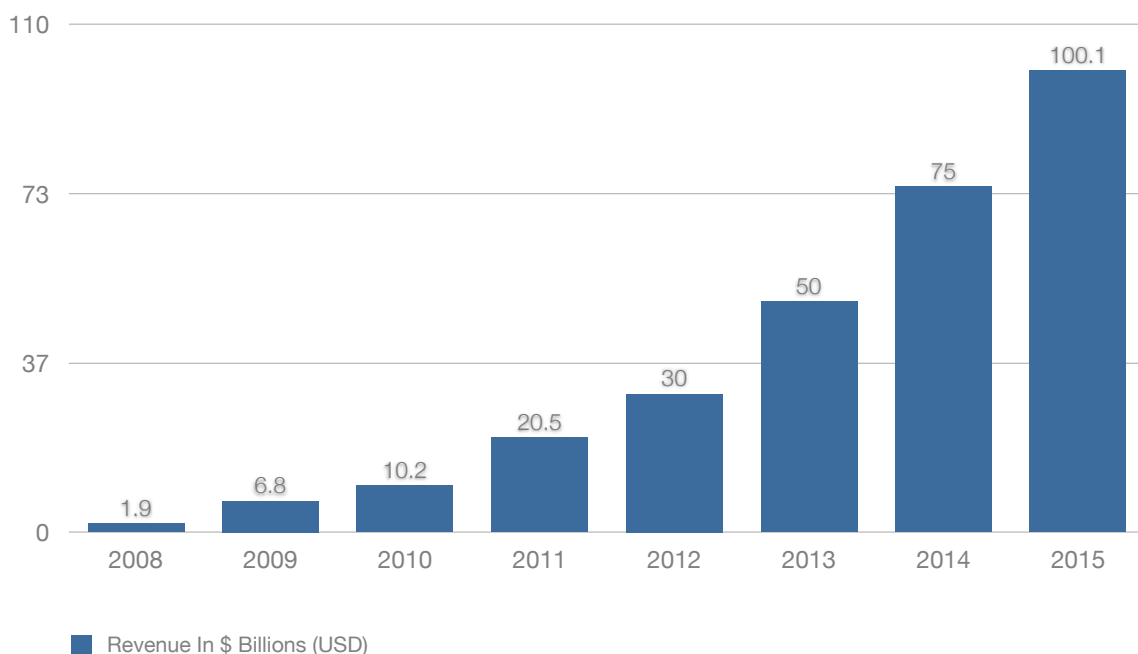
The mobile app industry is a dynamic and fast growing marketplace. It has grown to \$20 billion in only four years and is projected to top \$100 billion by 2015.¹ While the emergence of mobile apps has revolutionized the software industry, they are also having a profound impact on our national economy. With smartphones and tablets providing new platforms for software developers, an entire new class of software entrepreneurs has emerged. App makers have transitioned from writing applications for enterprise platforms to selling products directly to consumers.

This growth in startups and new businesses has also led to significant job creation during an otherwise troubled economic period. University of Maryland research identified 182,744 jobs created by the Facebook platform while separate research by ACT and TechNet concluded that the app

economy has created between 460,000 and 600,000 jobs. Since the publication of these studies, further evidence has emerged suggesting the widespread impact of apps is even greater than our earlier research revealed.

Despite its rapid development, however, the app marketplace has not fully matured. Companies continue to experiment with business models and platforms without having established an industry standard. App makers continue to expand into new markets bringing disruptive innovation to static industries. Since ACT undertook its first study of the app marketplace fourteen months ago, the growth of leading app companies, the rise of in-app purchasing, and the progress of foreign markets have further transformed the app market landscape.

Growth Of the Mobile App Industry



Findings

The analysis of the data we compiled suggests several interesting trends underlying the rapid growth of the mobile app economy. Most significantly, our research found:

- *78 percent of the top app developers are small businesses*
 - *American companies represent 22 percent of the top developers in the Chinese Apple App Store*
 - *Games dominate app revenue rankings; the vast majority of the highest revenue apps are using in-app purchasing*
 - *Successful app companies are expanding, building multiple top-ranking apps*
 - *While U.S. developers still dominate the US app market, international developers make up a growing portion of the market, particularly with games*
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Methodology

To explore the changes taking place, we surveyed the top 800 apps in the Apple and Android App Stores across the categories of productivity, education, business, and entertainment. We then analyzed each app by revenue, business model, and the location and size of the company developing it to better understand who is behind the explosive growth of the app economy. This analysis was done using publicly available data on each app store. As Apple and Android represent 75% of the smartphone market, we focused our analysis on those two app stores.

