

APPLE'S IN-APP PURCHASE ("IAP") AS A DISINTERMEDIATION TOOL

The Apple App Store, the only channel for app distribution available on iOS,¹ and thus the gateway between app developers and iOS users, places Apple in a unique position: being a true gatekeeper for app developers wishing to reach iOS users, Apple can take advantage of the developers' dependency on the App Store to impose on them terms and conditions that they would not have agreed to had they been in a similar bargaining position to Apple. But with Apple being an unavoidable trading partner for them,

app developers have no real choice: they either must accept any terms, conditions and policies Apple prescribes – regardless of whether they are unfair, arbitrary or detrimental for app developers – or lose access to iOS users and see (part of) their business collapse.

The obligation to use Apple's proprietary in-app payment system (In-App Purchase or "IAP"), imposed by Apple on app developers whose apps offer "*digital goods or services*" or "*goods or services consumed within*

the app" (Apple being the sole arbiter of deciding when this is the case),² constitutes a unilateral obligation with severe consequences for app developers and ultimately iOS users. The most infamous consequence of this obligation is the (up to) 30% commission charged on each transaction made through IAP.³ This commission has drawn much attention not only because it is levied on some but not all app developers distributing their apps through the App Store, but also because such a high commission is hard to justify.

A further consequence that is often overlooked is that the mandatory use of IAP allows Apple to confiscate the customer relationship, interposing itself between app developers and their users.⁴

While not always given proper attention, disintermediation is equally – if not more – detrimental for app developers and iOS users alike. As explained by Jason Fried, Basecamp's

¹ The App Store is the only app store allowed on iOS devices. As the App Store Review Guidelines point out, "[c]reating an interface for displaying third-party apps, extensions, or plug-ins similar to the App Store or as a general-interest collection" is unacceptable. See <https://developer.apple.com/app-store/review/guidelines/#unacceptable>. Thus, app developers wishing to reach iOS users have no other choice but to distribute their apps through the Apple-controlled App Store.

² See, App Store Review Guidelines, Article 3.1.1. On the other hand, if an app allows users to purchase "physical goods or services" or "goods or services consumed outside the app", the app developer cannot use IAP and must use its own or third-party payment solution. See App Store Review Guidelines, Article 3.1.3(e). Apple is the sole arbiter deciding whether an app enables the purchase of "digital

goods or services" and should thus use IAP or whether it enables the purchase of "physical goods or services" and thus should not use IAP. The distinction it draws is not always objective or logically founded, and it is difficult to understand why it considers some services as being consumed "within the app" while similar services are considered to be consumed "outside the app".

³ As of June 2016, the IAP commission is reduced to 15% for subscriptions lasting for more than a year. Since January 2021, the commission is reduced to 15% for developers who qualify for Apple's App Store Small Business Program. See <https://developer.apple.com/app-store/small-business-program/>.

⁴ A further consequence of the mandatory use of IAP is the resulting loss of innovation, which will be analyzed in a separate paper.

CEO, “[m]oney grabs the headlines, but there’s a far more elemental story here. It’s about the absence of choice, and how Apple forcibly inserts themselves between your company and your customer.”⁵

Apple collects commercially sensitive information about subscribers of third-party app developers (i.e., users who are not Apple’s customers), while these third-party app developers lose access to valuable user data.

This paper focuses on IAP as a disintermediation tool. It first points out that the mandatory use of IAP has resulted in app developers being deprived of valuable user data. It then looks into the dire consequences of the confiscation of customer relationship by Apple. In particular, it refers to the harms arising from the lack of visibility into user identity and other user data, before analyzing how disintermediation leads to chaotic customer service processes, causing user frustration and thus reputational harm to app developers. Finally, the paper explains how Apple benefits from the use of IAP as a disintermediation tool.

loss of access to valuable data

When IAP is used, Apple captures valuable user data, including the user’s full name, email, age, IP and mailing address, location, as well as credit

⁵ “Our CEO’s take on Apple’s App Store payment policies, and their impact on our relationship with our customers”, Hey, 19 June 2020, available at <https://hey.com/apple/iap/>.

⁶ The notification contains an “original transaction ID”, generated by Apple when a new subscription is purchased. See https://developer.apple.com/documentation/appstorereceipts/original_transaction_id.

⁷ That could, for example, be a customer ID or an Apple “subscriber ID”.

