An Economic Analysis of Revenue Share Policies for Applications on Android and iOS Platforms: A Comparison of Market Structure, Competition, and Developer Welfare

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Abstract. This paper provides an economic analysis of revenue share policies for applications on Android and iOS platforms, focusing on market structure, competition, and developer welfare. Given the dominance of these platforms in the mobile app economy, understanding their differences is crucial for both developers and platform owners. iOS's closed ecosystem offers higher revenue per user but limits developer flexibility, while Android's open system allows for more distribution options but brings challenges like revenue fragmentation. A comparative analysis reveals that developers face significant hurdles related to commission fees, payment systems, and market access on both platforms. To address these issues, the paper proposes several solutions, including progressive commission models, hybrid distribution strategies, and alternative payment options. The findings underscore the importance of reforming revenue share policies to enhance developer welfare and foster fair competition. The study contributes valuable insights to the ongoing discourse on platform monopolies and offers practical strategies for improving the mobile app ecosystem.

Keywords: Revenue Share Policies, Mobile Platforms, Developer Welfare, Android, iOS.

1. Introduction

In the present digital economy, with app stores for Android and iOS being the main source of app distribution channels, the global app market is experiencing high growth. Revenue from mobile apps is projected to reach more than $500 billion by 2023, with the Play Store of Google and Apple App Store as the two principal platforms. The platforms also enable the creation, distribution, and development of apps, but they have a major say in how the revenue flows between the platform owners and the app developers. In most commission structures, the companies charge a 30% fee on app sales and in-app purchases; the small developers, with a reduced rate of 15%, pay the 15% fee. This revenue-sharing model has sparked debates over fairness, particularly for small developers who struggle to compete in the marketplace where large companies' power is felt.

This research brings an understanding of how these policies affect investor behavior and competition as well as developers' sounding. In Apple's App Store, the distribution of apps is tightly controlled via its closed ecosystem, whereas a more open platform, Google Play, allows the development of third-party app stores for wider choice. The inherent inequalities result in varied patterns of market development, leading to contrasting approaches taken by developers on the platforms and the kind of profitability expected from each platform. For example, Apple would be a good source of income for developers because it generates much profit per user, but Android's global share of the market gives developers a wider market to penetrate.

The lawsuits, like Epic Games, Inc. v. Apple Inc., have provided clarity to a phenomenon that people have been feeling on a day-to-day basis: the monopoly position of such platforms, with developers claiming that Apple does this by misusing the market position that they have [1]. In a similar manner, Google was questioned about how it controls app distribution and pricing systems. The House Judiciary Committee Report on Antitrust in Digital Markets found that these companies were not only able to dominate but also to kill competition and innovation through their power over the platform [2]. As mobile apps are the foundation of the global digital economy, the effects of these platforms on competition and developer welfare are critical for any future renovations.

Research on revenue-sharing policies, in particular, seeks to assess the impact of these policies on the competition, the conditions of software developers, and the configuration of the market. Through this examination of two platforms, this study will enable us to know the achievement of a rational and invigorating equilibrium between the platform/controller and developer profits. By this, the analysis of the article will add to practical discussion regarding the path app distribution and platform regulation will take while providing some indications that the extent and direction of necessary reforms towards a more equitable market can take place.

The next line of the research literature is that it emphasizes studies that pay attention to the economics of mobile platforms and revenue-generating models. Rochet and Tirole lit up the system of the two-sided markets concept, where the platform functions as a mediator between the customers and developers, driving the economic dynamics of app distribution [3]. This research revealed that platforms are obliged to find the right balance between the provision of utility and financial profitability, but the question of setting the prices remains. The validity of this theory is indivisible since app stores are the model of both Google and Apple, as they are facing the same challenges of competing for developers while also upholding a strong user base via competitive pricing.

Etro focused on platform rivalry by showing that the sellers are allowed to enter the market free of charge, an example of which is the App Store and Google Play, which has been maintained in a closed system [4]. He insisted that rivalry between platforms might alleviate conditions for developers, but it will drastically change from Android to iOS with the open and closed nature of iOS. All of these are traced by Zennyo, who looked at the competition between the platforms in the mobile app economy across different markets [5]. Zennyo pointed out that Android's more open ecosystem facilitates the developers' experimentations with alternative revenue streams, such as third-party app stores and ads, contributing to the expanded app marketplace.

