
App store carrier billing: Transforming subscriber behavior

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Executive summary

It is widely believed that offering carrier billing for third party services cannibalizes operator revenues from traditional voice, SMS and data services, because subscribers have a limited budget to spend on their phone - a fixed wallet size.

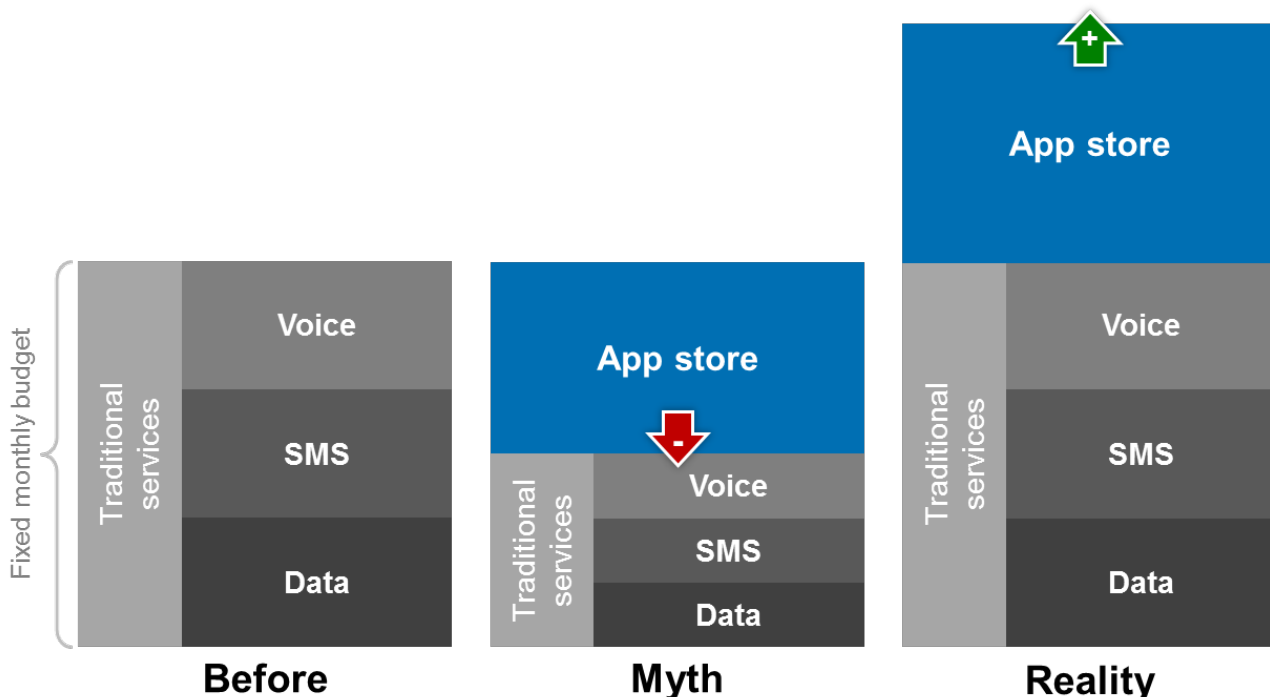
To investigate this belief in detail, Bango and Proximus partnered to analyze pre-paid subscribers using Android smartphones, comparing those using carrier billing to purchase from Google Play with those who do not, focusing in particular on pre-paid subscribers.

Bango and Proximus discovered that contrary to common belief:

- adding Direct Carrier Billing (DCB) to an app store **does not cannibalize end user spending on mobile data, voice and SMS services**
- pre-paid subscribers that pay using their mobile phone bill in Google Play **do not have a fixed wallet size**. They maintain the same level of spending on data, voice and SMS services and spend additional money on app store content

In addition, there is a positive impact on the pre-paid subscribers' behavior from those using app store DCB, in terms of customer engagement and the increased use of all operator services, including voice, SMS and data.

Introduction of app store carrier billing



Fear that app store introduction will erode high margin revenues from traditional services with lower margin app store revenues.

Use of high margin traditional services remain constant, while lower margin app store revenues are an incremental gain.