⁸ While app developers can download files with encrypted data from the “App Store Connect Portal”, these files do not contain any information that would allow app developers to match the data with their own records and identify their users with certainty. Similarly, even though Apple makes some financial reports available to app developers, these also do not provide detailed information about each transaction, and thus do not allow app developers to clearly identify the

card details and billing information. The trouble is that such users are not Apple’s customers; yet, Apple, through the use of IAP, is in the position to gather sensitive information about them (information that users may not have disclosed to Apple if they had a choice). Worse, Apple refuses to share valuable data with app developers who, after all, are the ones providing the service purchased by the user. Apple only shares limited information, which is inadequate for app developers to run their business efficiently.

In particular, when a user makes a payment through IAP, the app developer receives a real-time notification that a purchase has been made for a particular product offered by the app developer. This notification provides information about the purchased product,⁶ but does not contain information that would enable the app developer to identify the user with certainty.⁷ Nor does it contain information such as the amount paid or the currency used.⁸ No other identifying information is shared by Apple with the app developer at the time of the payment.⁹

This results in a most bizarre situation: Apple collects commercially sensitive information about subscribers of third-party app developers (i.e., users who are not Apple’s customers), while these third-party app developers lose access to valuable user data. While, therefore, the former collects unparalleled market intelligence, the latter lack necessary data to operate their business efficiently, to keep their services safe,¹⁰ to improve their services and to offer a better customer experience. Both app developers and iOS users are harmed by the fact that Apple becomes the “merchant of record” when transactions

customers and products purchased through IAP.

⁹ Apple does not reveal credit card information (e.g., name of the cardholder/account holder, bank etc.), which would enable app developers to identify with certainty who their customers are and which product they have purchased. Therefore, app developers have to operate on the basis of assumptions, e.g., that the customer will usually be still connected to his or her account shortly after the purchase is made and thus it can be assumed that the user behind the subscribing account is the one that has made the purchase through IAP. This will, however, not work if the user has logged out of his or her account in the meantime.

¹⁰ For example, credit card information (combined with information app developers have) can help app developers identify card fraud or scammers, and thus detect – and remedy – fraudulent or otherwise illegitimate activities that may take place in their platforms, at the expense of their users.

are carried out through IAP, which allows it to confiscate the customer relationship from the app developer.

loss of ability to identify users, communicate with them or offer personalized services.

When a subscription is purchased through IAP, app developers do not have the ability to directly communicate with their users or to provide tailored services or offers, as the customers' identity is concealed from them and the direct relationship between subscribers and app developers (i.e., the service providers) is lost.¹¹ This creates a series of shortcomings for app developers and iOS users.

App developers cannot get feedback from subscribers during the cancellation process. This would allow them to understand the reasons underlying cancellations and adapt offers or improve their services accordingly.

First, not knowing who their customers are, app developers are unable to perform analytics, predictive analytics and run experiments that would allow them to better understand their customers and deliver relevant content for them. Let us take the example of news publishers: without knowing their users' location or age, news publishers cannot deliver local news or tailor the content to each age group. Consequently, subscribers' experience is harmed, as they are likely not served content that would reflect their preferences.

¹¹ A further problem is that, when IAP is used, app developers are deprived of the possibility to freely determine their pricing policy, e.g., by pricing subscriptions or other products differently across the different geographic areas, or of the possibility to model subscriptions differently across different geographic areas or categories of users (e.g., offering subscriptions of different durations or

Second, app developers are prevented from directly communicating with their subscribers via newsletters, which, for some app developers, e.g., news publishers, constitute a critical component of user engagement activities. The lack of visibility into the customers' identity also prevents app developers from upselling and cross-selling,¹² thus reducing their ability to obtain additional revenues from their subscriber base.

Third, as app developers lack information both regarding the identity of subscribers and their credit card details (including the expiration date of the credit card used), they are precluded from proactively reminding subscribers to update their payment details in order to avoid interruption of the service. The result is that a renewal attempt may fail – something that could have been avoided had the app developer been able to identify and directly communicate with its subscribers.

Finally, app developers cannot get feedback from subscribers during the cancellation process, which would allow them to understand the reasons underlying cancellations and adapt their offers or improve their services accordingly. Nor can they provide extra services to important customers, such as carrying over unused credits to subsequent months or providing them with a loyalty discount. Being able to identify users and having a direct relationship with them are prerequisites for the above actions.

chaotic customer service and complex processes leading to poor user experience

The disintermediation of app developers when IAP is used leads to chaos when it comes to customer service matters, and thus results in

offering various instalment payment facilities).

