A Study of the Effects of Cryptocurrency Usage on Money Laundering and Tax Compliance in Zambia

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Abstract

Cryptocurrency usage has been on a rise in Zambia and other countries. Many concerns have been raised regarding the bad vices that have emerged as a result of Cryptocurrency usage. However, little evidence exists on the effects that Cryptocurrency usage has on money laundering and tax compliance in Zambia. This study sought to assess the relationship between Cryptocurrency usage, money laundering and tax compliance in Zambia. The study was conducted on the FIC, DEC and ZRA for in-depth interviews and 106 survey respondents consisting of employees of one of the commercial banks in Zambia. The study adopted a mixed approach, with the utilization of an interview guide to collect information through an in-depth interview with the key informants and a semi-structured questionnaire to collect data from the survey respondents. Correlation and regression analyses were used to establish the relationship among the variables of the study. The results of the study showed that Cryptocurrency usage has a positive but insignificant effect on money laundering and negative but insignificant effect on tax compliance in Zambia. The study further established that a strong negative correlation exists between money laundering and tax compliance in Zambia. Perceptions from the respondents were that an increase in Cryptocurrency activities, due to unregulated crypto environment, would increase money laundering activities. This is only supported by the observed sign of the correlation coefficient. In addition, since no legal framework has been put in place to guide the legal jurisdictions and operation of digital assets, levels of none tax compliance would become high in Zambia and this is equally supported by the observed sign of the correlation coefficient. The study has identified other effects such as fraud, terrorism, interfere with consumer protection and increase in the scamming levels in association with Cryptocurrency usage. Prevention of these vices was pointed to the centralization and unifying the Cryptocurrency transaction by the Central Bank. The study thus recommends that Zambia should consider investing in the investigation of how digital transactions can operate in order to quicken the regulation process of crypto operation. The government should also consider setting up an institution that can be strictly responsible for monitoring and regulating digital assets transactions in order to focus resources in the formulation of legal frameworks.

Keywords
Cryptocurrency, Money Laundering, Tax Compliance.

1. Introduction
Since early 2010 Cryptocurrencies have gained more prominence in monetary discussions all across the globe. Economists, Bankers, Politicians, Media personnel and even the general citizenry of many countries in both the developed and the developing world have come up with various opinions on this latest monetary phenomenon. The

debate on the usage of Cryptocurrencies has been extremely polarizing due to arguments for and against Cryptocurrencies.

Accessibility to increased internet services via Smartphones, Laptops and other Computer devices has made Cryptocurrency transactions ever more common the world over and Zambia has not been exempt to this ICT phenomenon. Despite the fact that in Zambia Cryptocurrency usage isn't something that has yet gone main stream activities of cryptocurrency engagements by Zambians have been spotted on websites such as www.reitani.com, www.coinmama.com and www.localbitcoins.com (FIC, 2019). There is no denying the fact that Cryptocurrency usage is something that is going to be part of the Zambian financial sector. In the Virtual Assets Report, FIC (2019) stated that Cryptocurrencies need to be treated with caution as there are potentially massive risks that may involve acts of money laundering.

The popularity of Cryptocurrencies can be said to be something that moves in cycles. In 2017 and late 2020, the value of the Bitcoin soared to extremely high levels. According to McCarthy (2018), one Bitcoin reached an equivalent of $20,000 at its highest in 2017. This in itself leads to the growing popularity of Cryptocurrencies as plenty of people seek to invest and perhaps reap high returns from Cryptocurrencies such as Bitcoin being a store of value. There is a proven precedence that when Cryptocurrencies have a gain in value more and more people will definitely use them and then invest in them perhaps as a store of value. This is why international institutions such as such as the United Nations Office on Drugs and Crime (UNODC), the International Monetary Fund (IMF) and the European Central Bank have been raising the alarm bells on the need to urgently find ways on how to tackle the risks and challenges that come with the use of Cryptocurrencies. In addition, The Financial Action Task Force (FATF) highlighted that, they are also mindful that the Cryptocurrency industry is still a growing industry with lots of potential for growth, hence there will be need to also strike a balance such that innovation that might be beneficial to the financial sector of the global economy is not in any way be stifled (FATF, 2012).

