

Bitcoin and Venezuela's Unofficial Exchange Rate: Open Review

Jackie Johnson[†]

Reviewers: Reviewer A, Reviewer B

Abstract. The final version of the paper “Bitcoin and Venezuela’s Unofficial Exchange Rate” can be found in Ledger Vol. 4 (2019) 108-120, DOI 10.5915/LEDGER.2019.170. There were two reviewers involved in the review process, none of whom have requested to waive their anonymity at present, and are thus listed as A and B. After initial review by Reviewers A and B (1A), the decision was made to conditionally accept the submission, with revisions. The Author responded (1B) and submitted a revised manuscript, and the revisions were accepted, thus ending the peer review process. Authors’ responses, where included, are bulleted for clarity.

1A. Review (First Round)

Reviewer A

Does this paper represent a novel contribution to cryptocurrency or blockchain scholarship?:

Yes

If you answered "yes" to the previous question, in one sentence, describe in your own words the novel contribution made by this paper:

This paper documents a potential shortcoming in IMF inflation estimates, through an analysis of Bitcoin prices.

Is the research framed within its scholarly context and does the paper cite appropriate prior works?

Yes

Please assess the article's level of academic rigor.:

[†] J. Johnson (johnsonresearchperth@gmail.com) is principal researcher at Johnson Research, Perth.

Good (not excellent but a long way from poor)

Please assess the article's quality of presentation.:

Good (not excellent but a long way from poor)

How does the quality of this paper compare to other papers in this field?:

Top 50%

Please provide your free-form review for the author in this section.:

General comments:

The subject is topical. The analysis is rigorous. The conclusion is intuitive. This paper, along with Viglione's (2015) paper, demonstrate that Bitcoin price premiums are economically valid proxies for financial freedom at the national level. An interesting follow-up paper might be to repeat this analysis in different regions of a the same large country, e.g. China, Russia, or the USA.

Avoid using flowery words, like "utilize" when a simpler word like "use" will do.

Statements like this one are a bit purple: "Even from the start of 2014 it is **OBVIOUS** that official and unofficial exchange rates have **NOTHING** in common." (p.7, emphasis added) What is obvious to one, who has been steeped in a research project for some time, is often not at all obvious to someone coming to the subject for the first time. Throughout the paper, avoid using unnecessary adjectives and adverbs; e.g., "one can see..." vs "one **CLEARLY** can see..."

p.9: "Even as the government changes from a fixed exchange rate, its rate is **UNREALISTIC** as the unofficial rate climbs even higher." (emphasis added) → something like: "Following the abandonment of fixed exchange rates, the official and unofficial rates initially diverged..."

p.9: "Calculating an implied inflation rate, using changes in Bitcoin's unofficial exchange rate, paints a **GRIM** picture."

etc.

This reviewer must defer to the Editor with regard to the use of "they" as a singular pronoun. While it is the trendy thing to do in the Humanities, it detracts from the academic rigor of the prose. If the author is uncomfortable using the neutral "he," then perhaps use "one."

§3 Data

According to Table 1, the data frequency is daily, but it is not stated explicitly in the body text above Table 1.

With regard to the VEF and VES data, how do the data compare to those available at a more well-known site like xe.com? Although fxtop.com was registered in 1999, a detractor might be put off by its garish interface.

§3.1 Trading Bitcoins on LocalBitcoins

"Rather than buying and selling bitcoins through a Bitcoin exchange where a trader needs to wait until the market agrees with the price at which they are prepared to buy or sell, a trader on LocalBitcoins can select from a range of currencies, alternative prices and payment methods and trade when and at what price they choose."

This implies that LocalBitcoins enables a user to pick his price, which is not true. If it were, then sellers would choose very high prices and buyers simultaneously would choose very low prices, which would result in no trades. Whether using LocalBitcoins, a centralized exchange, or an OTC dealer, buyers seek out the lowest sell offers and sellers seek the highest buy offers. Differences in buy and sell offers on LocalBitcoins include differences in payment methods. Users might prefer LocalBitcoins, because of this flexibility; in particular, the ability to pay in cash or barter, outside of the banking system.

There also is the issue of trust, with regard to holding a balance of fiat or cryptocurrency on a centralized exchange.

Somewhere above §3.2 Determining Adjustments for Venezuelan Trading, the author should include a Methodology section that lays out a 'recipe' that is sufficiently detailed for a reader to be able to follow, in order to replicate the analysis. This information is in the paper; it should be more about rearranging the text than about drafting a new section ab ovo.

