

# Research on Android app Vs Apple app Market: Who is leading?

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## Abstract:

Now days there is boom of smart phones, there are more than a billion smartphone users in the world [1]. As of 2013, two-third of Americans own smartphones [2]. The key feature of these smart phones are their application support and there operating system on which these application runs. The most common mobile operating systems are *Android*, *iOS*, *Blackberry* and *WindowsPhone*. This paper provides detail analysis of market share of smart phones having different mobile operating systems.

## 1. Introduction

### 1.1 iOS:

It's a mobile operating system used and developed by Apple Inc. It is used to run iPhone, iPad and iPod Touch devices. It was first released in 2007 for iPhone[3]. It is based on the concept of direct manipulation and utilizes a multi-touch interface where simple gestures are used to operate the device, like swiping your finger across the screen to move to the next page or pinching your fingers to zoom out also for rotating in three dimension, respond on shaking or tilting the device internal accelerometers are used applications[4]. It uses framework of OSX such as Core Foundation and Foundation but its UI toolkit is Cocoa Touch instead of AppKit framework. It's therefore not compatible with OS X for applications. iOS also shares the Darwin foundation with OS X. Its is very restrictive when it comes to their devices that why Apple is much secure than Android devices [7].

#### 1.1.1 iOS App Store:

It is a application store where user can browse and download mobile applications on iOS of their own choices, that are developed with Apple's iOS SDK. These app can free or paid depends upon the publisher of the application available on app store.

Many of the apps also have in-app purchase means user have to pay some amount in order to get access to particular feature of that app.

These apps can be dowloaded to iOS device such as iPad ,iPhones and iPods ,also they can be downloaded onto personal computer with help of iTunes.Apple takes 30 percent of all revenue generated through apps, and 70 percent goes to the app publisher [5].

### 1.2 Android:

Android is an open source mobile operating system developed by Google Inc. It is based on Linux software system and designed primarily for touch screen mobile devices such as smartphones and tablet computers. It's an open source operating system unlike iOS, any company can use Android and customize its code and can use it in their own mobile devices. [6]. It was initially developed by Android Inc. and now Google takeover this. Like iOS, Android also uses direct manipulation like swiping, tapping, pinching and reverse pinching to manipulate on-screen objects. The response to user input is designed to be immediate and provides a fluid touch interface, often using the vibration capabilities of the device to provide haptic feedback to the user.[8].

#### 1.2.1 Google Play Store:

It is an application store called Google Play Store where user can browse and download mobile applications for android devices of their own choices that are developed with Android's iOS SDK. These app can free or paid depends upon the publisher of the application available on app store. Many of the apps also have in-app purchase means user have to pay some amount in order to get access to particular feature of that app. These apps can be downloaded directly to an Android devices or Google TV device through the Google Play Store mobile application, also it can be deployed through Google Play Store website to android device. [19].

## 2. Who is dominating who?

iOS and Android are two leading mobile operating systems, Android and iOS Combine for 91.1% of the Worldwide Smartphone OS Market in 4Q12 and 87.6% for the Year[20]. So the question arises that who's winning the mobile platform wars, Apple's iOS or Google's Android? Is Android beating iOS or that iOS is beating Android.

The cold war between Apple and Google has developed gradually into the most heated rivalry in the business world and the tech industry. When in November 2007 Google made a formal public statement of its entry into the smartphone market, tension began to brew between the two tech giants. As the companies engaged in PR and legal fisticuffs, hardcore users took their sides and began spewing venom.

Initially Apple used to have a deal of attention on hardware and Google was all about internet services, the showdown began when these two companies started infringing on each other's space. Apple introduced its online services with iCloud and the iWork suite, on the other hand Google started refocusing on smartphones and wearables. And, the battle rages on. [15].

Below are the various parameters on which comparison is done between two operating systems.

## 2.1 No of sales: Android devices Vs Apple devices in 2013

According to Kantar Worldpanel Comtech, (leader in consumer knowledge and insights based on continuous consumer panels). Sales of Android devices has dominated over iOS on the basic number of smartphone buyers, From mid-November through mid-February, Android has noted increase in its share of U.S. smartphone sales from 45 percent to 51.2 percent, up during the same three-month period. Over the same period, Apple's iOS dropped to second place as its share of U.S. sales fell to 43.5 percent from 47 percent. Percentage share of smartphone sales is given in figure below. [9][10].

	3 mo. ending Feb 12	3 mo. ending Feb 13
<b>U.S MARKET</b>	<b>100%</b>	<b>100%</b>
iOS	47.0	43.5
Android	45.4	51.2
RIM	3.6	0.7
Windows	2.7	4.1
Symbian	0.5	0.1
Other	0.8	0.4

According to Comscore's MobiLens (comScore is a leading internet technology company that measures what people do as they navigate the digital world - and turns that information into insights and actions for their clients to maximize the value of their digital investments.