From the above indications, this research therefore sought to look at the effects that the use of Cryptocurrencies have had on money laundering and tax compliance in Zambia. The study made use of available law enforcement and investigative agencies such as the Drug Enforcement Commission (DEC) and the FIC (Financial Intelligence Centre). The research also got input from the Zambia Revenue Authority (ZRA). The Study interrogated if at all there is any kind of collaboration that exists between all these agencies and how exactly each one of them sees the threat of Money Laundering and Tax Compliance when it comes to the usage of Cryptocurrencies in Zambia.

It should be pointed out that it is not known as to the exact number of people who use Cryptocurrencies in Zambia and also which traders exactly help convert fiat currencies into Cryptocurrencies and vice versa. The FIC, in their virtual guidance report (2019), did mention that companies that are based in Finland have been enabling Zambian residents to covert Cryptocurrencies into fiat currencies which are later used in the Zambian economy. As earlier alluded to, the usage of Cryptocurrencies is something that is not yet mainstream activity in Zambia but money laundering activities purportedly involving Cryptocurrencies have been reported in various media reports. In January 2019 for instance a purported Cryptocurrency trading company known as Heritage Coin Limited had its directors sentenced to two years of imprisonment for money laundering activities involving a Cryptocurrency scam amounting to ZMW28, 346,800. In the same case, Heritage Coin was, by court order, directed to payback ZMW15, 312,182.40 to depositors for not actually having a license authorizing it to trade in any kind of financial services. The fact that the term Cryptocurrency was involved made it very complex for relevant authorities to render any help. This case showed that there is actually need to greatly protect members of the public from any such money laundering activities that may involve Cryptocurrencies (BOZ, 2019).

Currently, there is no specific law in Zambia which talks about clear boundaries on how Cryptocurrencies may or may not be used. With this lack of clear regulation in terms of outright legislation, it leaves the door open for money launderers and none tax compliers to take advantage by committing criminal acts that may not get detected or traced. Perhaps this study which is aimed at highlighting the effects that come with Cryptocurrency usage on money laundering and tax compliance will influence policy makers into acting against the potential threat that accompanies this new ICT phenomenon and in turn get the much needed attention and action it deserves. LEAs, IAs, ZRA and the BOZ need the National Assembly of Zambia to pass legislation through an act of Parliament that would enable them to better crack down on money laundering and ensure adequate tax compliance from users of Cryptocurrencies takes place. It is against this backdrop that this study was conducted so as to establish the effects of Cryptocurrency usage

on money laundering and tax compliance. The study also described the legal stance of Cryptocurrency usage in Zambia.

1.1. Objectives

This study aimed at achieving the following objectives:
To determine the relation that exists between Cryptocurrency usage and Money Laundering and to determine the relationship between Cryptocurrency usage and Tax compliance in Zambia.

2 Literature Review

Albrecht et al., (2019) analysed the money laundering process by showing how Cryptocurrency has been integrated into that process, and how government and some regulatory bodies are responding to Cryptocurrency usage. They adopted a theoretical approach. Their results indicated that Cryptocurrency usage eliminates the need for intermediation in the financial sector by allowing peer-to-peer financial transactions. They further established that Cryptocurrency usage got a lot of support from the darknet and other criminal networks such as those involved in money laundering.

Kolachala et al., (2021) examined the anti-money laundering mechanisms in Cryptocurrencies, together with payment networks from a technical and policy perspective. In addition, the authors highlighted practical challenges in implementing and enforcing the mechanisms. Their results pointed to the need to treat anti-money laundering regulations and technical methods as an integral part of the system.

