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BITCOIN implementation in El Salvador*

Implementación de BITCOIN en El Salvador

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Abstract

September 7, 2021 in El Salvador adopted the BITCOIN is cryptocurrency as legal tender in order to facilitate financial inclusion and boost economic growth, so this article seeks to analyze the use of BITCOIN in micro and small enterprises in the development of their business transactions before the establishment of this currency. For this purpose, a qualitative study is conducted through surveys to 133 companies defined in a non-probabilistic sampling by convenience, in order to obtain information about the use of BITCOIN in its implementation as legal tender to identify the positioning of companies with this strategy. In the surveyed companies, the low level of acceptance in the use of BITCOIN, to charge or pay in the conduct of their business operations is determined and those entrepreneurs who accepted it retained it in the Goat wallet issued in the Government in Dollars. Most businesses state that they have not perceived a benefit as an effect of the implementation of BITCOIN. BITCOIN as legal tender was established in El Salvador as a measure of financial inclusion, where 40.00% of people have access to a bank account, but the lack of knowledge of how cryptocurrencies work has led to a lack of acceptance of their use, which presents a training challenge. Financial inclusion should not be disconnected from financial literacy mechanisms in order to meet its objectives of use, access, quality and wellbeing, where showing vulnerable populations the benefits and risks of different products, including cryptocurrencies, becomes relevant for their implementation.

Keywords: El Salvador, Cryptocurrency, BITCOIN, Currency

Resumen

Septiembre 7 de 2021 en El Salvador adopto el BITCOIN está criptomoneda como moneda de curso legal con el fin de facilitar la inclusión financiera e impulsar el crecimiento económico,

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por lo que el presente artículo busca analizar el uso BITCOIN en las micro y pequeñas empresas en el desarrollo de sus transacciones comerciales ante el establecimiento de esta moneda. Para ello se realiza un estudio cualitativo mediante encuestas a 133 empresas definidas en un muestreo no probabilístico por conveniencia, a fin de obtener información acerca del uso del BITCOIN en su implementación como moneda de curso legal que permitiera identificar su posicionamiento de las empresas con esta estrategia. En las empresas encuestadas, se determina el bajo nivel de aceptación en el uso del BITCOIN, para cobrar o pagar en la realización de sus operaciones comerciales y aquellos empresarios que la aceptaban lo retenían en la billetera de Chivo emitida en el Gobierno en Dólares. La mayoría de los negocios manifiestan que no han percibido un beneficio como efecto en la implementación del BITCOIN. El BITCOIN como moneda de curso legal se estableció en El Salvador como una medida de inclusión financiera, donde 40,00% de las personas tienen acceso a una cuenta bancaria, pero el desconocimiento de funcionamiento de las criptomonedas ha llevado a que no la acepten en su uso, lo que presenta un reto de formación. La inclusión financiera no debe hacerse desvinculada de mecanismos de alfabetización financiera para que cumpla sus objetivos de uso, acceso, calidad y bienestar, donde el mostrar a las poblaciones vulnerables los beneficios y riesgos de los distintos productos entre ellos las Criptomonedas se vuelven relevantes para su implementación.

Palabras Claves: El Salvador, Criptomoneda, BITCOIN, Moneda

SUMMARY

INTRODUCTION. - RESOLUTION SCHEME. - I. Research problem. - II. Methodology. - III. Writing plan. - 1. Financial inclusion and cryptocurrencies. - 2. El Salvador and the implementation of BITCOIN. - IV. - Research results. - 1. Respondent profile. - 2. Survey results. - CONCLUSIONS. - REFERENCES.

Introduction

Since the 2000s, together with the financial crisis of 2008, the issue of financial inclusion has been highlighted, contributing to poverty reduction with strategies focused on vulnerable sectors, which can contribute in regions such as Latin America to reduce the inequality indexes that have persisted over the last fifteen years. According to the United Nations (2019), "Reducing inequality is one of the purposes included in the 2030 Agenda for Sustainable Development. Several of the Sustainable Development Goals (SDGs) refer to the aspiration to reduce inequality in multiple dimensions" (p. 27).

