

BITCOIN TRADING IN AUSTRALIAN AND CANADIAN DOLLARS, THE POUND AND EURO: PRE- AND POST-COVID-19

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Abstract. Much of the research relating to the impact on Bitcoin, of the COVID-19 pandemic focuses on the United States (US) market using Bitcoin prices in US dollars, but this is a market not open to a large proportion of the world's population who must trade Bitcoin in their local currency. The aim here is to compare Bitcoin trading behaviour pre- and post-COVID-19 in four currencies, the Australian dollar, the Canadian dollar, the UK pound and the European euro, to see if there is any consistency across currencies. The Bitcoin price may be universal but Bitcoin trading in local currencies can reflect local conditions. What becomes obvious is that when comparing across currencies, there is no consistent pattern. No two currencies are the same. The pre-COVID-19 period dominates in the Australian dollar market. The UK pound is similar except for transactions per day which is higher post-COVID-19. In the Canadian dollar and euro markets neither period dominates with each currency finding 'not significantly different' for a number of metrics. Surprisingly, there is not even any consensus with regard to the Bitcoin price which decreases in the Australian dollar and the UK pound markets in the post-COVID-19 period while this period sees an increase in the Bitcoin price in the Canadian dollar and euro markets. Consequently, observing Bitcoin trading behaviour in one currency does not indicate patterns of trade in another currency. This is particularly evident when comparing Bitcoin trading across countries with very different economic conditions, during a period of worldwide economic uncertainty as the COVID-19 pandemic continues to take a toll on local economies.

Keywords: Bitcoin, Australia, Canada, U.K., Europe, Dollars, Pounds, Euros

JEL: G01, G11, G14, G15

1. Introduction

In just 12 years, an idea proposed by Satoshi Nakamoto (2009) for Bitcoin, a peer-to-peer payment system outside of government control, with no need for conventional financial institutions has morphed into a cryptocurrency market with an estimated 101 million crypto users globally, holding 191 million accounts.¹ It has led to the development of thousands of cryptocurrencies with around 5,000 actively traded. Bitcoin was the first and still is the leading cryptocurrency in terms of market capitalisation, which is estimated at approximately US\$211 billion.² It is traded peer-to-peer around the world in 248 countries³ and on cryptocurrency exchanges in all the major currencies. Figure 1 shows its bumpy ride since it reached its peak of US\$19,300 in December 2017, after starting life in 2009 at just a few cents.



Figure 1: Bitcoin Closing Prices on the Kraken Exchange+, 7/1/2014 – 30/9/2020, US Dollars
Source: Kraken's daily closing Bitcoin price (bitcoincharts.com).

Research relating to the impact on Bitcoin, of the COVID-19 pandemic, concentrates on the correlation of the Bitcoin price, as given by the United States (US) dollar, with US stocks and the US S&P 500 index. Both Grobys (2020) and Conlon and McGee (2020) find a strong correlation in the early months of 2020. This relationship negates the use of Bitcoin as a safe haven at times of economic uncertainty. Many of the early studies of Bitcoin behaviour as COVID-19 develops rely on US dollar transactions and even though Conlon, Corbet and McGee (2020) test Bitcoin, Ethereum and Tether as safe havens during COVID-19 they still use US dollar trade prices in their analysis.

¹ Section 4 of the 3rd Global Cryptoasset Benchmarking Study, September 2020. Judge Business School, University of Cambridge.

² From bitcoincharts.com on 20/10/2020.

³ From localbitcoins.com that lists 248 countries in which trading takes place in date 10/10/2020.

Johnson (2020a) widens the tests of Bitcoin's relationship with stock indices by including five currencies, the US dollar, the UK pound, the European euro, the Japanese yen and the Australian dollar, and their respective stock indices. She finds the highest correlation is with the S&P 500 when bitcoin trading is restated in US dollars. Relationships are not as strong when trading in local currencies and assessed against local stock indices.

The aim here is to compare Bitcoin trading behaviour pre- and post- COVID-19 in four currencies, excluding the US dollar which is covered in Johnson (2020b), to see if there is any consistency across currencies or whether trading behaviour is more a reflection of each country's economic conditions. The Bitcoin price may be universal but Bitcoin trading in local currencies can reflect local conditions.

Section 2 covers both the data used in the analysis and the techniques used to compare pre- and post-COVID-19 behaviour. Section 3 is the analysis of each individual currency, highlighting any idiosyncrasies that are observed in each currency's trading behaviour. Section 4 brings the currencies together so a comparison can be made and Section 5 is the conclusion.