Not much has been done in Zambia on the subject matter. In October 2018, the Bank of Zambia (BOZ) released a statement on the issue of Cryptocurrency usage in Zambia (BOZ, 2018). In the paper BOZ clearly stated that Cryptocurrency was not a legal tender in the country hence the decision to either accept or reject Cryptocurrency in any transaction lay at the discretion of involving parties. BOZ also stated that it was considering what sort of regulations to put in place so as to better ensure that whatever sort of activities were done involving Cryptocurrencies were done within clearly stipulated laws and frameworks. The Bank also added that regulations involving Cryptocurrencies would not constrain but enable innovation (BOZ, 2018). The Financial Intelligence Centre (FIC) has recognised the need to set up adequate policy that will be effective in dealing with the threats that have emerged with the rise in the usage of Cryptocurrencies and Blockchain technology in Zambia, some of the recommendations include:

(i) Setting up effective policy response to Cryptocurrencies that will strike an appropriate balance between addressing risks and abuses while also avoiding overregulation that could stifle innovation. The policy set up should seek ways to urgently deal with pressing issues that come with the usage of cryptocurrencies such as Money Laundering (FIC, 2019).
(ii) The policy set up should be in sync in terms of coordination at national and international level so as to allow the FIC and other LEAs to work closely with their foreign counterparts in conducting investigations, making of inquiries, arrests and even seizers of Cryptocurrencies that may have been used in nefarious activities. Such policies if set up will encourage multi-national investigations and prosecutions particularly those involving foreign based persons and transnational organized crime based syndicates (FIC, 2019).

At the other end of the spectrum, Nigeria has also been battling the issue of how to tackle money laundering with the rise in the use of Cryptocurrencies within the Nigerian economy (Earl, 2010). The issue arises from the fact that currently according to the Money Laundering Prevention Act 2017 (MLPA) of Nigeria; money laundering can take the form of generic money laundering or non-generic money laundering. Both forms, however, are deemed to be serious crimes when committed within the Nigerian State. Generic money laundering is the kind of money laundering where an individual or business conceals illegally obtained money from authorities. Non-generic money laundering is where an individual or business without the use of a financial institution (as an intermediary) makes or accepts a cash payment or its equivalent in excess of 5,000,000 Naira.

2.1 Rational Choice Theory

It is indisputable that money laundering and non-tax compliance (Tax Evasion and Tax Avoidance) are white collar crimes as they are financially motivated and committed by skilled professionals who are adept in the techniques and

know-hows of committing the two vices and factor in the usage of cryptocurrencies for the committing of those two criminal acts. It defiantly narrows the scope that the people behind such criminal behaviour are those who know what they are doing and how they do it. It is therefore based on this criminal behavioural action that this research used the Rational Choice Theory (RCT) to try and explain how people can opt to use Cryptocurrencies for money laundering and avoid on tax compliance.

The RCT is based on the explanation that individuals will use rational calculations to make rational choices that will ultimately help them achieve their personal objectives, objectives that should confirm with their self-serving interests (Gates Foundation, 2017). The RCT can also be applied to understand the behaviour of those who engage in money laundering via the use of Cryptocurrencies. Those involved will rationally be committing a crime (Money Laundering) because they will fully be well aware that the Blockchain will be the safest place through which they can transfer proceeds of crime. Such proceeds do not go through any intermediaries who may raise red flags to where the source of the money may have originated from unlike if they had used the conventional systems of money transfer that involve the traditional fiat currency hence the rational choice to engage in cryptocurrency usage.

The proponents of the RCT include people such as the classical economist Adam Smith who also argued that human behaviour leans towards self-interest only for the objective of achieving individual prosperity and this individual prosperity can in turn have other benefits for society as a whole (Gates Foundation, 2017). For example, those who do not comply with existing tax laws will have more disposable money to spend which gives a trickle-down effect while those who maybe engaged in money laundering will have money that will be invested in the economy leading to creation of employment and even setting up or expanding already existing national infrastructure such as housing.

3. Methods

This study made use of the sequential exploratory research design. This design became ideal for this study because in the first phase the researcher collected information through a qualitative approach with 3 key informants from key state institutions. After establishing the effects of Cryptocurrency usage, the study went on to collect quantitative data with 106 survey respondents from a named commercial bank.

