



WHITEPAPER

How to sell more than a billion smartphones – tomorrow

PayJoy's simple locking app removes the need for credit checks. It opens up a vast market of underbanked customers.



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More than a billion underbanked people want to buy a smartphone and to participate in the digital economy. They can afford the repayments. But they have one huge barrier: a broken credit system. Underbanked people use cash. They do not have audited transaction records. As a result, they cannot borrow.

This means banks, mobile operators, retailers, and distributors are missing out on a huge market of customers.

PayJoy's locking app solves the credit problem. With PayJoy running on the smartphone, suppliers (retailers, MNOs or lenders) can remotely disable the device if a customer misses a payment. This acts as an incentive for customers to keep up their payments. And it means suppliers can enroll people even if they don't currently have a formal credit history¹.

Taken together it means:

- Customers can use the \$50 they would have spent on a feature phone as the down payment on a fully featured smartphone.
- MNOs benefit from higher ARPU and lower churn.
- OEMs and distributors sell more higher priced devices to a segment that previously bought low-end feature phones or no phone at all.

And there is one more important benefit. Consumers with no previous credit history now have a record of their ability to pay. This can help them to access other financial services.

In essence, they can use their smartphone as collateral for more loans.

Banks and other lenders can use this data to extend finance to a vast market of previously underserved customers.

¹ While PayJoy does not require a traditional credit score, if a profile exists, PayJoy typically will consult that score. A score is not necessary for an offer.

Introduction

More people than ever can afford a smartphone. So why are shipments falling?

After three decades of growth, smartphone penetration has hit a ceiling. Just weeks ago, Gartner predicted the market in 2019 would shrink by 3.2 per cent.

The takeaway? There's no growth left in the existing smartphone paradigm. Anyone who can afford a smartphone already has one.

This is wrong. In fact, the industry is overlooking a market of more than a billion consumers. Typically, these customers own feature phones or low-end smartphones. They don't have \$100 to \$200 to spend outright, but they do have the means to afford a modest deposit and monthly repayments.

Clearly, there is every incentive for banks and fintechs to serve these customers. There is a similar incentive for mobile operators, retailers and distributors to upgrade them.

The problem is credit. In much of the developing world, there's little or no formal credit scoring system. Many millions of people do not have a financial identity. In fact, many have no form of national ID at all.

The industry needs a new model to get fully featured smartphones into the hands of the next billion.

This is where the PayJoy Lock app comes in. Suppliers offer customers a high value smartphone with the app loaded on to it. Customers who make regular payments then have a frictionless experience. The app stays in the background.

The PayJoy assistant pops up on the customer's smartphone with advice on how to bridge their payments.

Delinquent customers also get these reminders, but their phone use is limited to emergency calls and whitelisted apps until they catch up.

At the end of the finance or subsidy term, the customer has something he or she never had before: an audited record of transactions, thus building credit history. He or she also has a smartphone – to be used as collateral to apply for a loan or a bank card. The lender simply activates the PayJoy app until the loan is repaid.

The PayJoy concept is elegant for many reasons:

It opens up a vast new base of users for smartphones previously deemed inaccessible by both MNOs and OEMs

PayJoy partners typically approve 90 percent or more of applicants.

It takes just a few minutes to set up a customer.

Subscribers are able to get the smartphone they need and want.

It helps suppliers to sell not just more smartphones, but more high-priced smartphones.

Late fees are not necessary. This turns any PayJoy-financed smartphone into “pay-as-you-go” hardware.

PayJoy gives customers a documented transaction history – often for the first time.

It gives risk-averse lenders a safe method to target millions of previously underserved customers.

This is a huge opportunity for mobile operators and their partners in retail, distribution and financial services.

In this white paper, we will explore the proposition.



“Before we partnered with PayJoy in 2017, two thirds of sales at our outlets were accessories. Today, 60 to 70 per cent of sales are high functioning smartphones. We have now tripled the number of retail outlets to support demand.”

**Guillermo Osorio,
Owner/CEO, Macrocel**



The missing 1.7 billion

Calculating the addressable market of underserved consumers

What is stopping aspirational customers from buying premium smartphones?

The GSMA Intelligence 2016 survey examined the question. It found 62 per cent of basic phone owners cited handset costs as the main barrier to using the mobile internet. Among non-mobile phone-owners, 64 per cent highlighted the cost of the handset and SIM as the biggest hurdle for acquiring a smartphone.

Despite these issues, the GSMA believes 1.74 billion new users could come online by 2025, most of them in mobile-first markets.

Sales up 92 per cent in a year

What happened when Mexican distributor Macrocel partnered with PayJoy

In Mexico, PayJoy works closely with local companies to trial products and services. It also runs its own lending operation in the region.

