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WHAT GOOGLE TELLS US ABOUT BITCOIN USERS



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What's Next In Payments®

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Knowing just who uses bitcoin is a bit tricky given the largely anonymous nature of the digital currency.

Not impossible, of course — as everyone learned from the Silk Road case that landed one man in prison for life, thanks to his so called “anonymous” connection to the online illegal drug bazaar. But on the surface — without the technology on hand to crack the bitcoin trail — tracking down who is using bitcoin and why they are using it isn’t an easy task.

That didn’t stop Dr. Aaron Yelowitz and Matthew Wilson, researchers at the University of Kentucky, from taking it upon themselves to dig into a topic that is garnering a lot of attention from the FinTech community: So, what is the profile of the bitcoin user?

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And you’ll never guess what research tool they used to help them answer their question: Google.

Yelowitz, an associate professor at University of Kentucky’s Department of Economics, published a paper with Wilson titled “Characteristics of Bitcoin Users: An Analysis of Google Search Data.” Through their latest research, they examined Google Trends data to examine what factors play a role in having an interest in bitcoin. This meant breaking down four possible user profiles, profiles that were assembled on the basis of “anecdotal evidence regarding bitcoin users.” Those categories included: computer programming enthusiasts, speculative investors, libertarians and criminals.

So what did the search results reveal?

“Computer programming and illegal activity search terms are positively correlated with bitcoin interest, while libertarian and investment terms are not,” the researchers conclude in the paper.

OK, before you start jumping to conclusions, the report isn’t suggesting there’s more computer programmers and criminals using bitcoin. Instead, the research was able to define what it is about bitcoin — based on search terms — that people were most interested in. By breaking down what interests people have in bitcoin, the researchers were able to gain insight into what might make people take that next step and actually become a bitcoin user.

“What we know about who uses bitcoin and why they use it is not so clear. We get antidotes, we get stories, but bitcoin is also a new and rapidly evolving market. It was a far more immature market just a few years ago,” Yelowitz explained.

In Yelowitz’s research report, he points to the fact that “little is known about the characteristics of bitcoin users, even though thousands of businesses accept bitcoins as payment.” And with people having high search interests in terms like “free market,” and how to “make money” with bitcoin, there’s a lot at stake at just how much interest people have in the digital currency.

“[Bitcoin] has a loyal following. There aren’t that many people who are interested in bitcoin, but those who are, are very passionate about it. So those types of sorts of topics are quite interesting to study,” Yelowitz said. “The thing that really drew me in was basically the idea that I had an incisive way of using data in a sense to explore something people didn’t want to have explored — kind of peeling away the onion. So the idea that there were topics out there that we rely largely on stories, not on data, to shape perceptions on how the way the world works.”

Deciphering perception from reality is a key distinction in the bitcoin world — a world in which rumors, assumptions and miscalculations have big consequences. Understanding behavioral searches of bitcoin is the first step in having concrete data about the vastly misunderstood bitcoin realm.

“If we can get data, I can try and see whether the perceptions agree with reality,” Yelowitz said.

Mining For Bitcoin (Data)

The natural pushback to researching bitcoin was the initial: there isn’t data on bitcoin; the users don’t want it and the design of bitcoin makes the data much less comprehensive than a traditional payment method. But then the concept of using Google search trends came into play. That didn’t mean the research would pinpoint who uses bitcoin, but it could pinpoint what interests people about bitcoin, which is, of course, a critical step in understanding how the bitcoin community has evolved.

“We’re not looking at actual bitcoin use. We can only look at search interest, of course, because what we’re doing is using Google Trends to figure out which areas people are punching into their Google browser and searching on. Nonetheless, we then did a statistical analysis. We tried to see in areas where there were blips,” Yelowitz said.

Those “blips,” came when searchers looked for bitcoin related to computer programming topics and even bigger blips when it came to Silk Road. But because of the publicity the Silk Road case got once its founder, Ross Ulbricht (<http://www.pymnts.com/news/2015/silk-road-creator-appeals-life-sentence/#.VYNEAYHF914>), was arrested in the fall of 2013, the researchers cut off the data at that point for that particular subject since the search interest was off the charts. Still, as it relates to bitcoin, the research still found that computer programming searches and Silk Road played an important statistical relevance to bitcoin.

“We did statistical analysis and found that the ones for computer programming and criminal activity as proxied by Silk Road were statistically significant and positively related to bitcoin,” Yelowitz said.

But some categories surprised the economist. Like the finding that libertarian activity didn’t play as big of a role in searches as he thought it would. But that may have changed since the research ran primarily between 2011-2013 (published in 2014), particularly with politicians like Rand Paul (<http://www.pymnts.com/in-depth/2015/bitcoin-goes-presidential-and-buttercoin-goes-belly-up/#.VYNEv4HF915>) — the bitcoin-loving 2016 Republican presidential candidate — praising the digital currency.

While Paul’s home state of Kentucky wasn’t in the Top 10 most popular states for bitcoin searches, that hasn’t stopped him from using it on the campaign trail. As for the states that were highest in the search research, Utah came in on top, followed by Oregon, California, Washington, Nevada, New Hampshire and Vermont. What’s most notable is the fact that most of those are in Western U.S., with just two of the top states falling on the East Coast. That’s likely because of the influx of tech interest out West, particularly with the Silicon Valley tech boom.