Specifically, explain with statistical tests the author ran (although, it is not necessary to divulge which specific software the author used).

Depending on the author's motivation for conducting this research, the following statement from §4 (p.7) is worthy of a longer discussion in the Conclusion:

"The IMF estimates (Table 6, column 5) of the unofficial exchange rate using the Consumer Price Index (CPI) are well short of the estimate using Bitcoin trading, with estimates made public only on a yearly basis."

Again, depending on the author's motivation, this even could become the primary focus of the paper, especially in light of the problems with PPP estimates mentioned in §3.2 (p.4).

Reviewer B

Content of paper seems interesting so I'd recommend accepting with relatively minor revisions.

In addition to some typos throughout (e.g., “The is evident in Table 4...”), there are a lot of (to me) awkwardly phrased sentences. Below are just a few examples:

“Understanding the importance of adjusting for a premium paid on LocalBitcoins P2P trading allows the calculation of Venezuela’s unofficial exchange rate from 2014 to 2018.”

(Is it really “understanding the importance” that allows the calculation?)

“In five years, the unofficial exchange rate has gone from 85-89 bolivars to the US dollar to over 80 million. Impossible to imagine unless you are there.”

(That second sentence is obviously a fragment and strikes me as a bit informal for an academic paper.)

“The results are the same regardless of whether a premium of 3% or 7% is used, indicating that the bolivar as a currency is virtually worthless.”

(Saying that the currency is “virtually worthless” seems a little off to me. I guess I’d expect something more like: “indicating that the bolivar in recent years has suffered, and continues to suffer, catastrophic levels of hyperinflation” –or something.)

SUBSTANTIVE REACTION

I wish there was a little more explanation of the nature of official vs. unofficial dollar exchange rates. Is it actually illegal to exchange cash USD for bolivars at something other than the government’s officially-set exchange rate? Is that biggest problem for coming up with an estimate for the unofficial USD exchange rate? Or is it that there are literally too few physical cash dollars in the country?

So they looked at premium price paid for bitcoins through LocalBitcoins (over and above exchange price) for three other countries: UK, Argentina, and Brazil and came up with a range of between 3-7%. And then they seemed to just assume that the premium would be similar in Venezuela. But it seems to me that they should at least acknowledge possible issue here. Might the premium in a country whose currency is experiencing hyperinflation not be expected to be significantly higher?

1B. Author’s Responses

Reviewer A

Does this paper represent a novel contribution to cryptocurrency or blockchain scholarship?:

Yes

If you answered "yes" to the previous question, in one sentence, describe in your own words

the novel contribution made by this paper:

This paper documents a potential shortcoming in IMF inflation estimates, through an analysis of Bitcoin prices.

Is the research framed within its scholarly context and does the paper cite appropriate prior works?

Yes

Please assess the article's level of academic rigor.:

Good (not excellent but a long way from poor)

Please assess the article's quality of presentation.:

Good (not excellent but a long way from poor)

How does the quality of this paper compare to other papers in this field?:

Top 50%

Please provide your free-form review for the author in this section.:

General comments:

The subject is topical. The analysis is rigorous. The conclusion is intuitive. This paper, along with Viglione's (2015) paper, demonstrate that Bitcoin price premiums are economically valid proxies for financial freedom at the national level. An interesting follow-up paper might be to repeat this analysis in different regions of a the same large country, e.g. China, Russia, or the USA.

- An excellent idea but data would be a problem. I am however following Brazil where inflation is starting to be a problem.

Avoid using flowery words, like "utilize" when a simpler word like "use" will do.

- Utilizing in the abstract has been changed to using.

Statements like this one are a bit purple: "Even from the start of 2014 it is OBVIOUS that official and unofficial exchange rates have NOTHING in common." (p.7, emphasis added) What is obvious to one, who has been steeped in a research project for some time, is often not at all obvious to someone coming to the subject for the first time. Throughout the paper, avoid using unnecessary adjectives and adverbs; e.g., "one can see..." vs "one CLEARLY can see..."

- Even from the start of 2014 it is obvious that official and unofficial exchange rates have nothing in common.

