



# Competition in the Mobile App Ecosystem

Global Survey of 673 Mobile App  
Publishers and Developers

SEPTEMBER 2016

**Application  
Developers  
Alliance**

# FOREWORD

I welcome this timely contribution to the Digital Single Market (DSM) dialogue. App developers constitute an important part of our Digital Landscape: while the APP economy has generated 1.64 m jobs to date and could employ 4.8m people and contribute €63bn to GDP by 2018. We should also celebrate the fact that European developers have created 40 of the top 100 grossing apps. Last year, all of the top five most downloaded games in the EU and the US came from Europe.

However, whilst this APP economy is fast becoming an industry in its own right, there remains a degree of misunderstanding in terms of its socio-economic benefit and extent to which it is increasingly embedded into the digitization of European industry. The internet of everything will become reality for individuals in the next 10 years and is already prominent in new business models to support productivity in traditional European enterprises. Achieving the DSM in a timely and workable fashion will be crucial to realising the full potential of this exciting group of innovators.

A busy autumn awaits those involved in the Digital Single Market. I continue to be particularly involved - in initiatives such as the Digital Content Contracts Directive and the Cross-border Portability Regulation which are both relevant for this important part of Europe's innovation agenda - as well as broader considerations such as those which we discussed at our event in May 2016, Regulation4Innovation. I see a particularly compelling role for App developers/publishers (many of whom are SMEs) within the DSM debate and welcome any opportunity to support this grassroots access- whether it is regulatory in nature or active engagement in areas such as the European Cloud Initiative.

It is therefore with great pleasure that I look forward to increasing my co-operation with this unique community of innovators across the EU.



**Eva Paunova**

Member of the European Parliament

# EXECUTIVE SUMMARY

The mobile app ecosystem displays all of the tell-tale signs of maturation: stability, access, growth, and competition. In response to concerns voiced by some that the mobile app industry is anything other than a healthy and competitive market, we asked 673 mobile app publishers and developers how they viewed the market and the industry.

What we found is a thriving industry, built on a partnership between publishers and platforms in service of their shared customers, with little appetite for government intervention.

In Europe alone, the mobile app economy supports over two million jobs (including 1.3 million jobs directly and over 650,000 jobs indirectly tied to mobile app development [1]). It is a full-fledged industry, made of more than just the apps that consumers buy and the platforms that host them. As with all industries, app entrepreneurs are finding success by identifying needs and creating a product or service that meets those needs. There is an interdependent ecosystem of publishers, developers, advertisers, agencies, consultancies, contractors, carriers, consumers and more. Any examination of the mobile app ecosystem must take this interdependency and the resulting complexity into full account.

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## DEVELOPER INSIGHT

*“There's a lot of griping amongst developers about how difficult it is these days to make a living. I think that's the sign of a mature market. Big players come in, they have a captive audience and do well. The smaller guys get squeezed out. It's now less of a gold rush and more like any other industry where your chances of success are much lower and you have to work a lot harder.”*

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The maturation of the industry should also compel us to reconsider outdated views of the “industry.” Two guys in a garage can still disrupt the market, but the mobile application development and distribution is not a pure “meritocracy.” Success depends on not just having the best idea, but the ability to navigate through the complex ecosystem and get it in the hands of users. This inherently raises the threshold for disruption, but it also makes the entire industry more stable and predictable, a clear sign of maturation.

This stability and interdependency makes anti-competitive behavior counterproductive. Industry leaders who do not respond to consumer demand or to pressure from developers and publishers risk their own bottom line. In fact, those who are counted as industry leaders (particularly the platforms through which most apps are distributed, primarily Android and iOS) achieved and maintain a leadership position because they respond to market forces and behave responsibly.

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## DEVELOPER INSIGHT

*“Those who have the biggest pockets to be able to advertise to their audience are going to win. It's like any other industry; it's not enough to have a great product and put it into the marketplace.”*

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That the two leaders have achieved that position in such divergent ways is evidence that there is no singular approach, technology, or model that is assured success. Innovation can build upon either model, or create a new model entirely as evidenced by the rise of alternative OS in use by the largest phone manufacturers.

[1]: <https://www.visionmobile.com/reports/european-app-economy-2015>

As with all things, there is room for improvement. For example, many publishers would like to see greater transparency from the platforms, particularly when it comes to discoverability. However, most complaints of an uneven playing field have to do with a competitor with a larger marketing budget. Examinations of this mature market and perceived anti-competitive practices should consider the context of this complex ecosystem. History, particularly recent history, tells us that preemptive and unnecessary regulations are a dangerous proposition prone to overreaching that achieves more harm than good. Globally, developers and publishers agree: The government should not play a greater role in the app ecosystem.