Comparing usage between pre-paid subscribers that paid in Google Play with DCB to pre-paid subscribers that did not use DCB in Google Play, found that:

- Customer ARPU was over 160% higher
- Voice usage was over 38% higher
- SMS usage was over 222% higher
- Data usage was over 583% higher
- Monthly pre-paid reload frequency was over 128% higher
- Pre-paid customer reload value was over 130% higher

This analysis highlights how subscribers who use carrier billing for third party app stores are likely to be the highest spenders and most active users of mobile services. Operators should look after this cohort of subscribers, to make sure they are free to use carrier billing for purchases of games and other entertainment, in particular pre-paid customers who have already funded their mobile accounts through top-up.

New patterns of purchase behavior are exhibited by subscribers when carrier billing is activated in app stores, many operators have not updated spend management controls to reflect these changes. This mismatch creates a poor customer experience, lost revenue to both app store and operator, and in the worst cases customer churn to a non-carrier billed payment method.

The analysis also identified several further benefits that app store DCB delivers. Operators are in a position to offer very effective payment services to third parties by taking a more analytical approach to the performance of carrier billing, and recognizing that the use of carrier billing in third party stores increases the overall adoption of mobile services by their customers.

Background

Belgian operator Proximus and Bango applied an analytical approach to measuring the impact of enabling pre-paid subscribers to use their mobile accounts to pay in app stores. Unique Bango Boost technology performed a range of analyses to identify the impact on subscriber behavior after Proximus launched DCB (Direct Carrier Billing) in Google Play through Bango. The advantage for Proximus in using the Bango Payment Platform for app store carrier billing is the deep dive into payments behavior provided by the platform, including comparative benchmarking across multiple billing routes.

Proximus wanted to fully understand the behavior of their pre-paid customers after an app store is activated. They specifically wanted to investigate and address the widely held belief that app store carrier billing cannibalizes high-margin revenues from voice, SMS and data. This belief relies on the perception that pre-paid mobile subscribers have a fixed mobile wallet size, so adding new services like app store DCB cannibalizes subscribers' budgets from traditional high margin spend on voice, data and SMS to lower margin app store services, leading to reduced profit per user.

"Like many mobile operators worldwide, Proximus naturally had concerns about introducing carrier billing for app stores, especially with pre-paid customers. Because of the comparatively low margins from processing app store payments, we needed to know if app store billing would erode our revenues from existing high margin voice, SMS and data products", said Jeroen Degadt, Head of Carrier Product & Market Mgt, Proximus.

Process

Bango and Proximus jointly analyzed pre-paid customer spend behavior in Google Play, the world's largest app store, to identify the impact on reload and spend across Google Play content and traditional high margin voice, SMS and data services.

Bango separated the usage data of Proximus pre-paid Android subscribers that had purchased from Google Play using carrier billing, from those that had not.

"Bango technology allowed Proximus to uniquely segment and analyze pre-paid customers based on their Google Play carrier billing history", said Jeroen Degadt, Head of Carrier Product & Market Mgt. "They helped us understand the total ARPU and revenues from voice, SMS and data for subscribers that have, and have not purchased on-bill from Google Play".

Proximus also provided the SMS, voice and data usage information for both Google Play customers and non-customers over a five month period from May to September 2015.

Bango identified thousands of Proximus pre-paid subscribers that purchased from Google Play using DCB in the first month after launching in October 2014. Voice, data and SMS usage for these pre-paid subscribers, was then compared between the five months prior to launch, June - October 2014, and the seven months after launch, November 2014 - May 2015. This "before and after" analysis investigated whether traditional voice, data and SMS services were being cannibalized by the addition of Google Play DCB.

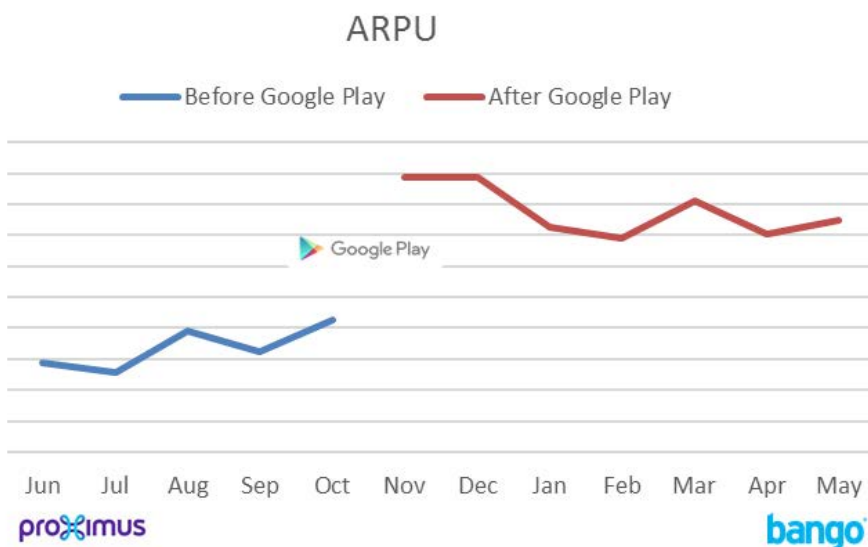
Findings of before and after analysis

Impact of app store carrier billing on high-margin revenues from voice, SMS and data

