

Download complete: The functionality of apps will continue to dramatically increase revenue

IBISWorld Industry Report OD5817 Smartphone App Developers in the US

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About this Industry

Industry Definition This industry develops and publishes applications for smartphones and mobile devices. Apps are typically sold in a special “app store” that can be accessed through the device.

Main Activities

The primary activities of this industry are

Creation of smartphone apps
 Script and code writing for external clients
 Design and user interface consultation for external clients

The major products and services in this industry are

Entertainment apps
 Games
 Lifestyle apps
 Social apps
 Tools and productivity apps
 Other apps

Similar Industries

51121 Software Publishing in the US

Software publishers disseminate licenses to customers for the right to execute software on their own computers.

51121e Video Game Software Publishing in the US

These establishments carry out operations necessary for producing and distributing video games, including design, documentation, installation and support services.

51121f Security Software Publishing in the US

This industry develops and distributes antivirus, anti-keylogger, spyware removal, encryption and firewall software.

NN003 Video Games in the US

The Video Games industry includes the broader operations of all video games components in the United States.

About this Industry

Additional Resources

For additional information on this industry

www.gartner.com

Gartner

appdevelopersalliance.org

The Application Developers Alliance

www.theverge.com/apps

The Verge

www.census.gov

United States Census Bureau

IBISWorld writes over 700 US industry reports, which are updated up to four times a year. To see all reports, go to www.ibisworld.com

Industry at a Glance

Smartphone App Developers in 2014

Key Statistics Snapshot

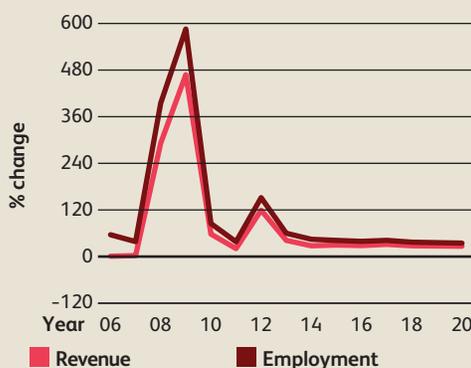


Market Share

There are no Major Players in this industry

p. 24

Revenue vs. employment growth



Number of mobile internet connections



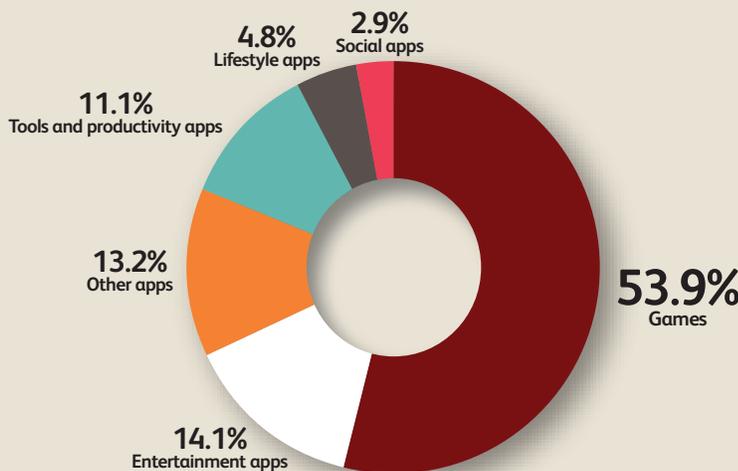
SOURCE: WWW.IBISWORLD.COM

Key External Drivers

- Number of mobile internet connections
- Percentage of services conducted online
- Demand from e-commerce and online auctions
- Time spent on leisure and sports

p. 5

Products and services segmentation (2014)



SOURCE: WWW.IBISWORLD.COM

Industry Structure

Life Cycle Stage	Growth	Regulation Level	Medium
Revenue Volatility	Very High	Technology Change	High
Capital Intensity	Low	Barriers to Entry	Low
Industry Assistance	Low	Industry Globalization	Low
Concentration Level	Low	Competition Level	High

FOR ADDITIONAL STATISTICS AND TIME SERIES SEE THE APPENDIX ON PAGE 30

Industry Performance

Executive Summary | Key External Drivers | Current Performance
Industry Outlook | Life Cycle Stage

Executive Summary

The release of the Apple iPhone and the launch of Google's Android have jump-started a practically inexistent industry of smartphone app developers. The smartphone's instant popularity and high adoption rate stimulated developers to quickly introduce fans of this new device to its full capabilities and superior functionality, offering gaming, entertainment, productivity, lifestyle and social apps. The percentage of services conducted online, often on smartphones, has been increasing constantly, along with demand from

increasing number of apps are offered for free. Monetization has been migrating away from paid apps and advertisements to a freemium business model that offers a pricing strategy in which a mobile app is available for free, and advanced features and functionality are acquired as in-app purchases. This model is widely successful, and revenue is expected to enjoy a 27.8% boost in 2014 alone.

Over the next five years, developers will likely struggle to satisfy the digital consumer. Developers are expected to increasingly rely on the development of web apps that are run by a browser, typically written in HTML5 and function across multiple platforms; consequently, they will rely less on the development of native apps that are integrated with the device's respective operating system. Big data and predictive analytics are also expected to allow developers to create predictive apps. With the increase in private information stored on smartphones, developers will likely struggle with mobile app security. As developers attempt to differentiate apps in the oversaturated industry, opportunities for mobile app marketing are also on the horizon. Due to the decreasing average app price, Industry revenue is projected to climb at a slower annualized rate of 28.9% to \$34.7 billion over the five years to 2019.

Developers have been struggling to make a profit, as many apps are offered for free

e-commerce and online auctions. Over the five years to 2014, revenue is expected to increase at an estimated rate of 49.8% to \$9.7 billion.

With an increasing number of mobile internet connections and low barriers to entry, the number of developers has been growing rapidly, and the structure of the industry is not mature enough to accommodate them. The industry quickly became oversaturated, with players competing to develop new apps and advertise them to an exigent mobile audience. Developers have also been struggling to make a profit, as an

Key External Drivers

Number of mobile internet connections

The number of mobile internet connections represents the total number of consumers who own a broadband internet-capable device, such as a smartphone. As the number of smartphone purchases increases with the number of mobile internet connections in 2014, app developers will see a greater market for their products.

Percentage of services conducted online

The percentage of services conducted online represents consumers' and businesses' increasing use of the internet for services they used to pay for at physical locations (e.g. streaming movies online rather than renting DVDs). As the percentage of services conducted online increases, so does the percentage of services offered through smartphone

Industry Performance

Key External Drivers continued

applications. These services are expected to increase in 2014, providing an opportunity for this industry.

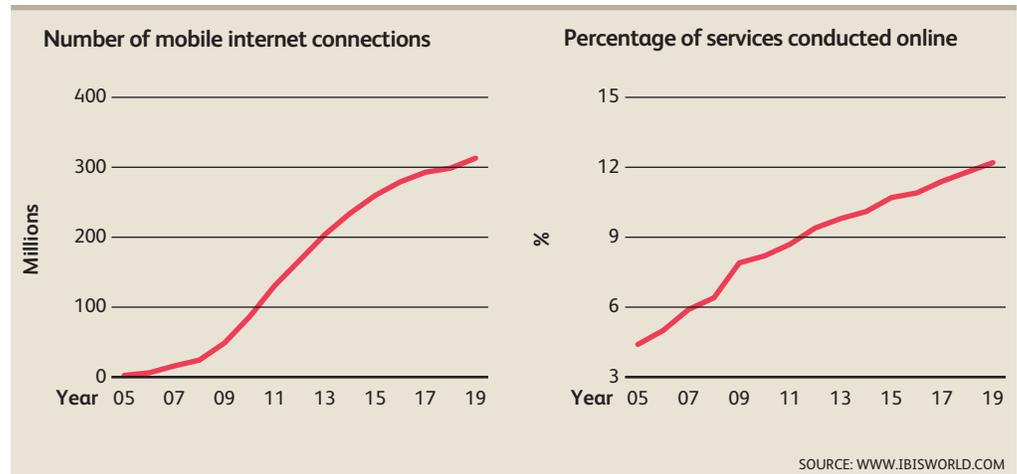
Demand from e-commerce and online auctions

E-commerce and online auctions sell goods online, primarily over the internet via either a retailer's online store or an auction site. With online shopping becoming more popular, retailers have expanded their product lines as well as the platforms on which they operate. As demand from e-commerce increases in 2014, retailers are expected to create more

shopping apps to assist time-strapped consumers who would rather shop from their living rooms.

Time spent on leisure and sports

Games make up a significant segment of smartphone applications and require some leisure time to play. While the industry now serves a broad audience, leisure time is a major restrictive factor in consumers' ability to use and purchase smartphone app products. Time spent on leisure and sports is expected to decrease slowly in 2014, resulting in a potential threat for the industry.



Industry Performance

Current Performance

The past five years have been generous to smartphone app developers, with industry revenue growing at an alarmingly strong

49.8%, to reach an estimated \$9.7 billion in 2014, focusing on tools and productivity apps as well as gaming and social apps.