¹² Upselling is the practice of encouraging customers to purchase a comparable higher-end product than the one in question. Cross-selling is the practice of encouraging customers to buy related or complementary items.

a poor user experience, which, in the minds of consumers, is inevitably associated with the app developer's brand. IAP leads to a forced separation between the provision of a service (which is the responsibility of the app developer) and the provision of customer support and after-sales services (which in large part must be handed over to Apple). Customers are generally not aware of this separation: since they subscribe to the app developer's service (i.e., buy the service from the app developer), they do not know that Apple captures both the billing and the relationship that follows. Users expect, therefore, that the app developer will be able to respond to any queries they have about their subscriptions and to solve any issues that arise, even though in reality it is only Apple that has such ability and responsibility. This creates considerable inefficiencies which cause user frustration, harm user experience and damage the reputation and thus the business of app developers.

what does the confiscation of the customer relationship by Apple mean in practice for iOS users?

- **Confusion as to how to exercise the right of withdrawal.** If iOS users who have purchased a subscription through IAP wish to exercise their right of withdrawal, they must do so through Apple. This is not always clear to users, who intuitively may seek to exercise this right by notifying the app developer whose service they purchased. In such a case, the app developer can do nothing more than redirect the users to Apple. However, even if a user contacts Apple, the app developer cannot guarantee that the user will always manage to cancel his or her subscription – or do so in a smooth and efficient way. The process is in Apple's hands, the app developer's role being limited to directing users to it.
- **Frictions in the process of obtaining a refund.** As Apple confiscates the customer relationship when IAP is used, app developers have no control over the refund process. If, therefore, a customer wishes to obtain a refund and contacts the app developer, the latter can only direct the user to Apple. As Apple has its own refund policy (which it does not communicate to app developers), it may grant refunds that the app developer would not have granted (as it would not consider them to be justified) or may refuse to grant refunds that the app developer would consider justified and would thus have granted. What is more, while Apple handles the refund process, it may need to communicate with the app developer in order to verify that the user is entitled to a refund. Instead of being a streamlined and smooth process, therefore, obtaining a refund when IAP is involved is a complex matter.
- **Inefficiencies in the process of cancelling a subscription.** The process for cancelling a subscription that has been purchased through the App Store is similar to that of obtaining a refund – and thus the inefficiencies associated with it. Since Apple holds the reins of the customer relationship, iOS users must contact Apple to cancel their subscriptions. This is, once again, not the intuitive course of action. Users will, in general, contact the app developer who provides them with the service purchased, asking them to deactivate or cancel automatic subscription renewals. App developers, however, are not in the position to help – in fact, they cannot even assist consumers to do so or contact Apple on the users' behalf. All they can do is inform the users that they must contact Apple. The complexity of this process is exacerbated by the fact that when cancelling a subscription purchased through IAP, users need to unsubscribe twice: in the app and through Apple. Until they do so, even if they have unsubscribed from the app, Apple may continue to charge them, as Apple is in charge of payment.

- **Hurdles in obtaining information about billing matters.** If a user has questions about invoices or other billing matters, the app developer cannot help or provide adequate information. Only Apple has the information necessary to respond to these requests, which it does not share with app developers.
- **Difficulties in upgrading subscriptions.** A user who has purchased a basic subscription may wish to convert it into a premium subscription. Normally, users would be able upgrade their subscriptions without facing any issues.¹³ When the basic subscription has been purchased through IAP, however, upgrading subscriptions turns into a complex task.¹⁴ Inevitably, users will contact the app developer to solve the issue and help them change subscription plan. But app developers cannot help, as Apple deprives them of the customer relationship when IAP is used.
- **Inefficiencies in case of suspension of a user account.** If an app developer suspends a user account for misconduct (e.g., fraud) or for breach of the Terms of Use, Apple will continue to charge the user until the cardholder discovers such charges and contacts his or her bank or Apple – even if the app developer tries to alert Apple.

