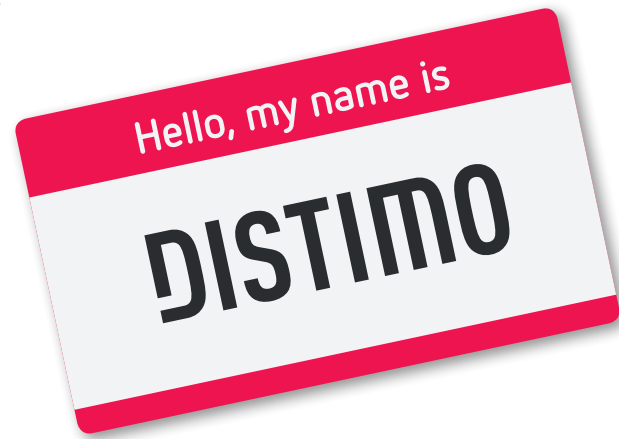


January 2013

THE IMPACT OF PRICE CHANGES

By Tiuri van Agten, Analyst at Distimo

DISTIMO Publication - January 2013



A brief introduction

Distimo has a very clear objective: to make the app market transparent. The company was born out of the frustration of a lack of insights into the performance of apps and the manual work needed to track important metrics.

Our goal is to provide the best and most actionable app intelligence for anyone who wants to compete in the app market. Our data-driven team seeks to help developers, brands and financial services companies gain actionable, timely and factual knowledge of what's happening daily in the global app market.

We offer three core services:

- **App Analytics**
to track all of your important app data across all major app stores and ad networks.
- **Conversion Tracking**
to measure your full app sales funnel from discovery and campaigns to app launch.
- **Market Data**
to analyze the daily download and revenue volumes of any app in the market.

Founded in 2009, Distimo is a privately held company based in The Netherlands. Follow us on [Twitter](#), read our [blog](#) or learn more at www.distimo.com.

New and noteworthy

This month's publication discusses the effects of price changes on download volumes and revenue. Does a price drop always increase download volumes? And what is the effect on revenue? Does the higher download volume compensate for the lower selling price? On the other hand, what happens to download numbers and revenue after a price increase? All data contained in this month's report covers the Apple App Store for iPhone and the Apple App Store for iPad during December 2012 in the 10 largest countries, which are (in alphabetical order): Australia, Canada, France, Germany, Italy, Japan, Korea, Russia, United Kingdom and United States. Moreover, this analysis is only based on applications that have reached the Top 400 Overall and had at least one price change in December 2012.

The major findings are:

The majority of price changes are within a \$1.00 to \$3.00 range. The largest price changes are in the Apple App Store for iPad, twenty percent of all price events involved a change larger than \$4.00 in this store.

The effect of a price drop is more intensive in the Apple App Store for iPhone than it is in the Apple App Store for iPad. On average, cumulative downloads grow by 1665% five days after the price drop in the Apple App Store for iPhone, while the growth is 871% on the iPad.

The effect on downloads of a lower price ends, when the price increases again. Download volumes in the Apple App Store for iPhone drop by -46%, aggregated over five days after a price raise. In the Apple App Store of iPad, the drop in downloads is somewhat higher, -57%.

A price drop positively affects revenue in both stores. Revenue in the Apple App Store for iPhone increases by 95% three days after the price drop. This percentage was lower in the Apple App Store for iPad, where revenue grows by 51% because of a price drop.

The effect of a price drop on revenue is significant and becomes larger in the long run in both the Apple App Store for iPhone and iPad. Revenue from one-off fees and in-app purchases are both contributors to this increase in revenue in the long run.

The price elasticity on revenue in Apple App Store for iPhone is the lowest, which means that revenue reacts most heavily on any price change in this store. Here, a 1% price drop leads to a 1.2% revenue increase within five days. The price elasticity in the Apple App Store for iPad is -0.7, which indicates that a 1% price drop causes a 0.7% increase in revenue.

The effect of price events is similar to applications in Google Play. However, the effect in this store seems less powerful compared to the Apple App Store. The *ranking effect* seems to be an explanation for this difference.

Alongside this publication we host a free webinar on the subject of price events on Thursday 7th of February @ 5:00 PM (CET).

Please register [here](#) to join the webinar.