2. Data & Methodology

Although Bitcoin trading in US dollars represents approximately 73%⁴ of the Bitcoin market, a significant number of the world's population do not have access to US dollars or US dollar bank accounts, to be able to enter this market. Consequently, here the focus is on four currencies with active but small markets and their experience before and during COVID-19. Table 1 details the currencies, their market share and the Bitcoin Exchange from which transaction data is taken, to be used in this analysis. Data is limited to that publicly available on bitcoincharts.com.

⁴ Taken from Coinhills website 25/9/2020. <https://www.coinhills.com/market/currency/>.

<i>Country</i>	<i>Currency</i>	<i>Proportion of Bitcoin Trading¹</i>	<i>Bitcoin Exchange</i>	<i>Details⁵</i>
<i>Australia</i>	Australian dollar (A\$)	0.06%	BTC Markets www.btcmarkets.net	Australian company founded in 2013. It has around 270,000 Australian traders. Complies with all AUSTRAC AML/CFT requirements.
<i>Canada</i>	Canadian dollar (C\$)	0.06%	Kraken www.kraken.com/	Founded in 2011. Based in San Francisco, USA. Fourth largest exchange in the world.
<i>United Kingdom</i>	Pound (£)	0.85%	Coinfloor www.coinfloor.co.uk	Founded in 2012. Incorporated in England. Based in London.
<i>European Union</i>	Euro (€)	3.18%	CEX.IO www.cex.io	Founded in 2013 with over three million users. CEX.IO Limited received a Distributed Ledger Technology license from the Gibraltar Financial Services Commission. CEX.IO Corp. has obtained Money Transmitter Licenses in 27 US states. ⁶

Table 1: Currencies, Market Share and Bitcoin Exchanges

Two periods are used to gauge Bitcoin trading activity before and during COVID-19. May-November 2019 represents the pre-COVID-19 period and February-August 2020, a time when the world is in the grip of COVID-19, which is for convenience referred to here as post-COVID-19. December 2019 and January 2020 are omitted from the analysis as knowledge of the pandemic and the disruptions to come are not widely known or understood during this period.

For each currency, trading is restated in local time and basic metrics are calculated, both at the transaction and daily levels and the Kruskal-Wallis (KW) test is used to determine the significance or otherwise of any differences between the two periods. All the price data is kept in local currency so the economic impact of the virus is also reflected in the value of each local currency.

⁵ Details taken from each exchange's website.

⁶ CEX.IO LTD has applied for a Digital payment token service license with the Monetary Authority of Singapore and for a Crypto Custody license with the Federal Financial Supervisory Authority of Germany.

3. Analysis

Each currency is discussed separately and differences in the two periods are evaluated.

3.1. Bitcoin Trading in the Australian Dollar on BTC Markets

Basic transaction details, in Table 2:A indicate that Bitcoin trading in the Australian dollar declines in the post-COVID-19 period. However, the KW test statistic (all of which are detailed in Table 3) indicates that the number of transactions per day (Table 3:B:1) is not significantly difference across the two periods, although Bitcoins traded per transaction does decline in the February to August post-COVID-19 period (Table 3:A:1).

	Pre-COVID-19 May-Nov 2019 214 days	Post-COVID-19 Feb-Aug 2020 213 days
A: Transactions		
Number of Transactions	286,957	261,128
Ave. Number Transactions / Day	1341	1226
B: Price		
Minimum Price	A\$7,434	A\$6,444
Maximum Price	A\$19,711	A\$17,209
Ave. Price	A\$13,877	A\$13,248
C: Price Changes		
Average Transaction Price Change	A\$0.0136	A\$0.0084
Minimum Transaction Price Change	-A\$983.26	-A\$668.02
Maximum Transaction Price Change	A\$1,053.40	A\$692.48
Number (& %) of Zero Transaction Price Changes	84,325 29.4%	71,079 27.2%
Average Daily Price Change	A\$18.14	A\$10.31
Minimum Daily Price Change	-A\$1,913.80	-A\$2,318.20
Maximum Daily Price Change	A\$2,099.10	A\$1,070.10
D: Bitcoins		
Total Bitcoins Traded	51,747	42,188
Average No. Bitcoins Traded / Day	241.76	198.10
Minimum Size / Transaction (Bitcoins)	0.00000001	0.00000001
No. of Transactions of 1 Satoshi	132	309
Maximum Size / Transaction (Bitcoins)	28.44	20.19
No. of Transactions \geq 10 Bitcoins	39	26
Average Size / Transaction (Bitcoins)	0.1803	0.1616
Median Size / Transaction (Bitcoins)	0.0580	0.0500