The smartphone era

Apple's introduction of the iPhone in 2007 gave the Smartphone App Developers industry a boost of mystical proportions. Apple's App Store was launched in 2008 and was an instant success, causing revenue to shoot up 292.1% that year. Inspired by Apple's achievement, Google quickly jumped on board and released the Android in 2008, causing a second epic revenue upsurge of 468.0% in 2009. BlackBerry, Symbian and Windows followed the market trend as well. By 2010, the smartphone adoption rate was so high that total shipment outpaced those of personal computers. The ability of smartphones to run mobile apps offers consumers far greater functionality than other mobile phones. A quickly increasing number of

The high number of mobile applications has increased market competition

developers have been attempting to introduce a growing number of consumers to the full capabilities of their new devices. The number of apps downloaded per device has grown significantly over the past five years. As a result, employment increased at an alarming 71.6% since 2009, reaching an estimated 417,630 individuals in 2014. Although the majority of app developers are full-time employees, a significant proportion works in app development only part time, while holding another job.

Show me the money

Although the app market grew at an alarming rate over the past five years, developers account for only about 70% of revenue, as platforms such as Google Play and App Store charge a 30% transaction fee. Additionally, the high number of mobile applications has increased market competition, and developers have yet to find an efficient way to market their apps to consumers who are increasingly accustomed to sifting through a vast number of offerings and comparing prices and value-added.

Mobile app revenue stems from paid-for apps, advertising and in-app purchases. Some developers sell their apps in an online marketplace for a predetermined price and pay a royalty fee to Apple or Google (the dominant platform owners) for each app sold, applying the traditional pay-per-

download model. Others choose to release their app for free and generate revenue by placing advertisements throughout the user interface. Some developers choose a hybrid version of the two, offering a paid-for app with no advertisements and full functionality, as well as a free version with sponsored ads and limited functionality. The freemium business model offers a pricing strategy in which a mobile app is available for free, and advanced features and functionality can be acquired as an in-app purchase. Free downloads with in-app purchases are increasingly dominating the app market, increasing from 8.6% in 2011 to about 22.5% in 2014. Paid-for apps are expected to decrease from an overwhelming 85.5% in 2011 to about 69.5% in 2014, according to Gartner. The rise of free apps is expected

Industry Performance

Show me the money continued

to put pressure on industry profit and increase the already high competition. Nevertheless, revenue is expected to continue increasing, albeit at a slower

rate of 27.8% in 2014, as developers find creative ways to increase their revenue and estimate their customers' willingness to pay for extra features.

Intense competition

At the beginning of the smartphone era, mobile gaming and social networking dominated the industry of app development. Although overall time spent on leisure activities has decreased over the past five years, consumers are spending an increasing amount of money on interactive entertainment online and on digital devices. Since then, business apps with practical utility and online shopping apps have taken up an increasing market share. Mobile apps can serve as virtual secretaries that assist in time management or mobile wallets that allow for virtual forms of credit cards. Many of these mobile apps are not designed to generate revenue and are used to build brand recognition. As many individuals and corporations compete for a piece of the pie, establishments are expected to increase

The oversaturation and lack of structure in the industry have caused high failure rates among apps

at 49.0% over the five-year period, reaching about 257,072 in 2014.

The oversaturation and lack of structure in the Smartphone App Developers industry have caused developers to face intense competition, leading to a steep increase in failure rates among mobile apps. It has also become increasingly difficult for app developers to differentiate their products and market them as superior to others. Functionality and aesthetics are increasingly important bases of competition, and apps are expected to be updated and enhanced regularly.

Industry Performance

Industry Outlook

Although the growth of mobile apps shows no signs of slowing down, revenue derived from these apps is expected to increase at a slower rate. In the five years to 2019, revenue is expected to experience a 28.9% increase, reaching a total of \$34.7 billion, as smartphone sales overtake the sales of other phones.



Responding to competition

Intense competition and lack of structure in the industry have caused high failure rates among mobile apps. Developers are expected to search for new and creative ways to create and market their products at low costs in order to boost their own market share and revenue. Some app developers are using third-party app developers to assist in concept development, design or coding in order to boost their revenue.

Over the coming five years, developers are expected to rely more heavily on the development of web apps and less on the development of native apps. Native apps are integrated with smartphone operating systems, allowing them to interact with hardware in a process similar to that of computer systems. They are accessed through icons on the device's home screen and take advantage of their host's features and capabilities, such as the camera, the GPS, compass and list of contacts. These apps may also incorporate app-defined gestures. Mobile web apps are run by a browser

and are typically written in HTML5. The technology enables developers to create apps that are able to function across multiple platforms, and the independence allows companies to circumvent royalty fees.

Today, native apps have a smoother look and often work faster without needing to constantly download data, while web-based apps remain fragmented and immature. Extended battery life and increasing mobile connections, however, are expected to give web apps the competitive advantage they need to strike at the aesthetic advantage of native apps. The migration to web-based apps is expected to further lower the barriers to entry, causing establishments to increase a further 26.7% to 838,764 in 2019. As entry into the industry becomes easier, more independent, full-time developers are expected to appear and aim for a piece of the growing pie. Employment is thus expected to increase at a faster rate than establishments, at 39.0% over the next five years, to total 2,170,255 workers in 2019.

Industry Performance

The land of the freemium

Over the next five years, consumers are expected to continue migrating away from pay-to-download apps, forcing developers to embrace the freemium business model that relies on monetizing free downloads after the fact via in-app purchases. As an increasing number of mobile applications are offered for free, the average app price is expected to fall, pressuring profit margins. By 2019, free

downloads are expected to account for about 95.5% of total mobile app store downloads. According to Gartner, an information technology research and advisory firm, in-app purchases are expected to increase and account for about 48.2% of total mobile app store revenue by 2017 (latest forecast), up from the 22.5% expected share in 2014. Revenue from advertising is also expected to increase significantly.

Targeting and satisfying the digital consumer

Developers are also expected to increasingly focus on maintenance, analytics, distribution and services. App developers are expected to leverage the rise of big data and predictive analytics to improve the app experience. In order to do so, developers will continuously collect information and learn about their customers and potential buyers to offer apps that detect their intent and ensure the functionality and content reflect it. The increased use of the GPS will only assist in the creation of predictive apps, helping developers provide the right content at the right time.

Corporations are expected to continue reaching out to customers with apps that are not designed to increase revenue, but rather made to increase name recognition and publicity. Some organizations are beginning to support personally owned mobile devices, seeking to increase employee satisfaction and productivity while reducing their own expenses. This Bring Your Own Device trend is expected to create a new opportunity for developers as well as new app stores. Employers are expected to demand more apps to increase productivity and communication among their mobile employees, as well as apps that connect smartphones to enterprise resources.

As app developers increasingly use consumer data and location, recall customer credit cards and target employers aiming to share company

App developers will leverage the rise of predictive analytics to improve the app experience

resources and personal devices, mobile app security is expected to become a greater issue. Corporations and customers must be reassured that their data is safe, and security software developers have yet to catch up with consumers and address these fears. Mobile devices and apps may lack passwords to authenticate users, require only a static password and not a two-factor authentication and send information that is not encrypted. Additionally, mobile devices may contain malware and often do not use security software.

With an overwhelming number of new mobile apps entering the market each year, developers will need to find new ways of marketing their new apps and reaching out to consumers in a saturated market. Creating an effective marketing pitch that differentiates the product from other similar ones and reaching the greatest possible audience is expected to be one of the challenges that developers must overcome in the next five years.