Therefore, ensuring that citizens have an account to carry out basic transactions that allow them to save money, send and receive payments may be the first step towards financial inclusion. According to Honohan (2007), for every 10,00% increase in access to and use of financial services, this can contribute to a 0.60-point reduction in the Gini inequality coefficient. Financial inclusion should not be read as a simple concept but has multidimensional characteristics that allow vulnerable populations to access mobile payment systems a recurrent use of these for their daily payments as long as the populations have access to financial education that allows them to know their duties and obligations, generating skills to empower them in measuring the risks and benefits that each product and service can bring to their lives (CAF, 2013, p. 30). Thus they can face crises and environmental situations that may affect their consumption, investment, and personal and social development.

Therefore, institutions worldwide, especially in emerging economies, have promoted these processes to mitigate the risks that may arise around financial crises, which are experienced

over time. As part of these initiatives in El Salvador, on June 6, 2021, the Legislative Assembly of El Salvador approved the adoption of this cryptocurrency called BITCOIN as a legal tender to increase the levels of financial inclusion by facilitating the access of its citizens through platforms and cost reduction to boost the economic growth of the country.

One of the key elements of admitting BITCOIN as a currency establishes that all economic agents, be they businessmen, public institutions, and organizations, must accept bitcoin as a form of payment in the case of acquiring any good or service (Asamblea Legislativa de El Salvador, 2021, p.2). Similarly, the Chivo Wallet was created to manage transactions. It is an electronic wallet developed by the Government of El Salvador with the contracting of Panda Group and Athena Bitcoin Global. It sought to generate transactionality in payments in dollars and Bitcoin.

The article analyzed the use of BITCOIN in micro and small enterprises in developing their commercial transactions before establishing this currency. For this purpose, a qualitative study was conducted through surveys to 133 companies defined in a non-probabilistic convenience sampling, in order to obtain information about the use of BITCOIN in its implementation as legal tender that would allow identifying its positioning about this topic, strengths, and opportunities for improvement. In the surveyed companies, it determined the low level of acceptance in using BITCOIN to charge or pay in the realization of their commercial operations, and those entrepreneurs who accepted it retained it in the Goat wallet issued in the Government in Dollars.

Resolution scheme

1. Research Problem

Is Bitcoin being used by micro and small businesses in the development of their commercial transactions in the face of the establishment of legal tender?

2. Methodology

The research with a qualitative approach of exploratory, descriptive type to analyze the use of BITCOIN in micro and small enterprises in the progress of their commercial transactions before the establishment of legal tender. This research aimed to collect data and opinions of micro and small businesses through surveys to owners or legal representatives who were developing their economic activity in the departments of San Salvador and La Libertad. The information collected was intended to identify micro and small businesses positioning in using BITCOIN to provide information to serve as a basis for constructing training programs to generate skills for entrepreneurs.

A non-probabilistic convenience sample was taken from companies in the departments of La Libertad and San Salvador, which resulted in collecting information from 133 companies. A survey was used to collect the information, consisting of twenty items, ten of which are general data, ten of which are classified into two sections: preparatory activities carried out for the entry into force of the law and routine operations carried out. A form was created in Google Drive Form, and an e-mail was sent from a database of companies linked to university activities. After collecting information from the surveys, we proceeded to the interpretation and analysis of each of the items. For this purpose, the perceptions of entrepreneurs regarding the use of BITCOIN in their businesses were analyzed using statistical analysis to determine

frequencies in absolute and relative terms that could summarize the information obtained, which is presented using graphs.

3. Drafting Plan

3.1 Financial inclusion and cryptocurrencies

Today it can be observed that in countries that have little access to financial services, technological platforms are contributing to their advancement (Gutiérrez, 2022, p. 9); as seen in recent years, the increase of these platforms has favored access to financial services for vulnerable populations, especially women and low-income populations. An issue that has been gaining more relevance is the use of new alternatives such as digital currencies from financial institutions or the use of cryptocurrencies as measures of financial inclusion, systems that seek that a citizen can make transactions directly without intermediaries at low cost since it reduces transaction costs.