Table 2: Bitcoin/A\$ Trading on BTC Markets Local Time and Local Currency

The Bitcoin price in Australian dollars (Table 2:B) also declines during the pandemic which the KW test indicates is significant (Table 3:A:1). Price changes between transactions is significantly larger in the pre-COVID period but price changes on a daily basis are not significantly different (Table 2:C, Table 3:A:2 & B:2). In each of the two periods approximately one quarter of transactions are unchanged from the previous transaction' price. (Table 2:C:4)

When it comes to the size of the trades (in Bitcoins) the KW test indicates that both the average and mean daily trade size (Table 2:D) are largest in the pre-COVID period, though the daily maximum trades are no different in the two periods (Table 3:A:4-7). Any judgement about the average size of trades needs to take into account the influence of a few very large transactions and a better understanding of trade size should be based on the median rather than the mean. Two factors influence this recommendation:

1. The significant number of transactions as small as one Satoshi (0.00000001 Bitcoins). In this case, 132 and 309 in the pre- and post-COVID-19 periods, respectively.
2. The number of very large transactions. In the pre-COVID-19 period there are 39 transactions of 10 or more Bitcoins, while in the post-COVID-19 period this stands at 26.

Figure 2 shows the marked difference between the daily average and median size of the Bitcoin/A\$ transactions.

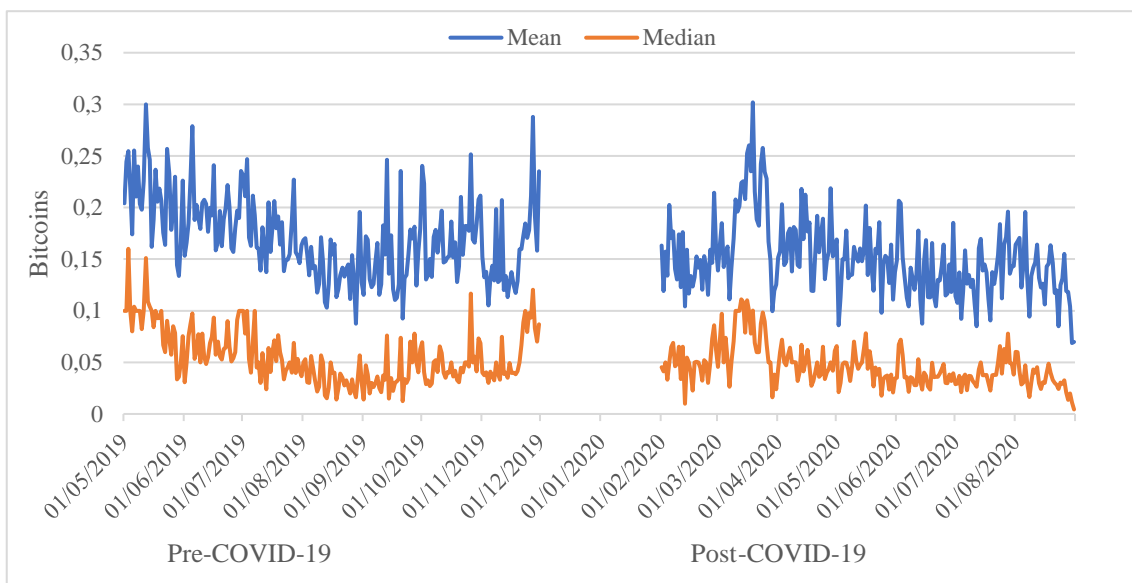


Figure 2: Bitcoin/A\$ Trades Daily Mean and Median Trade Size in Bitcoins

In the Australian dollar market, Bitcoin trading decreases, as does the number of Bitcoins traded, in the post-COVID-19 period (Table 2:D:1). There is no evidence of any

increase in Bitcoin trading implying that Bitcoin is not being used as a safe haven in Australia, during the economic upheaval of the pandemic.

A: KW tests based on transaction data	KW test results+
Bitcoin Price	Pre > Post ***
Price Difference Between Transactions	Pre > Post ***
Bitcoins Traded /Transaction	Pre > Post ***
B: KW tests based on daily summaries	
Transactions / Day	n.s.d
Daily Price Change	n.s.d
Bitcoins / Day	Pre > Post *
Maximum Trade Size / Day (Bitcoins)	n.s.d
Average Trade Size / Day (Bitcoins)	Pre > Post ***
Median Trade Size / Day (bitcoins)	Pre > Post ***

Table 3: KW Tests of Significant Difference Between Pre- and Post-COVID-19 Periods, Bitcoin/A\$ Trades on BTC Markets

*Note: + KW significant levels: *** 1%; ** 5%; *10%; n.s.d. not significantly different.*

As far as trading Bitcoin in Australian dollars is concerned the pre-COVID-19 periods dominates trading activity, even though the Bitcoin price declines in the Australian dollar market.