These are the overarching themes from our thorough analysis of competition issues that developers and publishers are facing. Specifically, we looked into five topics:

- 1) Competitive practices,
- 2) Differences between the major platforms,
- 3) Revenue sharing models of platforms,
- 4) Pre-loaded apps, and,
- 5) Fragmentation.

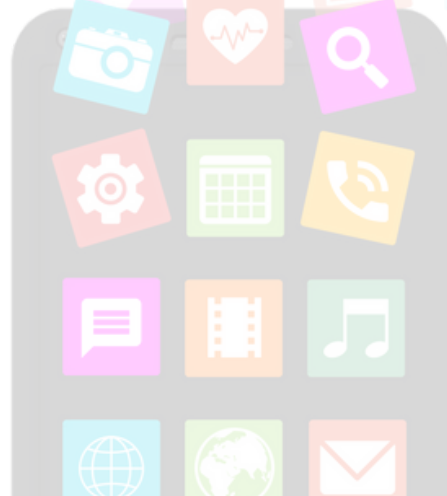
In addition to a survey, we also conducted in-depth interviews with publishers and developers to explore these topics in-depth and synthesize the findings.

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#### DEVELOPER INSIGHT

*“Technology advances at a very rapid pace. Markets change at an incredible pace. Regulators just can't follow it. That would cause a lot of problems.”*

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# THE MOBILE APP MARKET IS COMPETITIVE, STABLE, AND THRIVING

Ninety-six percent of publishers and developers globally (including 97% in Europe) say the app industry is competitive. If anything, publishers view the market as “too competitive” – 76% globally and 80% in Europe describe the industry as “very competitive”. The number one reason developers cite for why a good app might not succeed is discoverability – in essence, there are so many competitors and more every day.



The natural response to saturation in any industry, including the app industry, is specialization. App entrepreneurs identify needs that haven't been met and attempt to meet those needs.

The narrower the need, the more specialized the product. This creates a diverse market, full of carved-out niches of customers. Our survey results reflect this diversification: eleven different categories of apps have at least 10% representation [2]. Six different revenue models were reported, none higher than 27% or lower than 17% [3]. There are many paths to success.

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## DEVELOPER INSIGHT

*“Our apps work with our back-end services in a niche market.”*

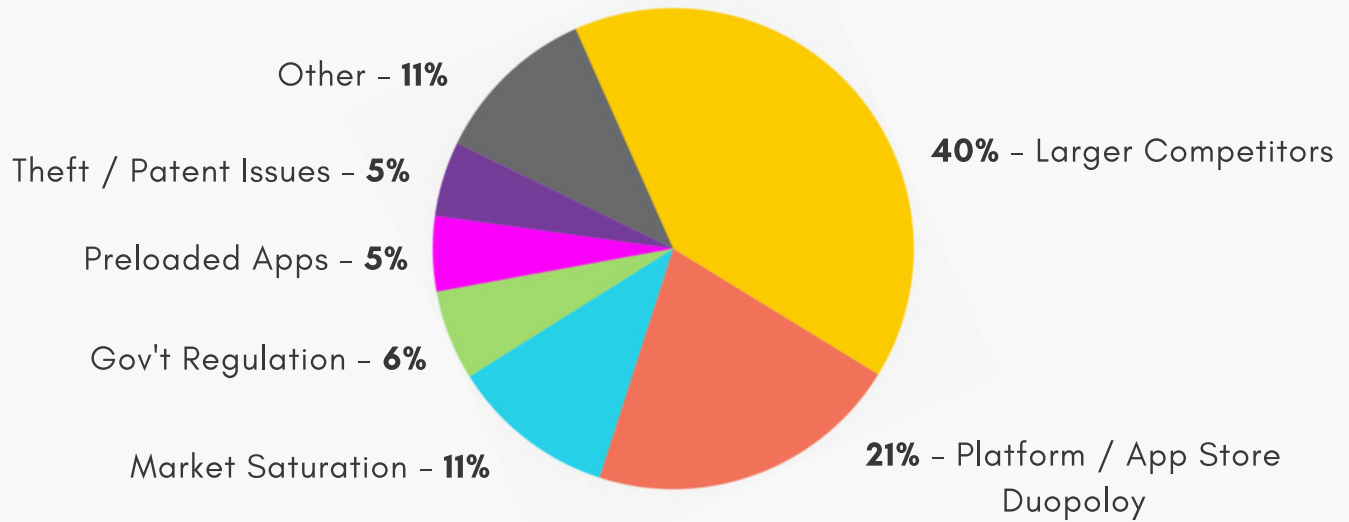
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The greatest threat to mobile app publishers is discoverability in a crowded market. That is the mark of competition, not a lack of it. A minority of developers (21% globally and 25% in Europe) view platforms as their greatest threat. Within that 21%, over half of the frustration (13%) is with the app stores, which are typically the sole means of distribution for publishers. Specifically, many publishers are concerned or confused about how the search function works and the algorithms used to determine who appears on the ranking/featured app lists. Also, several publishers who work with iOS cite Apple's App Store and its difficulty, and at times unclear approval process as an issue.