Rueda and Fiedler investigated this problem from an operating system market point of view: they looked at the way platform holders can limit the options of the application developers by making it obligatory for applications to be exclusive [6]. This method limits the opening of more competitors, and as a result, principal developers, such as Apple, gain undue bargaining power. Neelakanta and Yassin also developed the co-evolution description in order to explain the competitive mechanism between mobile platforms, which operated with biological metaphors as living entities going through various market pressures [7].

This research essay explores the market dynamics and strategies used by Android and iOS, which facilitates the foundation of the analysis of revenue-sharing policies and their implications for the developer welfare of this paper.

Perhaps most notably, income-sharing models of developer welfare have been little studied compared to the other aspects of platform competition and the dynamics of two-sided markets. The depth of shared literature, like Rochet & Tirole and Etro, that pays attention to the demand of the platform owners is insufficient since these authors only describe how a platform owner can profit more via the balancing of developer and consumer interest. However, studies have not touched on the fact that these policies are adversely affecting the smaller developers, specifically with regard to entry barriers and profitability.

This paper aims to fill this gap in the literature by contrasting the economic welfare of developers whose apps are on the Android system and those that are on the iOS system. Furthermore, while larger developers such as Epic Games have instability through their legal attack on platform policies, the small developers are much more dragged down by the financial burden of taking this kind of legal issue into their hands. Generally, a small portion of the impacts of third-party app stores on Android is that they provide developers with more employment opportunities, which has not been sufficiently explored in the context of developer welfare. This study will aim to fill this gap and examine the role of a revenue-sharing model in shaping the competitive landscape for data holders.

This paper will be developed concisely and will analyze the role of revenue-sharing policies on Android and iOS in the following ways:

Firstly, the study will describe the Android and iOS platforms, not just their market structure but also their strategies. In this section, the author will discuss the most significant divergences in the methodology of both systems regarding the app distribution and the revenue-sharing areas. Second, the comparison will let us see how revenue-sharing policies are introduced and then how the discussion of potential profit, market access, and opportunities for innovation analyzes their effects. The analysis will also include policies that influence consumer prices and how the platforms allow competition or stifle it. Thirdly, the article will elaborate on the legal and regulatory environment, which will mostly focus on Epic Games, Inc. v. Apple Inc. case and the recommendations made by the House Judiciary Committee. Moreover, a section will be devoted to exploring the wider policy implications of platforms holding monopoly power over app distribution and recommending some reform initiatives.

Addressing these aspects, this article shall offer a detailed economic assessment of how revenue-sharing practices modified competition on Android and iOS platforms and, as a result, cater to the developers' welfare.

2. Description of Android and IOS

The mobile app industry is mainly powered by two primary platforms: an open-source system called Android, which Google owns, and a closed-source system owned by Apple, iOS. The superior role of Android is in global market share, where it represents almost 70% of the total mobile iOS market. By its core open-source nature, third-party app stores and bespoke hardware compatibility are widely integrated, resulting in sufficient coverage and diversity of users from less wealthy territories. At the same time, iOS has a lower market share (i.e., about 27%), but it means that the revenue per user is higher, as its premium ecosystem is characterized by its orientation to more affluent users, which can be admitted in the United States and a part of Europe.

The structure of Android's app distribution allows for more flexibility, as developers can distribute apps through Google Play and third-party stores, offering more avenues for revenue generation. In contrast, iOS operates as a closed ecosystem, with app distribution exclusively managed through Apple's App Store, which gives Apple more control over app quality, pricing, and commission policies. This structural difference plays a significant role in shaping the competition between the two platforms.

While both Android and iOS are involved in the multi-sided market competition, the latter requires direct engagement between developers and consumers. Rochet and Tirole underlined the importance of the balance between developers and users for platforms so that the value of the platform will be maintained [3]. The open Android system promotes more developers' competition because they have a way of accessing diverse app stores and can use ad-based revenue strategies or freemium models through different media channels. This adaptability is crucial for small and medium-sized developers to break into the market.

Nevertheless, iOS gives developers an opportunity to tap into a more affluent group of users who are prone to pay for apps and in-app purchases, resulting in a higher revenue for those who use iOS. Consequently, the developers are geared to do iOS for the money due to the fact that Apple has strictly controlled app distribution and monetization. Epic Games v. Apple Inc. demonstrates the developer's issues owing to the restrictions in Apple's iOS environment [3]. Hence, the big developers want more freedom in payment systems and distribution channels.