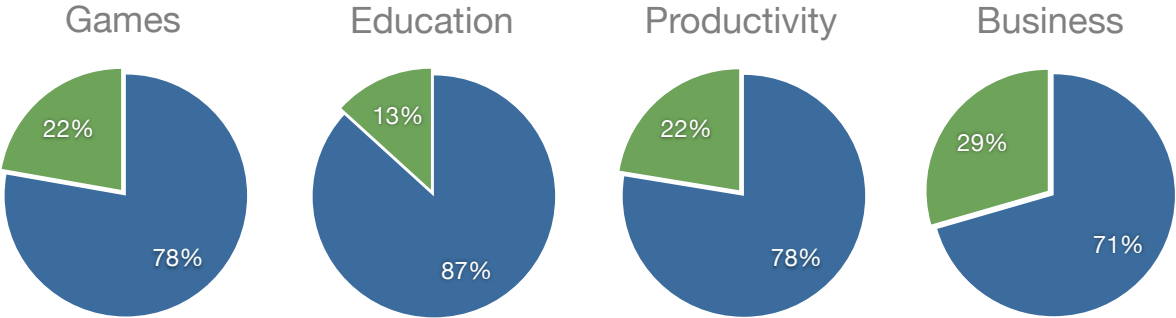
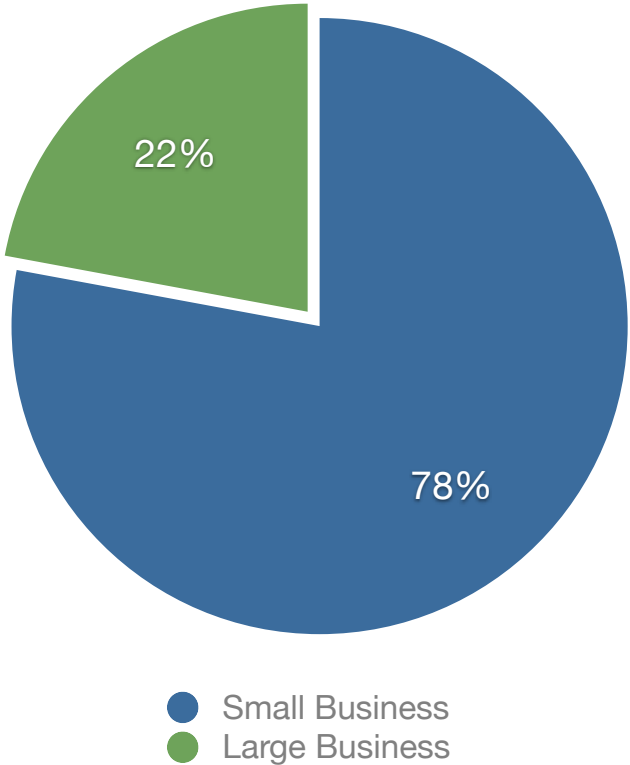
Dauids Are Beating Up on the Goliaths

Consistent with findings from earlier ACT research, we found that the vast majority of U.S. mobile app companies – 78% – are small businesses

According to a 2001 study by the U.S. Small Business Association, innovation and job creation are at their greatest in small business and this is reflected in the type of apps that are succeeding.² Our research found that 87 percent of the top education and 78 percent of the top game developers were small businesses. Particularly notable in these innovative categories are education apps on tactile mobile devices that make education concepts accessible to the very young and touchscreen game apps that are tremendously successful and appealing to all age ranges.

The business category had the highest percentage of large company developers, due primarily the popularity of apps that connect mobile users to existing services like PayPal, UPS, and FedEx. However, our polling of members suggests that many of the “large business” apps were not built internally, but were built by small contract app development companies, like Zco, based in New Hampshire, or Vertigo from California.