Comparing the behavior of pre-paid subscribers before and after the launch of Google Play DCB in October 2014.

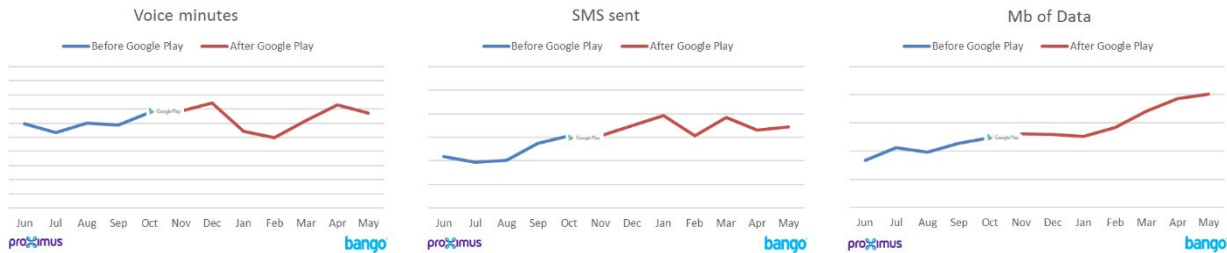
1. Impact on Average Revenue Per User (ARPU)

ARPU from pre-paid subscribers after Google Play DCB launch increased, rising by 4€ per person. The next step was to determine if there was any impact on non-Google Play, first party services.



2. Impact on voice, SMS and data usage

Proximus pre-paid customers showed consistent use in their use of voice, SMS and data services. Overall usage was slightly up after Google Play DCB launched, although that could not be directly attributed to the introduction of DCB in Google Play.



What this means:

Adding app store DCB does not cannibalize revenues from data, voice and SMS services. Pre-paid subscriber spend on voice, data and SMS does not decrease when app store DCB is introduced even when DCB generates extra ARPU.

Subscribers don't have a fixed wallet size, they will continue to spend on data, voice and SMS services, spending additional money on app store content and in-app purchases.

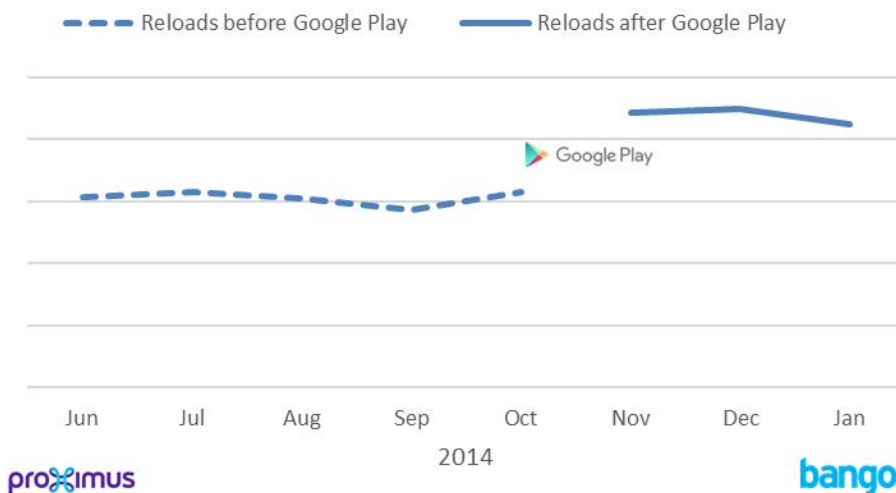
"There is general acceptance across the industry that OTT services cannibalize traditional revenues because subscribers have a fixed wallet size. We were not expecting to see that in fact, it has a hugely positive impact, increasing spend from existing services while opening up new revenue and customer satisfaction opportunities." Jeroen Degadt, Proximus.