One of its key partners is Macrocel, which began selling and distributing PayJoy-enabled smartphones in 2017. The alliance has delivered some impressive results:



Sales
increased by 92 per cent in year one, and a further 35 per cent in year two.



Its market share
in its MNO group went up from 11 per cent to 25 per cent.



Eight in ten phones sold
are now PayJoy-enabled.



Gross profit margin
doubled.



EBITDA
before PayJoy was 11 per cent. After, it leapt to 27 per cent.

How the PayJoy process works

Approving the customer

The customer provides a Facebook account, mobile number and ID. PayJoy's algorithm scans numerous data points to provide payment terms in five minutes.

Installing the PayJoy Lock app

Once the customer has been approved, the PayJoy Lock app is installed. If the OEM has a mobile device management (MDM) platform, the assistant can load the app at the point of sale.

Handset makers that do not have an MDM platform can make their devices compatible with PayJoy via PayJoy's Access technology, which is installed at the system level and will enable the PayJoy Lock App to run securely on the phone.

Devices with Access have no PayJoy Icon, and Access remains dormant unless and until the sales assistant notes the phone's IMEI for a PayJoy-facilitated offer. This eliminates the need for an app pre-load. It also frees suppliers from having to manage a separate inventory of devices.

Defining the repayment terms: integrating the PayJoy Lock API

When the device is powered up, the Access app calls PayJoy's server and asks if the device is to be controlled by PayJoy. If not, Access goes dormant. If it is, then Access downloads the Lock app.

The Lock app then communicates with the lender. By integrating the PayJoy API, the lender can define the payment terms, take ownership of the device, and lock it if the customer misses a payment.

Customizing the PayJoy experience

Lock partners can customize the app features. There is no need to write new code. They can whitelist numbers and apps, embed a payment page URL, and more.

The affordability gap

Solving the problem of total cost of mobile ownership (TCMO)

There is evidence to suggest that the world is getting richer. The Brookings Institution says 3.3 billion people belong to the global middle class. They spend \$37 trillion a year.

But even if incomes are rising, there is still an affordability gap in mobile. The total cost of mobile ownership (TCMO) remains a barrier in the world's poorest countries.

The GSMA determines TCMO as the combined cost of service usage (voice, data, SMS), activation and mobile handset. In 2018 it analyzed the TCMO for purchasing a handset

and 500MB of data per month in Sub-Saharan Africa. It found TCMO to be 10 per cent of monthly income – well above the five per cent recommended by the UN Broadband Commission.

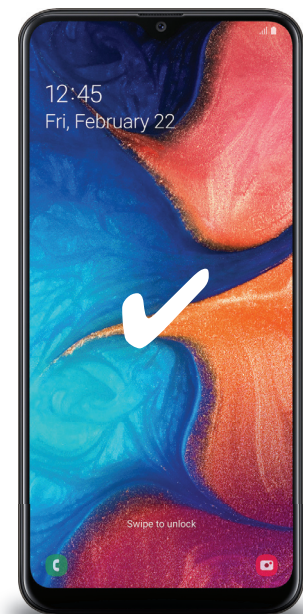
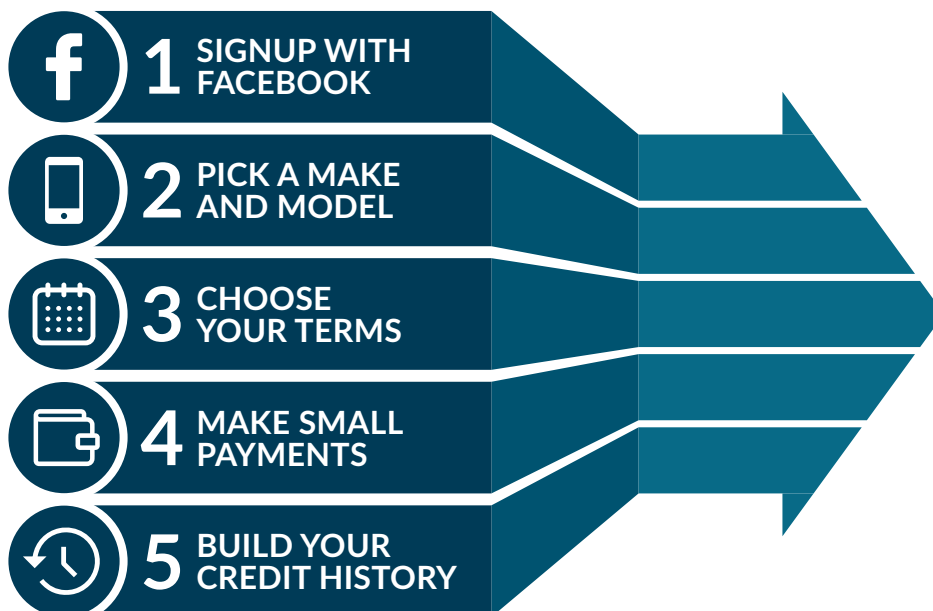
This is the 'affordability gap'. The GSMA believes it is the reason why the market in Sub-Saharan Africa is slowing down. Only a third of the region's customers use smartphones. Yet it should be ripe for growth.