[2]: In order of prominence: Business/Productivity, Utilities, Social Networking, Education, Entertainment, Games, Health/Fitness, Retail, Other, Music/Photo/Video, Navigation

[3]: In order of prominence: Developing apps for other companies, subscription, selling a corresponding product, advertisements, paid downloads, in-app purchases.

## WHAT IS THE GREATEST THREAT TO COMPETITION?



Some context should be considered here. Android and iOS aren't as ubiquitous as some believe: over 40% of publishers use at least one other distribution platform other than Apple Store or Google Play, and 23% who don't use either of them. Additionally, 17% use Windows' app store, 12% use Amazon's, and 14% have their apps side-loaded.

### APP DISTRIBUTION

Google Play	65%
Apple App Store	65%
Google/Apple (one or both)	77%
Windows	17%
Side-loaded	14%
Amazon	12%
Pre-loaded	9%
Other app store	7%
Other	11%

### DEVELOPER INSIGHT

*"It's all related to discoverability. You can have a great app but if no one discovers it its meaningless."*

Even with 22% of publishers saying their products compete with pre-loaded apps, only 5% of publishers consider them to be a top threat to competition. The overwhelming majority (63% globally, 68% in Europe) of publishers are not concerned about pre-loaded apps. In fact, most publishers (62%) say it's a fair practice for platforms to have them. Even more (69%) say that the impact of pre-loaded apps is mitigated by the fact that consumers are easily able to move, hide, or disable them. Finally, 73% say that a better competing app will surpass a pre-loaded app (Apple Maps being a prime example of this).

That said, publishers and developers don't see the mobile app industry as a meritocracy: 39% say the best apps become the most successful, but 43% disagree. European publishers are slightly more fatalistic, with 31% saying yes and 47% disagreeing. When asked why a good app might not succeed, 80% pointed to lack of promotion: either not enough marketing, failure of user acquisition, or discoverability. With such an open field of competition, apps, even good apps, need a way to break through.

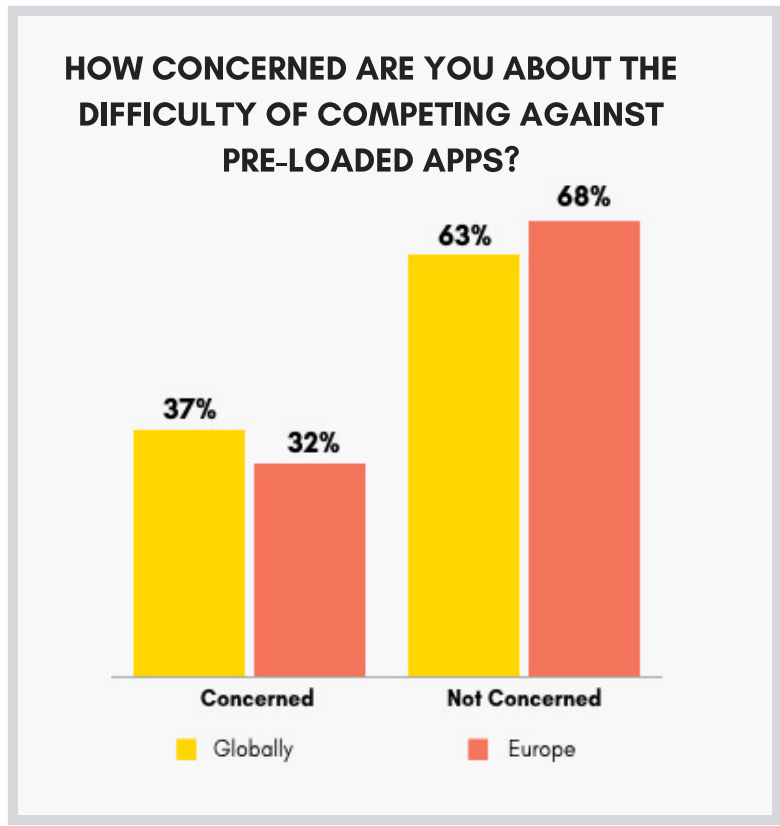
This is why the greatest threat to competition aren't the platforms or unfair business practices. It is the success of the app industry as a whole. Forty percent of publishers and developers globally (38% in Europe) describe the greatest threat as the challenge of competing with larger competitors, who have more resources for marketing, innovation, and developers. Another 11% globally (10% in Europe) say market saturation and the sheer number of apps available.