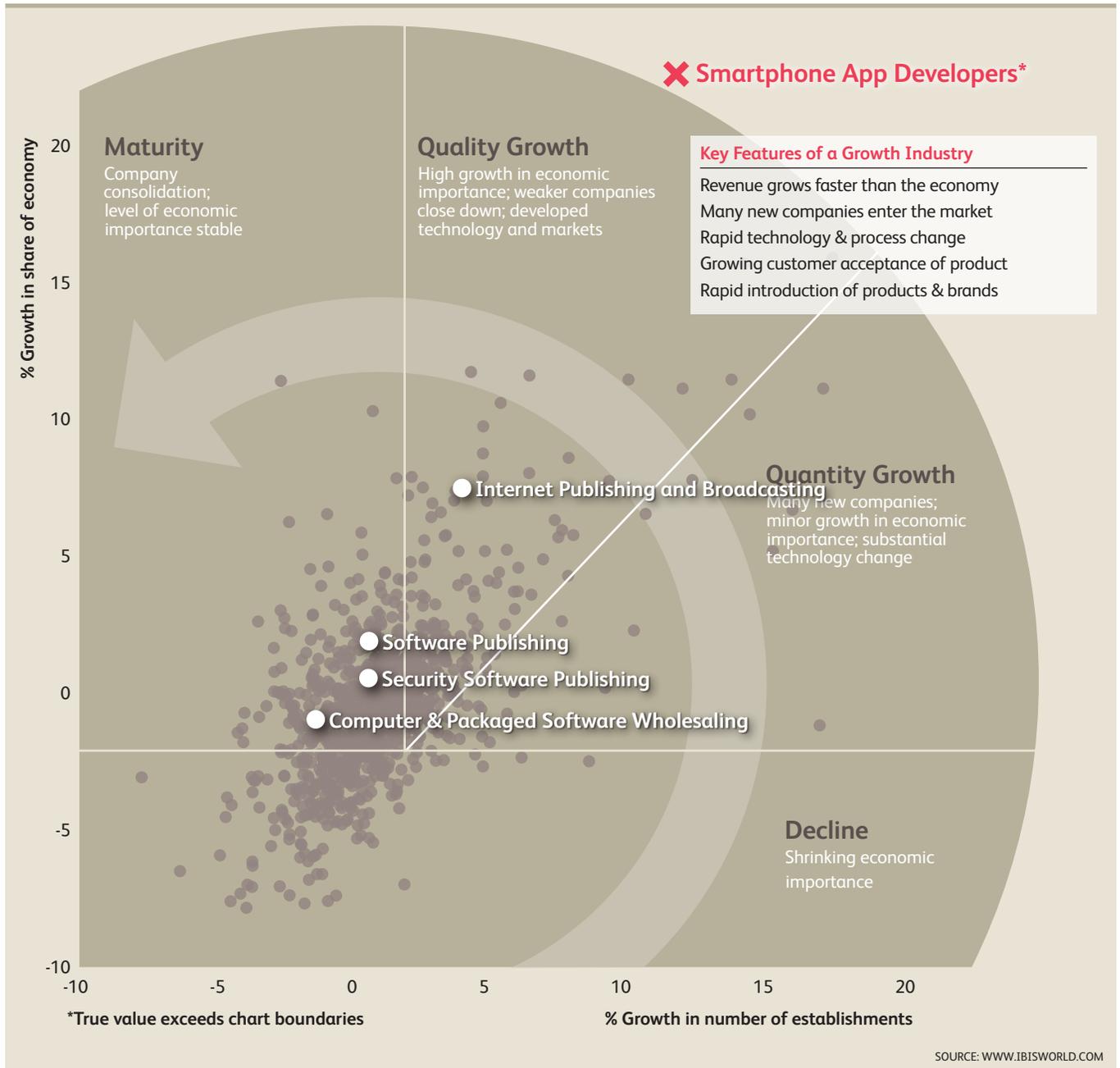
Industry Performance

Life Cycle Stage

Technological innovation

Growing number of developers

Undefined product segments



Industry Performance

Industry Life Cycle

This industry is **Growing**

The Smartphone App Developers industry is in the growth stage of its life cycle. In the 10 years to 2019, industry value added, a measure of the contribution of the industry to the overall economy, is expected to grow at an annualized 40.4%. Over the same period, total GDP is expected to grow at a much slower 2.7%. Great technological innovation and high adoption rates by consumers as well as an increasing number of industry players are attributing to industry growth. Product innovation and flexible product segments also display an industry in its growth stage.

Developers have been expanding their reach to new demographics and cater to men, women, seniors and children. As gamers age, they are expected to continue in their leisurely activities, and repeat sales in the industry are expected to keep increasing revenue. The average age of gamers is expected to continue climbing over the 10 years to 2019. The future of industry profit, however, seems uncertain, as developers target an audience increasingly accustomed to using free apps. Developers are also in the midst of testing web apps that may circumvent store royalties and potentially increase profit.

Products & Markets

Supply Chain | Products & Services | Demand Determinants
Major Markets | International Trade | Business Locations

Supply Chain

KEY BUYING INDUSTRIES

99 Consumers in the US
Apps are primarily marketed to consumers to make everyday tasks easier.

KEY SELLING INDUSTRIES

42343 Computer & Packaged Software Wholesaling in the US
App developers require computers and software to code and test new smartphone apps.

51913b Internet Publishing and Broadcasting in the US
App developers require the internet for research, development and testing of apps.

53112 Commercial Leasing in the US
Developers often lease commercial spaces for the duration of the app development.

54151 IT Consulting in the US
Industry operators may use consultants to get a better idea of target audiences and how to proceed with development.

54191 Market Research in the US
App developers require information on their target market and what services will be requested.

Products & Services

The majority of products developed in the Smartphone App Developers industry are games, which includes revenue generated from advertisements, the purchase of an app and in-app purchases. Additionally, entertainment and tools and productivity apps generate more than one-quarter of industry revenue. Over the past five years, these apps have trended towards generating revenue from in-app purchases rather than through the purchase of the actual app. Consumers are more likely to download apps and then make in-app purchases when they are drawn in, rather than relying on consumers making an upfront payment.

Games

Games account for the majority of app developments, with an estimated 53.9% of industry revenue in 2014. Over the past five years, smartphone games have become increasingly popular, as they provide a convenient, casual and low-cost alternative to video game systems. Furthermore, rising smartphone penetration across the United States has allowed developers to market games to

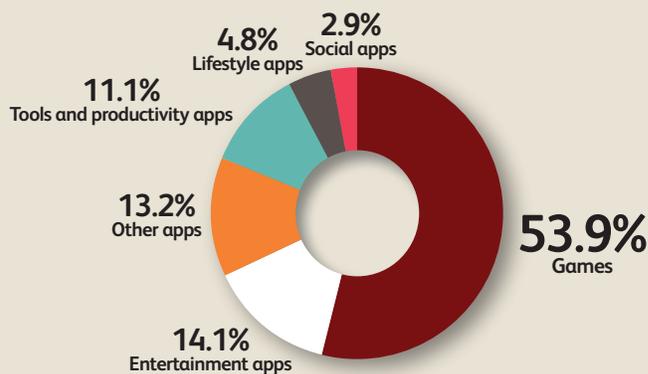
different demographics. This includes older generations and women, who typically represent a smaller proportion of the market for video games. According to research from Flurry, a mobile analytics firm, games such as solitaire, slots and social turn-based games are most popular with women above the age of 35. Meanwhile, strategy, shooter, racing and action role-playing games are most popular with men below the age of 35.

Over the five years through 2014, games have remained a steady share of revenue; however, the way consumers spend money on games has changed. Developers have created more freemium apps, in which consumers are provided basic functions for free but must pay to access advanced features or virtual goods. This allows developers to entice consumers before requesting they pay for additional features. Freemium games are expected to continue to grow over the next five years, as developers focus on encouraging consumers to download games and get a sample before requesting payments.

Products & Markets

Products & Services continued

Products and services segmentation (2014)



Total \$9.7bn

SOURCE: WWW.IBISWORLD.COM

Entertainment

Entertainment apps include television and film apps such as Netflix, YouTube and ringtones and wallpaper downloads. Additionally, this segment also includes music and video apps such as Pandora, Spotify, Snapchat and other video creation applications. In 2014, entertainment apps are expected to account for about 14.1% of total revenue. Entertainment apps have become more popular over the past five years, as Americans increasingly access the internet through mobile devices. Therefore, more television, film and other media is now consumed on the go. As a result, entertainment apps are expected to grow as a proportion of revenue over the next five years.

Tools and productivity apps

Tools and productivity apps are generally organizational and administrative. This includes email, cloud storage, calendars, translators and notation tools. In 2014, tools and productivity apps are estimated to account for about 11.1% of total industry revenue. Over the past five years, tools and productivity apps have remained a steady share of revenue. Many tools

and productivity apps are provided as part of the smartphone operating system and, therefore, there is less incentive for consumers to make a purchase. However, the rapid uptake of cloud storage will provide opportunities for app developers over the next five years.

Lifestyle and social apps

Lifestyle apps are forecast to account for 4.8% of industry revenue in 2014. Apps in this segment include online shopping apps such as Amazon and eBay, retail coupons from companies such as Groupon, real estate browsers and dating services. Additionally, social apps are expected to account for 2.9% of industry revenue in 2014. This includes apps for popular social networks such as Facebook, Twitter, Pinterest and specialized messaging apps.

Over the past five years, lifestyle and social apps have remained steady as a portion of revenue. Over the five years to 2014, consumers have spent more time using mobile apps to shop and have increasingly browsed social media through smartphone applications. As a result, the amount of time spent on these apps by individuals is high; however,

Products & Markets

Products & Services continued

these apps are typically created by the company and updated periodically to ensure usability to maximize advertising revenue. Therefore, there is little room for other app developers to create apps that can directly compete with major social networks, and instead, developers look to create apps that are compatible with them.

Other

Other apps are estimated to account for 13.2% of industry revenue in 2014 and include news and weather, health and fitness, travel and navigation, personal finance, business and sports apps. This segment has declined as a proportion of revenue over the past five years, as other segments have grown at a more rapid pace.

Demand Determinants

Demand for smartphone apps is driven by price, smartphone penetration and the proportion of services that individuals are comfortable conducting online through a smartphone device. As smartphone technology improves, demand for smartphone apps will grow, and the number of services conducted online will improve.

Price

The price of smartphone applications is a key determinant in demand. An increase in consumer incomes precipitates greater discretionary spending on products such as smartphone apps. Lower app prices will also result in more purchases from consumers. Over the past five years, the way app developers have approached generating revenue from apps has changed. More freemium apps are being marketed, where the app itself is free with basic features; however, consumers must spend money to access additional content and features.

Smartphone penetration

Over the past decade, the number of mobile internet connections has been

rising rapidly. Cell phones have become a part of everyday life, and since the introduction of the Apple iPhone in 2007, smartphones have exploded into the mainstream. Over the five years through 2014, the number of mobile internet connections has grown at an average annual rate of 36.8% to 234.2 million. As smartphone penetration increases, the market for apps will expand because more consumers will require games, tools and other applications.

Services conducted online

Consumer preferences regarding handling everyday tasks also influences demand for this industry. Industry revenue will increase as consumers become more comfortable performing tasks online, such as shopping, paying bills and accessing media. Over the past five years, the percentage of services conducted online has risen because of improving attitudes towards conducting tasks online and the increasing prevalence of smartphones.

