The App Economy Forecast: $6 Trillion in New Value

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Table of Contents

The Exploding App Economy: Dollars Across App Stores, Advertising and Commerce

The Global Economy Is Increasingly Mobile-First

Usage Is the New Currency: App Engagement Drives Revenue

The Engines of Growth: App Stores, In-App Advertising and Mobile Commerce

Country Highlights

   China

   United States

The App Economy: A Once in a Lifetime Opportunity
The Exploding App Economy: Dollars Across App Stores, Advertising and Commerce

App Annie estimates the global app economy in 2016 was worth $1.3 trillion across the three major types of monetization: all mobile app stores, in-app advertising and mobile commerce. This sum was driven by 3.4 billion people spending a total of 1.6 trillion hours in apps, which on average equates to $379 in apps across these three forms of monetization per person during 2016.

The trajectory of the app economy across geographies, income levels, demographics and nearly every major industry has been astonishing. Since the launch of the iPhone 10 years ago and the launch of the iOS App Store and Android app stores nine years ago, we have seen new use cases, business models and technology innovation fuel this vibrant and dynamic market, creating the enormous opportunity we have today.

This report lays out our analysis of the current state of the app economy and our projections for this rapidly expanding market through 2021 — when App Annie projects that the global app economy will be worth $6.3 trillion. That's an economy which, if it were a nation state, would be the third largest on Earth today, with apps reaching nearly every person on the planet.

The Global Economy Is Increasingly Mobile-First

The value of the global app economy will expand from $1.3 trillion in 2016 to $6.3 trillion in 2021 thanks to device base growth and increasing engagement with apps. The user base will nearly double from 3.4 billion people in 2016 to 6.3 billion in 2021, and time spent in apps will grow even faster, from 1.6 trillion hours in 2016 to 3.5 trillion in 2021.
The growth of annual spend per user from $379 to $1,008 on a global basis is driven by innovation and the transition from physical transactions to mobile. For example, Alibaba announced that mobile accounted for 79% of the total transaction value generated in its China retail marketplaces in fiscal year 2017, up from 65% in fiscal year 2016.
However, these stats still don’t paint a complete picture of the impact of apps, as businesses can also benefit without directly monetizing apps. For example, growth in usage of retail banking apps is driving down costs for large multinational institutions like Bank of America and Barclays to serve their customers by reducing visits to branches.

We also project that most of the developed western economies will lag behind many Asia-Pacific countries in the shift of activity, consumer spend and ad spend to mobile. Western economies are somewhat constrained by legacy systems such as banking, payment transfers, food purchases and an overconcentration of wealth among their older customer base. Developing economies in Asia-Pacific are building infrastructure and app habits, highlighted by Chinese chat giant WeChat, which have little to no such legacy “drag” effect on the growth of their app economy.

The Engines of Growth: App Stores, In-App Ads and Mobile Commerce

In this section we will share our projections and key highlights for the three components contributing to the $6.3 trillion app market opportunity.

App Store Forecast

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As we shared earlier this year in our 2016 to 2021 app store forecast, we expect consumer spend across all mobile app stores to grow at 18% CAGR to reach $139 billion in 2021. iOS App Store will continue to be the largest single store, growing to over $60 billion in 2021, with Google Play plus third-party Android combined, forecast to overtake iOS App Store in 2017. China is the most significant driver of this growth in Asia and globally, thanks to a young, wealthy and mobile-first population. We forecast China to generate over $56 billion in app store spend by 2021.

Delving a little deeper on app store monetization, Games continue to represent the majority of this segment during the forecast period, growing from $50 billion in 2016 to $105 billion in 2021. Demonstrating the adoption and growth of app habits and new methods of monetization, non-game app spend is projected to triple in size from $11.5 billion in 2016 to over $34 billion in 2021 as video, music, dating, education, productivity, etc. drive app store purchases and subscriptions.

**In-App Advertising Forecast**
Meanwhile, global in-app advertising spend is set to nearly triple in size from $72 billion in 2016 to $201 billion in 2021. Asia-Pacific is projected to outpace other regions, growing at a 25% CAGR to hit $77 billion. The Americas is forecast to remain the single largest region, growing at 26% CAGR to hit $85 billion. EMEA is expected to trail the global average growth rate with a 15% CAGR mainly due to greater inefficiencies in some markets and lower advertising dollars targeting consumers in parts of the Middle East and Africa.

The global average for advertiser spend is set to grow from $13 to $52 per user in the forecast period as advertisers increasingly leverage technology and new ad formats that allow for better targeting and measurement of ads and their effectiveness.

**Mobile Commerce Forecast**

Mobile commerce is the single largest driver of the growth of the mobile and app economy and represents a clear demonstration of the shift to mobile. Global mobile commerce is outpacing other forms of monetization and growing at a 38% CAGR through the forecast period. We project that mobile commerce per user globally will increase from $344 to $946 by 2021. As we have said before, Asia-Pacific has developed more quickly
in terms of the shift to mobile and is forecast to grow at a 36% CAGR to reach $3.2 trillion in 2021 to remain the single largest region for mobile commerce revenue through the forecast period. Commerce in the Americas is in the midst of its transition to mobile and will grow at an impressive 44% CAGR to hit $1.7 trillion. Finally, most of EMEA is beginning this transition; given its relatively small base today of $210 billion, it will see the highest growth rates as it expands nearly five-fold to reach $1.0 trillion in 2021.