3.1 Sampling and Procedure

For the first phase of the data collection, the study sought respondents from Law enforcement and Investigative agencies such as the Financial Intelligence Centre (FIC) and the Drug Enforcement Commission (DEC). The research also interacted with respondents from the Zambia Revenue Authority (ZRA) who provided information on the issue surrounding Tax Compliance. The respondents were engaged via in-depth interviews and were also sampled through what is known as Expert Sampling whereby the sample was drawn from "experts" in the field of the research topic as the respondents. This was because with issues to do with money laundering and tax compliance, particular officers who deal in such are the ones who are needed to provide data to be use. The same kind of sampling was also used when it came to the employees who were found at ZRA.

For the Survey, the population was 144 employees of one of the commercial banks in Lusaka district of Lusaka province in Zambia. This population was obtained from the human resource department of the same bank. The sample was calculated using the Taro Yamene formula at a 5% margin of error.

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population size and e is the margin of error.

$$n = \frac{144}{1 + 144(0.05)^2} = 105.88$$

By rounding up, the sample size for the survey was 106 respondents from a Zambian commercial bank in Lusaka District.

4. Data Collection

Data was collected via the use of an interview guide for the first phase and a semi-structured questionnaire for the second phase. The qualitative responses were first transcribed before analysis using the N-vivo software while the survey data was coded before analysis in the Statistical Package for the Social Sciences (SPSS). To aid the transcribing process, audio recorders were used so as to accurately capture the respondent's exact statements. This helped in ensuring that the responses are not paraphrased to the likes of the data collectors. The researcher wishes to put it on record that he would have really liked to have organized some sort of search conference in the sort of focus group discussion with the members from the Investigative and Law enforcement agencies as well as the Bank of Zambia and the Zambia Revenue Authority. However, due to a limited amount of financial resources available it wasn't possible for the researcher to host such a conference hence only the in-depth interviews were used in the data collection of the research.

5. Results and Discussion

5.1 Numerical Results

Demographic Characteristics of the Respondents

Sex of the Respondents

Table 1. Distribution of the respondents by Sex

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	60	56.6	56.6	56.6
Female	46	43.4	43.4	100.0
Total	106	100.0	100.0	

The results presented in Table 1 above shows the distribution of sex of the respondents. Most of the respondents were male and constituted a 56.6% of the distribution. The other 43.4% of the respondents were female.

Age of the Respondents

The respondents of this study were of varying ages. As indicated in Table 2 below, the youngest respondent was aged 23 years old while the oldest respondent was 51 years old, giving an age range of 28 years.

Table 2. Age Statistics for the Respondents

Mean	32.37
Std. Error of Mean	0.575
Median	31.50
Mode	29
Std. Deviation	5.921
Variance	35.054
Skewness	0.968
Std. Error of Skewness	0.235
Range	28
Minimum	23
Maximum	51
Sum	3431

The results of this study also indicate that most of the respondents were 29 years old, with an average age of about 32 years old. Each respondent was on average, about 6 years old away from the mean age. It is also important to note in this study that half of the respondents were aged below 32 years. The distribution happens to be positively skewed with a skewness statistic of 0.968. The Figure 1 below shows the age distribution of the respondents using a histogram. The histogram also confirms that the ages of the respondents were skewed to the right (positively skewed).