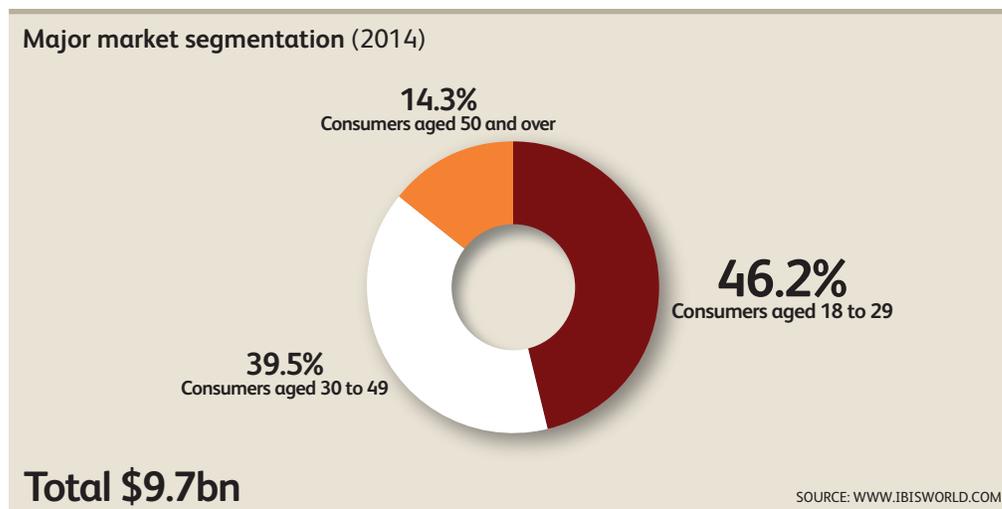
Major Markets

Industry revenue is primarily generated from consumers between the ages of 18 and 29. Consumers in this age group tend to be the most technologically savvy, and smartphone penetration is also highest. Conversely, the smallest proportion of

revenue is generated from consumers over the age of 50. Consumers aged under 18 are not included because although they may be a major user of apps, they are typically not paying for downloads and use family accounts for purchases.

Products & Markets

Major Markets continued



Consumers aged 18 to 29

Consumers aged 18 to 29 are estimated to account for 46.2% of industry revenue in 2014. These consumers exhibit the highest level of smartphone penetration and have become increasingly reliant on using apps as part of everyday life over the past five years. Consumers in this age range also tend to play more games on their smartphones, which is the industry's largest product offering. Over the past five years, consumers aged 18 to 29 have remained the largest segment; however, the segment has shrunk as a proportion of revenue as smartphones have been increasingly adopted by consumers in the 30 to 49 category. Consumers aged 18 to 29 are expected to remain the single largest portion of revenue over the next five years; however, the development of more apps aimed at older demographics will slowly eat into its share of industry revenue.

Consumers aged 30 to 49

Consumers aged 30 to 49 are estimated to represent 39.5% of industry revenue in 2014. This segment has been growing over the past five years, as consumers in this age category have become technologically

aware and smartphone penetration has increased rapidly. More games, tools and productivity apps are being developed to cater to this market, as they typically have significantly higher incomes than consumers in the 18 to 29 age bracket. Additionally, consumers in this age bracket are most likely to make purchases for children. Over the past five years, this segment has expanded as a proportion of revenue and is expected to continue doing so over the five years to 2019.

Consumers 50 and over

Consumers aged 50 and over account for the smallest proportion of revenue, with an estimated 14.3% of industry revenue in 2014. Consumers in this age bracket are the least likely to own a smartphone and download paid apps. These individuals also have the highest proportion of preloaded apps, which refers to apps that come with the phone, and are less likely to play games, which is the industry's largest product offering. Over the past five years, the number of consumers aged 50 and over has increased overall but slowly shrunk as a proportion of revenue, as other age brackets have grown at a faster rate.

Products & Markets

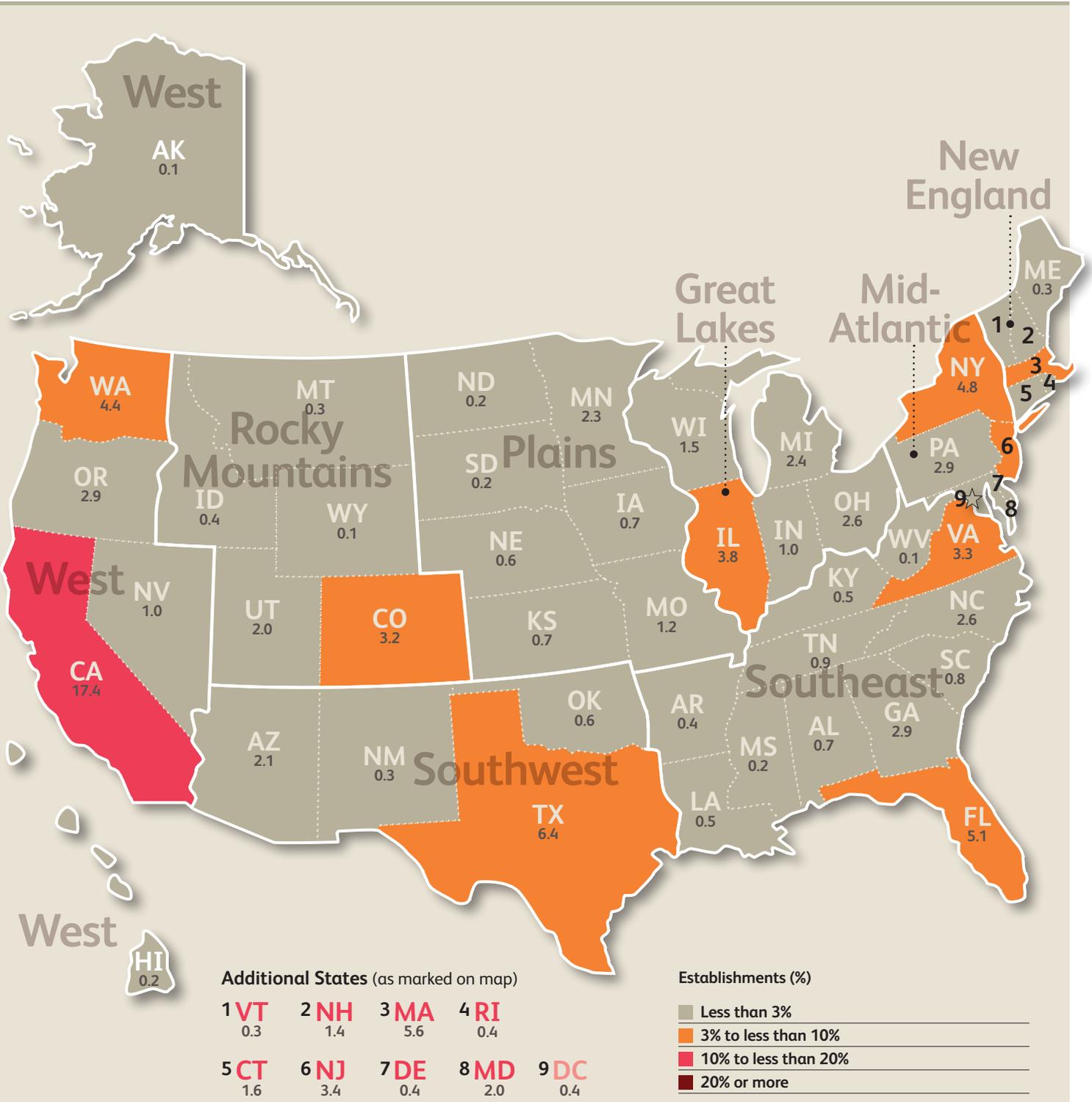
International Trade

There is no international trade in the Smartphone App Developers industry, as trade figures only reflect the value of software products that are shipped in the form of physical media; software transferred over the internet is not included. Although development may be

offshored, this is not considered international trade, as the app development is then attributed to the overseas company. Developers are typically sourced locally; however, some coding and design work may be influenced by overseas companies.

Products & Markets

Business Locations 2014



Products & Markets

Business Locations

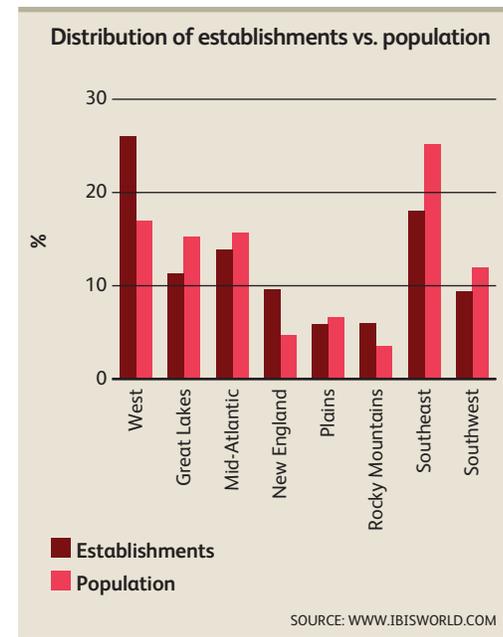
The geographic distribution of software app developers is most prominently concentrated in the West, where many technology companies exist. Furthermore, the Southeast also contains a large number of developers, and New England contains a relatively high number of firms.

West

The West accounts for the single-largest proportion of industry establishments in 2014, with an estimated 25.9% of establishments. California is the most populous state in terms of establishments, with an estimated 17.4% of total establishments. California is also the single largest state in the United States in terms of population and has a flourishing technology sector. The state developed a large technology sector because of the invention of the microprocessor and microcomputer in Silicon Valley, CA. Furthermore, a major site for the United States Navy's research and technology was based in San Francisco, CA. Silicon Valley also has become famous for innovations in software and internet services, which has drawn many computer engineers and scientists to the area who also have expertise in app development. Additionally, there is a high concentration of technology students in the area that have come to gain experience in the many firms that exist in the region.