Since 2008 the introduction of BITCOIN by Satoshi Nakamoto, a wave of new technologies based on decentralization began (Solano, 2022, p. 1), which has led to a growing interest of researchers and policymakers to analyze digital currencies (Camara et al., 2018, p. 3), understanding cryptocurrencies is a challenge, especially in the economic and financial framework. According to Chainalysis (2022) studies, the use of cryptocurrencies globally and in emerging markets remains an increasing investment mechanism, with an 880.00% jump in adoption levels yearly. Therefore, cryptocurrencies are generating a digital revolution. Cryptocurrencies as an investment mechanism means of payment, which have the advantage of functionality, speed, registration, and unalterability. The ease with which they can be used allows for boosting financial inclusion due to the operations that can be carried out with them (Mata, 2022, p. 37).

Financial education is a key factor for a greater entry and use of financial products and services since developing people's skills generates trust in institutions. On cryptocurrencies, it becomes even more relevant for their introduction to have people who can understand their use, advantages and risks, the management of technologies, and clarity in the functioning of the market where they are developed.

For Mata (2022), a cryptocurrency requires informing those who want to use them about the conditions of their operation, including financial institutions, investors, and the general public, so that they can be used in different ways such as remittances, which attracts many users due to the ease and low cost of use (p. 39).

3.2 El Salvador and the implementation of BITCOIN

At the initiative of the Presidency of the Republic, El Salvador presents to the Legislative Assembly the BITCOIN Law, which has 16 articles that regulate the use of BITCOIN. In El Salvador Monetary Integration Law since 2001, the established currencies are the Salvadoran colon and the dollar, where the functional currency is the dollar; this new law also establishes the BITCOIN cryptocurrency as a currency for the execution of any transaction made by natural or legal persons, public (Legislative Assembly of El Salvador, 2021, p. 1), making El Salvador the first country to have a cryptocurrency as legal currency.

Therefore, companies are obliged to accept BITCOIN as a payment mechanism for the acquisition of goods and services offered, except for those entities that do not have access to

technologies that allow them to perform these operations; however, for accounting purposes, the dollar will be the currency of record (Asamblea Legislativa de El Salvador, 2021, p. 1-2). The government created a trust in the Development Bank of El Salvador BANDESAL, issued on August 1, 2021, where it was initially issued for 150 million dollars (Asamblea Legislativa de El Salvador, 2021, p. 2).

Likewise, the BITCOIN law mentions that it will be the government who will provide alternatives for automated instant convertibility between the BITCOIN and the dollar; based on the above, the State enacted the Chivo Wallet placing as an introductory measure that every citizen over 18 years old who subscribes to it could enjoy a bonus of \$ 30.00 to make purchases, withdraw in ATMs provided by a private entity through a public-private partnership. The application shows more than one million downloads, but there needs to be clear data on how many Salvadorans obtained and used the application.

To facilitate and ensure the implementation of the cryptocurrency, regulations, definition of participating institutions, their functions, technical standards, and mechanisms for authorization of institutions of technological platforms were issued to ensure the various authors' clear participation (BCR, 2021, p. 1).

The State, in association with the Platzi School of Blockchain and Cryptocurrencies, enacted on its financial inclusion site a virtual training for using BITCOIN in El Salvador; the training was provided free of charge and in virtual mode (Platzi, 2021). As part of the promotion of BITCOIN, The Government of El Salvador expects to develop the BITCOIN City, where each of the companies and establishments will promote the use of this cryptocurrency; within the project is expected the creation of hotels, restaurants, among others, as a sample of this in 2021 a company called Chivo Pets is created, which as indicated is constituted with the profits of Chivo Wallet to promote the use of BITCOIN to that date, and whose objective is to be a veterinary hospital, all within the Chivo Wallet platform. All these have been important milestones in implementing BITCOIN in El Salvador. However, there needs to be evidence that the population uses the Chivo Wallet platform daily.