“No one knows how many people use bitcoin in any particular region, but you can see where interest is,” Yelowitz said.

And seeing that interest can be used to predict behavior — behaviors such as why people would be using bitcoin and what they would be using it for, as well as in what particular region. And that’s an important factor in helping researchers like Yelowitz begin to break down the bitcoin behavior to

better understand what the possible motives and behavior of bitcoin users could be.

Bitcoin Tracker Week 78: The Good, The Bad - The Top 10 Bitcoin Stories Of The Week

Biden Lovers Who Love Bitcoin (June 15, 2015)

- U.S. Vice President Joe Biden has a loyal following, and that loyal following has taken a liking to bitcoin. Reports indicate that a group "Draft Biden 2016" that supports the VP is using BitPay to accept bitcoin donations. Draft Biden 2016 director Joseph Schweitzer told The Hill (<http://thehill.com/blogs/ballot-box/244822-draft-biden-2016-now-taking-bitcoins>): "This is in keeping with Vice President Biden's strong support of technology and innovation throughout his career."

Bitcoin Hits A Hot Streak (June 16, 2015)

- Bitcoin jumped by 7 percent in one day, which CNBC reported (<http://www.cnbc.com/id/102763842>) was its hottest streak in 18 months. This comes at the same time Greece faces more financial troubles, causing Prime Minister Alexis Tsipras to fight back against Greece's creditors. Greece has been looking to bitcoin as a possible financial alternative as it considers exiting the eurozone.

Bitcoin Mining Pool Will Soon Dry Up (June 16, 2015)

- The bitcoin mining servers (<https://www.cryptocoinsnews.com/bitcoin-mining-pool-btc-guild-close-june-30-2015-risk-loss-new-york-bitlicense-cited/>) BTC Guild will soon close up shop. The company announced that the servers will shut down June 30, but users can still view with accounts and request withdrawals until the end of September. BTC Guild had previously announced it would be closing, but this one seems that it will stick.

Bitreserve Launches Bitreserve Connect (June 16, 2015)

- Bitreserve (<https://bitreserve.org/en/blog/posts/bitreserve/announcing-bitreserve-connect-where-innovation-meets-money>) announced the launch of Bitreserve Connect, which houses its API, developer community and app directory. Bitreserve Connect, according to founder Halsey Minor, "makes it quick and easy for partners to integrate Bitreserve functionality into their financial services apps." He also noted that "these reimagined apps take advantage of the many benefits within our truly frictionless cloud money platform."

Silk Road Ex-Federal Investigator Pleads Guilty (June 17, 2015)

- Shaun Bridges (<http://www.sfgate.com/crime/article/Ex-Secret-Service-agent-to-plead-guilty-to-6336239.php>), a former Secret Service agent who was involved in the Silk Road investigation has plead guilty. The plea entered Wednesday (June 17) admits his role in the case, which has him confessing to money laundering and obstruction of justice charges. Bridges (<http://www.pymnts.com/news/2015/silk-road-investigators-charged-with-bitcoin-laundering/#.VYONzFxViko>) "abruptly resigned" in March when he became aware of the investigation against him.

Santander May Invest In Blockchain Tech (June 17, 2015)

- Santander might be looking into bitcoin and its blockchain technology. Mariano Belinky, head of Santander InnoVentures, said in an interview (<http://www.businessinsider.com/santander-has-20-25-use-cases-for-bitcoins-blockchain-technology-everyday-banking-2015-6>) that the bank has "internally identified 20 to 25 use cases where this technology can be applied." If Santander does invest in the technology, it would join the ranks of the traditional financial institutions looking to leverage its power.

Coinbase Rolls Out Instant Exchange (June 17, 2015)

- Coinbase introduced Instant Exchange, available to any consumer with a local currency wallet. Through Instant Exchange, users can send bitcoin and pay for it with it using local currency from the same page. "We're pleased to announce the launch of Instant Exchange, a feature that allows users to send or receive bitcoin payments while eliminating exposure to bitcoin exchange rate fluctuation," the company wrote in a blog post.

Bitcoin Hits The Movie Theaters (June 18, 2015)

- A new film "Dope" opens this week across the U.S. and bitcoin will be an accepted payment form to purchase tickets. The film, which shares a story of a high schooler who has an affinity for new technology also talks about bitcoins in the film. Will having bitcoin on the big screen help garner more interest for the digital currency?

The Case Of Bitcoin P2P Lending (June 18, 2015)

- Following a federal judge's ruling, a Kentucky man has been ordered to repay a loan he received via bitcoin from BTCJam, a P2P lending platform. The case stems back to 2013 when the loan fell into default, but the defendant has since been ordered to pay back more than \$67,000.

Case - The Bitcoin Hardware Wallet - Raises Cash (June 18, 2015)

- Case, a New York-based bitcoin hardware wallet provider, has raised \$1.5 million. The Case wallet will start shipping this summer after being available for pre-order in May. "Case is poised to provide trusted, decentralized and biometrically secure signing of those and similar transaction," said CEO Melanie Shapiro.

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