Southeast

The Southeast comprises an estimated 17.9% of industry establishments in 2014 because of the large population in the region. In 2014, an estimated 25.4% of



the US population resides in the Southeast. No single state controls a significantly large share of establishments, as most are highly correlated with the population in the area. Accordingly, Florida is the largest state in terms of establishments, with 5.1% of total industry establishments.

New England

The New England region accounts for a relatively high proportion of establishments, with 9.6% of total establishments but only 4.7% of the population. The region has a large number of app developers because of the major colleges in the area, such as Harvard and Yale University. Many graduates in the region work for companies in app development, and this has resulted in the region comprising a large number of app-development firms.

Competitive Landscape

Market Share Concentration | Key Success Factors | Cost Structure Benchmarks
Basis of Competition | Barriers to Entry | Industry Globalization

Market Share Concentration

Level
Concentration in this industry is **Low**

The Smartphone App Developer industry is highly fragmented. There are a large number of very small developers creating products for this market. The top four players account for 11.8% of industry revenue. Many smartphone apps start with one developer or a very small group of developers. These developers can publish their app to a platform such as the Apple App Store. Once published to any platform, the

developer is added to the industry, increasing fragmentation. However, over the past five years, the industry has experienced an increasing number of mergers and acquisitions. Large established gaming companies such as EA Games, will buyout successful app makers. Nevertheless, the industry is expected to remain fragmented, and industry establishments are expected to continue to increase.

Key Success Factors

IBISWorld identifies 250 Key Success Factors for a business. The most important for this industry are:

Access to highly skilled workforce

App developers need to be highly trained and skilled in programming and coding to create user-friendly and successful apps.

Product is sold at high profile outlets

Industry products gain the most exposure through listings on popular app stores.

Ensuring pricing policy is appropriate

Apps can generate revenue either through advertising, paid purchases or

in-app purchases. The ability to set the correct pricing scheme will lead to greater app success.

Market research and understanding

Conducting market research to understand the app's audience and what services are most required is crucial to an app's success.

Company's product is user friendly

Industry operators need to develop apps that are user friendly as consumers will turn away from difficult to use apps.

Cost Structure Benchmarks

With establishments in the industry varying by size, cost structure may vary and fluctuate vastly from one company to another. Depending on the business structure and success of the app, profit may differ greatly, with large, well-established players making a greater profit than the smaller and less-known developers. Small operators must invest in software and marketing, building awareness and brand recognition.

Profit

IBISWorld estimates that profit accounts for about 3.1% of industry revenue. An increasing number of app developers are following the freemium business model, offering free apps with in-app purchases.

A great and expanding percentage of apps are offered for free, with paid apps making up a smaller percentage of total downloads. Profit is expected to fluctuate only slightly, remaining relatively static, as developers find new business models to attract and retain customers.

Wages

Wages are expected to account for about 66.7% of total industry revenue. Industry employees often have undergraduate and advanced degrees in computer science and are trained in a number of programming languages, such as Java, C, C++, Python and Ruby, among many others. App development requires substantial skill sets and work hours to

Competitive Landscape

Cost Structure Benchmarks continued

create and maintain apps. Nevertheless, average wage is quite low, as it is pulled down by the increasing number of failing apps. A relatively small percentage of developers receive significant wages, and many developers work alone or with a couple of other people, spending very little money on capital expenditures and making a very small profit. Most of the revenue is thus allocated to wages.

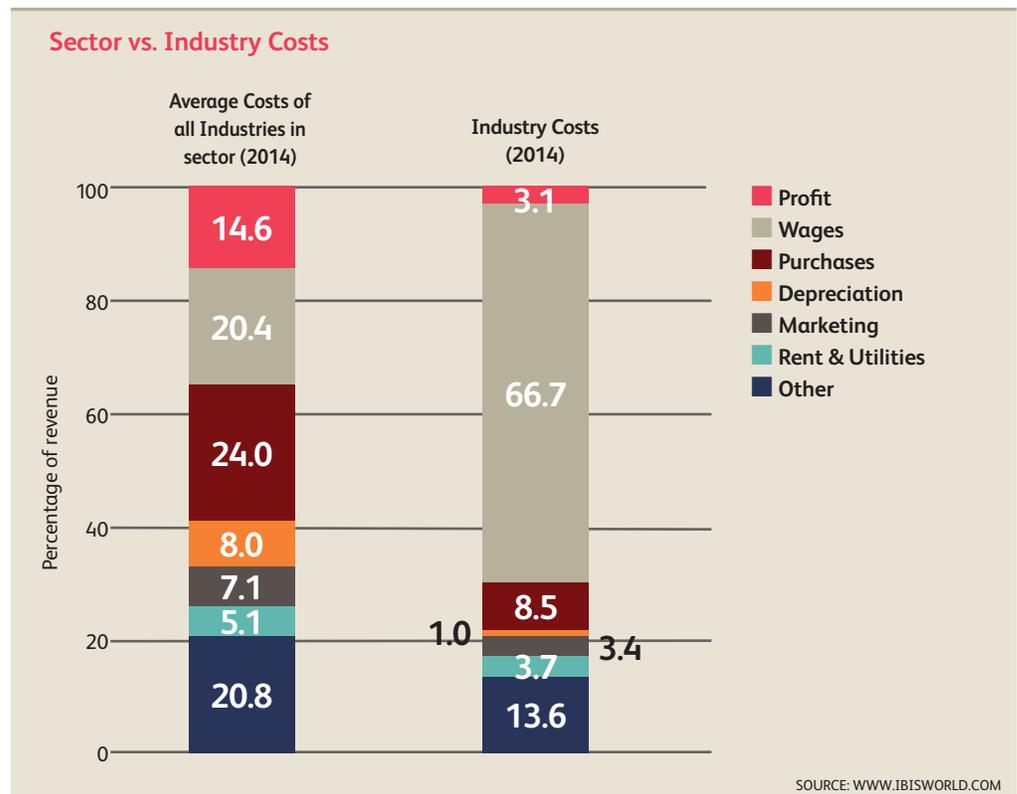
Purchases

Purchases for the industry account for about 8.5% of revenue and are mainly related to development kits, and the hardware that mobile application development is performed on. As new phone models are released on a regular basis, developers need to guarantee that their software is consistently compatible and works on all possible platforms. Over the past five years,

these costs have increased as the popularity of Android smartphones leads developers to create software for several types of smartphones.

Royalties

Another significant cost is app store royalties, which are paid to the app store host (App Store and Google Play are the best known) for allowing the program to be publicized and downloaded. While many app stores take a 30% software revenue cut, the proliferation of more stores (particularly on Android), the increasing number of web apps and the outsourcing of development by many companies has reduced the burden of this cost on the industry. Only those that self publish must be concerned with this cost. Royalties are estimated to account for about 7.9% of total industry revenue.



Competitive Landscape

Basis of Competition

Level & Trend
Competition in this industry is **High** and the trend is **Steady**

The industry exhibits a high level of competition. The number of smartphone app developers has grown exponentially over the past few years due to low barriers to entry and solid demand for a seemingly endless array of possible app creations. As a result, competition between industry operators for market share remains extremely high. No company controls a commanding share of the market at the moment, yet some industry consolidation is on the horizon. The time, effort and capital involved in app creation should encourage companies to merge or acquire smaller brands. Nevertheless, competition will remain fierce as new operators continue to enter the industry.

Internal competition

Competition within the industry is largely based on the development of new products. Smartphone app developers continue to race to think of novel app ideas to service customers' needs. While consumers remain eager to download new apps, their expectations for quality have heightened over time. Functionality and aesthetics are increasingly important competition points for industry products. As a result, a disparity has emerged between larger and smaller operators' apps. Bigger firms tend to be better able to mobilize more investment for product development.

App developers also compete over visibility. In the crowded environment of smartphone app development, a product's visibility is almost as important as its functionality. Developers who are unable to expend large amounts on advertising are usually unable to rise above the fold and capture enough consumer attention to profit from their products. This naturally favors larger firms who can rely on brand recognition and bigger advertising budgets to help distinguish their apps.

Industry operators also compete on price, and a number of established pricing schemes exist for developers to adopt. For example, the majority of successful apps tend to be free, with potential for customers to directly purchase or subscribe to additional content once downloaded. Other apps require customers to purchase the app before download. Different approaches exhibit varying degrees of success, and selecting the right pricing scheme is a critical component of app development.

External competition

Smartphone apps experience minimal substitution from other promotional platforms due to their position as a relatively new technological development. However, new automated design processes may begin to displace more experienced app developers as it becomes easier for amateurs to make their own apps.

Barriers to Entry

Level & Trend
Barriers to Entry in this industry are **Low** and **Steady**

The Smartphone App Developers industry exhibits low barriers to entry, but high barriers to success. Industry participants require extensive knowledge regarding coding and design, as well as budgets to pay for additional developers, project managers and necessary computer equipment. Learning adequate programming and coding often requires a university level education; however, it

can also be learned independently. Capital costs can be high for operators, as businesses will typically require the use of several programmers that are responsible for development, testing, bugging, social media integration, in-app purchasing functions and the development of a database. Furthermore, app developers will then require the assistance of a designer to create an

Competitive Landscape

Barriers to Entry continued

interface that is attractive to users. This includes an app icon, tab icons and splash screens, which refer to images that appear while programs are loading. There are also distribution costs involved with submitting apps to be put on app stores such as the Apple iTunes or Google Play store. Nonetheless, most developers have the ability to perform the majority of these tasks together and, therefore, can keep costs low.