The developer's welfare is a focus of the tiered commission schemes of both platforms directed through their response to the 30% fee standard. To up the royalties for developers, Google Play and Apple have created a new 15% commission model for developers whose annual income is below 1 million. These measures enrich the internationalization of small developers. In contrast, the fees of larger developers, particularly those producing big profits, result in lower margins. As a result, for some app developers who are on Android, the availability of such third-party app stores may limit the negative impact of app stores on the companies' financial operations and help them survive.

In certain cases, Apple users are limited to the App Store, which means at least more options are available for cost-cutting. Rueda and Fiedlar indicated that the exclusive dealing arrangements and the restrictive policies made by Apple could be obstacles that diminish the chance for small developers to flourish [6]. Rather, as Etro explained, platform competition at the Android level with free entry is more balanced for developers as long as it offers a larger innovation area than before and more room for startups [4].

3. Comparative of Android and IOS

3.1. Similarities Identified Between Android and iOS

However, even Android and iOS, being competitors, still hold a lot in common. In spite of the unique operational models of both these platforms, they are united by the key factors that determine developers' interaction with the platforms and the experience of their users with

3.1.1 Two-sided market dynamics

Both Android and iOS operate as two-sided markets, where they function as intermediaries between developers (on one side) and consumers (on the other). This model means that both platforms need to attract developers by providing tools, monetization opportunities, and distribution channels while simultaneously offering users a wide variety of high-quality applications. As Rochet and Tirole pointed out, two-sided markets are characterized by pricing strategies that balance the needs of both developers and consumers [3]. On both platforms, the app store ecosystem relies on commission fees from developers to sustain their operations while maintaining a large and engaged user base.

Both platforms employ a commission-based revenue model, charging a standard 30% on app sales and in-app purchases, although they have reduced this to 15% for small developers as a source of income. This tiered structure is done purposely to encourage innovation and create a fairer market for visionaries of various scales, as Etro mentioned when he studied competition for technology platforms [4].

3.1.2 Developer tools and support

These platforms, both Google and Apple, are absolutely the natural ones, with this one being specifically developed and devised for such developers. Developers can access Android Studio on the Android operating system and Xcode on Apple devices. These tools are critical in stably making and ensuring optimum performance on different devices. Alongside these platforms, there are non-blocking APIs that developers can integrate for application-specific features such as Apple Pay or Google Play In-App Billing.

With these generous tools, both Android and iOS give developers the advantage of improving the application user experience and increasing their application profitability. The wider range of developers' resources ensures an efficient, innovative process on both platforms, allowing the developers to create apps in a favorable environment.

3.1.3 Legal and regulatory scrutiny

Google and Apple have experienced similar troubles with the authorities when it comes to their control of the mobile app ecosystem. Game Developers like Epic Games, Inc. v. Apple Inc. For example, where Epic Games is challenging Apple's App Store policies [1]. Particularly, it is concerned about the mandatory use of Apple's payment system and the high commission rates. In a similar vein, Google is also facing regulatory issues related to its dominance in the Android app market, such as antitrust. The Antitrust in Digital Markets Report compiled by the U.S. House Judiciary Committee mentioned that both players exercised a high level of control over platforms where apps are distributed [2].

Unstructured in market structure, the two platforms increasingly face pressure from developers and law forces to supply flexible and fair revenue models, showing that they are treated by the legal authorities alike.

3.2. Differences Identified Between Android and iOS

Notwithstanding the similarities running through the development of Android and iOS, the platforms have their major differences, which require developers to follow particular paths and users to interact differently with the apps. The reasons for this are mainly attributed to the marketing strategy, the source of revenue, and competition.

3.2.1 Market openness and distribution

One of the most prominent distinctions that Android has from iOS is the contrast in their market openness policy. Android, on the other hand, operates on an open-source model that allows developers to publish their apps across many channels, like Google Play and other app stores like Samsung Galaxy Store and Amazon Appstore. The privilege of this provides developers with multiple revenue channel options; thus, they are not subject to the requirements and fees levied on a particular app store. Zennyo also underscores that these tactics particularly need Android developers to have full control over their app distribution and monetizing options [5].

Moreover, iOS is now a hierarchical system that applies control in the way of Apple's App Store app distributions. A developer must follow Apple's guidelines and use Apple's payment system for their apps. The third-party app stores are completely banned. Due to this, many developers have brought lawsuits against Apple for practices like Epic Games, Inc. v. Apple Inc., where developers pointed out that Apple's play affects competition and forces them to limit their offerings [1].