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**DEVELOPER INSIGHT**

*“If I'm not writing software that solves a problem that isn't already solved, I don't want to write it to begin with. If I can't do better than the preloaded app, I deserve to fail.”*

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**DEVELOPER INSIGHT**

*“Some native apps are OK on a device, like mail or a browser, etc. But there is such a huge and open area that is ripe for "bettering" so native apps are really never ever a threat. They provide instead a baseline and allow the user a feel for what can be done with a device and once the user wants something better, third-party apps are available to fill that spot.”*

**”**

# COMPARING ANDROID AND IOS

The two leading platforms, Apple’s iOS and Google’s Android, take different approaches to serving their customer base, as well as the publishers and developers whose apps they distribute. This is proof of concept that there is no one “correct” way to be an industry leader; and if different approaches can work then alternatives can and will arise. As indicated in the previous chapter, already a majority of publishers go outside these two platforms to distribute their apps.

## DEVELOPER INSIGHT

*“One of the biggest advantages is the level of standardization, there's fewer screen sizes and OS's to account for, so apps can be designed faster and published faster.”*

Apple helped launch the app industry. Its operating system, iOS, is famously and intentionally closed, with the phrase “walled garden” typically applied. This eliminates interoperability challenges for developers, as only Apple products use iOS and iOS is only used on Apple products (of course, country-based issues may still apply).

This closed system also raises the standard of quality for apps that appear in the app store, as all apps and updates undergo a rigorous approval process.

The byproduct of a closed system is strict and sometimes unclear or changing guidelines. In fact, “restrictive policies” is the most commonly cited disadvantage of working with iOS, by 51% of developers who use the platform. Most dissatisfaction was aimed at the approval/review process, specifically the lack of transparency, shifting or unclear guidelines, and the amount of time it takes. These hurdles (particularly the time) routinely threaten to blow up launch schedules and create uncertainty.

## DEVELOPER INSIGHT

*“The test flight process is a lengthy and laborious process. I appreciate the standard and quality that Apple wants to maintain, but sometimes time-to-market is so crucial. We were looking to launch an app on the 21st of April, but it got so held up by the App Store, it pushed our launch dates out of sync. We're still looking for a good date.”*

### ADVANTAGES & DISADVANTAGES WORKING WITH IOS

TOP ADVANTAGES	TOP DISADVANTAGES
Market reach	Restrictive policies
Technical ease of use	Closed ecosystem
Lack of interoperability challenges	How to use Apple tools/hardware



The closed nature of iOS also limits the ability to get an iOS system in users' hands, particularly for global consumers. Many global publishers deprioritize creating an iOS version of their app, but Apple has succeeded despite this because of their users' tendency to use Apple products exclusively. This means developing for iOS is the only way to access this highly-sought after market segment.

Finally, Apple differentiates itself from Android with its revenue sharing agreements. Both Android and iOS take an average of a 30% fee of the revenue generated from paid apps. This practice is accepted as sort of a price of access to each platform's respective user base, and is viewed as fair by 66% of all publishers.

However, Apple takes this a step further with their in-app purchase policy, by requiring apps to use Apple's payment system then taking 30% of the revenue for non-consumable items (like subscriptions or ad-free experiences). In contrast, apps on the Google Play store aren't required to use Google Wallet, and can use any payment system the publisher chooses.