For app developers, the most detrimental consequence of the above inefficiencies and frictions in the provision of customer services (confiscated by Apple) is reputational damage. The inefficiencies in, for example, subscription management or the refund process, although rooted in Apple’s conduct, are inevitably associated in customers’ minds with the app developer’s brand. After all, it is hard to grasp – or to believe – that when purchasing a service from a particular brand, a third party is responsible for

customer service – and the service provider itself cannot offer any help. In other words, users do not understand that, when purchasing a subscription through IAP, they do not contract with the app developer but with Apple.

Worse, unlike app developers that strive to provide impeccable customer service, by swiftly resolving any issues or responding to any queries in order to keep their customers satisfied, Apple does not have similar incentives. Coupled with the fact that Apple provides customer services for millions of apps that are distributed through the App Store, it comes as no surprise that Apple is unable to adequately serve all users of these apps. Customers are often vocal about their dissatisfaction with the inefficient handling of their issues, which they may express publicly, e.g., in social networks or in the “reviews” sections of websites or apps. Inevitably, it is the app developers’ reputation that is harmed, even though they are not the source of the inefficiencies.

Apple’s benefits from disintermediation

The confiscation of the customer relationship by Apple creates switching costs for users, locking them into the iOS ecosystem. As Apple holds the reins of customer relationship when subscriptions are purchased through IAP, users cannot simply switch to Android and retain access to subscriptions purchased on their iPhone. This is because subscriptions purchased through IAP are not linked to the app developer that provides the service, but to Apple. Thus, iOS users must first cancel subscriptions purchased on their iPhone or wait for them to expire before switching to an Android device, where they will have to re-download every app and purchase new subscriptions.

¹³ The industry standard approach is as follows: the user wishing to upgrade will pay only a pro-rated amount for the upgraded subscription, which corresponds to the period between the date of upgrading and the renewal date of the basic subscription. At each renewal date the user is then billed the full price for the upgraded subscription. If any issues would arise, users could contact app developers directly and resolve the matter. Apple, however, does not follow this industry standard. Instead, the user must go through a complex process, whereby he or she purchases the upgraded subscription and pays the full price and then

receives a refund of his or her basic subscription (on a pro rata temporis basis that corresponds to the period between the date of purchase of the basic subscription and the date of upgrading).

¹⁴ While a technical solution for changing subscription options exists through IAP, it is extremely complex. In fact, even app developers have never been able to implement it and offer this possibility to their customers.

But perhaps the most important benefit for Apple is that IAP allows it to collect sensitive commercial data from all apps obliged to use this in-app payment system, such as their customer lists, the purchasing activity of individual users (which can be used to deduce their propensity to purchase subscriptions) and the success of subscriptions. This allows Apple to gain unparalleled market intelligence, which it can use to scan the horizon and identify app categories with revenue growth opportunities. Apple can then swiftly develop its own apps and enter the services market (e.g., by launching music streaming, video or news apps), competing with app developers whose data played an instrumental role in Apple's ability to do so.

conclusions

While Apple has mostly attracted criticism due to the 30% commission associated with the mandatory use of IAP, an equally – or even more – severe consequence of IAP is that it allows Apple to disintermediate app developers offering “digital goods or services” from their customers. Concisely put by Basecamp's CEO,

“[w]hen someone signs up for your product in the App Store, they aren't technically your customer anymore - they are essentially Apple's customer. They pay Apple, and Apple then pays you. So that customer you've spent years of time, treasure, and reputation earning, is handed over to Apple. And you have to pay Apple 30% for the privilege of doing so!

You can no longer help the customer who's buying your product with the following requests: Refunds, credit card changes, discounts, trial extensions, hardship exceptions, comps, partial payments, non-profit discounts, educational discounts, downtime credits, tax exceptions, etc. You can't control any of this when you charge your customers through Apple's platform. So now you're forced to sell a product - with your name and reputation on it - to your customers, yet you are helpless and unable to help them if they need a hand with any of the above.”¹⁵

The consequences of the disintermediation of app developers by Apple are dire, not only for the developers themselves but also for iOS users. It is of utmost importance, therefore, that efforts to curb Apple's practices are not limited to the reduction of the 30% commission but also cover Apple's use of IAP as a disintermediation tool, aiming to restore app developer's direct relationship with their iOS users.

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¹⁵ Our CEO's take on Apple's App Store payment policies, and their impact on our relationship with our customers”, Hey, 19 June 2020, available at <https://hey.com/apple/iap/>.

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