

An Empirical Research on with Bit Coin Purchase Intentions of Lebanon Citizens and Its Effects on Supply Chain Strategy

Mansour Al Shamali^{#1}, Pierre Al-Khoury^{*2}, A. Nagaraj Subbarao^{#3}

¹PAAET, Kuwait

²Lebanese German University, Lebanon

²p.khoury@lgu.edu.lb

³DSU, India

Abstract-Nowadays, almost everybody has overheard about the digital currency named Bit coin and its worth has risen steeply. Even extra deeply, Bit coin currency with its central block cable technology has to be managed for pushing a decentralized change around the ecosphere. Intentions of this study are to empirically highlight the features that are associated with the purchase behavior of an individual. Digital signs deliver the resolution, but instead of these the key benefits are misplaced if a right-hand or a trusted another party is obligatory to stop dual expenditure. Bit coin's attraction has arranged key administration ladders towards a new group of operators. Data (almost 400 Respondents) for this study has been collected form the citizens of Lebanon of multiple cities. For the data analysis the proposed hypothesis has been tested through SPSS process method. Finally this study is concluded with discussion as well limitations and future research indications.

Keywords-Bit coin, Economy, Block-chain, Supply chain strategy.

1. Introduction and Literature

Managing today's supply chains—all the links to creating and distributing goods—is extraordinarily complex. Depending on the product, the supply chain can span over hundreds of stages, multiple geographical (international) locations, a multitude of invoices and payments have several individuals and entities involved, and extend over months of time. Due to the complexity and lack of transparency of our current supply chains, there is interest in how block chains might transform the supply chain and logistics industry. Understanding expansions in alternate

payment approaches is imperative for Bank of Lebanon, as it is a particular issuer of banknotes, so that it might assume its part in a well-organized way [1], [2]. The Bank of Lebanon directed a survey research as regards Lebanon's payment methods in 2009 and 2013 and results of this survey give a rich information regarding usage of debit cards, cash as well as credit cards [1], [3]. This survey outcome also helps the bank of Lebanon to collect data regarding newer payment novelties.

Bit coin has seemed as extreme productive cryptographic argument in history. Within few years of its quiet inauguration in 2009, Bit coin produced to contain billions of dollar bill of monetary value, in spite of brief analysis of the planning's. Meanwhile, up warding literature has recognized unseen but significant stuffs of the system, exposed attacks, planned promising alternates, and singled out problematic upcoming challenges. For now a large and energetic community has planned and arranged numerous alterations and additions.

Media and journalists conversation of digital coinages such as Bit coin has improved from last few years. On the other hand, the practice of digital exchange as a disbursement system has not reserved a speed. In this paper, the author walks around determining factor of awareness, possession of that particular digital currency in Lebanon state. While relying on the concept of Bit coin, Bit coin, the most prevalent currency, we catch that 64 % of Lebanon's are have awareness of Bit coin but only 2.9 % are actually using this.

Bit coin is substantial for an important function by providing a computer-generated currency structure without trusted revelries and deprived of pre-assumed individualities among contributors. Based on these restrictions, the over-all problem of agreement in dispersed system is unbelievable [4]. The word crypto currency and computer-generated currencies correspondingly used but these are grounded on a technology and computer-generated ecosphere respectively.

Past investigation into digital coinages can be divided into three threads. The chief emphasis of the mass media, general practitioner and research is towards the value of digital currency like Bit coin, as they consider it as an important pointer of these currencies accomplishment [5], [6]. A second research thread is emerging the fundamental technology [8], [9], [10]. A next thread is concerned with the value of current digital technology [7].

The author discover that the knowledge is definitely connected with Bit coin assumption. Finally, this study is accomplish with some recommendations to recover future reviews towards advancement of digital exchange, in specific, to attain detailed appraisals from the hard to grasp people of digital exchange operators.

Based on the survey of the Bank of Lebanon's research agenda towards digital currency, the focus of this research investigation is to empirically investigate the phenomenon of purchase intentions of Lebanon residents [11]. Below facts and figures has been used to hypothesis the current research. The Bit coin Omnibus Survey was originally considered as a pilot revision on use of ordinal or digital exchange in Lebanon state, and there are numerous motives that why we study it as such [12], [13].

