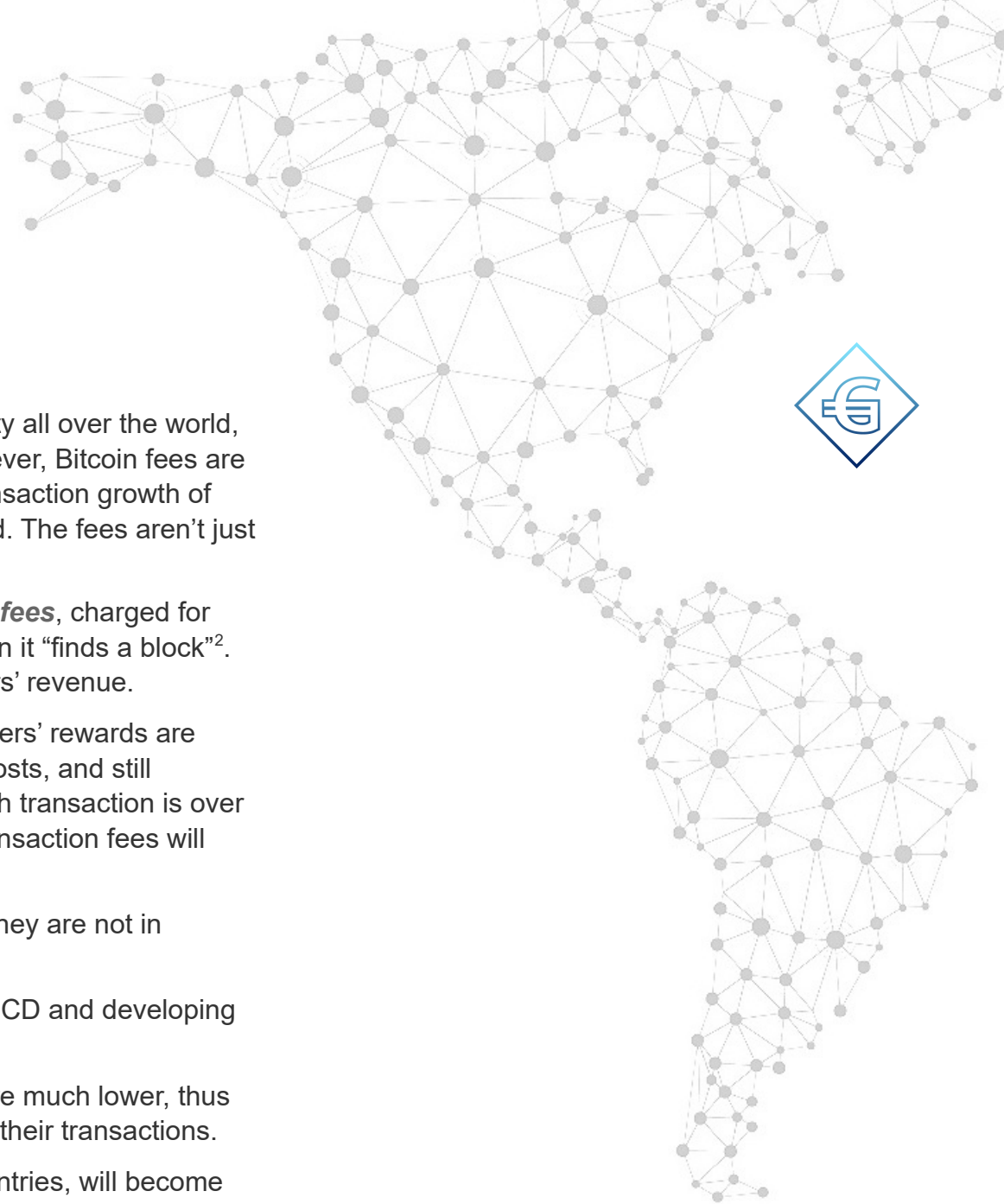




How Can Gorbyte Make a Difference in the World?



1 The Problems

Bitcoin is an alternative currency that is gaining popularity all over the world, especially for transferring money person to person. However, Bitcoin fees are rising. Over the last 14 months, factoring in Bitcoin's transaction growth of nearly three times, fees have increased by nearly 12-fold. The fees aren't just rising, they're rising exponentially¹.

Bitcoin miners' revenues currently consist in transaction **fees**, charged for most transactions, and **rewards**, gained by a miner when it "finds a block"². Transaction fees currently represent about 12% of miners' revenue.

Transaction fees are expected to rise even faster as miners' rewards are going to disappear. Considering all the crypto-network costs, and still excluding internet access costs, the average cost of each transaction is over five US dollars³. Thus, as miners' rewards disappear, transaction fees will tend to increase at least by that amount.