Introduction

This month's publication discusses the effects of price changes on download volumes and revenue. Many stories are told and some rumors go around whether price strategies do pay off. However, what can we learn from the data? Does it really pay off to develop a price strategy or do consumers not react much to price change – if at all?

We have received many questions over the years from our [Distimo Analytics](#) users about the impact of price drops or increments. We devoted our [monthly publication](#) a year ago to a related subject of being featured in the app store and the effect of putting an app on sale on an app's rank. We are able to study the effect of price changes in more detail with the introduction of [AppIQ](#), which includes daily estimates of download volumes and revenue for each application.

In theory, price drops and increases might both be beneficial for developers for different reasons. On the one hand, developers can put their apps on sale to achieve a higher rank. This would attract more attention, which generates more revenue in the long run. Additionally, the surge in paid downloads due to the lower price could make up for the loss in price. Alternatively, consumers might be eager to pay a higher price for popular applications, which would be an incentive for developers to raise the price of popular applications. These are just general thoughts about pricing strategies, but essentially developers develop and engage in pricing strategies in order to boost revenue.

All data included in this month's publication covers the Apple App Store for iPhone and the Apple App Store for iPad during December 2012 in the 10 largest countries, which are in alphabetical order: Australia, Canada, France, Germany, Italy, Japan, Korea, Russia, United Kingdom and United States. Moreover, this analysis is only based on applications that have reached the Top 400 Overall and had at least one price change in December. Please keep this mind, because these Top applications have reached some degree of popularity, which could bias this analysis towards higher growth figures.

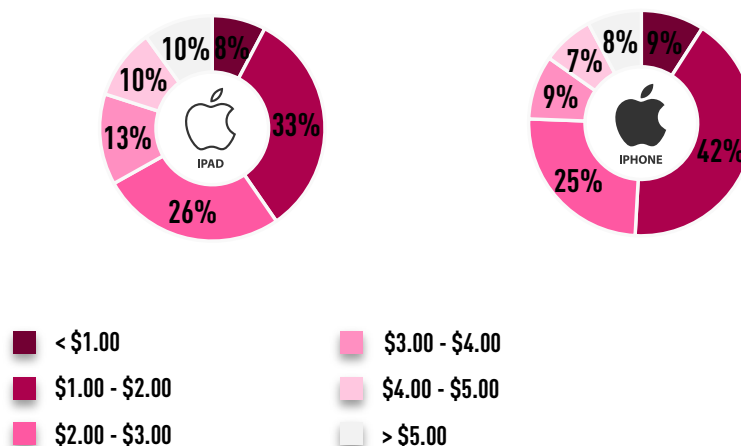
Sizes of Price Events

Pricing regimes differ among the major application stores. Developers are bound to fixed price points ranging from \$0.99 to \$999.99 in the Apple App Store, while developers in, for example, Google Play are free to set any price point they wish in Google Play. However, the decision to change the price of an application solely lies with the developer.

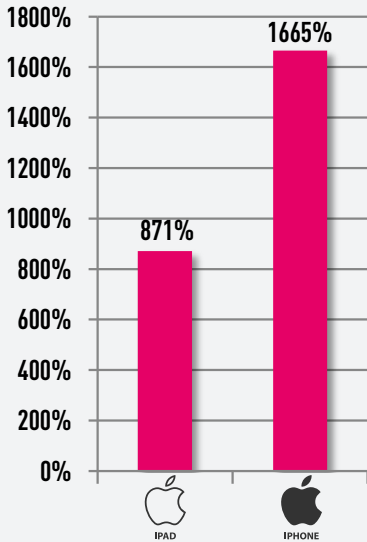
Many applications changed prices in December 2012. We noted that respectively 850 and 930 unique applications in the Apple App Store for iPhone and Apple App Store for iPad changed prices at least once. Some of these applications were put on sales only once during December, while other applications had multiple price fluctuations.

The Majority of Price Changes is less than \$3.00

Sizes of the Price Events as Percentage of All Price Events, Increases and Drops



The graphs above provide insights about the size of price change events and include both price increases and price drops. The size of price events differs from event to event. Some prices changed less than one dollar, while other changes were more significant. Forty-two percent of price changes was in the range of \$1.00 to \$2.00 in the Apple App Store for iPhone, one-third of the changes on the iPad fitted in this range. Prices in the Apple App Store for iPad had the largest fluctuation when we look at the tiers that indicate large price changes. Twenty percent of all price events involved a change larger than \$4.00, while in the Apple App Store for iPhone this percentage was 15%. The largest price change that we found was a \$200.00 price change for *Add2Cart Amana* by Data Driven Decisions on the iPad.