2. Methodology

Block chain is the technology behind Bit coin and other crypto currencies. Block chain is a protocol for a digital ledger that enables proof of ownership and the transfer of ownership from one entity to another without using a trusted third party intermediary (like a bank). The value that is transferred can also move through an extended supply chain while ensuring that

what occurs at each point in the chain can be chronologically recorded. Facts related to awareness of digital currency shows that, generally 64 % of Lebanon's having age level of 18 or elder had heard of Bit coin. The age group that shows maximum level of awareness is from 25 to 24, with 71 % of respondents in this age group who have approximately heard bit coin. Regarding gender awareness of bit coin men's are considered to be more aware about it as compared to females, overall 75% men and 54% women stated that they have awareness of this digital currency. For the top measure, the awareness of Bit coin enlarged with education and household revenue (income). Like 72% of respondents with income level of \$100,000 or greater were having the bit coin awareness as compared to 54% of those having income level of below \$30,000.

On the other hand respondents having university education declared 75% of response level regarding awareness of bit coin as compared to college or high school level education which stated 59 and 50 % of awareness respectively. Hence, there is no difference found among the college and high school education awareness level of respondent's. Added more employed individuals had highest level of awareness related to digital currency that is 73 % as compared to those who are not in labor force of almost 51%.

Trend of digital currency among labor force status were almost same for both men's and women, but this trend again shows slighter higher level of awareness as compared to women's. While concerning with the geographical coverage awareness, British Columbia demonstrated to be the area most aware or conscious of Bit coin with the percentage level of 78. Quebec was the area that have the least amount of awareness regarding digital currency.

The gender Bit coin awareness related to region were also show approximately a similar trend for both cases either men or women, but almost a little bit trend depicts that men's are more aware then women's regarding digital currency awareness. The major difference among gender awareness is found in Quebec with 63 % men's and 35% women's knowledge of bit coin currency [12].

Bit coin awareness was inferior amid elder age groups as paralleled with the 18-24 age level. Conversely, the significant differences were originate in the 45-54 age level group. Precisely as paralleled with youngest age group, this depicts that they had 0.6 times the chances of heard about Bit coin digital currency.

3. Security Knowledge

Bit coin's attractiveness has prepared practical and safe management steps to new group of operators. Contrasting to claims of cryptography, operators faced instant and irreversible monetary victims, in case of if keys are lost or negotiated. Henceforth it is a thrilling and significant extent of research in practical or useable security e.g. Simplified Payment Verification (SPV). Even though the orientation of a Bit coin client maintains an authenticated copy of the complete block chain, this would execute an excessive weight on mobile campaigns.

An insecure observation centrals to a lightweight substitute: supposing that clients need authenticate proofs and can belief that the extended chain only comprises valid contacts. SPV proofs let un trusted handles to efficiently show to the clients, that a deal or a transaction has been comprised in a particular account. SPV is applied in the Bit coin library which inspires maximum mobile Bit coin customers. SPV confirmation entails handling an ever rising arrangement of proof of work tenacities, even though optimizations are conceivable such as opening from hard-coded check themes. SPV also conveys confidentiality alarms as it involves revealing the set of discourses the client is concerned to the third party [12].

4. Purchase Intention

Bit coin operators were requested to deliver their main motive for retaining Bit coin; on the other hand non users were requested to depict their own reasons for not using it even though they are having an awareness of it. While relying on these two questions it can be potentially shed a light over the point that why the rate of adoption for bit coin is lasting low? So For operators the mutual or a primary motive given for keeping Bit coin was curiosity of new

technology (29%). Other communal reasons highlighted that because of its international coverage it has been accepted as a foundation of international currency for buying goods from physical stores (11-14%).

The quantified facts for possession cracked down according to the level of Bit coin properties. Assumed the minor sample scopes of residents, it is problematic to make conclusive assumptions. However, more Bit coin containers incline to give payment connected details for possession more commonly than those who have low Bit coin quantity. Finally, only low Bit coin containers report trust related concerns.

Individuals who remained conscious of Bit coin but they did not possess it, asked to deliver main motive of not preserving Bit coin. Around 60% assumed that present exchange means met necessities or did not be aware of sufficient information about the technology. This delivers clarification of low implementation rates, consumers are content with current ways or unaware of the compensations or shortcomings of the substitute relative to their current method.

Additional common particulars stated that, for not holding Bit coin was because of the reason that, it is not extensively recognized (7%) and not considered as easy to manage (6%). In conclusion, it is supposed to note that many spectators on Bit coin have commonly quoted thrilling price differences as a reason of that why people avoid the digital exchange (Bit coin).