### DEVELOPER INSIGHT

*"I understand that Apple wants part of the pie, but 30% is a massive part of our overhead."*



In an industry with often razor-thin margins, this can have a huge impact. In fact, 73% of those who have in-app purchases as part of their revenue model say that this has affected their business decisions. Two-thirds (68%) who sell in-app purchases have set a different price or considered doing so to account for the tax. A few (8%) have even created a workaround to try and sell to their consumers by directing their users outside the app to complete the transaction.

Despite being later on the scene, Android has a larger market share globally. The platform was introduced as open-sourced, and still allows significant freedom and flexibility for coders to write apps and take full advantage of the OS's functionality. This flexibility, makes it easier (resources-wise) for a publisher to get started. This has also resulted in diversity, most notably in the number of devices and manufacturers that run Android. Thus, Android has global penetration; it is not reliant on a specific piece of hardware, so it can be found in most markets

#### ADVANTAGES & DISADVANTAGES WORKING WITH ANDROID

TOP ADVANTAGES	TOP DISADVANTAGES
Easy to start / code	Fragmentation
Market size	Amount of competition
Open-source	Crashes / bugs

Android's flexibility with manufacturing has a notable downside, however: fragmentation. The number of devices available, plus the number of different versions of each operating system, results in interoperability challenges. In order to make an app work, an Android developer must test the program on many different devices and many different versions of Android. (The global presence of Android creates similar issues, due to varying regulations and restrictions by country). Most developers (64%) list fragmentation as the greatest obstacle to working with Android.

#### DEVELOPER INSIGHT

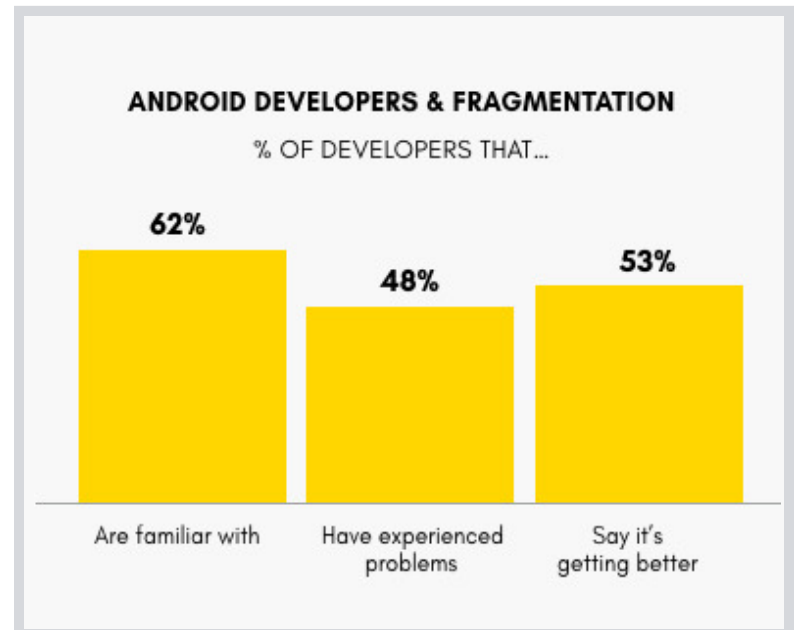
*"Well, Google is doing a lot with some policies, the device certifications. It will just take a long while till those make a noticeable difference."*

Concerns over fragmentation are not new: 62% of publishers and developers who work with Android say they're familiar with the issue, and 48% say it has been of a problem for them (only 12% say it's a "very large problem"). Most developers are concerned with its impact on security and user experience. That is, they cannot risk losing or alienating users with different versions of the OS, so they must devote resources to create a different versions of the app. Those who don't have the resources or time run the risk of losing their market share or deteriorating consumer confidence in their products.

#### DEVELOPER INSIGHT

*"Android made it possible for anyone to develop an app. They've expanded into the realm of budget phones, so more people can use your app, more people can reach it. And Android standardized the smartphone market, so you have things you can expect from a phone that supports Android to have and you know what you can work with."*

On average, developers say they've had to develop for five different types of operating systems. Roughly 10% of developers say they've had to account for 10 or more different versions. Developers characterize the time invested in either months (on average, adding 6-8 weeks to the project lifecycle) or in percentages (on average, adding 30% more time).



Encouragingly for developers and consumers alike, 53% of those who work with Android say the problem of fragmentation has gotten better in the past several years while just 16% say it's getting worse. Accordingly, few see a role for the government to play. Most developers (54%) reject the idea of a government agency implementing a solution to this problem.