While such fees may be affordable in OECD countries, they are not in developing countries, because of two factors:

1. Income and wages are very different between OECD and developing countries⁴, and
2. The average payments in developing countries are much lower, thus fees in average represent a higher percentage of their transactions.

Bitcoin fees, already hardly affordable in developing countries, will become even less affordable in the future.

A third factor affects people equally in all countries: Lower income people may not need to perform as many financial transactions, but when they do, the fees affect them more, proportionally to their income.

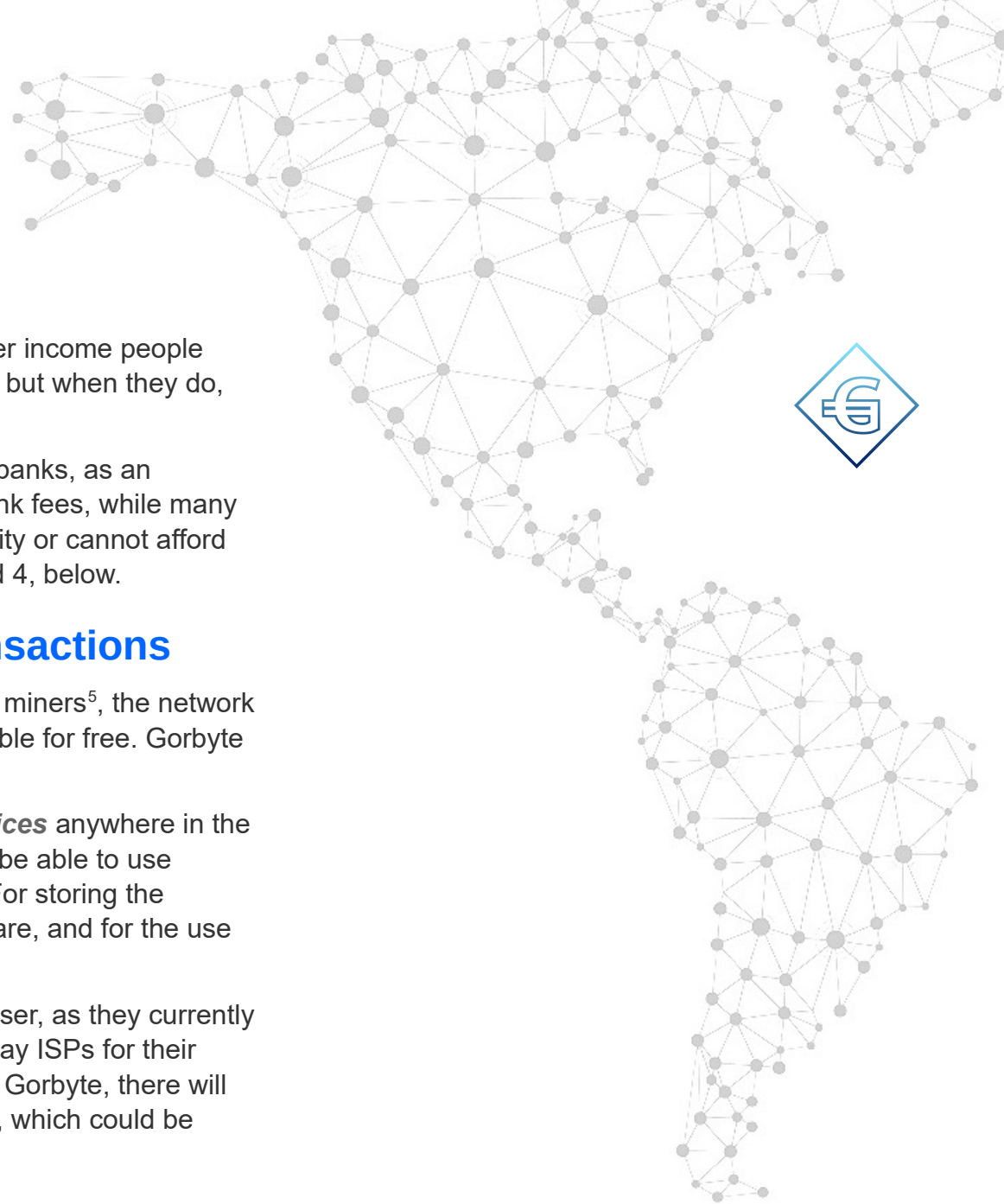
Finally, people in OECD countries have more access to banks, as an alternative for their transactions, and most can afford bank fees, while many people around the world do not have the same opportunity or cannot afford bank fees. They are the “unbanked”. See Sections 3 and 4, below.

2 The Gorbyte Solution: Free Transactions

Because Gorbyte’s consensus process does not require miners⁵, the network costs drop to zero. Gorbyte client software is downloadable for free. Gorbyte will be open source.