3.2. Bitcoin Trading in the Canadian Dollar on Kraken

Details provided in Table 4:A:1 & 2 indicate that Bitcoin trading in the Canadian dollar increases in the post-COVID-19 period. This is supported by the KW test statistic in Table 5:B:1, which assesses transactions per day as significantly greater during the post-COVID-19 period.

The minimum price for the pre-COVID-19 period, highlighted in red, in Table 4:B:1 is misleading but accurate and influences the outcome when assessing the Bitcoin price across the two periods which the KW test (Table 5:A:1) determines is significantly higher in the post-COVID-19 period.

	Pre-COVID-19 May-Nov 2019 214 days	Post-COVID-19 Feb-Aug 2020 213 days
A: Transactions		
Number of Transactions	162,697	196,853
Ave. Number of Transactions / Day	760	924
B: Price		
Minimum Price	C\$101	C\$5,441
Maximum Price	C\$17,998	C\$16,500
Ave. Price	C\$12,032	C\$12,422
C: Price Changes		
Average Transaction Price Change	C\$0.0216	C\$0.0145
Minimum Transaction Price Change	-C\$2,955.50	-C\$1,108.30
Maximum Transaction Price Change	C\$10,983.00	C\$800.50
Number (& %) of Zero Transactions Price Changes	43,569 26.9%	50,719 25.8%
Average Daily Price Change	C\$12.29	C\$13.39
Minimum Daily Price Change	-C\$2,104.40	-C\$3,310.50
Maximum Daily Price Change	C\$2,739.40	C\$1,999.80
D: Bitcoins		
Total Bitcoins Traded	16,764	17,563
Average No. Bitcoins Traded / Day	78.30	82.40
Minimum Size / Transaction (Bitcoins)	0.00000001	0.00000001
No. of Transactions of 1 Satoshi	1,422	1,938
Maximum Size / Transaction (Bitcoins)	35.87	22.74
No. of Transactions \geq 10 Bitcoins	22	13
Average Size / Transaction (Bitcoins)	0.1030	0.0892
Median Size / Transaction (Bitcoins)	0.0241	0.0252

Table 4: Bitcoin/C\$ Trading on Kraken Local Time and Local Currency

Closer examination of the 2019 transactions data finds what is described as a ‘flash crash’ on the Kraken exchange with the Bitcoin/C\$ trading pair on the 30th May 2019. Figure 3 shows that during a very short period of trading on the 30th May 2019, Bitcoin trading in the Canadian dollar fell from around C\$11,250 to as low of C\$101.20 and just as quickly returned to its previous level. The exchange did not cancel these trades but let them ride and some traders who had left very low bids had their orders filled.⁷

⁷ Details of the ‘flash crash’ can be found at: “Bitcoin: a flash crash on Kraken causes the price to fall to \$100” by Marco Cavicchioli. 3/6/2019. <<https://en.cryptonomist.ch/2019/06/03/bitcoin-flash-crash->