The industry needs a solution to this 'affordability gap'. In a world of rising incomes, the challenge is to find creative ways to bring financing to aspiring new customer segments.

What is a typical deal available through PayJoy?

Suppliers are free to construct a plan based on a consumer's preferences. However, as an example, a device financed through PayJoy channels in Mexico that costs **USD\$150** will often require a **25 per cent** down payment. That's **\$31.25**. In this case, the financed amount is **\$118.75**.

Consumers can make payments once a week over three, six, nine or 12 months. The app will show them the exact amount due, and display a reminder before the phone locks. Consumers can consult the app at any time to see the most convenient ways to make a payment.



No Credit? No Problem

Start using new smartphone today

The credit scoring problem

Underserved customers miss out and pay more

According to the World Bank, an estimated 1.7 billion adults do not have a basic transaction account. Why does this matter? Well, think of life without credit. It means cash for every transaction. This limits what you can pay for, where you can transact and what you can afford.

And where credit is available, loans are often expensive with late fees that exacerbate the high cost of repayment. Clearly, this penalizes the poorest customers.

The problem in many countries is the lack of a system to generate credit files. So even when unbanked people do borrow money, their files are usually invisible to future lenders. To address this, experts argue for the adoption of standard data formats. Such solutions are laudable, but they will take time.

Far better to develop a simple system in which established entities can extend credit in just a few minutes – and then use the audited trail of payments to finance future loans.

PayJoy: the key numbers



Up to three times more customer approvals

The PayJoy system helps partners to approve around 90 per cent of applications. This is 3x more than legacy scoring models in market tests.



Repayment defaults down by 50 per cent

In Mexico, defaulting customers went from 13 per cent for existing smartphone financing to seven per cent.



A Net Promoter Score of 80

In Mexico, PayJoy earned a Net Promoter Score of 80. By way of comparison, Mexican financial services companies average an NPS of 46, while telcos average 37.



Average handset selling price up a third

In Mexico, the recommended retail price (RRP) of the PayJoy enabled devices was 33 per cent higher than the average.



Store revenue up by 250 per cent

Some partners report average monthly store revenues up by as much as 2.5x. In one example, a retail group that previously made 60 to 70 per cent of revenue from accessories started to make 60 to 70 per cent of revenue from high value smartphones. Additionally, since customers come in weekly to make payments, it also sold more accessories.



If a payment is missed, up to 98 per cent of customers return to make the subsequent payment

PayJoy partners report between 80-98 per cent of subscribers who have missed a payment(s) return to make a subsequent fresh payment. What explains the high number? PayJoy's model recognizes the daily realities of living in a cash-based society. It does not penalize nor charge late fees for missed cash payments. All sides benefit. Distributors accumulate returning and loyal customers, while customers receive a pay-as-you-go smartphone on finance, without the worry of penalty or late fees.

Cheap handsets and smart feature phones

Do underserved customers deserve better?

Around 2015, the industry started to explore the potential for budget smartphones. Google unveiled the stripped-down Android One. OEMs launched devices that cost as little as \$20. Handset makers also experimented with a new concept: the smart feature phone.

Some of these experiments have been successful. Take the \$20 JioPhone, launched in July 2017 by the Indian MNO Reliance Jio. According to Counterpoint Research, the smart feature phone has delivered more than 50 million new subscribers for the carrier.

But there's a question to be asked: why should aspirational customers be content with smart feature phones? Budget handsets typically offer minimal processing power and small memory capacity. Many lack features such as Bluetooth, NFC and 4G.

A fully featured smartphone can boost incomes and change lives. Hard working customers deserve better. And with a financing model that does not punish missed payments, individuals have the option to divert their cash when needed for education, health and emergencies.

How PayJoy changes lives: Pepe's story

For underbanked consumers, PayJoy offers the chance to acquire a high functioning smartphone, and to build a credit history for the first time.

The benefits extend beyond the term of the initial loan. After a completed purchase (for which the smartphone is paid in full), the customer is now able to finance another smartphone with the advantage of more favorable payment terms. PayJoy's own figures show that the multiple can fall as much as 20 per cent for subsequent loans.

There are many real-life stories that reveal the life-changing power of the PayJoy model. Here's the experience of Pepe², 29 from Mexico City.

Why did you need a smartphone?