On the other hand, this supported study cleared that 3 % of the targeted respondents nominated this choice as leading or a foremost cause for not using Bit coin ownership. A notable section of both users and non-users articulated a level of disbelief or distrust for the organizations involved with the substitute method of disbursement. On one side, 6% Bit coin operators specified they do not trust on bank as well government and the Lebanon dollar; even though just 14 % stated imperfect to avoid dishonesty, fraud as well as make payments anonymously [12].

5. Hypotheses Development

In addition, the author hypothesis this study on the basis of this Lebanon research survey test of Bit coin features, to measure the level of knowledge held by defendants who were conscious of as well aware of Bit coin, containing actual ownership. Conferring to these supported facts and figures of Lebanon Omnibus survey the author hypothesized that

H1: Awareness of Bit coin have a significant effect towards Bit coin purchase intentions.

H2: Bit coin security Knowledge have a significant effect towards Bit coin purchase intentions

H3: Age moderates the relationship of Awareness and Purchase Intentions of Bit coin.

H4: Age moderates the impact of Security Knowledge and Purchase Intentions of Bit coin.

H5: Income moderates the relationship of Awareness and Purchase Intentions of Bit coin.

H6: Income moderates the impact of Security Knowledge and Purchase Intentions of Bit coin.

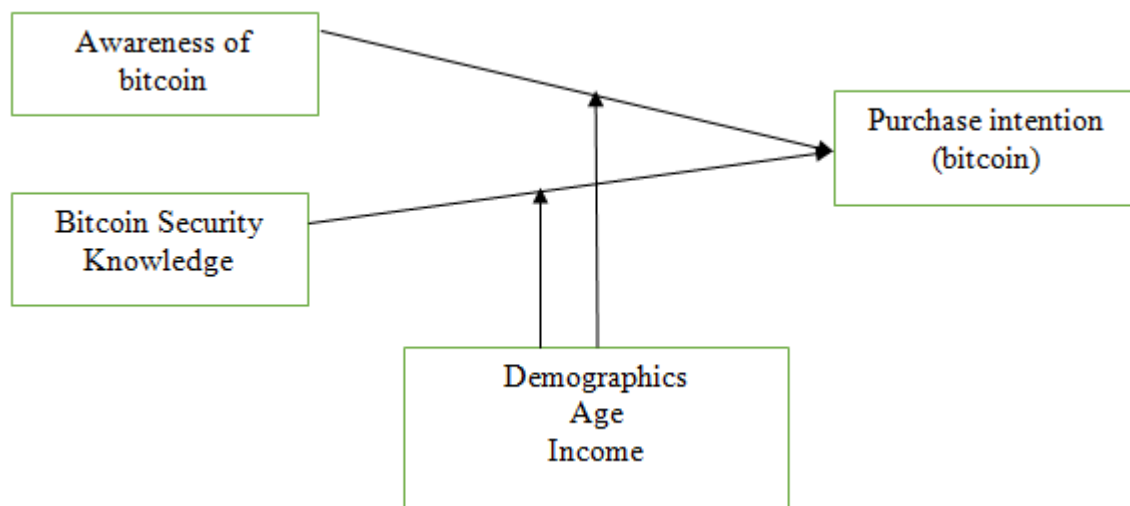


Figure 1.Conceptual Framework

6. Methodology:

Research Design: In our research study we used the Deductive Approach when we analyzed Literature and Inductive was used when we interpreted the results of our survey. Questionnaire survey is used as primary data collection instrument of this research. We used Quantitative research which is cross sectional, descriptive and formal study.

Target Population: The targeted population for this study is Lebanon Residents as they are well reputed, having technology awareness, and being known by trustworthy public.

Unit of Analysis: Our unit of analysis is the individual residents (external Customers; Sample size of almost more than 400 respondent's) of the

Lebanon State, either they are Bit coin users or not, but they have an awareness regarding Bit coin Exchange Technology.