Thus Gorbyte can offer **free financial transaction services** anywhere in the world. Users with a device connected to the internet will be able to use Gorbyte services, in exchange for sharing their device: For storing the Gorbyte blockchain, for running the Gorbyte client software, and for the use of related resources.

The communication access costs are borne directly by user, as they currently are with other crypto-networks and applications: Users pay ISPs for their subscription to the internet and/or cell subscription. With Gorbyte, there will be a small verification service fee for their (virtual) PUD⁶, which could be included by ISPs as part of their invoices.





Such communication access costs are different in various parts of the world, and they tend to be as affordable as they can be, considering the communication network availability and free market conditions in each country.

3 Who the Unbanked Are

*“Globally, 2 billion adults remain unbanked. South Asia and East Asia and the Pacific together account for more than half the world’s unbanked adults. South Asia, home to about 625 million adults without an account, has about 31 percent of the global total; East Asia and the Pacific, with 490 million unbanked adults, accounts for about 24 percent”*⁷
(See diagrams 1 and 2).

At the same time, the availability of mobile devices and access to direct payment services is relatively high (see section 4). Continuing, from the same source:

“India is home to 21 percent of the world’s unbanked adults and about two-thirds of South Asia’s.

Women make up 55 percent of the world’s unbanked adults: 1.1 billion. And adults in the poorest 40 percent of households within economies make up half: 1 billion.

These shares vary little across developing regions.”

“...almost 40 percent of adults around the world remain unbanked.”

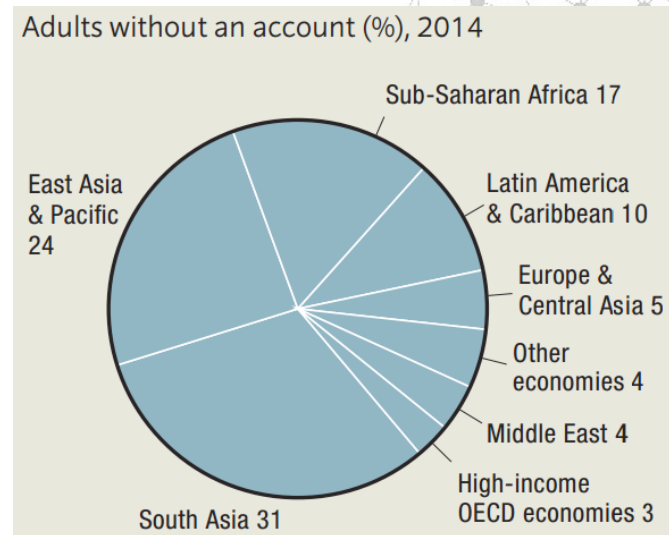
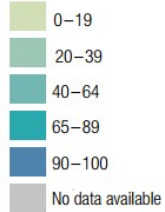


Diagram 1: The world’s unbanked adults by region

The reasons may be various: distance from cities, high costs of traditional banking services, less economic activity in the region, less trust in institutions and government, etc.



MAP 1.1
**Account penetration
around the world**
Adults with an account (%), 2014



Source: Global Findex database.
IBRD 41559 | APRIL 2015

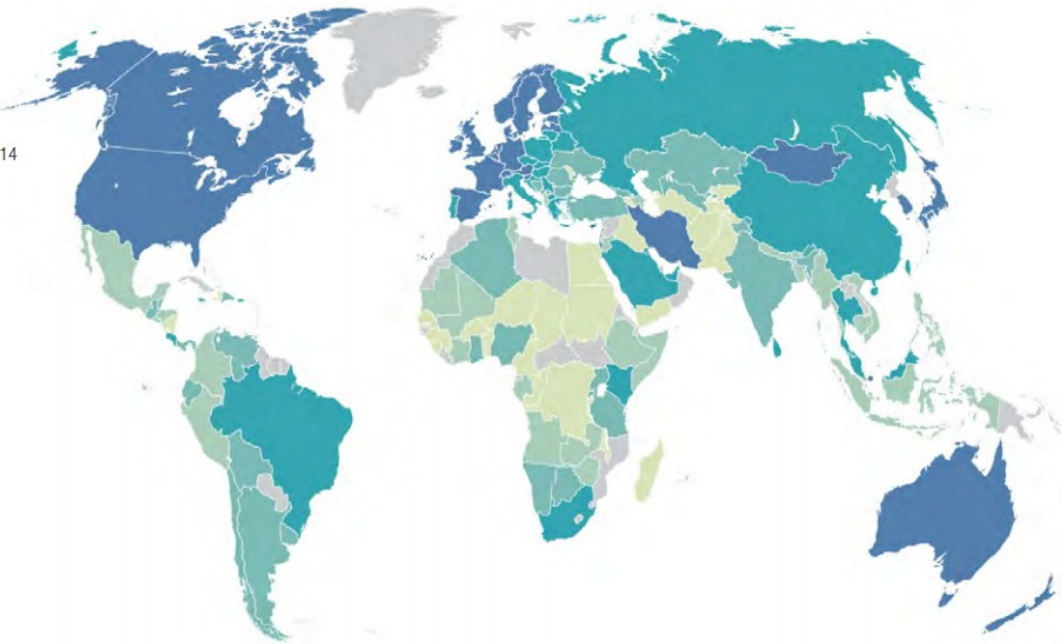


Diagram 2: Where are the unbanked?