)study which attempts to measure the smartphone platforms used by everyone in the U.S. over the age of 13. Percentage share of smartphone sales is given in figure below. [11]

	Share (%) of Smartphone Subscribers		
	Nov-12	Feb-13	Point Change
Total Smartphone Subscribers	100.0%	100.0%	N/A
Google	53.7%	51.7%	-2.0
Apple	35.0%	38.9%	3.9
BlackBerry	7.3%	5.4%	-1.9
Microsoft	3.0%	3.2%	0.2
Symbian	0.5%	0.5%	0.0

According to Gartner: (is an American information technology research and advisory firm headquartered in Stamford, Connecticut, United States) World-Wide Smartphone Sales (Thousands of Units). In the smartphone OS market, Android's share increased by 12 percentage from 66.4 to 78.4 percent in 2013. The Android platform will continue to benefit from this, with sales of Android phones in 2014 approaching the billion mark. While iOS's share decreased by 3.5 % from 19.1 in 2012 to 15.6 in 2013. [12].

Worldwide Smartphone Sales to End Users by Operating System in 2013 (Thousands of Units)

Operating System	2013 Units	2013 Market Share (%)	2012 Units	2012 Market Share (%)
Android	758,719.9	78.4	451,621.0	66.4
iOS	150,785.9	15.6	130,133.2	19.1
Microsoft	30,842.9	3.2	16,940.7	2.5
BlackBerry	18,605.9	1.9	34,210.3	5.0
Other OS	8,821.2	0.9	47,203.0	6.9
Total	967,775.8	100.0	680,108.2	100.0

## 2.2 Who is selling more apps and who is generating more revenue?

Android's position is one of the dominant smartphone platform worldwide making a mark on mobile app download, Russia and Brazil have been on the rise for some time now, but Mexico and Turkey also had a strong influence on Google Play downloads in Q1 2014. [13]. Google Play led the iOS App Store in downloads by approximately 45% in Q1 2014, up from 35% in the previous quarter. [13]. Growth in Google Play downloads was driven by explosive growth in emerging markets, with Mexico and Turkey showing themselves as markets to watch. According to IDC, smartphone adoption has grown rapidly in Mexico, increasing around 75% in 2013 and expected to grow by approximately 40% in 2014. Over 65% of these devices used the Android OS, and this proportion is expected to increase in 2014 [21]. In Turkey, significant investment in IT and prominent technology projects as part of Vision 2023 and the FATI H education project are contributing to rapid device growth. According to IDC, IT spending is expected to increase around 9% in Turkey this year, driven primarily by the adoption of smartphones and tablets. [21].

According to App Annie Intelligence estimates, the ranking of the top five countries in the iOS App Store by both downloads and revenue remained remarkably stable in Q1 2014. However, there was still significant growth for the top countries with China making strong gains, as it has done for several quarters.

With a substantial rise in both downloads and revenue, China is now a dominant force in the worldwide growth of the iOS App Store. In January, Apple completed a deal to bring the iPhone to China Mobile, the country's largest carrier with over 700 million subscribers. This deal reportedly drew one million new iPhone users in China in February alone. Rising demand for iPhones in China in Q4 2013 indicates that further gains may also be made for Apple outside of the China Mobile deal. During Q1 2014, downloads in China saw strong growth from apps within the Games, Travel, and Social Networking categories. Revenue growth in China was even stronger than download growth, rising by around 70% quarter-over-quarter. It was again Games that accounted for the majority of growth, with Social Networking apps also making a significant contribution. [14].

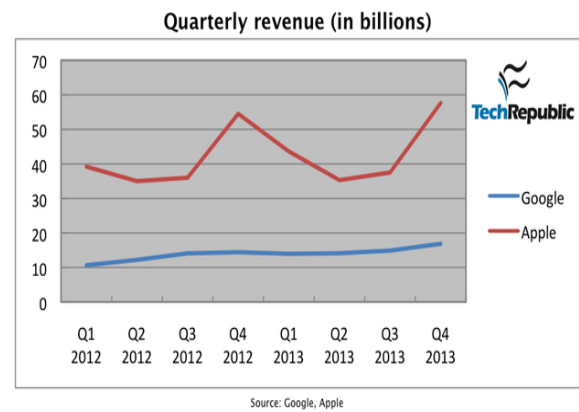
The iOS App Store maintained its comfortable advantage in revenue, leading Google Play by 85%.

iOS App Store revenue growth was driven largely by China and the United States[21]. The key finding in terms of revenue from the Q1 report appears, at first glance, to be more of the same – that is, Apple generates more revenue for developers, despite Google's massive install base. However, what's interesting is that Google Play is now narrowing that revenue gap, according to App Annie. In the U.S., for example, Google Play revenue grew approximately 55% quarter-over-quarter, taking the country past South Korea (home to Samsung and LG), and second place on the Market Index since Q1 2013. Now it's number three, with Japan (#1) and the U.S. (#2) ahead. The change indicates that stateside Android users may be slowly warming up to the notion of paying for apps and other in-app purchases, specifically games, like category leader Clash of Clans, for instance.