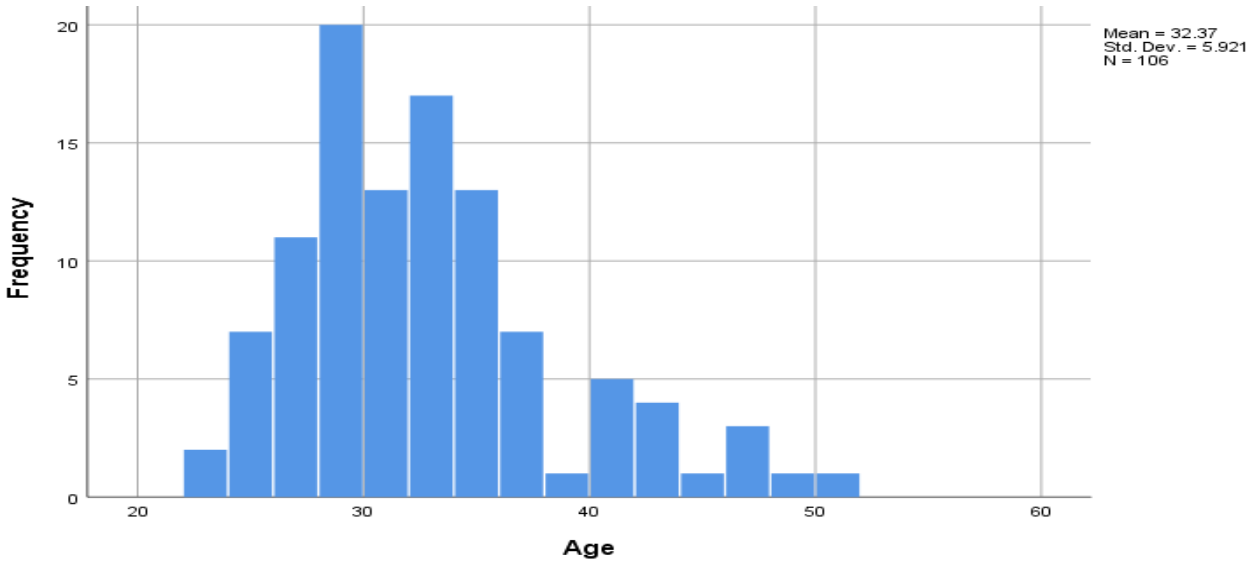

Figure 1. Age Distribution of the Respondents

Knowledge about Cryptocurrency

After getting feedback from the Key informants, the researcher went on to asking the survey respondents if they know what Cryptocurrencies are. This was important in order to isolate only those who know what Cryptocurrencies are for the purpose of valid feedback. Table 3 below presents the finding.

Table 3. Cryptocurrency Knowledge Distribution

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	91	85.8	85.8	85.8
No	15	14.2	14.2	100.0
Total	106	100.0	100.0	

Most of the respondents had knowledge of Cryptocurrencies representing an 85.8% knowledge rate. This shows that about 86 out of the every 100 Zambian has understanding of what Cryptocurrencies are.

Correlation Analysis

In linking Cryptocurrency with Money laundering and tax compliance, several statistical tests were conducted. Table 4 below shows the results from the Pearson's correlations tests.

Table 4. Correlations Test

Correlations

		Money Laundering cases in Zambia	Tax compliance levels in crypto usage	Crytocurrency usage in Zambia
Money Laundering cases in Zambia	Pearson Correlation	1	-.218*	.040
	Sig. (2-tailed)		.038	.709
	N	91	91	91
Tax compliance levels in crypto usage	Pearson Correlation	-.218*	1	-.109
	Sig. (2-tailed)	.038		.305
	N	91	91	91
Crytocurrency usage in Zambia	Pearson Correlation	.040	-.109	1
	Sig. (2-tailed)	.709	.305	
	N	91	91	91
*. Correlation is significant at the 0.05 level (2-tailed).				

From the two tailed test used evidence shows that there is no significant correlation between Cryptocurrency and money laundering and between Cryptocurrency and tax compliance in Zambia. These results were true even at 10% level of significance. Going by the a priori expected signs, there happens to be an insignificant positive correlation between Cryptocurrency and money laundering cases in Zambia. This leads to the same side directional movement between the two Cryptocurrency and money laundering. The more Cryptocurrency users, the more the money laundering cases we expect to record. However, evidence shows that such a relationship is insignificant in Zambia. This follows from the Pearson's correlation coefficient p-value of 0.709.

Further a priori expected sign evidence was established from the relationship between Cryptocurrency usage and Tax compliance in Zambia. The negative correlation sign implies that the more Cryptocurrency users in Zambia, the lover the tax compliance levels. However, the results for this relationship are also statistically insignificant even at a 10% significance level. This follows from the Pearson's correlation coefficient p-value of 0.305.

The results of this study established a strong significant negative correlation between tax compliance and money laundering. An increase in the money laundering cases correlates negatively with tax compliance levels and the results for such a relationship are statistically significant at a 5% level of significance.