We project that the world will follow Asia into a mobile-first economy, albeit at varying rates. Regional mobile commerce conversion rates are key metrics to watch to understand how slow or fast consumers are transitioning to mobile. We estimate that global conversion rates across all basket sizes in the retail market is currently 32%, which is projected to grow to just over 40% during the forecast period. Indicative of the mobile-first nature of key economies like China in the region, Asia-Pacific conversion rates lead the way at 37% in 2016, growing to nearly 42% by 2021.

The Americas lag significantly in this vein, currently converting at a rate of 31% and growing to just over 39% in 2021 as the transition accelerates. EMEA shows strong adoption of mobile commerce, converting at a rate of 35% and growing to 39% by 2021 as a result of the weakness of certain economies within the region, mainly sub-Saharan Africa. Such growth, especially in Western European economies, such as the UK,
continues to be driven by greater conversion rates among mid-market consumers in the 25-34 year old demographic in major urban centers.

Country Highlights

China

The sheer size of the Chinese market across iOS and Android has delivered over 800 million mobile users spending a total of 390 billion hours in 2016 and growing to 672 billion hours by 2021. While the majority of users are concentrated in lower income groups, higher income groups exhibit an extremely high affinity to apps and mobile purchases. Based on our research, we estimate that compared to US consumer, Chinese consumers are nearly three times as likely to buy food and groceries via their devices, twice as likely to transfer money using apps, and four times more likely to spend a majority of disposable income on mobile. Furthermore, the growth of the Chinese app economy is broad based and not solely centered on one method of monetization.

Consumer spend across app stores in China is forecast to grow from $19 billion in 2016 to more than $56 billion in 2021; an impressive 24% CAGR for an economy of this size.
Ad revenue growth is just as strong with Chinese publishers netting $10.5 billion in 2016 and $48 billion by 2021, a brisk CAGR of nearly 36%.

When mobile commerce is added to the total, the size and growth of the Chinese economy continues unabated. Chinese users spent an average of $955 in 2016 across the app economy, and this is forecast to grow to $2,025 in 2021 — an increase of more than 120%.

**The United States**

The United States will continue to show strong growth in the forecast period, as it begins a slower transition to the mobile-first economy. Currently, mCommerce data suggests that while the US consumer is becoming more likely to spend dollars within an app and convert larger and larger basket sizes, many prefer to execute some transactions via other channels (desktop web, physical stores, etc.) with food purchases, apparel and travel being three examples.

Consumer spend in app stores in the US continues to deliver double digit growth, with a forecast CAGR of 21% and growing to over $31 billion in 2021. People in the US have been spending on non-game apps for some time as video, music, sports, dating,
education, productivity and other categories have been fueling this spend — especially as subscriptions to video services took off in earnest in the second half of 2015, driving $1.7 billion in consumer spend across all non-game apps in 2016.

Advertising continues to experience strong growth with a 22% projected CAGR in the forecast period with publishers earning $28 billion in 2016 growing to $72.5 billion in 2021. This growth is being driven by broad ad monetization in non-game apps, which is set to outperform the overall advertising market with a nearly 21% CAGR.

Compared to their Chinese counterparts, the US consumer does not currently spend nearly as much on mobile commerce. However, our research suggests that this is beginning to change. Total mcommerce spend per user in the US was $613 in 2016 and is projected to grow to $2,012 by 2021 — an increase of 228%.

This growth is primarily driven by more time spent in apps (as well as more users adopting mobile devices over the next five years) and increased affinity towards mobile purchases among younger age groups, especially as frictionless payment methods are adopted more broadly. As the current working generations age, trust in mobile will continue to increase as the primary medium to transact. The proliferation of ride sharing apps like Uber and Lyft and retail banking and fintech apps like Chase, Capital One and PayPal clearly demonstrate this effect.

The App Economy: A Once in a Lifetime Opportunity

Consumers, publishers, advertisers and brands are set to see remarkable changes over the next five years as technology and competition deliver new use cases and consumers across the globe increase the time they spend in apps to the equivalent of more than one month per year. Furthermore, we expect nearly 2 billion more people to adopt mobile devices by 2021. Paradigm shifts continue to propel this market and while there are many areas of innovation companies will bet on, we believe augmented reality, mobile
payments, 5G, UI/UX developments and artificial intelligence will drive strong growth of this market.

Given increasing investments in mobile and specifically in apps by companies across industries and in mobile’s ever-expanding centrality in our daily lives, we project the app economy will add more than $5 trillion in value over the next five years, resulting in a $6 trillion app economy by 2021. In context, that means users and developers will deliver growth equivalent in size to the economy of Japan by 2021 — creating enormous opportunity for companies across industries and around the globe.

About App Annie

App Annie delivers the most trusted app data and insights for your business to succeed in the global app economy. Over 800,000 registered members rely on App Annie to better understand the app market, their businesses and the opportunities around them. The company is headquartered in San Francisco with 450 employees across 15 global offices. App Annie has received $157 million in financing from investors such as e.Ventures, Greenspring Associates, GreyCroft Partners, IDG Capital Partners, Institutional Venture Partners and Sequoia Capital. Learn more at [www.appannie.com](http://www.appannie.com).