# DEVELOPERS REGARD EXISTING APP COMMUNITY AS AN EFFECTIVE SELF-REGULATORY ANSWER TO EVER-CHANGING TECHNOLOGY ISSUES

The overwhelming opposition to increased government regulation is based on two-part consensus belief: 1) government interference is largely unnecessary, and 2) government interference does more harm than good. The necessity of government interference on how up-to-date one's view of the app market is. Some still think of the app economy as it was in its infancy, a lawless and nascent industry rife with inefficiencies and vulnerabilities. Any regulations written around 2008 or 2009 that haven't been updated since then would reflect this largely obsolete view of the industry.



## DEVELOPER INSIGHT

*"I've seen in the past where creating rules can get too black-and-white. As the technology continues to evolve and change, usually regulations take longer to catch-up and they become a hurdle."*



It is more common now to view the two major platforms as the whole system; this view sees the tip without noticing the rest of the iceberg underneath. Platforms must have users, and must provide access to apps to engage those users. App developers are dependent on platforms, but also on tools and services that help them specialize and differentiate themselves. One cannot accurately examine iOS or Android separately from the ecosystem they inhabit.

To do so would overlook or ignore the consequence of interdependency is punishing anti-competitive actions and rewarding proactive leadership. For example: most developers are unaware of the reason why fragmentation has gotten better in the past several years, but those who do give credit to Google, who worked with manufacturers to reduce the number of variations to their OS (and reduce the cost, bugs, and security risks to end users). This is but one example of industry leaders properly self-regulating.

Other examples include:

- The formation of the Interactive Advertising Bureau (IAB), which established industry standards and guidelines for digital advertising, showcased the ability and effectiveness of the industry to regulate itself responsibly.
- Apple, after criticism for their in-app purchases policy, has reduced their fee on subscriptions for their Apple TV product and are considering expanding that to the rest of their devices.
- Several years ago, the top six mobile companies (Amazon, Apple, Google, HP, Microsoft, and Research in Motion) collectively formed an agreement with the Attorney General of California to improve privacy protections for users.

With these examples in mind, it's easy to see why the European Commission, in a communication [4] to the European Parliament about online platforms and the Digital Single Market, concluded: "Where appropriate, self-regulation and co-regulation can often achieve better outcomes for enabling the development of strong platform ecosystems in Europe and can complement or reinforce the existing legislation that already governs certain activities of online platforms."

Developers and publishers don't consider pre-loaded apps to be a problem. To the limited extent that they compete with them, developers are content that they can be mitigated through user customization, and most developers believe better apps will outperform them anyways. If consumers are harmed by these apps, there is even a simple market solution: they can choose to take their business to a manufacturer who promises fewer pre-loaded apps.

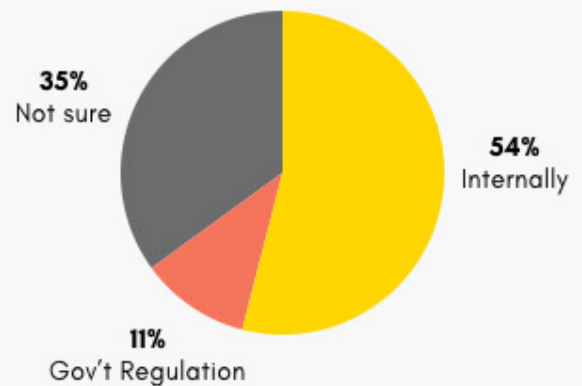
#### DEVELOPER INSIGHT

*"The government lacks the expertise to begin with, to monitor and you have this whole game of you're going to need these requirements. It must be a community and corporate leadership. The community that creates apps."*

In the rush to intervene, regulators risk missing that platforms and publishers have significant incentive to respond to the needs of the consumer and mobile app developers. Their bottom line depends on preserving the ecosystem of which they are inextricably a part.

This is why developers view the industry, including Apple and Google, as better equipped and motivated to create guidelines and abide by them.

#### INDUSTRY PROBLEMS BEST HANDLED INTERNALLY OR BY GOVERNMENT REGULATION?



It also explains why publishers agree that the platforms have done more good than harm; in fact, we found no one who said the opposite. Only 11% of developers see a role for government to fix industry problems due to the potential of unintended consequences of regulation affecting their bottom line, either directly or by disrupting the mobile app ecosystem.