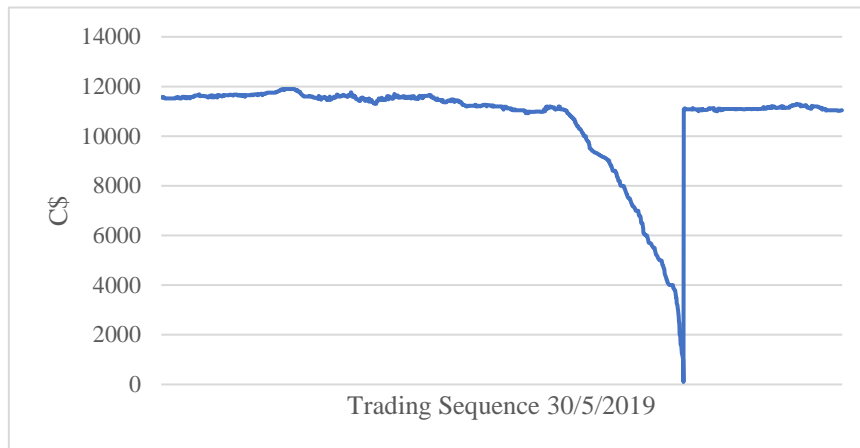


Figure 3: Bitcoin/C\$ Trading on Kraken, 30th May 2019

Although price changes from day to day are not significantly different across the two periods (Table 5: B:2) when measured between transactions, prices changes in the post-COVID-19 period are greater than in the pre-COVID-19 period (Table 5:A:2). Along with an increase in trading activity is an increase in the number of Bitcoins traded, though a large number of transactions are as small as one Satoshi: 1,422 and 1,938 in the pre- and post-COVID period, respectively (Table 4:D:4). Both the maximum and average size of trades are greater in the pre-COVID period (Table 5:B:4&5), the median trade size, a more accurate measure of central tendency, is not significantly different across the two periods (Table 5:B:6).

A: KW tests based on transaction data	KW test results+
Bitcoin Price	Post > Pre ***
Price Difference Between Transactions	Post > Pre ***
Bitcoins Traded /Transaction	n.s.d.
B: KW tests based on daily summaries	
Transactions / Day	Post > Pre ***
Daily Price Change	n.s.d.
Bitcoins/Day	n.s.d.
Maximum Trade Size / Day	Pre > Post ***
Average Trade Size / Day	Pre > Post ***
Median Trade Size / Day	n.s.d.

Table 5: KW Tests of Significant Difference Between the Pre- and Post-COVID-19 Periods Canadian Dollar Trades on Kraken.

*Note: + KW significant level: *** 1%; ** 5%; *10%; n.s.d. not significantly different.*

Trading Bitcoins for Canadian dollars on the Kraken exchange increased in the post-COVID-19 period as did the price difference between transaction, though the number of Bitcoins per transaction doesn't vary. Trading may have increased but the overall size of the transactions decline during 2020, implying that increased trading did not mean larger trades.

3.3. Bitcoin Trading in the UK Pound on Coinfloor

Details provided in Table 6 indicate that trading Bitcoin/£ on Coinfloor increases in volume during the 2020 post-COVID-19 period, which the KW test statistic, Table 7:B:1, indicates is significant. However, the number of Bitcoins changing hands declines as does the average and median trade, size (Table 6:D:1,7&8 and Table 7:A:3, B:5&6), even though the Bitcoin price in pounds declines in the post-COVID-19 period.

	Pre-COVID-19 May-Nov 2019 214 days	Post-COVID-19 Feb-Aug 2020 213 days
A: Transactions		
Number of Transactions	92,463	113,420
Ave. Number of Transactions / Day	432	532
B: Price		
Minimum Price	£4,039	£3,284
Maximum Price	£10,919	£9,515
Ave. Price	£7,408	£7,058
C: Price Changes		
Ave. Transaction Price Change	£0.0199	£0.0146
Minimum Transaction Price Change	-£358.0	-£1,129.0
Maximum Transaction Price Change	£296.0	£1,129.0
Number (& %) of Zero Transaction Price Changes	23,873 25.8%	30,895 27.2%
Average Daily Price Change	£8.45	£7.75
Minimum Daily Price Change	-£1,399.00	-£2,292.00
Maximum Daily Price Change	£1,011.00	£797.00
D: Bitcoins		
Total Bitcoins Traded	47,976	33,565
Ave. No. of Bitcoins Traded / Day	224.19	157.58
Minimum Size / Transaction (Bitcoins)	0.0001	0.0001
No. of Transactions of 1 Satoshi	0	0
Maximum Size / Transaction (Bitcoins)	47.0650	20.4450
No. of Transactions \geq 10 Bitcoins	89	78
Ave. Transaction Size (Bitcoins)	0.5189	0.2959
Median Transactions Size (Bitcoins)	0.0691	0.0299

Table 6: Bitcoin/UK pound Trading on Coinfloor Local Time and Local Currency

Of particular interest are the maximum and minimum transaction price changes of £1,129 and -£1,129 respectively, in the post-COVID-19 period. These are highlighted in red in Table 6. Figure 4 shows the sequence of trades on the 13th March 2020 in which the £1,129 price change occurs. This is at a time when the Bitcoin price is, as noted previously, shadowing the US S&P 500 during a particularly volatile period. Over this period there are continual price reversals of the S&P 500 and the Bitcoin price. This is easily seen in the trading sequence on the 13th March 2020 as shown in Figure 4.