Average Across All Categories



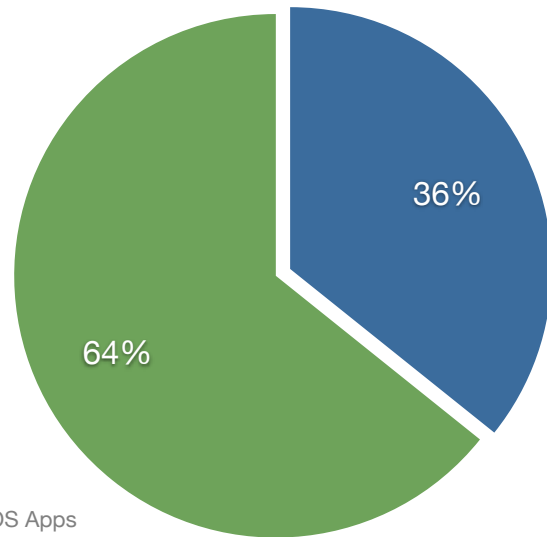
Rise of In-App Purchasing

Games Dominate, but Other Segments Find Uses

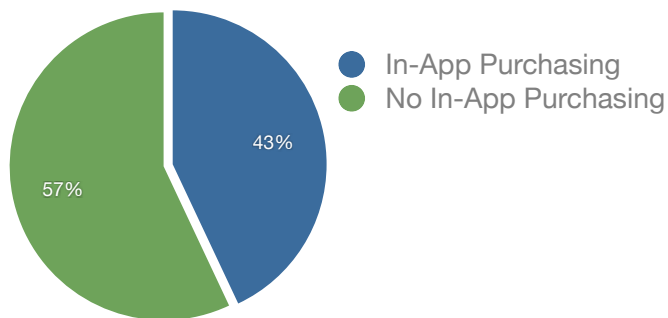
Almost all of the top grossing mobile apps are games; 84 percent of both the iPhone and Android platforms. This is an area where we are seeing the most dramatic changes in the mobile marketplace and much of it has to do with the growth of in-app purchasing. This business model allows users to make purchases within the app without having to return to the app store. Typically, these added expenses are for additional features or new game levels. Unsurprisingly, the research demonstrated that the majority of top games rely heavily on in-app purchasing for revenues, and free apps are more likely to use in-app purchasing to monetize their software.

According to leading mobile app analytics company Flurry, 24 percent of app revenues in 2011 came from mobile advertising, 24 percent from App sales, and 52 percent from in-app purchases. Research firm IHS predicts that in-app purchasing will generate \$5.6 billion in 2012, up from \$970 million in 2011.³