4 How Payments Are Made

The people of these countries make payments for a variety of reasons, but without bank accounts their options are limited. For example, the data available from the World Bank related to agricultural payments shows that most payments are made in cash:

“About one in four adults in developing economies reported receiving payments for the sale of their family’s agricultural products in the past 12 months (See diagram 3). Across all developing regions, these payments are received almost exclusively in cash.”

While the cost of face-to-face cash transactions is minimal, it implies some risks. In addition, the cost of storing the cash in a bank and the cost of transferring cash through a bank may still be expensive.

However, digital payments are becoming more popular in Sub-Saharan Africa:

“There, 5 percent of adults—or 13 percent of recipients—reported receiving these payments directly into an account, mostly into a mobile money account.”

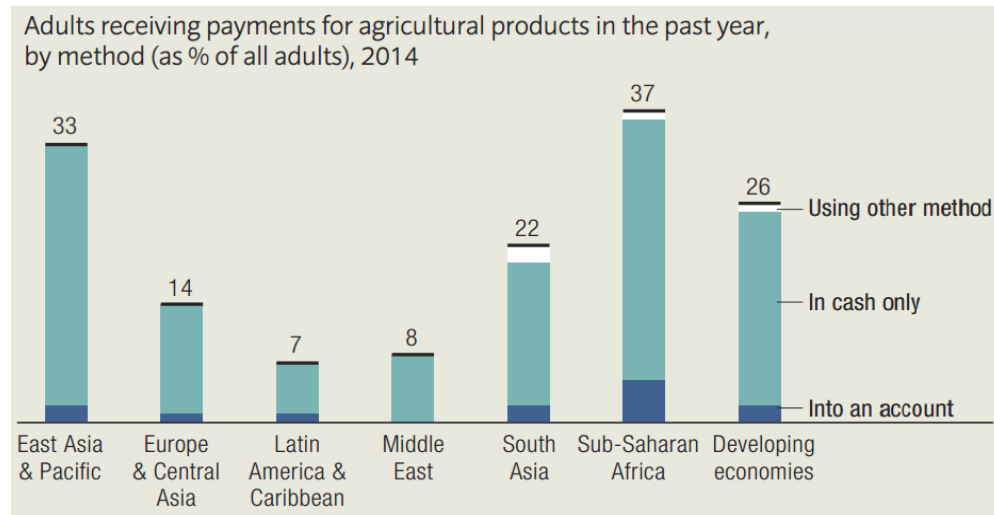


Diagram 3: How agricultural payments are made



Digital payments for the sale of agricultural products have particularly taken off in Kenya, Tanzania, and Uganda—three of the six countries where more than half of adults reported receiving agricultural payments.

In Kenya 20 percent of adults—or 37 percent of recipients—receive the payments into an account, again mostly into a mobile money account.

In the other two countries this is the case for about 10 percent of adults—or for 24 percent of recipients in Tanzania and 15 percent in Uganda.”

The World Bank document shows similar charts for utility payments, school fee payments, wage payments and other forms of payment.

5 Conclusion

The use of mobile, digital technology has spread across the world, almost independently from people’s income. However, the use of financial transaction services is still expensive for many.

The Gorbyte business model of **free financial transactions** for all, will make a remarkable difference to many millions of people around the world!



Notes

- ¹ See: <https://medium.com/@spair/the-bitcoin-fee-market-4df1857d12b7#.ps9fqv1z6>
- ² “Finding a block” is a competitive and difficult process, used to select and reward one miner that will be responsible to assemble and distribute a block of transactions to all of the network nodes.
- ³ These are variable, currently between approximately four and twelve USD.
See: <https://blockchain.info/charts/cost-per-transaction>
- ⁴ See, for example: https://euro.indiana.edu/doc/archive/past-events/wcms_324678.pdf
- ⁵ Bitcoin, Ethereum and other unpermissioned networks require the use of miners. Several token coin applications, for example those created through smart contracts on Ethereum, have the goal of facilitating payments worldwide. However, they are still subject to their support network’s costs.
- ⁶ See: “The PUD device” document at <http://www.Gorbyte.com>
- ⁷ This, and the following quotes in italics, are from the World Bank document:
<http://documents.worldbank.org/curated/en/187761468179367706/pdf/WPS7255.pdf>