7. Findings and Results:

Table1. Regression Analysis for Purchase Intention (Bit coin)

Variables	Purchase Intention (Bit coin)					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Independent						
Awareness of Bit coin	.194**					
Bit coin Security Knowledge		.188**				
Moderator						
Awareness*age			.322**			
Awareness*income				.371**		
Bit coin Know*age					.312**	
Bit coin Know*income						.405**

Table 1 shows the regression analysis of study variable. Table shows that in Model 1 relationship of awareness of bit coin is significant ($p < .05$) and positive ($b = .194$) with the purchase intention. In the same way in model 2, relationship of bit coin security knowledge is significant ($p < .05$) and positive ($b = .188$) with the purchase intention. This means that our direct hypothesis of the study is supported with our data. To check the moderation of age and income we multiply our independents (Awareness and bit coin security knowledge) with our moderators (age and income). After the interactional term in Model 3 we regress awareness*age with purchase intention and this shows that the relationship of awareness*age with purchase intention remains significant (.322**) which means that age moderates the relationship of awareness*age and purchase intention.

In the same way interactional term (awareness*income) also remain significant (.371**) in Model 4, which shows that income moderates the relationship of bit coin awareness and purchase intention. In the same way the interactional term of (bit coin know*age) is significant (.312**) with the purchase intention in Model 5 which shows that age moderates the relationship of bit coin knowledge and purchase intention. In Model 6 the interactional term (bit coin Know*income) remains significant (.405**) which means that income moderates the relationship of bit coin security knowledge and purchase intention.

8. What is Block Chain and how could it Help Supply Chains?

While the most prominent use of block chain is in the crypto currency, Bit coin, the reality is that block chain—essentially a distributed, digital ledger—has many applications and can be used for any exchange, agreements/contracts, tracking and, of course, payment and SCM improvement. Since every transaction is recorded on a block and across multiple copies of the ledger that are distributed over many nodes (computers), it is highly transparent. It's also highly secure since every block links to the one before it and after it. There is not one central authority over the block chain, and it's extremely efficient and scalable. Ultimately, block chain can increase the efficiency and transparency of supply chains and positively impact everything from warehousing to delivery to payment. Chain of command is essential for many things, and block chain has the chain of command built in. The very things that are necessary for reliability and integrity in a supply chain are provided by block chain. Block chain provides consensus—there is no dispute in the chain regarding transactions because all entities on the chain have the same version of the ledger. Everyone on the block chain can see the chain of ownership for an asset on the block chain. Records on the block chain cannot be erased which is important for a transparent supply chain.

9. Discussion and Conclusion

The short rate of ownership of Bit coin is surprising to some ones, seeing all the media courtesy specified to Bit coin. On the other hand, a recent revision by [14] delivers extra perspective for low Bit coin possession. In this current research study, the author concluded that both of the factors like awareness, security are the significant contributors for customers Bit coin purchase intentions. Even popular disbursement novelties like credit cards also took time to infiltrate into the market [15]. Relying on the empirical findings the author argument that the adaption of Bit coin is still in the early stages because of specific transactional purposes [13].

Bit coin's attraction has arranged applied and harmless key administration ladders to a huge new group of users. Opposing to other titles of cryptography, operators faced immediate and irretrievable monetary sufferers, in case of if secret keys are misplaced or exchanged. Added more based on the empirical results it also has been found that Bit coin awareness was less amongst elder age levels as compared to the youngest one having age level of 18-24 years.

Conversely, the noteworthy alterations were create among the age group of 45-54. Bit coin is considerable for an imperative purpose by providing a virtual currency structure without any trusted festivities and without pre-assumed personalities among the donors. Within these limits, the general problem of arrangement in a discrete system is unbelievable.

10. Implications and Direction for Future Research

Based on the empirical results or current research argument, it has been assumed that, still digital currency is in early state-run of knowledge of digital coinage usage. An emphasis should be positioned on recognizing and categorizing diverse sorts of users; e.g. Casual operators versus investor or contributors. By understanding the types of users it will be more beneficial for the development of Bitcoin technology

among multiple users according to their pre request demands.

By consideration the configuration of these sorts of operators (users) would be central for better future of digital currency usage or the implications. Added more there is more need to give awareness of bit coin usage to the residents, as results stated that many of the individuals were having Bit coin awareness but they are not users because of risk, security impacts. Therefore, by providing them proper training sessions regarding use of Bit coin technology the user rate may be enhanced.

The results of this study helps practitioners as well as academicians, or other experts who are studying the digital currency marvels to get know how regarding Bit coin user rate, significant impact of awareness, security knowledge towards purchase intentions. It is clear that estimates of Bit coin holdings must to be more accurate; this allow to rectify data to external network data as suggested above, using the methodology projected in. This suggests that we prerequisite to inquire directly around the quantity of Bit coin possessions, or also increased the quantity (number) of bins that a particular respondents can select from.

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