Barriers to success

Although the industry exhibits low barriers to entry, the Smartphone App Developers industry is very difficult to succeed in. There are many industry participants that focus on developing

Barriers to Entry checklist

	Level
Competition	High
Concentration	Low
Life Cycle Stage	Growth
Capital Intensity	Low
Technology Change	High
Regulation & Policy	Medium
Industry Assistance	Low

SOURCE: WWW.IBISWORLD.COM

ideas; however, many struggle to find an appropriate audience or find suitable ways for the app to generate revenue. Additionally, to be successful, apps will most likely have to be listed on app stores that take a royalty fee of up to 30.0%.

Industry Globalization

Level & Trend
Globalization in this industry is **Low** and the trend is **Steady**

There is a medium degree of globalization in the Smartphone App Developers industry. There is no international trade in the industry, but firms may choose to outsource certain coding and programming to international firms where wages are lower. Companies may also choose to auction their coding and programming needs to freelancers online, which allows businesses from any region

to complete work. Furthermore, most apps will be available to consumers across the world after development, with the exception of apps that have region sensitive information or content. There has been no major developments in globalization of the industry over the past five years, as the outsourcing of programming and coding existed prior to app development.

Major Companies

There are no Major Players in this industry | Other Companies

Other Companies

King Games

Estimated market share: 4.3 %

King Games is a creator and provider of casual games. The company is headquartered in London, England and was founded in 2003. King's most popular game is Candy Crush, which was launched in mid-2012 on Facebook and in November 2012 for smartphones. Other games include Bubble Witch Saga and Pyramid Solitaire Saga. The company is private and filed for an initial public offering in 2013 with NASDAQ but decided to delay its listing. In 2013, King Games' revenue is estimated to be \$330.0 million.

Kabam Inc.

Estimated market share: 4.3 %

Kabam Inc. is a developer and provider of multiplayer social games. The company was founded in 2006 and has locations in the United States, China, Germany and Luxembourg. Kabam creates games for the internet, IOS and Android operating systems. The most popular mobile games include Kingdoms of Camelot, Runes of War, Eternal Uprising: End of Days and Fast and Furious 6: The Game. According to management, 70.0% of revenue is derived from smartphones. In 2013, Kabam revenue is estimated to be \$325.0 million.

Zynga Inc.

Estimated market share 2.2 %

Zynga Inc. is a creator and provider of social games. It was founded in 2007 and is headquartered in San Francisco, California. Zynga employs 3,058 people.

The company went public in December 2011 under the ticker NASDAQ: ZNGA. The company categorizes its games into four categories: invest and express, casino, casual and mid-core player versus player. Zynga's most popular games are FarmVille, Zynga Poker, Words With Friends and Mafia Wars. The company's games are typically free and are available for play via internet, social networks and mobile platforms. Zynga has been closely linked with Facebook, accounting for 14.0% of its revenue in 2012. Roughly 22.0% of Zynga's revenue is earned via smartphones. In 2013, industry-specific revenue is estimated to be \$166.6 million.

Electronic Arts, Inc.

Estimated market share: less than 1.0 %

Electronic Arts Inc (EA Games) is a developer and distributor of video games. The company was founded in 1982 and is headquartered in Redwood City, California. In 2013, EA Games had over 9,300 employees. The company produces games for several different platforms, including video game consoles, handheld game players and mobile devices. The company is known for their most notable brands, which include FIFA, Madden NFL, The Sims and Need for Speed. Over the past five years, the company has acquired several mobile game developers. Chillingo was acquired in 2010 and PopCap Games and Firemint in 2011. ESN, a social gaming developer, tops the list in 2012. Its mobile games include Monopoly and Dungeon Keeper. In 2013, industry-specific revenue is estimated to be \$45.1 million.

Operating Conditions

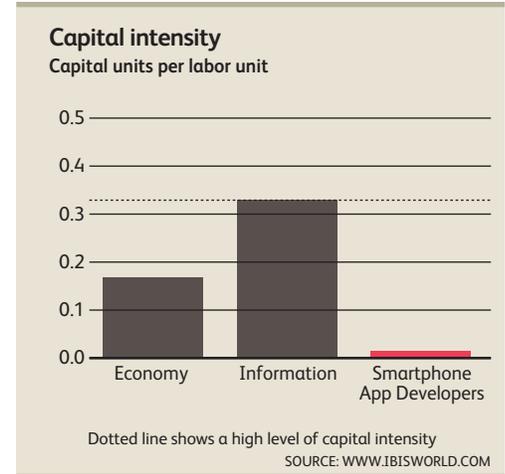
Capital Intensity | Technology & Systems | Revenue Volatility
 Regulation & Policy | Industry Assistance

Capital Intensity

Level
 The level of capital intensity is **Low**

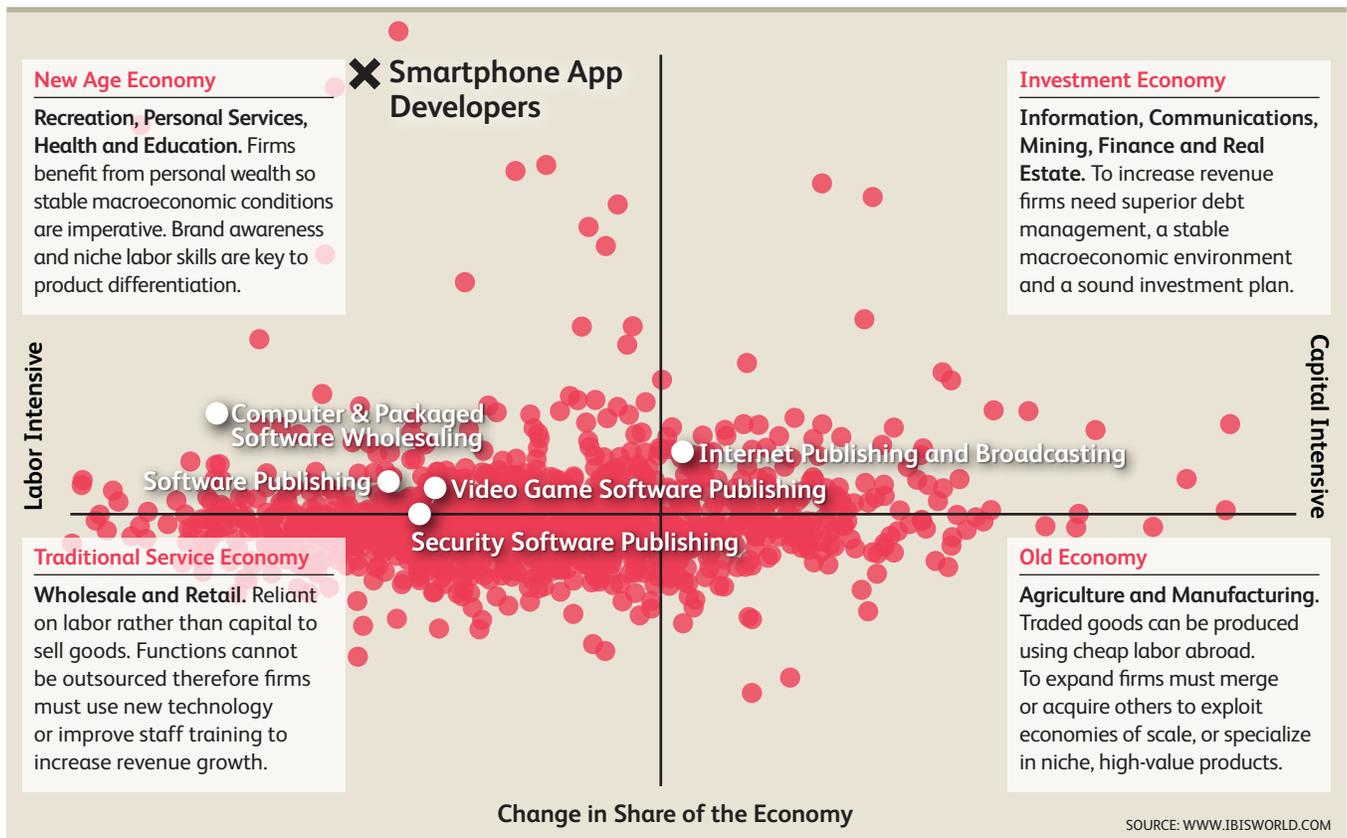
Capital intensity in the Smartphone App Developers industry is low. IBISWorld estimates that for every dollar spent on wages in 2014, the industry will allocate \$0.01 for capital investment. The industry's level of capital intensity has remained relatively stable over the five-year period.

Because app development relies on programmers to create and maintain app infrastructure, at 66.7% of revenue, labor costs make up the largest industry cost. Industry employees often have undergraduate and advanced degrees in computer science and are often trained in a number of programming languages, such as Java, C, C++, Python and Ruby, among many others. As smartphones



such as the Android, Blackberry and iPhone use different languages, app development requires substantial skill

Tools of the Trade: Growth Strategies for Success



Operating Conditions

Capital Intensity continued

sets and work hours to create and maintain apps. Although the average industry wage is low, this is explained by the fact that most programmers work alone rather than as full-time employees of large enterprises.

In addition, the low level of capital intensity is influenced by the limited capital required to perform industry services, as operators require only computers and software to create apps and mobile devices on which to test them.

Technology & Systems

Level

The level of
Technology
Change is **High**

Industry operators use programming languages, defined as instructions used to process data in a symbolic manner without regard to the machine-specific details, to develop smartphone apps. Among the most common languages used in smartphone app development are JavaScript, Java, C#, Objective-C and PHP. Evolution in programming languages has enabled the creation of new smartphone apps, with emphasis currently geared toward increasing language mobility and security.