#### DEVELOPER INSIGHT

*"Changes [to platforms] have come around due to feedback from developers, but perhaps more importantly it's come around from commercial pressures they face as an entity in the marketplace. It's not like they get in the way of what we're trying to do here. You recognize that they also have some obligations as a business themselves. I wouldn't fault for having done anything particularly stupid or challenging, and where they have done anything like that I've found them as quick to resolving them."*

# CONCLUSION

The mobile app ecosystem is prosperous, predictable, stable, and competitive. Market forces are at work, leading to revenue growth, industry best practices, and the continued reduction in inefficiencies. Investment capital is widely available. Innovation and vertical disruption are supported and celebrated by the industry and consumers alike. These market indicators predict the beginning of the golden age of the mobile app market, not the end of it.

Here at the Developers Alliance, our members are at the tip of the spear of innovation, whether working in the engine of an industry giant or as a new start-up looking to disrupt the market. From our interactions with these developers (not limited just to the creation of this report), we are confident that:

- 1) The app marketplace is thriving and presents opportunity for all comers;
- 2) Platforms are a major contributor to developers' success;
- 3) Proposals for government regulation, while well-intentioned, risk going too far to fix issues that aren't significant concerns to developers.

Outside observers may see conflicting forces within the industry: consumers versus publishers versus platforms. We see an interdependent ecosystem responding to its contributing forces. Developers are building products consumers want. Platforms deliver these products in a convenient, inexpensive, and predictable way. Consumers have choice and these choices guide developers and platforms decisions and investments. The market is working.



## { Application Developers Alliance }

This report is produced by the Application Developers Alliance, a non-profit global membership organization that supports developers as creators, innovators, and entrepreneurs.

We promote the continued growth of the industry and advocate on behalf of our members on public policy and industry issues.

Our membership includes a global network of tens of thousands of developers with diverse skills, expertise, and interests; and hundreds of companies that depend on and work with developers.

Learn more at [AppAlliance.org](https://AppAlliance.org)

# APPENDIX 1: METHODOLOGY STATEMENT

This report is primarily based on findings from our online survey of developers and publishers as well as data collected from in-depth interviews and previously published literature.

Our quantitative analysis is based on a May 19 – July 13, 2016 global survey of 673 of developers and staff at companies that develop, publish, or support mobile apps. The survey data was collected using an online survey questionnaire constructed by the Application Developers Alliance which was distributed to developers and publishers. Responses came from across the world, with 52% of respondents based in the United States or Canada, 21% based in Europe, 13% based in Asia-Pacific, and the remainder based elsewhere.

The report contains direct quotes from developers at companies that publish apps. These perspectives on the industry were obtained through in-depth phone interviews conducted by the Application Developers Alliance in June and July 2016.

Findings from the quantitative analysis, in-depth interviews, and third party literature were synthesized to produce the insights on the state of play of the mobile app industry.

# APPENDIX 2: PROFILES OF RESPONDENTS

Tables below show the distribution of survey respondents by company size, geographic location, type of app, and role in company.

**TABLE 1. DISTRIBUTION OF RESPONDENTS BY GEOGRAPHIC REGION**

NUMBER OF EMPLOYEES	SHARE
United States / Canada	52%
Europe	21%
Asia-Pacific	13%
Latin/South America	7%
Middle East/Africa	4%
Other	3%

**TABLE 2. DISTRIBUTION OF RESPONDENTS BY COMPANY SIZE**

NUMBER OF EMPLOYEES	SHARE
1 - 10 employees	28%
11 - 50 employees	12%
51 - 200 employees	10%
201 - 1,000 employees	11%
1,001 - 10,000 employees	18%
10,000+ employees	21%

**TABLE 3. DISTRIBUTION OF RESPONDENTS BY ROLE WITHIN COMPANY**

ROLE	SHARE
Developer	44%
Business/Marketing	28%
Founder/Leadership	29%

**TABLE 4. DISTRIBUTION OF RESPONDENTS BY TYPES OF APPS DEVELOPED/SUPPORTED**

TYPE OF APP	SHARE
Business/Finance/Productivity	45%
Utilities/Services	32%
Social Networking/Messaging	19%
Education/Reference	18%
Entertainment	17%
Games	15%
Health/Fitness/Medical	15%
Shopping/Retail	14%
Music/Photo/Video	12%
Navigation/Travel	10%
News/Books/Magazines	8%
Food/Drink/Hospitality	7%
None/Other	13%