- Changed to:
- Even from the start of 2014 official and unofficial exchange rates diverge.

p.9: "Even as the government changes from a fixed exchange rate, its rate is UNREALISTIC as the unofficial rate climbs even higher." (emphasis added) → something like: "Following the abandonment of fixed exchange rates, the official and unofficial rates initially diverged..."

- Even as the government changes from a fixed exchange rate, its rate is unrealistic as the unofficial rate climbs even higher.
- Changed to:
- Even as the government abandons the fixed exchange rate, the official and unofficial exchange rates continue to diverge.

p.9: "Calculating an implied inflation rate, using changes in Bitcoin's unofficial exchange rate, paints a GRIM picture."

- Calculating an implied inflation rate, using changes in Bitcoin's unofficial exchange rate, paints a grim picture.
- Changed to:
- Calculating an implied inflation rate, using changes in Bitcoin's unofficial exchange rate indicates serious and increasing economic mismanagement.

etc.

This reviewer must defer to the Editor with regard to the use of "they" as a singular pronoun. While it is the trendy thing to do in the Humanities, it detracts from the academic rigor of the prose. If the author is uncomfortable using the neutral "he," then perhaps use "one."

- I could only find one instance where 'they' was used in the singular and I have changed the wording so that 'they' refers to more than one person

§3 Data

According to Table 1, the data frequency is daily, but it is not stated explicitly in the body text above Table 1.

- 'Daily' has been added to the Table title and the paragraph before the Table.

With regard to the VEF and VES data, how do the data compare to those available at a more well-known site like xe.com? Although fxtop.com was registered in 1999, a detractor might be put off by its garish interface.

- I did some spot checks through a range of date in 2019 and the exchange rates are very close.
- Eg May 1, 2019 – fxtop = 5189.88 VES / US\$1; xe.com 5189.21 VES / US\$1.

- fxtop also provides easy access to historical exchange rate data.

§3.1 Trading Bitcoins on LocalBitcoins

"Rather than buying and selling bitcoins through a Bitcoin exchange where a trader needs to wait until the market agrees with the price at which they are prepared to buy or sell, a trader on LocalBitcoins can select from a range of currencies, alternative prices and payment methods and trade when and at what price they choose."

- Changed to:
- Rather than buying and selling bitcoins through a Bitcoin exchange where traders need to wait until the market agrees with the price at which they are prepared to buy or sell, traders on LocalBitcoins can select from a range of currencies, alternative prices and payment methods but are limited to what is on offer.

This implies that LocalBitcoins enables a user to pick his price, which is not true. If it were, then sellers would choose very high prices and buyers simultaneously would choose very low prices, which would result in no trades. Whether using LocalBitcoins, a centralized exchange, or an OTC dealer, buyers seek out the lowest sell offers and sellers seek the highest buy offers. Differences in buy and sell offers on LocalBitcoins include differences in payment methods. Users might prefer LocalBitcoins, because of this flexibility; in particular, the ability to pay in cash or barter, outside of the banking system.

There also is the issue of trust, with regard to holding a balance of fiat or cryptocurrency on a centralized exchange.

Somewhere above §3.2 Determining Adjustments for Venezuelan Trading, the author should include a Methodology section that lays out a 'recipe' that is sufficiently detailed for a reader to be able to follow, in order to replicate the analysis. This information is in the paper; it should be more about rearranging the text than about drafting a new section ab ovo.

- Section 3 has been split into two and the following sections renumbered:
 - Section 3: Data
 - Section 4: The Method for Determining Adjustments for Venezuelan Trading

Specifically, explain with statistical tests the author ran (although, it is not necessary to divulge which specific software the author used).

- There were no specific statistical tests. All the results were calculated using equations 1 and 2. The results were so dramatic, that visual inspection demonstrated the increase in exchange rates and inflation numbers.

Depending on the author's motivation for conducting this research, the following statement from §4 (p.7) is worthy of a longer discussion in the Conclusion:

"The IMF estimates (Table 6, column 5) of the unofficial exchange rate using the

Consumer Price Index (CPI) are well short of the estimate using Bitcoin trading, with estimates made public only on a yearly basis."