Impact on engagement with the introduction of app store carrier billing

3. The impact on pre-paid reload value

Proximus pre-paid customers that purchased from Google Play using carrier billing, on average reloaded their pre-paid account with a higher value. Given the low percentage of users initially paying with DCB in Google Play, this growth in reload value is significant, especially as app store promotion grows post launch.

Pre-paid reload values for Google Play customers



What this means:

Pre-paid app store customers reload more often and at higher values, meaning that Google Play users are more engaged and spend more across all services.

As Google Play users are topping up with higher reload values, while data, voice and SMS services are remaining consistent or growing, we again see that subscribers do not have fixed wallets. They are spending additional money with the addition of app store carrier billing.

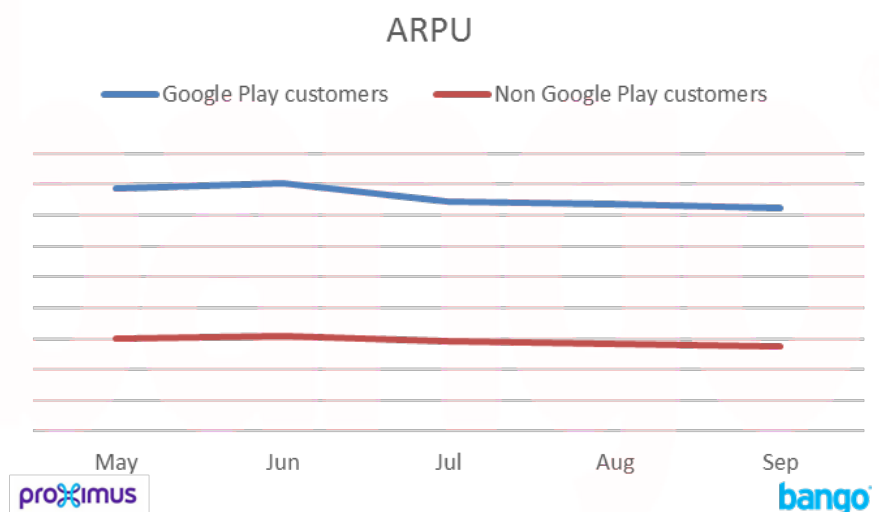
Findings from Google Play versus non-Google Play analysis

Customer profiles with introduction of app store carrier billing

Comparing pre-paid subscribers who use carrier billing to purchase in Google Play with pre-paid subscribers who either do not use Google Play, or use credit card to purchase, rather than DCB.

4. Average Revenue Per User (ARPU)

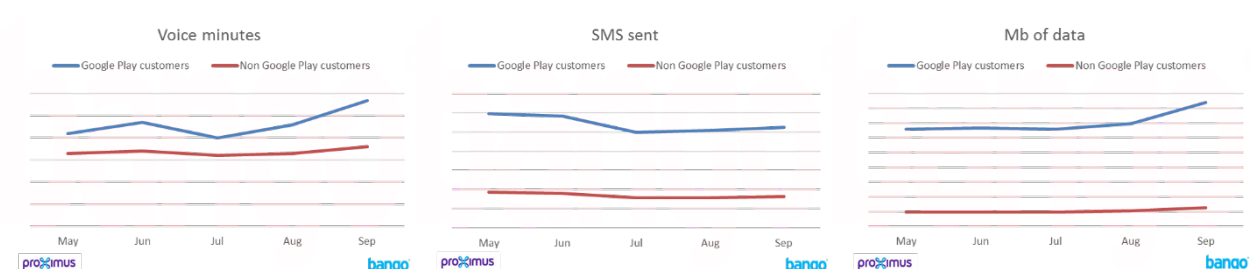
ARPU from pre-paid subscribers is over 160% (2.6 times) higher compared to pre-paid subscribers that did not pay on-bill in Google Play. This takes into consideration approximately 150% (2.5 times) higher outbound revenue costs.