I keep everything on my phone. My birth certificate, university diploma, tax ID and personal security number. Also my resume, which is important when you are searching for jobs. I had

an iPhone 5 before, but the screen was broken and I couldn't afford to replace it.

Did you try to get credit before PayJoy?

I went to retailers and banks. But I was declined because I have no credit history. Another option was the pawn shop, but they sell phones with no warranty, which is a risk.

How did you hear about PayJoy?

I saw posters saying: "You can buy a new cell phone without a credit card – only a Facebook account needed." I got a new Samsung Galaxy Note 9 in five minutes! This never happens in Mexico. It was weird.

What was your payment plan?

I put down 1500 pesos and paid 365 pesos a week for 12 months.

Did you ever miss a payment?

No! But I couldn't believe there were no late fees if I did. I was very fearful of losing my phone functionality. It's my lifeline.

How did your PayJoy history help you get a credit card?

I went to the bank. They told me I was pre-approved for a credit card. I said I didn't have a credit history. But they checked with PayJoy, and in a couple of minutes they confirmed the decision because I had never missed a payment.

How has having a bank card changed your life?

I can pay for vacations, rent a car and pay my electricity and internet bills. I have also moved to a post-paid cellular plan, which is cheaper.

Have you used your PayJoy history to access more borrowing?

Yes. I used it to get a loan for 60,000 pesos to buy a new motorcycle.

How do you rate your PayJoy experience?

I love PayJoy. One smartphone has led to so many opportunities for me. Now I feel like I'm a real part of society.

² Pepe is a PayJoy employee. Anecdotal evidence suggests his story is common among PayJoy's customer base. We thank Pepe for sharing his real-life story to illustrate PayJoy's transformative power.

PayJoy: how it all began



When Doug Ricket, PayJoy's founder and CEO, served in the Peace Corps in West Africa in the early 2000s, he saw the incredible positive impact of mobile technology on under-served populations. However, affordability was a challenge. Later, while building distribution for small-scale solar systems in Africa, he again encountered this problem. This time he came up with a novel solution: pay-as-you-go technology to allow installment payment plans.

Ricket and his team developed software that secured solar systems, remotely disabling and re-enabling them in response to customer payments. This ability to pay in small daily, weekly, or monthly amounts changed a \$200 system into a \$1/day system. It made small-scale solar affordable – and led to access for hundreds of millions of people worldwide.

In 2015 Ricket founded PayJoy to apply the same installment payment technology to smartphones. His goal? To enable 'the next billion' of unbanked and underbanked consumers to afford smartphones and to join the modern financial system for the first time.

A quick PayJoy Q&A

Where is PayJoy live?

Mexico, Guatemala, Honduras, Panama, Ecuador, Senegal, Nigeria, Cote D'Ivoire, Kenya, Zambia, Indonesia & Malaysia. Coming soon to Brazil, South Africa and elsewhere.

How many customers have bought a smartphone with PayJoy?

Hundreds of thousands.

What's the average selling price of a PayJoy phone?

\$180 to \$225

What is the average deposit required?

Around 25 to 30 per cent of the smartphone RRP.

What are the required identity documents?

Usually a national ID and/or evidence of a social media account.

How fast can partners on-board new customers?

In most cases, just a few minutes.

Does PayJoy work with any phone?

Suppliers can activate PayJoy on compatible smartphones. OEMs can integrate PayJoy Access, a headless APK that is dormant unless/until the PayJoy Lock is downloaded.

What happens if a customer pays in a region with weak data coverage?

PayJoy offers an Unlock Offline feature, which sends a code by phone call, SMS or USSD. The user can enter this to register a payment when offline.

How does PayJoy counter fraud and hacking attempts?

PayJoy has made its app virtually unbreakable. It works closely with local pawn shops to counter attempts by customers to sell Lock-enabled devices. However, the best protection against fraud is the PayJoy model itself. The need for a deposit deters many fraudsters, while the locking mechanism prevents re-sale attempts..

Conclusion

The mobile industry is under the illusion that every person who can afford a fully featured smartphone already has one. There is no more growth.

This is not true. In fact, as many as 1.7 billion hard working people have the means to buy a smartphone on finance. They just don't have the credit history they need to get a loan.

PayJoy's simple Lock app can unleash this army of new smartphone customers.

What's more, it can make them creditworthy for the first time. They can use this new power to take out further loans by using their PayJoy-enabled smartphone as collateral.

If you would like to know more about becoming a PayJoy partner, please visit www.payjoy.com.



PayJoy Inc. is a Fintech company founded in 2015 in San Francisco focused on delivering access to consumer finance and smartphone technology to people in emerging markets worldwide.

The company was founded by Doug Ricket, Mark Heynen and Gib Lopez and now has offices in seven countries with its global headquarters in the SoMa district of San Francisco, California

Find out more www.payjoy.com



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