- Endnote 4 added:
 - The calculation of the CPI, which enables the estimation of inflation is now more complicated with the inclusion of internet purchases being made in both the domestic and international markets. This adds to the complexity of maintaining a fixed basket of goods, particularly when transaction costs, such as credit card fees and postage, are now factored into the final purchase price. In addition, for Venezuela, where goods are in short supply, finding an appropriate substitute is difficult. Plus, many goods are now being sold for US dollars not bolivars. All these problems add to the delay in producing a current CPI and inflation rate. See "Consumer price Index (CPI) Manual, Chapter 11 Some Special cases", March 27, 2018. <<https://www.imf.org/en/chapter-11-some-special-cases.pdf>>

Again, depending on the author's motivation, this even could become the primary focus of the paper, especially in light of the problems with PPP estimates mentioned in §3.2 (p.4).

- Thank you for the suggestion but I will leave the focus as it stands.

Reviewer B

Content of paper seems interesting so I'd recommend accepting with relatively minor revisions.

In addition to some typos throughout (e.g., "The is evident in Table 4..."), there are a lot of (to me) awkwardly phrased sentences. Below are just a few examples:

- Six typos found and fixed. A few sentences split into two.

"Understanding the importance of adjusting for a premium paid on LocalBitcoins P2P trading allows the calculation of Venezuela's unofficial exchange rate from 2014 to 2018."

(Is it really "understanding the importance" that allows the calculation?)

- Changed to :
- It is important to adjust for an expected premium when using LocalBitcoins P2P trading when calculating Venezuela's unofficial exchange rate from 2014 to 2018.

"In five years, the unofficial exchange rate has gone from 85-89 bolivars to the US dollar to over 80 million. Impossible to imagine unless you are there."

(That second sentence is obviously a fragment and strikes me as a bit informal for an academic paper.)

- “Impossible to imagine unless you are there” has been removed.

“The results are the same regardless of whether a premium of 3% or 7% is used, indicating that the bolivar as a currency is virtually worthless.”

(Saying that the currency is “virtually worthless” seems a little off to me. I guess I’d expect something more like: “indicating that the bolivar in recent years has suffered, and continues to suffer, catastrophic levels of hyperinflation” –or something.)

- Changed to:
- “The results are the same regardless of whether a premium of 3% or 7% is used, indicating that the declining value of the bolivar continues to reflect the level of economic mismanagement, leading to a catastrophic level of hyperinflation.”

SUBSTANTIVE REACTION

I wish there was a little more explanation of the nature of official vs. unofficial dollar exchange rates. Is it actually illegal to exchange cash USD for bolivars at something other than the government’s officially-set exchange rate? Is that biggest problem for coming up with an estimate for the unofficial USD exchange rate? Or is it that there are literally too few physical cash dollars in the country?

- Endnote 5 added:
- During the period of this study there were foreign currency controls on local banks. These were put in place in 2003 with the government controlling the buying and selling of foreign currency. The exchange rate system is complex with the exchange rate depending on what is being imported and who is requesting the transaction. Limited dollars are available for purchase. These controls were not lifted until 7 May 2019. See comments in Zerpa, F. Vasquez, A. “Venezuela Lifts Controls on Banks Trading Foreign Currency”, 7 May 2019. <<https://www.bloomberg.com/news/articles/2019-05-07/venezuela-liftscontrols-on-banks-trading-foreign-currency>> and Disilvesto, E. Howden, D. “Venezuela's Bizarre System of Exchange Rates”. 1 July 2016. <<https://mises.org/library/venezuelas-bizarre-systemexchange-rates>>.

So they looked at premium price paid for bitcoins through LocalBitcoins (over and above exchange price) for three other countries: UK, Argentina, and Brazil and came up with a range of between 3-7%. And then they seemed to just assume that the premium would be similar in Venezuela. But it seems to me that they should at least acknowledge possible issue here. Might the premium in a country whose currency is experiencing hyperinflation not be expected to be significantly higher?

- Endnote 3 added
- Holub and Johnson (2018) find that with LocalBitcoins trading, the premium paid reflects the risk of the payment being negated. In Venezuela the risk is significantly

reduced as almost 100% of payments are through a specified bank. If the parties concerned use the same bank, not only does this reduce the risk but allows for the fast transfer of funds, in which case the risk would be small. As trading in bolivars has increased substantially, there is no shortage of supply or demand and therefore the incentive to trade is unnecessary. Therefore the 3%-7% should be enough to capture inflation.



Articles in this journal are licensed under a Creative Commons Attribution 4.0 License.



Ledger is published by the University Library System of the University of Pittsburgh as part of its D-Scribe Digital Publishing Program and is cosponsored by the University of Pittsburgh Press.