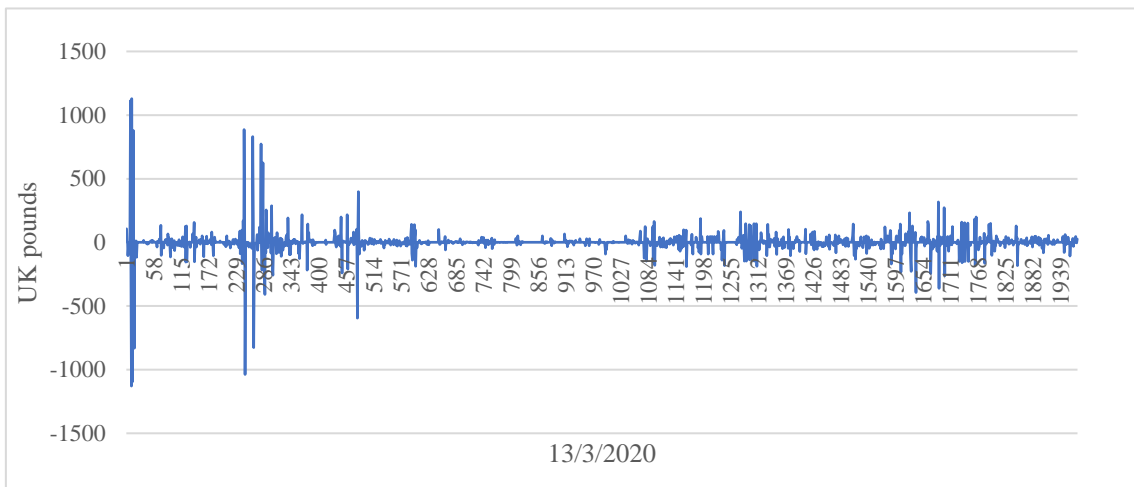


Figure 4: Bitcoin/£ Trading on Coinfloor, The Sequence of Price Differences Between Transactions 13th March 2020

A: KW tests based on Transaction data	KW results+	test
Bitcoin Price	Pre > Post	***
Price Difference Between Transactions	n.s.d.	
Bitcoins Traded /Transaction	Pre > Post	***
B: KW tests based on Daily summaries		
Transactions / Day	Post > Pre	***
Daily Price Change	n.s.d.	
Bitcoins/Day	Pre > Post	***
Maximum trade size / Day	Pre > Post	*
Average trade size / Day	Pre > Post	***
Median trade size / Day	Pre > Post	***

Table 7: KW Tests of Significant Difference Between Pre- and Post-COVID-19 periods, UK Pound Trades on Coinfloor

+ KW significant level: *** 1%; ** 5%; *10%; n.s.d. not significantly different.

One other metric of note in Bitcoin/£ trading on Coinfloor is the minimum transaction size, which never drops below 0.0001 Bitcoin (Table 6:D:3). Nowhere near the one Satoshi level of the Australian dollar and Canadian dollar trades. Reading through Coinfloor's website, there does not appear to be any limitation placed on the size of trades but the fee structure would imply that anything smaller than 0.0001 Bitcoin would cost more in fees than the trade itself. Figure 5 is the daily minimum trade size for the pre- and post- COVID-19 periods. The minimum size drops away to 0.0001 Bitcoins from April 2020 as the average and median trade sizes also decrease. (Table 6;D:7&8 and Table 7:B:5&6).