3.2.2 Revenue generation and ser spending

Moreover, this is a key area for revenue generation and user spending between Android and iOS. Even though Android is capturing a larger share of the global market, iOS is raking in far more revenue per user. Heitkoetter, Hildebrand, & Usener say that iOS users are rich and spend more on apps and in-app purchases [8]. It won't be equal to earned income or savings. It made iOS the right place for developers to profit, especially in markets like the United States and Western Europe.

In contrast, Android users tend to prefer ad-supported apps or in-app purchases rather than paying upfront for premium apps. This difference in user behavior leads developers to prioritize iOS over Android when seeking to maximize revenue. According to TechCrunch, the debate between Google and Apple's revenue share models revolves around how each platform handles app store commissions and developer revenue [9]. While both companies charge a 30% commission, Apple has faced more criticism for its rigid policies, especially given that iOS users typically generate more revenue per user.

3.2.3 Developer profitability and flexibility

A developer's profitability also gets affected if the platform's revenue share model is flexible. While deploying on iOS, developers adhere to Apple's strict rules as stipulated and pay the 30% commission fee if they are large developers. Such being the case, larger app developers have voiced their frustrations with this, pointing out that the fees are too much and reducing their profitability as app developers. Rueda and Fiedler's research discloses that Apple's exclusive dealing schemes tend to limit iOS developers' ability to seek alternative distribution means, hence further negatively affecting their profit margins [6].

Android also opens the doors for developers; they have many distribution systems available to them, which allows them to select the means of distribution they choose to employ. For example, developers can opt for a third-party app store that charges a lower commission or use an ad-based revenue generation method. Etro indicated that this specialty would be conducive to rapid innovations, and surfing on the profitability of small and medium-sized developers on Android would be independent of Google Play for revenue generation [4].

3.3. Problem Identified

Android and iOS are both equipped with features that benefit developers and consumers, but both platforms have challenges that pose risks to competition and developer interests. Such problems arise

from their own revenue-sharing models and absolute control monetization of apps of all kinds for the respective platforms.

3.3.1 Lack of transparency in revenue sharing

The issue that is highlighted is the transparency problem, which is the revenue-sharing model that seems to be applied across the whole operation. Though both Android and iOS have initiated tiered commissions, there are still some developers who are not aware of the conditions required for the application of these rates or when they are to be applied. This uncertainty arises as a result and can create friction between the owner of the technology, which is the platform, and the developer, which in turn will culminate in a poor engagement level of the developers, which is detrimental to the growth of innovation.

3.3.2 Limited distribution channels on iOS

A greater obstacle lies in the limited distribution channels available on iOS compared to other systems. Apple is operating on a closed system, which causes developers to be unable to distribute apps outside the App Store, which raises questions about monopolistic practices. Developers have the disadvantage of not having control over the way their apps are marketed and monetized, and this can make it difficult for smaller developers to compete. The case of Epic Games, Inc. v. Apple Inc. shows how angry developers are with Apple's strict policies, which take away their control over their apps and their ability to maximize [1].

3.3.3 High commission fees for large developers

One thing remains unresolved, and still high commissions continue to be a big challenge for larger developers. As both platforms have also offered the smaller developers a discount of some sort, the larger developers continue to be charged the 30% commission, which adds to their lowered profit. This problem is exacerbated by the fact that in iOS, developers have to use only Apple's payment system, which does not create any negotiating room for them. The rigidity in commission rates is still one of the issues that the app market suffers from. Goldsmith reviewed the smartphone apps ecosystem and found that the app market is one of those whose symptoms are even more visible [10].

4. Suggestions

In light of the differences and challenges identified between Android and iOS platforms, several solutions can be proposed to enhance developer welfare, improve market transparency, and foster fair competition. Below, we address these issues one by one, offering potential solutions.

4.1. Enhancing Market Openness for Developers

The biggest difference between Android and iOS is the freedom they allow in terms of market operation. With the open-source Android system, developers can distribute their apps through many channels, while iOS requires its app to be published in the Apple App Store. This leads to monopolistic tendencies.

To do so, Apple should consider a hybrid distribution system, allowing the use of third-party app stores that are equivalent to those used by Android. This would spare developers from Apple's rules, giving them more options in terms of distribution and monetization. Tregub et al. argue that expanding access to the market through increased competition can foster innovation through app store competition, which can also increase opportunities for smaller developers [11].