Effect on Downloads by Price Drops

Growth in Cumulative Downloads after Five Days

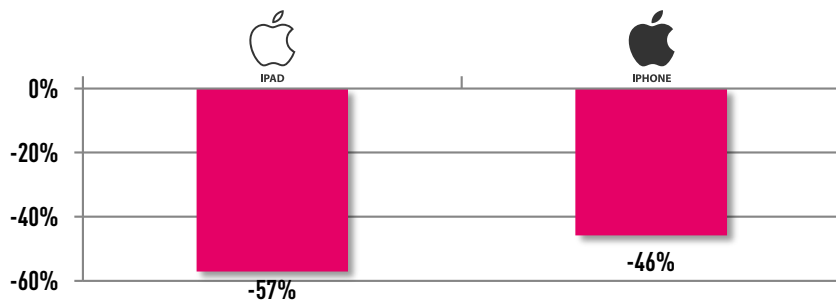
The graph on the left depicts the growth in cumulative downloads five days after a price change took place. According to our data, a price change had a significant effect on download volumes. Not surprisingly, download volumes generally went up with a price drop and decreased when a price increased. The intention of the effect of the price change, however, depends on the store. On average, downloads of applications in the Apple App Store for iPhone react most heavily on any price change. Download volumes in this store grew by 1665%, five days after the price drop. The effect of a price drop is much lower for iPad applications; after five days the download volumes increased by only 871%.

The effects of price raises are depicted in the figure above. A price raise often marked the end of a sales period. However, some developers raise prices without having put their application on sale. The outcome of a price raise is that it negatively affects download volumes. However, the extension of the effect is lower for price raises compared to price drops. Downloads decreased by 46% in the Apple App Store for iPhone and by 57% in the Apple App Store for iPad. We can conclude from this that applications do not maintain the download level that is reached by a price drop once the price increased again.

Downloads on the iPhone react most heavily on any price changes.

Effect on Downloads by Price Increases

Growth in Cumulative Downloads after Five Days



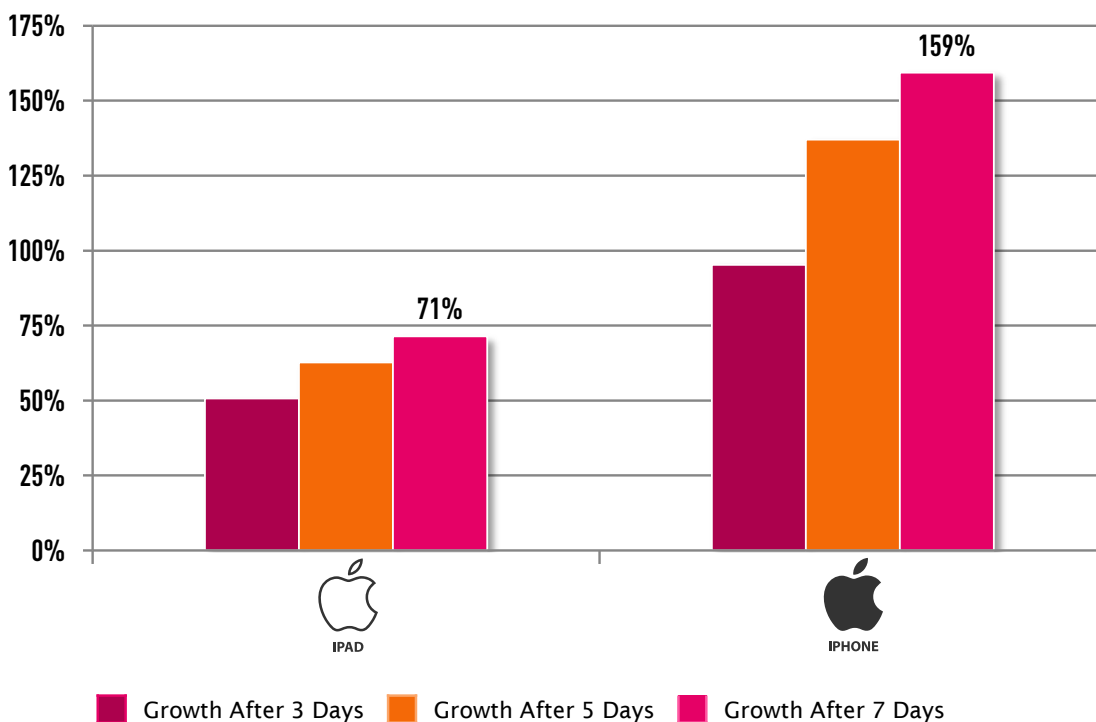
Please note that in general download volumes and revenue went up in December by 25% to 40% compared to November. This could have a significant effect on the outcome of this analysis and could explain the extreme growth rate as result of a price drop compared to the less extreme drops for price increases.