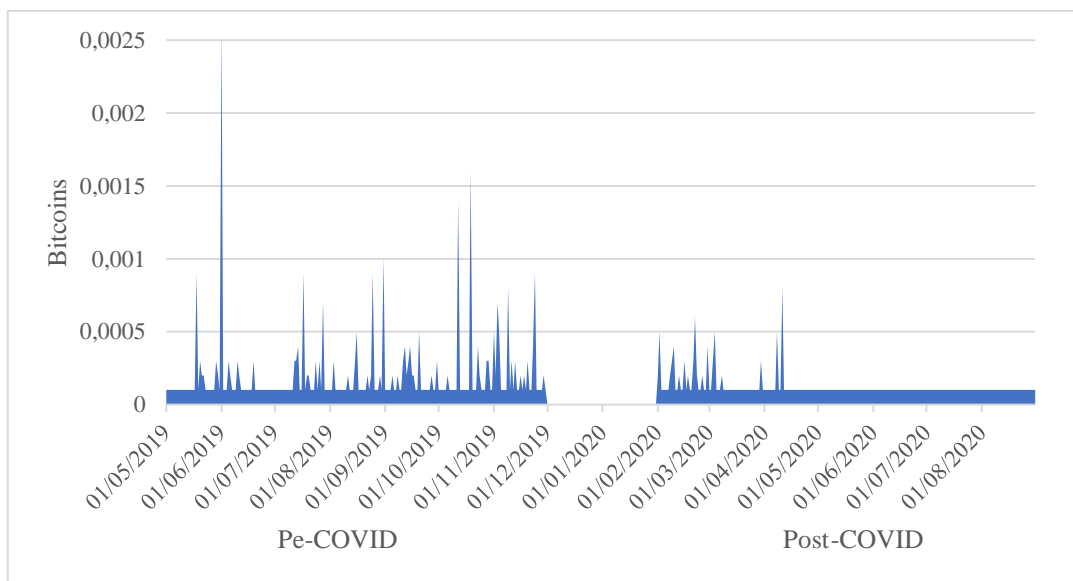


Figure 5: Bitcoin/£ Trading on Coinfloor, Daily Minimum Trades in Bitcoins

3.4. Bitcoin Trading in the Euro on CEX.IO

From Table 8:A:1 it can be seen that unlike trading in the Australian and Canadian dollars and the pound, trading in the euro on the CEX.IO exchange experiences a significant increase in the post-COVID-19 period, over 100% above the pre-COVID-19 level. The increase in the level of Bitcoins changing hands is not quite at this level with the post-COVID-19 amount approximately 50% greater than in the pre-COVID-19 period. Together with this increase in trading we witness an increase in the euro price of Bitcoin in the post-COVID-19 period.

In terms of the difference in the price between transactions, there is no significant difference, nor any difference between daily price changes between the two periods.

	Pre-COVID- 19 May-Nov 2019 214 days	Post-COVID- 19 Feb-Aug 2020 213 days
A: Transactions		
Number of Transactions	141,756	309,241
Ave. Number of Daily Transactions	662	1,452
B: Price		
Minimum Price	€4,703.4	€3,501.5
Maximum Price	€12,298.0	€10,514.0
Ave. Price	€8,310.7	€8,676.3
C: Price Changes		
Average Transaction Price Change	€0.0151	€0.0043
Minimum Transaction Price Change	-€849.9	-€3,167.2
Maximum Transaction Price Change	€982.8	€1,272.4
Number (& %) of Zero Transaction Price Changes	44212 31.2%	35,610 11.5%
Average Daily Price Change	€9.99	€6.22
Minimum Daily Price Change	-€1,221.70	-€1,849.90
Maximum Daily Price Change	€1,030.30	€1,031.60
D: Bitcoins		
Total Bitcoins Traded	8,642.3	12,638
Average Bitcoins Traded / Day	40.38	59.33
Minimum Size / Transaction	0.0000012	0.0000011
No. of Transaction of 1 Satoshi	0	0
Maximum Size / Transaction	8.1881	16.5340
No. of Transactions \geq 10 Bitcoins	0	9
Average Transaction Size	0.0610	0.0409
Median Transactions Size	0.0110	0.0040

Table 8: Bitcoin/€ Trading on CEX.IO, Local Time and Local Currency

What is notable is the size of the Bitcoin transactions. Unlike trading in the Australian dollar, the Canadian dollar or the UK pound, no euro transactions in the pre-COVID-19 period exceed 10 Bitcoins. There are only nine transactions in the whole post-COVID-19 period that exceed this amount. Figure 6 highlights the difference in the daily maximum between pound and euro trading. The minimum transaction size also exceeds the one

Satoshi evident in the Bitcoin trading in the Australian and Canadian dollars but is smaller than the 0.0001 Bitcoin evident with the Bitcoin/£ trading.