Native Apps and Mobile Web Apps

Industry operators use programming languages to develop mobile apps on various smartphone platforms. In addition to the growing number of programming languages competing for industry dominance, the number of smartphone platforms has grown over the past five years. Smartphone app platforms include hardware architecture and software framework, thereby enabling mobile app software to run. The most common mobile app platforms are Apple's iOS, Google's Android, followed by HTML5, Windows and BlackBerry.

Smartphone app design is largely divided between two formats, native and mobile web. Native apps, which are specific to individual platforms like iOS, Android, Windows and BlackBerry, are integrated with smartphone operating systems, allowing them to interact with hardware in a process similar to that of computer systems. Because native apps are able to use elements from their operating system such as cameras,

microphones, GPS and scanning, they are more integrated and run faster. In contrast, mobile web apps run directly from an online interface, accessible through desktop web apps like Safari or Chrome. Web apps are developed using programming languages like HTML 5 and CSS3 JavaScript, and can be accessed across multiple platforms.

Although native apps represent the latest in technological advancement, the future of app technology is currently unclear. While native apps are faster and provide a better user experience since they are able to leverage the technology of smartphone operating systems, they are also more expensive because they require a more complex code and must be built separately for each operating system. Mobile web apps, in contrast, require fewer resources because they are built using a simpler code and function across all operating systems. As a result, it is currently unclear whether the technological gains offered by native apps will dictate industry development in the future, as many operators may choose to work with mobile web apps due to the time and labor cost savings they enable.

Smartphone evolution

In addition to advancements in programming language and platform expansion, growth in smartphone technologies has continued to redefine the industry. Beginning with the introduction of the Apple iPhone in 2007, smartphone use has risen above previous mobile and feature phones that are limited to performing voice calling and

Operating Conditions

Technology & Systems continued

text messaging, providing consumers with greater computing capability and function. Since the rollout of the Apple iPhone, the entrance of other smartphone manufacturers has propelled technological change. Mirroring prior advances in personal computing, smartphone processor performance has improved rapidly, with processing speeds doubling at an estimate rate of once every six months.

In addition, new smartphone developments like near field communication (NFC), a wireless technology that uses radio frequency

identification tech (RFID) to transfer data between two devices, are creating opportunities for industry developers. In contrast to Bluetooth technology, NFC is low power and does not require a pairing code. Already, smartphone apps have begun to integrate NFC technology, with apps like Foursquare allowing users to share lists simply by tapping phones. Ultimately, advancements in smartphone technology have the power to create new growth opportunities for smartphone app developers, as new technologies will foster the ability to create new smartphone app functions.

Revenue Volatility

Level
The level of Volatility is Very High

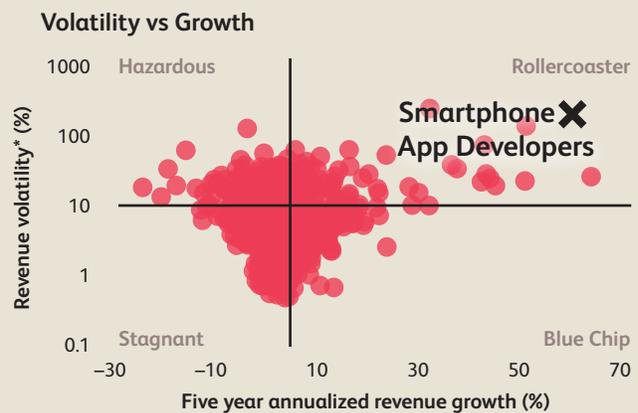
Over the past five years, revenue volatility in the Smartphone App Developers industry has been very high. However, this level of revenue volatility reflects the industry's rapid growth over the past decade, rather than instability. In 2009, for example, the industry experienced record growth of about 468.0%, due to the release of the Android and the adoption of the iPhone. Although industry growth figures have not since approached this high, revenue has continued to grow at a rapid pace. Over the five years to 2014, IBISWorld

estimates that industry revenue will grow at an average annual rate of 49.8%.

Rapid revenue growth, the driver of industry volatility, has been propelled by the growing number of consumers that have a broadband internet-capable device combined with the increasing number of mobile internet connections. In particular, industry growth has been spurred by the increasing number of consumers with smartphones. Since early 2007, when Apple introduced the first iPhone, the number of consumers using smartphones increased rapidly.

A higher level of revenue volatility implies greater industry risk. Volatility can negatively affect long-term strategic decisions, such as the time frame for capital investment.

When a firm makes poor investment decisions it may face underutilized capacity if demand suddenly falls, or capacity constraints if it rises quickly.



* Axis is in logarithmic scale

Operating Conditions

Revenue Volatility continued

Because these mobile devices provide more functionality and capability than what was once available on desktop computers, mobile app development has grown at an

unprecedented rate. As the prevalence of mobile internet-capable devices such as the iPhone, so too will mobile app development, fueling industry revenue growth.

Regulation & Policy

Level & Trend
The level of Regulation is **Medium** and the trend is **Increasing**

The Smartphone App Developers industry is affected by regulation at the federal and state level, as well as restrictions imposed by companies that distribute apps such as Apple and Google. Because of the sensitive nature of information consumers make available to apps and app marketplaces, security and privacy issues related to third-party app developers have become a central concern, spurring new regulation.

Federal regulation

Consumer privacy concerns have come to the forefront of the industry, with social networking sites like Facebook, Path, Twitter and Yelp, all of which operate mobile apps, drawing reproach for storing and distributing users' private information. At the federal level, the industry is regulated by the Children's Online Privacy Protection Act (COPPA) of 1998, enforced by the Federal Trade Commission (FTC). Under COPPA, mobile app operators are required to notify and seek parental consent before collecting personal information from children under the age of 13. Revisions to COPPA passed in 2012 have made compliance with the law more stringent for all online service providers, including mobile apps. Under the revisions, mobile apps directed toward children under the age of 13 that collect private information must post a clear and comprehensive message of information that is being collected, as well as make extensive efforts to notify parents. In addition, the revised law expands the definition of personal information, broadening it to include

geolocation information as well as photos, videos and audio files. Increasing regulatory oversight of the industry is evidenced by the January 2014 settlement between the FTC and Apple, which agreed to refund a minimum of \$32.5 million for failing to properly disclose how payment in its mobile app marketplace worked, allowing kid's to make purchases without parental consent.

Although COPPA is limited to protecting child privacy, recent concerns that mobile apps sold through marketplaces like Apple and Google are violating user privacy, have spurred initiative for more stringent regulation. In the wake of the fallout from the Path scandal, in which the photo sharing and messaging app was found to have stored and distributed users' personal information (contact lists, e-mail addresses and phone numbers), new legislation has been proposed to limit mobile apps' collection of personal information. The Do-Not-Track Online Act, introduced in 2011 and again in 2013, would provide users with the option to prevent all internet companies from tracking their online activities. New legislation of this nature would increase industry operator compliance costs, as well as limit revenue opportunities from data collection and distribution.

State regulation

In contrast to federal law, which revolves largely around the enforcement of provisions under COPPA concerning minors, some states have passed more stringent laws governing online privacy.

Operating Conditions

Regulation & Policy continued

Internet privacy in California, for example, is governed by the Online Privacy Act of 2003, which requires internet operators to clearly notify all California residents that their information is being gathered. This law was effectively extended to the mobile app industry in 2012, when companies such as Apple, Google, Microsoft, Amazon, Hewlett-Packard and Research in Motion agreed to improve privacy protections in apps that use their operating systems. Under the law, individual mobile app operators that fail to meet specific provisions may face severe civil penalties.

Marketplace regulation

In addition to federal and state regulations, the Smartphone App

Developers industry is subject to policies imposed at the marketplace level. Since the introduction of the mobile app platform, developers have accessed unique device identifiers (UDIDs) present in every phone. By accessing UDIDs, which are intended to be anonymous, developers have been able to gain access to user information, allowing them to raise revenue by selling user data for marketing purposes. However, with growing privacy concerns among the public, app marketplaces like Apple have begun to phase out UDIDs. As a result, policies that eliminate developers' access to private information have the potential to negatively affect industry revenue growth moving forward.

Industry Assistance

Level & Trend

The level of Industry Assistance is **Low** and the trend is **Increasing**

Although the Smartphone App Developers industry does not receive any specific government assistance, the industry has recently benefited from the federal government's 2012 directive mandating that all major federal agencies make at least two public services available on mobile phones by May 2013. Under the guidelines stipulated in the administration's "Digital Government" directive, the federal government now offers more than 100 mobile apps, including apps for job openings by the Office of Personnel Management (OPM) and for flight information by the Transportation Security Administrations (TSA).

In addition, the "Digital Government" directive created the foundation for the Office of Management and Budget (OMB) to accelerate the release of accessible government data in an effort to spur new mobile app development. More specifically, the framework created by the Open Data Initiatives projects pairs innovators from the private sector, nonprofits and academia with top government employees to expand the amount of publicly released government data in machine-readable form. The release of this data will further industry expansion, providing the foundation on which mobile apps in the healthcare, education and public safety fields can be built.