5. Google Play user spend on data, voice and SMS high margin products

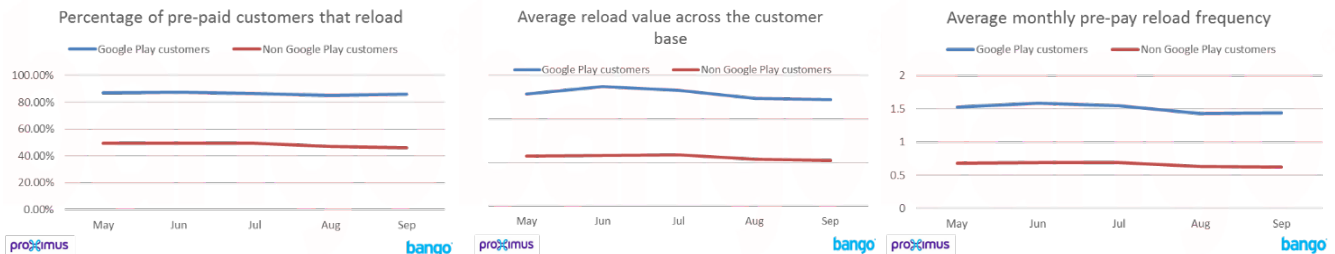
Pre-paid app store customers spend more on data, voice and SMS services.

- Voice usage was over 38% higher
- SMS usage was over 222% higher
- Data usage was over 583% higher



6. Frequency and value of pre-paid reloads

- There is a 79% increase in reload engagement in subscribers who use Google Play DCB
- Subscribers who use Google Play DCB reload with 130% (2.3 times) higher values than pre-paid subscribers who do not
- Subscribers who use Google Play DCB reload their account 128% (2.28 times) more frequently than subscribers who do not



What this means:

Google Play DCB customers are more engaged in their operator relationship. They spend more than non-Google Play customers on traditional voice, data and SMS services. In addition, Google Play DCB customers reload their pre-paid accounts more frequently, with higher values.

Conclusions

When carrier billing is offered in app stores, additional money is spent on the store content with high levels maintained across traditional voice, SMS and data services.

The introduction of Google Play DCB via the Bango Payment Platform has given Proximus insights about their subscribers' app store spending habits, which they previously could not get. The Proximus data* shows that Google Play carrier billing is not cannibalizing voice, SMS or data revenues. Crucially, there is no reduction in high margin first party services, simply the addition of incremental margin from additional payments for third party services.

More frequent reloads and higher reload values clearly show that customer wallet size is not fixed, and in fact will increase by adding app store DCB. More money is spent with Proximus each month as a result. This is money that subscribers would otherwise spend elsewhere, including physical stores, online services or in Google Play via credit cards.

The data indicates that Google Play DCB users are more engaged and spend more across all services. The addition of app store carrier billing increases Proximus revenues and significantly increases their pre-paid customer engagement.

"The Bango Payment Platform has given Proximus a fast, consistent route to launching major app stores", said Jeroen Degadt at Proximus. "Bango has worked closely with our analyst, Françoise Pauwels, PM DCB, to help us understand the real impact of Google Play DCB on our pre-paid customers. The positive results show how app store carrier billing has become a crucial part of our business and presents a massive future growth opportunity."

*The findings in this report are consistent with other mobile operators across high pre-paid emerging markets such as Latin America and Asia.

What's next

A report analyzing post-paid customers will follow. Make sure you register your interest in receiving this report by emailing info@bango.com

About Bango

Bango is the global standard for app stores offering carrier-billed payments, with more than 150 activations of carrier billing around the world. As the next billion consumers adopt their first smartphone and look for alternate payment methods, Bango will be there to unlock the universe of apps, video, games and other content that bring those smartphones to life. Global app stores and merchants plugging into the Bango Payment Platform include Amazon (NASDAQ: AMZN), Google (NASDAQ: GOOG), Samsung (005930: Korea SE) and Microsoft (NASDAQ: MSFT). Bango also partners with leading mobile network operators (MNOs) around the world to drive new revenues through its industry-leading carrier billing solutions. For more information, visit www.bango.com.



About Proximus

Proximus Brands

The Proximus Group is a telecommunications company operating in the Belgian and international market. We are the leading national provider of telephony, internet, television and network-based ICT services. Our aim is to deliver the best customer experience. To do so, our complementary brands meet the demands of a wide range of customers.

Best quality and service with a full choice of features – bringing customers instantly close to what matters.

In 1994, Belgacom Mobile was the first operator to launch mobile telephony services based on GSM technology in Belgium, under the brand Proximus. Now, more than twenty years later, the Proximus Group provides fixed and mobile voice, Internet, digital television and ICT services. It makes us the leading provider in Belgium of comprehensive, competitive telecommunication offers and a trusted partner for very high quality convergent solutions.