4. Research results

4.1 Respondent profile

It is important to describe the profile of the companies surveyed in terms of sector, legal form, number of employees, years of operation, and level of sales, since many of these aspects may differ from country to country:

- About the sector in which they carry out their economic activity, 16.00% are in industry, 40.00% in services, and 44.00% in commerce.
- Regarding their legal form, 69.00% are sole traders, and 31.00% are social traders.
- Regarding the number of employees, 10% have no employees, 65.00% have between 1 and 10 employees, 16.00% have between 10 and 50 employees, 3.00% have between 11 and 50 employees, and 4.00% have more than 100 employees.
- About years of operation, 9.00% Less than 1 year, 32.00% Between 1 and 3 years, 14.00% More than 3 and less than 6 years, 45.00% More than 6 years
- Concerning the level of annual gross sales, 71.00% have annual gross sales of less than \$144,600, and 29.00% have annual gross sales of more than \$144,60

4.2 Survey results

Regarding the positioning of BITCOIN, as shown in table 1, 32.00% of the entrepreneurs accept it as a means of payment, and only 7.50% make their payments with this currency.

Table 1. Frequency of use of BITCOIN for payment and collection transactions.

ITEM	BITCOIN COLLECTIONS %	BITCOIN PAYMENTS %
Always	12.78	0.00
Almost always	3.76	0.75
Few	15.79	6.77
Not at all	67.67	92.48
Total	100.00	100.00

Source: own elaboration.

When the clients receive payments, the company determines if it will accept it in BITCOIN or in Dollars and can make the necessary conversions. As shown in table 2, 36.00% is retained in the Chivo Wallet, but in dollars and only 18.00% in BITCOIN, 20.00% is retained in financial institutions, and 25.00% is retained for investment purposes.

Table 2. Handling of BITCOIN received in the company

ITEM	%
Holds you in the Chivo wallet in BITCOIN	18.18
Holds it in the Chivo wallet in Dollars	36.36
Withdraws it daily in financial institutions in dollars	14.55
Withdraws it daily at ATMs	5.45
What he receives is intended for investment to generate profits	25.45
Total	100.00

Source: own elaboration.

Concerning the preparation process before its implementation, table 3 shows that 37.00% of the companies decided not to accept the BITCOIN, 21.00% were trained, 24.00% have only reviewed the law, and 18.00% did not carry out any preparation activity.

Table 3. Preparation Mechanisms for BITCOIN Implementation

ITEM	%
Staff training on government website	18.05
Staff training by private entities	3.01
Review of laws, guidelines and instructions on their own.	24.06
BITCOIN is not accepted	36.84
None	18.05
Total	100.00

Source: own elaboration.

About the effects that companies perceive from the implementation of BITCOIN, table 4 shows that 79.00% of the companies do not perceive any benefit, 4.00% have perceived an increase in sales, and the challenge is perceived as a generator of expenses due to the exchange rate differential and the investment in equipment.

Table 4. Effects that the company perceives in the implementation of BITCOIN

ITEM	%
None	78.86
Increase in sales	4.07
Increase in expenses	0.00
Investment in systems	1.63
Investment in equipment	2.44
Positive exchange rate differential	1.63%
Negative exchange rate differential	9.76%
Increase in investment through this mechanism	1.63%
Total	100.00%

Source: own elaboration.

Conclusions

In the surveyed companies, it was possible to determine the low level of acceptance of using BITCOIN to charge or pay in realizing their commercial operations. Those businessmen who accepted it retained it in the wallet of Chivo issued in the Government in Dollars. Most businesses have not perceived any benefit from implementing BITCOIN as a legal tender.

BITCOIN as legal tender was established in El Salvador as a measure of financial inclusion; in a country where 4 out of 10 people have access to an account in a financial institution, as explained by the International Monetary Fund (2022), the implementation of BITCOIN in El Salvador is positive in order to increase the rates of financial inclusion, but it is not necessary that this is a legal tender for its operation, since its volatility has generated losses to the country and increased indebtedness. Any measure of financial inclusion brings with it literacy on the part of the population. However, there is no interest among business people due to the lack of knowledge of how cryptocurrencies work. It has led to their use needing to be accepted, which presents a training challenge.

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