Key Statistics

Industry Data

	Revenue (\$m)	Industry Value Added (\$m)	Establishments	Enterprises	Employment	Exports	Imports	Wages (\$m)	Domestic Demand	No. of mobile internet connections (Mils)
2005	56.1	22.0	1,252	950	383	--	--	19.6	N/A	2.3
2006	56.6	30.7	1,312	996	598	--	--	28.3	N/A	6.2
2007	58.0	37.2	1,383	1,045	828	--	--	34.7	N/A	16.0
2008	227.4	145.9	4,762	3,665	4,098	--	--	136.4	N/A	24.3
2009	1,291.6	828.6	34,990	26,441	28,098	--	--	775.0	N/A	48.9
2010	2,039.1	1,307.9	51,359	38,829	51,972	--	--	1,223.4	N/A	86.4
2011	2,456.6	1,575.4	68,735	52,895	71,782	--	--	1,473.9	N/A	130.8
2012	5,387.2	3,514.7	137,874	104,186	180,614	--	--	3,288.9	N/A	167.2
2013	7,629.1	5,052.3	207,731	157,620	289,088	--	--	4,728.4	N/A	204.0
2014	9,747.7	6,923.5	257,072	195,000	417,630	--	--	6,499.8	N/A	234.2
2015	12,639.0	8,989.2	298,839	227,110	591,510	--	--	8,441.2	N/A	259.7
2016	16,216.5	11,531.9	455,835	347,469	823,097	--	--	10,830.5	N/A	279.2
2017	21,317.6	15,157.1	540,575	412,903	1,166,356	--	--	14,237.4	N/A	292.9
2018	27,243.9	19,367.9	701,218	536,468	1,598,389	--	--	18,195.4	N/A	298.7
2019	34,654.3	24,632.4	838,764	642,263	2,170,255	--	--	23,144.5	N/A	313.0

Annual Change

	Revenue (%)	Industry Value Added (%)	Establishments (%)	Enterprises (%)	Employment (%)	Exports (%)	Imports (%)	Wages (%)	Domestic Demand (%)	Number of mobile internet connections (%)
2006	0.9	39.5	4.8	4.8	56.1	N/A	N/A	44.4	N/A	169.6
2007	2.5	21.2	5.4	4.9	38.5	N/A	N/A	22.6	N/A	158.1
2008	292.1	292.2	244.3	250.7	394.9	N/A	N/A	293.1	N/A	51.9
2009	468.0	467.9	634.8	621.4	585.7	N/A	N/A	468.2	N/A	101.2
2010	57.9	57.8	46.8	46.9	85.0	N/A	N/A	57.9	N/A	76.7
2011	20.5	20.5	33.8	36.2	38.1	N/A	N/A	20.5	N/A	51.4
2012	119.3	123.1	100.6	97.0	151.6	N/A	N/A	123.1	N/A	27.8
2013	41.6	43.7	50.7	51.3	60.1	N/A	N/A	43.8	N/A	22.0
2014	27.8	37.0	23.8	23.7	44.5	N/A	N/A	37.5	N/A	14.8
2015	29.7	29.8	16.2	16.5	41.6	N/A	N/A	29.9	N/A	10.9
2016	28.3	28.3	52.5	53.0	39.2	N/A	N/A	28.3	N/A	7.5
2017	31.5	31.4	18.6	18.8	41.7	N/A	N/A	31.5	N/A	4.9
2018	27.8	27.8	29.7	29.9	37.0	N/A	N/A	27.8	N/A	2.0
2019	27.2	27.2	19.6	19.7	35.8	N/A	N/A	27.2	N/A	4.8

Key Ratios

	IVA/Revenue (%)	Imports/Demand (%)	Exports/Revenue (%)	Revenue per Employee (\$'000)	Wages/Revenue (%)	Employees per Est.	Average Wage (\$)	Share of the Economy (%)
2005	39.22	N/A	N/A	146.48	34.94	0.31	51,174.93	0.00
2006	54.24	N/A	N/A	94.65	50.00	0.46	47,324.41	0.00
2007	64.14	N/A	N/A	70.05	59.83	0.60	41,908.21	0.00
2008	64.16	N/A	N/A	55.49	59.98	0.86	33,284.53	0.00
2009	64.15	N/A	N/A	45.97	60.00	0.80	27,582.03	0.01
2010	64.14	N/A	N/A	39.23	60.00	1.01	23,539.60	0.01
2011	64.13	N/A	N/A	34.22	60.00	1.04	20,533.00	0.01
2012	65.24	N/A	N/A	29.83	61.05	1.31	18,209.55	0.02
2013	66.22	N/A	N/A	26.39	61.98	1.39	16,356.27	0.03
2014	71.03	N/A	N/A	23.34	66.68	1.62	15,563.54	0.04
2015	71.12	N/A	N/A	21.37	66.79	1.98	14,270.60	0.05
2016	71.11	N/A	N/A	19.70	66.79	1.81	13,158.23	0.07
2017	71.10	N/A	N/A	18.28	66.79	2.16	12,206.74	0.08
2018	71.09	N/A	N/A	17.04	66.79	2.28	11,383.59	0.11
2019	71.08	N/A	N/A	15.97	66.79	2.59	10,664.42	0.13

Figures are inflation-adjusted 2014 dollars.

SOURCE: WWW.IBISWORLD.COM

Jargon & Glossary

Industry Jargon

FREEMIUM A pricing strategy in which a mobile app is available for free and advanced features and functionality are acquired as in-app purchases.

IN-APP PURCHASES In-app purchases refer to the consumer purchases made whilst running the app. In-app purchases typically unlock additional content or features.

NATIVE APP An application program that has been developed for use on a particular platform or device.

SPLASH SCREEN Splash screens are images that appear while apps are loading.

WEB APP An application program that is stored on a remote server and delivered over the Internet through a browser interface.

IBISWorld Glossary

BARRIERS TO ENTRY High barriers to entry mean that new companies struggle to enter an industry, while low barriers mean it is easy for new companies to enter an industry.

CAPITAL INTENSITY Compares the amount of money spent on capital (plant, machinery and equipment) with that spent on labor. IBISWorld uses the ratio of depreciation to wages as a proxy for capital intensity. High capital intensity is more than \$0.333 of capital to \$1 of labor; medium is \$0.125 to \$0.333 of capital to \$1 of labor; low is less than \$0.125 of capital for every \$1 of labor.

CONSTANT PRICES The dollar figures in the Key Statistics table, including forecasts, are adjusted for inflation using the current year (i.e. year published) as the base year. This removes the impact of changes in the purchasing power of the dollar, leaving only the “real” growth or decline in industry metrics. The inflation adjustments in IBISWorld’s reports are made using the US Bureau of Economic Analysis’ implicit GDP price deflator.

DOMESTIC DEMAND Spending on industry goods and services within the United States, regardless of their country of origin. It is derived by adding imports to industry revenue, and then subtracting exports.

EMPLOYMENT The number of permanent, part-time, temporary and seasonal employees, working proprietors, partners, managers and executives within the industry.

ENTERPRISE A division that is separately managed and keeps management accounts. Each enterprise consists of one or more establishments that are under common ownership or control.

ESTABLISHMENT The smallest type of accounting unit within an enterprise, an establishment is a single physical location where business is conducted or where services or industrial operations are performed. Multiple establishments under common control make up an enterprise.

EXPORTS Total value of industry goods and services sold by US companies to customers abroad.

IMPORTS Total value of industry goods and services brought in from foreign countries to be sold in the United States.

INDUSTRY CONCENTRATION An indicator of the dominance of the top four players in an industry. Concentration is considered high if the top players account for more than 70% of industry revenue. Medium is 40% to 70% of industry revenue. Low is less than 40%.

INDUSTRY REVENUE The total sales of industry goods and services (exclusive of excise and sales tax); subsidies on production; all other operating income from outside the firm (such as commission income, repair and service income, and rent, leasing and hiring income); and capital work done by rental or lease. Receipts from interest royalties, dividends and the sale of fixed tangible assets are excluded.

INDUSTRY VALUE ADDED (IVA) The market value of goods and services produced by the industry minus the cost of goods and services used in production. IVA is also described as the industry’s contribution to GDP, or profit plus wages and depreciation.

INTERNATIONAL TRADE The level of international trade is determined by ratios of exports to revenue and imports to domestic demand. For exports/revenue: low is less than 5%, medium is 5% to 20%, and high is more than 20%. Imports/domestic demand: low is less than 5%, medium is 5% to 35%, and high is more than 35%.

LIFE CYCLE All industries go through periods of growth, maturity and decline. IBISWorld determines an industry’s life cycle by considering its growth rate (measured by IVA) compared with GDP; the growth rate of the number of establishments; the amount of change the industry’s products are undergoing; the rate of technological change; and the level of customer acceptance of industry products and services.

NONEMPLOYING ESTABLISHMENT Businesses with no paid employment or payroll, also known as nonemployers. These are mostly set up by self-employed individuals.

PROFIT IBISWorld uses earnings before interest and tax (EBIT) as an indicator of a company’s profitability. It is calculated as revenue minus expenses, excluding interest and tax.

VOLATILITY The level of volatility is determined by averaging the absolute change in revenue in each of the past five years. Volatility levels: very high is more than $\pm 20\%$; high volatility is $\pm 10\%$ to $\pm 20\%$; moderate volatility is $\pm 3\%$ to $\pm 10\%$; and low volatility is less than $\pm 3\%$.

WAGES The gross total wages and salaries of all employees in the industry. The cost of benefits is also included in this figure.

At IBISWorld we know that industry intelligence is more than assembling facts

It is combining data with analysis to answer the questions that successful businesses ask

- Identify high growth, emerging & shrinking markets
 - Arm yourself with the latest industry intelligence
 - Assess competitive threats from existing & new entrants
 - Benchmark your performance against the competition
 - Make speedy market-ready, profit-maximizing decisions
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Who is IBISWorld?

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