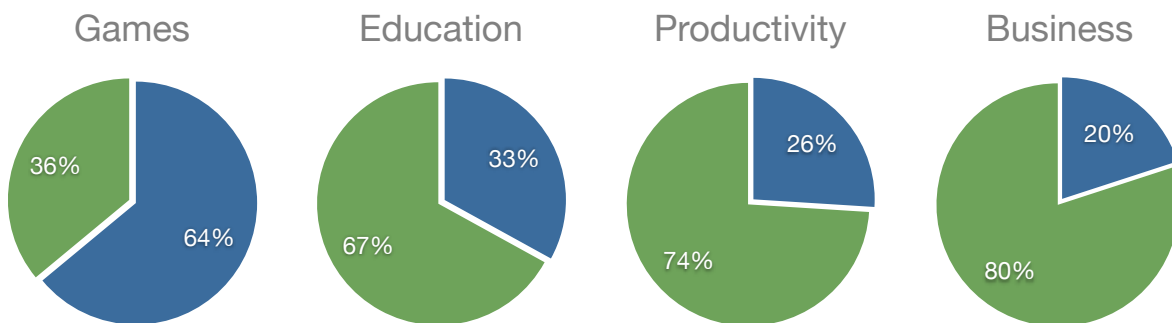
Average Across All iOS Apps



Average for Free iOS Apps



● In-App Purchasing
● No In-App Purchasing



Apps Across America

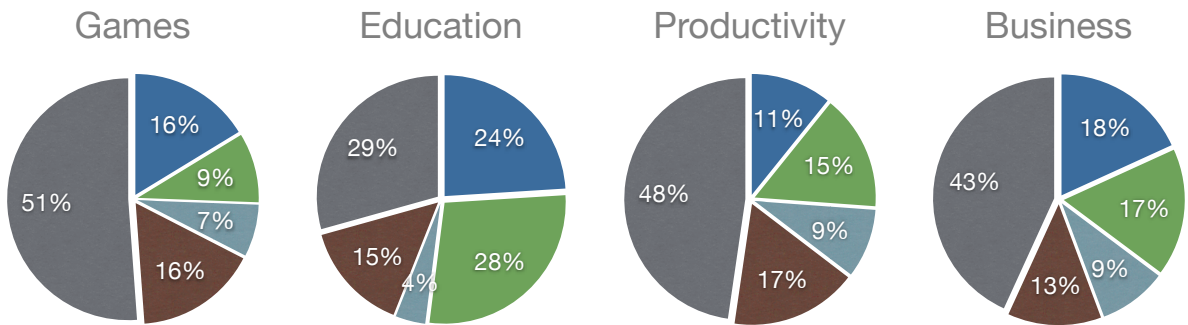
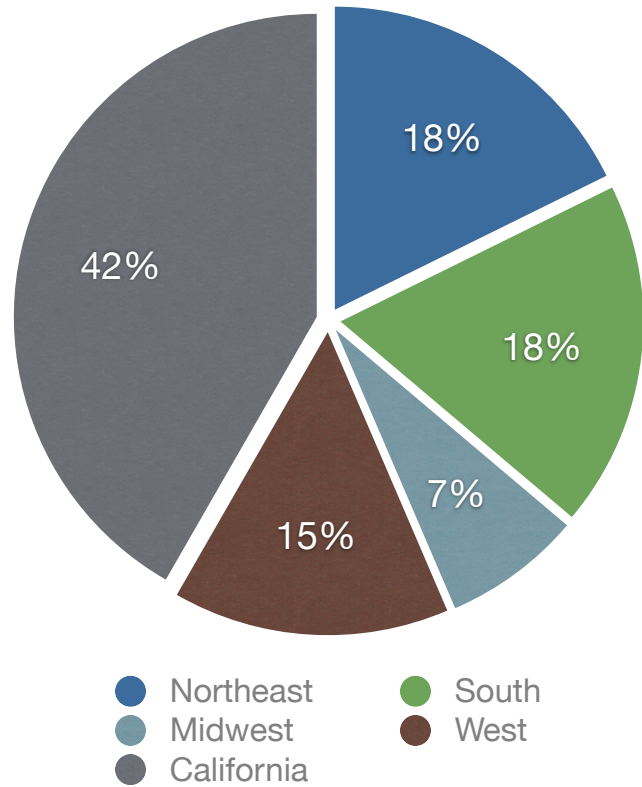
Companies Developing Apps from Coast to Coast

American developers dominate U.S.-based app stores with broad representation from throughout the country. The app industry is not simply a Silicon Valley phenomenon, with nearly 60 percent of top app development companies formed outside of California.

App development companies from the South and Northeast both represent 18 percent, the West 15 percent, and the Midwest seven percent of the top U.S. app developers. In the education sector, the distribution of app developers is pretty equal between California, the South, and the Northeast with each region representing between 24 and 30 percent of the developers.

One element of geographic diversity that isn't reflected in this data involves the widespread practice of app companies employing remote workers. The geographic distribution of app economy jobs is even greater when factoring in the number of employees who work in rural areas and states other than the company offices.

Location of U.S. App Developers



Foreign Competitors and Foreign Markets

Increased Foreign Competitors at Home, New Opportunities Abroad

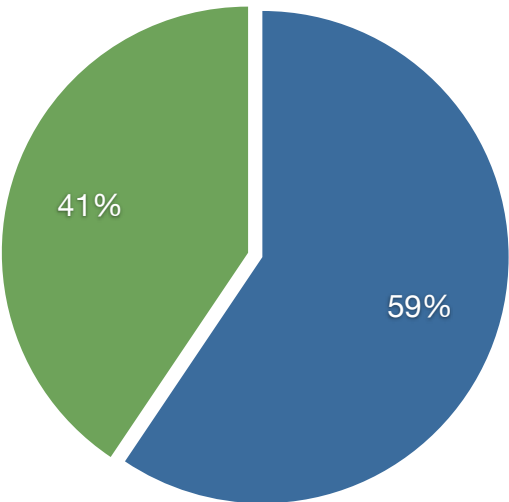
While American developers continue to dominate the U.S. app sales charts, they are facing increasingly stiff competition from foreign competitors. Foreign firms now represent 41 percent of the top app companies in the U.S. app stores. The situation is even more competitive in the incredibly lucrative category of game apps, where foreign companies produce 52 percent of the top games today.