Regression Analysis

Further evidence was observed from regression analysis. The results in Table 5 below indicate that Cryptocurrency has a positive but insignificant effect on money laundering in Zambia. The results were read at 5% as well as 10% levels of significance. The observed p-value of 0.709 is greater than the 10% level of significance, providing statistical evidence for the insignificance of the hypothesized effect of Cryptocurrency usage on money laundering in Zambia. The obtained confidence interval also suggests the existence of the insignificant results as the observed beta coefficient of 0.036 falls within the confidence range bordered by the lower confidence limit of -0.155 and the upper confidence limit of 0.227.

Cryptocurrency and Money Laundering

Table 5. Regression of Cryptocurrency Usage on Money Laundering

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B

		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	7.583	.377		20.133	.000	6.835	8.332
	Crytocurrency usage in Zambia	.036	.096	.040	.375	.709	-.155	.227
a. Dependent Variable: Money Laundering cases in Zambia								

A further regression analysis was conducted to establish the effect of Cryptocurrency usage on tax compliance in Zambia. The results are presented in Table 6 below. The results show that Cryptocurrency has an insignificant effect on tax compliance in Zambia. This follows from the t-statistic value of -1.031 and the corresponding p-value of 0.305. Since the p-value of 0.305 is greater than the 10% level of significance, the effect of Cryptocurrency on tax compliance is insignificant in Zambia.

Cryptocurrency and Tax Compliance

Table 6. Regression of Cryptocurrency Usage on Tax Compliance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.606	.185		3.271	.002	.238	.974
	Crytocurrency usage in Zambia	-.049	.047	-.109	-1.031	.305	-.142	.045
a. Dependent Variable: Tax compliance likelihood for crypto users								

These results were justified by the confidence interval approach to inferential statistics. The beta coefficient of -0.049 is within the confidence interval with the lower limit of -0.142 and the upper limit of 0.045.

6. Summary, Conclusions and Recommendations

6.1 Summary of findings

The overall objective of this study was to assess the relationship that Cryptocurrency usage has with Money laundering and tax compliance in Zambia. The study was conducted on one of the commercial banks in Zambia with a sample size of 116 employees of that commercial bank. 91 out of the 116 respondents appeared to have knowledge on Cryptocurrency and so they constituted the sample of interest and the results presented were based on the 91 respondents.

Evidence from the correlation analysis revealed that there is no significant correlation between Cryptocurrency usage and money laundering in Zambia. Further, no significant correlation was observed between Cryptocurrency usage and tax compliance in Zambia. However, the correlation coefficients have a positive sign for the Cryptocurrency usage – money laundering relationship and negative sign for the Cryptocurrency usage – tax compliance relationship.

Further evidence was observed from regression analysis for the cryptocurrency usage – money laundering – tax compliance relationship. The results show that Cryptocurrency usage has an insignificant effect on both money laundering and tax compliance in Zambia.

6.2 Conclusion

Despite the insignificant effects, there have been many concerns highlighted by the respondents regarding the use of Cryptocurrency. These concerns are around money laundering and none-tax compliance. Evidence from ZRA

indicates that money laundering and tax evasion are main results of Crypto transactions. Through the use of digital assets, holders of these assets tend to transact in an unregulated environment. This has seen the skyrocketing of money laundering in Zambia and other parts of the world where Crypto activities are unregulated. The loophole through which Cryptocurrency has found its comfortable operation has created other bad vices.

BOZ (2018) indicated the Cryptocurrency associated risks, which include, hacking, fraud, money laundering, consumer protection risks, and financing activities of terrorism. These vices create a need for concern for Zambia and other states where Cryptocurrency is not prohibited. It is thus concluded that Policy makers need to constantly engage in solving the problem of regulation. The survey respondents also indicated the same concerns with a skewed response towards strong agreement to the bad vices being caused by Cryptocurrency usage.

6.3 Recommendations

The recommendations of the study include the following:

> Zambia should consider investing in the investigation of how digital transactions can operate. This will quicken the regulation process of crypto operation and the Zambian government should also consider setting up an institution that can be strictly responsible for monitoring and regulating digital assets transactions. This will help to focus resources in the formulation of legal frameworks

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