Furthermore, allowing payment systems chosen by developers can lower Apple's monopoly on app monetization by giving developers more job control of their revenue.

4.2. Improving Transparency in Revenue-Sharing Models

Both platforms operate under layered commission models; however, the majority of developers are confused about the terms under which these reduced rates actually apply.

Android and iOS must make a commitment to transparency by discussing the requirements for the use of low commission. Neelakanta and Yassin show that transparency is the main factor sustaining trust in the platform-developer regime [7]. Platforms may share clear game rules of revenue thresholds and fee laws on websites; thus, developers have the possibility to better predict their strategies.

Moreover, taking into account the progressive commission structure, where fees decrease as revenue increases, could also be a good report for developers of all sizes, who are in the view of Etro that such flexible pricing implementation will encourage competition [4].

4.3. Expanding Distribution Channels on iOS

SEO-restricted developers, due to the iOS platform, focus on limited distribution channels. Several enhanced third-party stores on iOS would improve the competition and the app distribution monopoly for app developers.

Rochet and Tirole reckon that if platforms have their control lessened over distribution, the playfield will be balanced in two-sided markets [3]. On account of giving up third-party app dissemination rights, iOS will let developers work around newer and more interesting revenue models, as well as reduce opportunities for serious dependence on Apple's App Store.

4.4. Addressing High Commission Fees for Large Developers

The commission fee, say in Android and iOS, which takes around 30% share, seriously strains big developers. On the other hand, while the newcomers have no more to pay and their development continues to be affordable for all, the big developers keep on facing exorbitant costs, creating a no-profit situation.

Platforms can also reconsider providing commission caps for high-grossing developers as they take up real estate and make room for the smaller ones. Goldsmith asserts that large charges slow down innovative processes and create market monopolies [10]. Limiting the commission charge for larger developers will ensure that these retain a bigger market share for higher profitability and improved app development. Allowing alternative payment systems would also give developers greater control over their earnings, as highlighted in the Epic Games, Inc. v. Apple Inc. case [1].

4.5. Promoting Fair Competition Through Regulatory Reforms

Both Apple and Google are being challenged for their monopolistic power in Epic Games, Inc. v. Apple Inc. case, where the developers challenged Apple's monopoly over app submission in the platform [1]. The U.S. House Judiciary Committee's Antitrust in Digital Markets Report showed the emphasis on the need for more supervision as it prevents monopolies in the markets [2].

Platforms could implement self-regulation, establishing internal bodies to review app distribution policies regularly. Additionally, cooperation with external regulatory bodies could ensure fair competition and better treatment of developers, as suggested by Tregub et al. [11].

5. Conclusion

5.1. Conclusion of Key Findings

The present paper analyzes and contrasts the revenue-sharing policies of the Android and iOS platforms by establishing critical distinctions in market access, profitability generation, and app developer rights. Open-source Android acknowledges a wider variety of app distribution schemes, unlike iOS, which operates a closed system where all apps are distributed solely through its own app store, resulting in a lesser option space for developers. Even though iOS generates more revenue per user, Android has a total number of users, too, and this is the main reason for the high number of ads.

The Suggestions section offered solutions, including opening iOS's ecosystem to third-party app stores, improving transparency in revenue-sharing models, and implementing progressive

commission systems. Regulatory reforms and self-regulation were also proposed to ensure a fairer and more competitive landscape for developers.

5.2. Research Significance

The study brings forth the need for significant improvement in policies that deal with platform competition and innovation, which is particularly crucial in a marketplace where a few big platforms have taken over. By exploring the implications of policies for developers' well-being and market opportunities, the studies also present useful views that may help platform operators, developers, and regulators in increasing the internal demand strength of digital ecosystems. Data results underline the necessity of the development of more equal revenue models that might represent growth and promote the introduction of a highly competitive app market.

5.3. Limitations and Future Studies

One limitation of this study is the reliance on secondary data, as it primarily draws on existing literature, reports, and case studies to form its conclusions. The lack of primary data, such as face-to-face conversations and questionary, with the developers and platform operators restricts the amount of data and information that can be gathered. Future studies may overcome such limitations by implementing primary data collection via questionnaires or structured interviews with developers and their stakeholders to get a first-hand account. In addition, the consequences of persistent alternative payment systems and noticed revenue share systems for the developers' position and platform competitors may be investigated. Consequently, this will help to get a more detailed view of the implications of these strategies.

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