However, this report also looked at the top paid iOS for iPhone apps in China. While the market is predictably dominated by Chinese app developers, 22 percent app developers are U.S. app companies. For example, San Francisco company *tap tap tap* created Camera+, the 35th most popular paid app in the Chinese iOS app store. A small business with only 16 employees, *tap tap tap* has sold over 8 million Camera+ apps world-wide.

While China is a huge market for mobile apps (in May 2012 it ranked second behind the U.S. for iOS app downloads, with downloads increasing 305 percent and revenues increasing 213 percent from May 2011), apps earn significantly less in China than in the U.S.⁴ An app downloaded in China generates around 3¢, compared to 28¢ for an app downloaded in the U.S.⁵ Even China’s ten largest apps published in Apple’s App Store generate 90% of their revenue from outside China.⁶

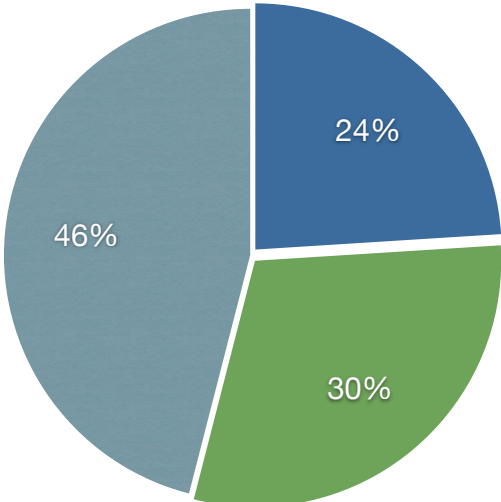
Even with these concerns, American developers still see opportunities with the huge size of the Chinese market. As more of its one billion wireless customers become smartphone users, low percentage returns can still net considerable profits

USA v International Developers



● USA ● International

Top iOS App Developers in China



● USA ● International ● China

About the Study

This report analyzes data taken about the top free and paid Android apps in Google Play and iOS for iPhone apps in the App Store on May 26, 2012. It looked at four popular categories of apps: games, education, business, and productivity. Information regarding the size and location of the app developers were gathered from online resources which include, but are not limited to: the app developer's websites, mobile app stores, LinkedIn, SEC EDGAR filings, and Twitter. This report did not look at iOS for iPad apps because the Google Play store did not separate out data on apps for smartphones and tablets. As smartphones have larger market penetration than tablets, this report concentrated on iPhone apps.

For the analysis of in-app purchasing, this report only looked at iOS apps because data on in-app purchasing of Android apps was not available at the time data was collected.

For the analysis of the Chinese market, this report also looked at the top 50 paid iOS apps in China on June 10, 2012. Data was collected on iPhone apps because the App Store commands a fair percentage of app downloads in China. Data was not collected on Android apps, as the Google Play store does not support paid apps in China.

The report was compiled and written by

Jonathan Godfrey, Morgan W. Reed, III, and E. Whitley Herndon, Esq.

¹ Egle Mikalajunaite, The Application Development Market Will Grow to \$US100bn in 2015, RESEARCH2GUIDANCE (July 6, 2011) available at <http://www.research2guidance.com/the-application-development-market-will-grow-to-us100bn-in-2015/>.

² "Small Business Economy 2011" Small Business Administration Office of Advocacy (2011), available at http://www.sba.gov/sites/default/files/sbe_2011_2.pdf

³ Jack Kent, "In-App Purchases Will Dominate the Smartphone App Business," IHS (January 17, 2012), *available at* <http://www.isuppli.com/Media-Research/News/Pages/In-App-Purchases-Will-Dominate-the-Smartphone-App-Business.aspx>; Molly Wood, "How to Make Money on Mobile, in Three Easy Steps," CNET (June 1, 2012), *available at* http://news.cnet.com/8301-31322_3-57445089-256/how-to-make-money-on-mobile-in-three-easy-steps/?tag=mncol;txt.

⁴ Michael Kan, "Apple App Store downloads in China triple, but developer revenues lag," COMPUTER WORLD (June 21, 2012), *available at* http://www.computerworld.com/s/article/9228315/Apple_App_Store_downloads_in_China_triple_but_developer_revenues_lag.

⁵ Id. (citing App Annie, *available at* <http://www.appannie.com>).

⁶ Id.