The first thing to note is that while Apple tends to make between three and five times as much revenue as Google does[15], their revenue is far more volatile than Google's. The first thing that we can infer is Google's revenue strategy is still largely dependent on selling ads. Apple's revenue spikes wildly around the holiday season because of their retail operation, but Google's remains far more stable throughout the year. According to Frank Gillett, a principal analyst at Forrester Research, this is because their physical product offerings have yet to make up a substantial part of their revenue.

"They're not fundamentally a product-driven company. When you sell a physical good you are beholden to seasonal buying cycles," Gillett said.

Even as Google positions itself to sell more hardware in the coming years, their revenue will probably never reach the level of volatility experienced by Apple. According to Gartner analyst Van Baker, Google is seeding the market with an OS to get more people to use their services, so it can sell more ads. So, it is likely that ad revenue will remain the foundation for Google's overall revenue moving forward.



### 2.3 Whose app store is better? Google's or Apple's?

Both stores have their strengths and weaknesses. Both of them have benefits and drawbacks. The main difference is that Apple controls every single aspect of their app store. You cannot get an app into the App Store unless they accept you even if you've spent millions of dollars. In contrast, the Android Marketplace is kind of like the Wild West. Anyone can put anything in there and they do.[16].

There are a lot of really cool apps designed and developed for both platforms. In terms of design, Android platform and Marketplace allows user to download in a nice clean fashion (in the background)also before user install an application, it will get a list of all of the things that app will do in relation to their system. The installation process with the iTunes store is a bit of a kluge. User has to jump in and out of the App Store.

Apple has locked down the App Store. That being said, sometimes it's nice to be able to install an application that hasn't been accepted. That can be done in an ad-hoc fashion on the iPhone. However, Google has made it easy for you to install anything user wantsits device, even if it hasn't been accepted into their Marketplace. Apple is closed while Google is open. User can try Google Android apps without actually buying a phone by using the Emulator on your computer. While user cannot really do that with anything from Apple. [16].

Coming on figures, the horse race between the app stores has become a tedious exercise. Apple says it has 800,000 apps in the App Store. Google Play is about at 800,000 and is likely to hit the million app benchmark before iOS[17].

Applause, a service that uses an algorithm to crawl all live apps in the App Store and Google Play to aggregate every app's ranking and user reviews to determine the quality of an individual app by uTest.[17].It is some powerful data and the results are fascinating. Applause ranks every app in 10 categories and gives them an Applause Score of 1 to 100 along 10 categories. It then breaks everything down into 10 Applause Attributes: Content, Elegance, Interoperability, Performance,

Pricing, Privacy, Satisfaction, Security, Stability and Usability [18]. uTest can then look at average scores for app categories (such as games or media etc.) and yes, entire operating systems. By uTest's metrics, iOS apps have a mean Applause Score of 68.53. Android apps average Applause score is 63.34. The margin of difference between the two is ~8%. That does not necessarily mean that any individual iOS app is going to be better than its equivalent or similar Android app. Each platform offers unique characteristics that can make the experience better or worse.

Upon ReadWrite's request, the team at uTest took a broad level look at some popular app categories and compared them between the Apple App Store and Android Google Play. As you can see with the chart below, Apple generally comes out ahead in most major categories.

Note: Apple and Google do not use a common taxonomy for how they categorize apps. uTest had to map equivalent app categories to each other to come up with comparable rankings. Apps can be listed in two separate categories. Amazon Appstore for Android rankings are not included. [17]

Applause Data Across Sample of Leading App Store Categories

Category	iOS Avg Score	iOS Total Active Apps	Android Avg Score	Android Total Active Apps
Games	74.67	121,256	65.17	50,015
Entertainment	57.01	61,877	50.82	48,614
Education	73.06	65,757	67.28	27,573
Lifestyle	61.84	50,718	57.77	29,189
Business	64.80	41,065	54.54	13,890
Sports	61.33	21,081	58.05	13,525
Productivity	66.72	19,654	69.34	13,801
Health & Fitness	69.84	17,349	66.04	11,627
Finance	69.23	14,690	65.95	10,023
Medical	68.32	14,277	69.28	5,174
Weather	65.61	2,915	65.40	2,229
<b>Total Active Apps</b>	<b>68.53</b>	<b>660,143</b>	<b>63.34</b>	<b>440,635</b>

### 3. Conclusion on basis of above parameters.

Based on above statistics and analysis it can be concluded that

*Google android has more number of users than Apple has also android apps are more downloaded than apple's app but apple is earning more revenue than Google.*

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