Effect on Revenue

The graph below shows the average revenue growth three, five and seven days after a price drop in both Apple App Stores. The graph supports the notion that the surge of downloads caused by the price drop, compensated the lower charged price during the sales period. This effect becomes already visible three days after the event took place. Revenue in the Apple App Store for iPhone went up by 95% within three days after the price drop. The revenue boost for applications on the iPad is significantly lower, revenue increased by 51% three days after the price drop.

Price Drops Positively Affect Revenue

Growth in Cumulative Revenue after Three, Five and Seven Days



A Lag in Revenue Growth

Remarkably, the revenue growth rate grew the longer the application was on sale. The revenue growth rate increased to 137% after five days of the price drop in the Apple App Store for iPhone. Observing seven days resulted in an even larger revenue growth rate to 159%. We noted a similar trend in the Apple App Store for iPad, where the growth numbers were somewhat lower: 63% after five days and 71% after a week.

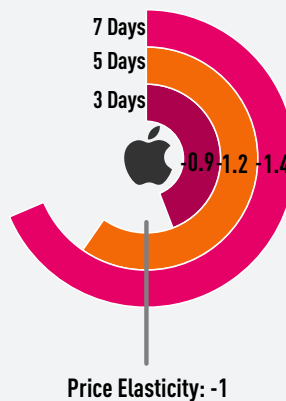
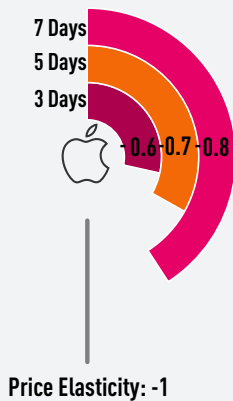
There is a two-fold explanation for this lagged revenue growth effect: either an increase in income from one-off fees or an increase in income generated by in-app purchases. An increase of revenue from one-off fees was partly the cause on both stores, because average downloads went up in the long run. Additionally, revenue generated by in-app purchases is a second explanation for this lagged revenue effect. The data shows that the growth in income gained by in-app features increased in the long run, especially for iPhone applications.

Price Elasticity on Revenue

We realize that developing some kind of price strategy is beneficial, however the question remains: to what extent does a price event have on the influence of revenue? To find out, we look at the price elasticity on downloads and revenue. Price elasticity is a number that stands for the change in revenue caused by a 1% price change.

Price Changes Most Effective on the iPhone

Price Elasticity on Revenue after Three, Five and Seven Days



The graph on the left depicts the price elasticity on revenue. A number between -1 and 0 indicates that the product (in this case the store) is relatively inelastic, which means that a price drop of 1% results in revenue growth of less than 1%. This was the case for revenue in the Apple App Store for iPad, where a 1% drop in the selling price of an iPad application resulted in a 0.7% increase in revenue aggregated over five days. The price elasticity on revenue for applications on the iPhone is lower than -1 , which suggests that the revenue in this store are relatively elastic: a 1% price drop in the Apple App Store for iPhone led to a 1.2% increase in revenue within 5 days from the price event.

The relative high price elasticity in Apple App Store for iPhone compared to the lower price elasticity in the Apple App Store for iPad suggests that consumers in Apple App Store for iPhone are more sensitive to price changes compared to the consumers in the Apple App Store for iPad.

Price Effects in Google Play

According to our data, the effect of price events is also noticed for applications in Google Play. A price drop stimulates download volumes and revenue positively. However, this effect seems to be less powerful compared to the Apple App Store, because of the fact that it is harder to reach the top of the charts in Google Play. This reduces the so-called *ranking effect*, which means that higher ranked applications have more visibility than lower ranked applications. Consequently, higher ranked applications are downloaded and generate more revenue than lower ranked applications, disproportionately.