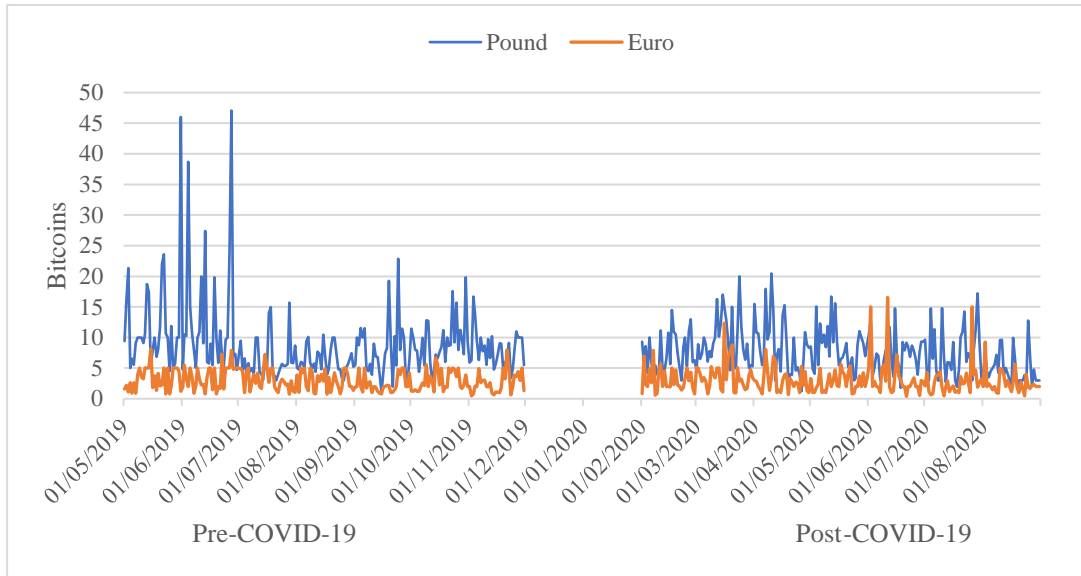


Figure 6: Maximum Size of Daily Trades, Pound and the Euro

Patterns of trading in the euro are mixed. In the post-COVID-19 period, the Bitcoin price is higher as are the transactions/day and the Bitcoins traded each day. In the pre-COVID-19 period Bitcoins traded per transaction are greater as is the median trade size.

KW tests based on Transaction data	KW results+	test
Bitcoin Price	Post > Pre ***	
Price Difference Between Transactions	n.s.d	
Bitcoins Traded /Transaction	Pre > Post ***	
KW tests based on Daily summaries		
Transactions / Day	Post > Pre ***	
Daily Price Change	n.s.d	
Bitcoins/Day	Post > Pre ***	
Maximum trade size / Day	n.s.d.	
Average trade size / Day	n.s.d	
Median trade size / Day	Pre > Post ***	

Table 9: KW Tests of Significant Difference Between Pre- and Post-COVID-19, Euro Trades on CEX.IO

4. Summary

From Table 10, the first observation when comparing across currencies is the lack of any consistent pattern. No two currencies are the same. The pre-COVID-19 period dominates in the Australian dollar market. The UK pound is similar except for transactions/day which is higher post-COVID-19. In the Canadian dollar and euro markets neither period dominates with each currency finding ‘not significantly different’ for a number of metrics. Surprisingly there is not even any consensus with regard to the Bitcoin price which decreases in the Australian dollar and the UK pound market in the post-COVID-19 period while this period sees an increase in the Bitcoin price in the Canadian dollar and euro markets, indicating that local currencies are factoring in local economic conditions.

KW tests based on Transaction data	KW test results+			
	A\$	C\$	£	€
Bitcoin Price	Pre > Post ***	Post > Pre ***	Pre > Post ***	Post > Pre ***
Price Difference Between Transactions	Pre > Post ***	Post > Pre ***	n.s.d.	n.s.d.
Bitcoins Traded /Transaction	Pre > Post ***	n.s.d.	Pre > Post ***	Pre > Post ***
KW tests based on Daily summaries				
Transactions / Day	n.s.d.	Post > Pre ***	Post > Pre ***	Post > Pre ***
Daily Price Change	n.s.d.	n.s.d.	n.s.d.	n.s.d.
Bitcoins/Day	Pre > Post *	n.s.d.	Pre > Post ***	Post > Pre ***
Maximum trade size / Day	n.s.d.	Pre > Post ***	Pre > Post *	n.s.d.
Average trade size / Day	Pre > Post ***	Pre > Post ***	Pre > Post ***	n.s.d.
Median trade size / Day	Pre > Post ***	n.s.d.	Pre > Post ***	Pre > Post ***

Table 10: KW Tests of Significant Difference Between Pre- and Post-COVID-19, A\$, C\$, £ and € Trades

5. Conclusion

Observing Bitcoin trading behaviour in one currency does not indicate patterns of trade in another currency. Though the Bitcoin price in US dollars may be the universal benchmark price, each currency will reflect the economic conditions in the country concerned, which in turn will influence local Bitcoin trading patterns. This is particularly evident when comparing Bitcoin trading across countries with very different economic conditions during a period of worldwide economic uncertainty as the COVID-19 pandemic continues to take a toll on local economies.

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Conflicts of interest

The author(s) states that there is no conflict of interests.

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