Recap











Based on our analysis, we can draw the conclusion that price drops pay out in terms of downloads and revenue in the Apple App Store. The effect on revenue became even more intense in the long run, which is caused by an increase of revenue from one-off fees and in-app purchases. Moreover, the relative high price elasticity in Apple App Store for iPhone compared to the lower price elasticity in the Apple App Store for iPad suggests that consumers in Apple App Store for iPhone are more sensitive to price changes compared to the consumers in the Apple App Store for iPad.

Next week on Thursday 7 February, we will host a free webinar about price strategies where we discuss this month's publication in even more detail. Aside from presenting the main findings from the publication, we will also show a case study about what happens when a paid application becomes free. Register for free [here](#) to join us for the webinar.



Top 10 Applications that Benefit from Price Drops











By Revenue Growth in Apple App Store for iPhone (United States)

	App name	App publisher	Price Change
1.	 Bladeslinger Ep.1	Bladeslinger Ep.1	\$2.99-->\$0.99
2.	 Super Mole Escape	[adult swim]	\$0.99-->\$0.00
3.	 A Charlie Brown Christmas	Loud Crow Interactive Inc.	\$4.99-->\$2.99
4.	 Ski Safari	Defiant Development	\$0.99-->\$0.00
5.	 I'd Cap That 2+ With Animated GIF Camera	Iddiction	\$1.99-->\$0.00
6.	 MEGA MAN X	CAPCOM	\$4.99-->\$0.99
7.	 MARVEL VS. CAPCOM 2	CAPCOM	\$4.99-->\$0.99
8.	 Superbrothers: Sword & Sworcery EP	Capybara Games Inc.	\$4.99-->\$1.99
9.	 FINAL FANTASY I, II & III	SQUARE ENIX	\$8.99-->\$3.99
10.	 Batman Arkham City Lockdown	Warner Bros.	\$5.99-->\$0.99



Top 10 Applications that Benefit from Price Drops

By Revenue Growth in Apple App Store for iPad (United States)

	App name	App publisher	Price Change
1.	 Snark Busters: High Society HD	Alawar Entertainment, Inc	\$3.99-->\$0.99
2.	 A Witch's Curse: Princess Isabella HD	Big Fish Games, Inc	\$4.99-->\$1.99
3.	 A Charlie Brown Christmas	Loud Crow Interactive Inc.	\$4.99-->\$2.99
4.	 Loopy HD	A Tasty Pixel	\$7.99-->\$3.99
5.	 SoundPrism Pro	Audanika GmbH	\$15.99-->\$7.99
6.	 The Lorax - Dr. Seuss	Oceanhouse Media	\$4.99-->\$0.99
7.	 Superbrothers: Sword & Sworcery EP	Capybara Games Inc.	\$4.99-->\$1.99
8.	 F-Sim Space Shuttle	Ledinsky Software GmbH	\$3.99-->\$0.99
9.	 The Curse	Toy Studio LLC	\$2.99-->\$0.00
10.	 Air Tycoon 2 HD	TRADEGAME Lab Inc.	\$4.99-->\$1.99

Track daily downloads and revenues of any app with Distimo ApplQ



Distimo ApplQ allows users to:

- Track and compare app downloads and competitor app downloads: Analyze an app's market share and compare download figures versus a competitor's in one chart. The chart shows the daily downloads and can also be aggregated per week or month. Events such as price changes, featured listings and version updates are also included, and allow the user to analyze the influence of each event on downloads.
- Analyze competing app revenues including those from in-app purchases: View daily revenues from competing apps side-by-side with the their own app and get extensive insight into the revenue generation of different business models, revenue per country, and platform.
- Identify the most popular and upcoming new apps: The Leaderboard provides the daily rankings of all applications, and can be viewed by app store, country, category, device, and free/paid/gross. All of the major app stores are supported, and for iOS and Android, the daily volumes per individual app are also provided. ApplQ users see the daily downloads and revenue from in-app purchases and one-off fees. Developers can also use the Leaderboard to see how many downloads are needed to achieve a certain ranking on any given day.

Learn more about ApplQ at www.distimo.com/app-analytics/appiq

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