Subject Review: Are the Traders of Cryptocurrencies Adopt (Knowing- Doing) Approach in their Digital Stocks?

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Depending on articles titled:
1) "Cryptocurrencies Are Becoming Part of the World Financial Market", published in Feb. 2023, https://doi.org/10.3390/e25020377
2) "Moving Toward a Digital Competency- based Approach in Applied Education: Developing a System Supported by Blockchain to Enhance Competency-Based Credentials", published in Feb, 2021, https://ijhe.sciedupress.com

It is interesting to discuss only two article's points of view to solve the topic question; but due to the complicity of this phenomenon, it is a good chance to start with only two to avoid misunderstanding. So, the sequence of reviewing above mentioned articles will be as a brief description of each one then mixing the main ideas of both and trying to bridge those ideas with our subject title.

The dynamic expansion of fourth revolution of technology led to many changes in life style of economy in general and for financial activities in specific due to the appearance of which is called "*digital economy*". Before discussing the related two articles, it is useful to start with the beginnings of digital economy in addition to the reasons that pushes the wheel of activating this kind of economy. The global continued development pushes developed countries to adopt "*Tic*" technologies in their transactions and within a decades or less; many countries tried hardly to join this technology especially in developed countries while other developing ones are still at the end of the race and this could be the main source of our question because adopting (Knowing-Doing) Approach needs transferring efforts towards adopting "Tic" technologies rather than depending on traditional ways of having information and which it is captured in the (II article) in specific, in addition to the direct effect of environment because accepting and adopting such technologies need flexible response and deep understanding of the importance of sustainable development as shown in article (I).

In this context, the ambiguity shades the scene to understand this phenomenon because still, there is no specific definition for digital economy; studies, articles, researches, are still not clear to submit any; but in general, it could be known as that "*economy where both technologies and other economic trends interact and integrate in a transparent way to achieve the survival of economy; which means the future vision of economy depends on high qualified information sources rather than depending of traditional ones; it is known as "knowledge economy".* And although many digital currencies or "cryptocurrencies" as known and used since they were appeared and defined by European Central Bank in 2012 as *unarranged currencies or intangible ones that known and exchanged by traders through the use of*

blockchain technology that records, collects, and stores the information during exchanging cryptocurrencies among traders. And by U.S. Department of Treasury in 2013 who defined them as *a mean of exchanging currency; but still, it works in certain conditions not like tangible currencies;* but again no one could imagine the horizon of this path! Especially after many global critical circumstances i.e., Pandemic COVID-19 or any other global political issues i.e., Ukrainian War and/ or the critical situation of Middle East in Gaza.

Below is a brief explanation for the chosen articles;

Article I: it was written by Watorek; Kwapien & Drozdz; who are member of Computer Sciences Faculty & Academy of Sciences in Poland, and they present their article on discussing two kinds of cryptocurrencies (Bitcoin & Ethereum) by analyzing them with traditional instrument of financial marketing stocks for the period 2020-2022; and if those currencies are autonomy with respect to traditional financial stocks or not, they conclude that cryptocurrencies cannot stand as safe as market desires, still the situation is more complicated while talking about financial system.

They address how through (12/years) ago, cryptocurrencies were "*Bubbles & Crashes*" under many developing circumstances especially by using novel technologies, but most crashes took place during 2020 when Covid-19 pandemic appeared and again the situation is unclear! They refer to some related studies where some of them are handling the future of cryptocurrencies with high risk while others feel that environment for trading with cryptocurrencies is not mature enough yet; which means there is uncertainty of investing in cryptocurrencies. Moreover, since early times of 2022, the world inflation has its bad effects on trading with those currencies that leads to handle those liquid currencies as a hedge or safe haven for the stock market investment.

This article presents a data that consists of (12) financial time series to present contracts for difference (CFDs); where they are succeeded in adopting it due to its offering freely high frequent records of many financial instruments of the highest capitalized cryptocurrencies (BTC & ETH); which includes as well the most important traditional instruments of financial transactions, common fiat currencies i.e., AUD,

CAD, CHF, CNH, EUR; and GBP, etc. Data covers the period working hours of stock markets starts from 01/Jan.2020 to 28/Oct. 2022. The results of this article show two properties; first one is the strong correlation of the most financial instruments while the second shows the lower correlation strength of BTC& ETH.

These facts conclude to focus on those two ways of thinking towards cryptocurrencies; either to deal with cryptocurrencies as new version of financial market trends or still they cannot stand without the traditional instrument of analyzing financial market, and then it becomes evident that investing is possible for future; but meanwhile, authors doubt their results because they couldn't be valid to all kinds of cryptocurrencies due to the limitation of their samples where they use only two kinds of cryptocurrencies (BTC & ETH).

The current article also guides us to another conflict that related to technologies especially if we are talking about cryptocurrencies and how they react directly responses to any external and / or internal information because they are freedom and flexible to exchange and, in some cases, it is hard or impossible to control information. Thus, it is very important for every trader of those cryptocurrencies to have knowledge and skills to manage any changes and/ or making the suitable correction to control this cycle, especially in critical situations or events as happened during Pandemic COVID-19.

In addition, this article mentions how those cryptocurrencies have their role in energy consumption in future which means that all traders, consumers, users, etc. have to be skilled and trained enough to sustain in this path of investment; they also assured that their future

works deal with energy consumption into cryptocurrency market.

Article II: Two authors write this article; it is written by Ahmed Ghonim from Higher College of Technology in UAE; and Irene Cropuz from The Higher Institute of Applied Arts in Egypt in 2021 where it was published. Current article tries to make a journey from theoretical approach into applicable ones and handling Blockchain and badge technologies to emerge the new digital system for competency- based education (CBE) and trying to decrease the gap of learning for future. The idea is how to merge the industries expectations with the learning experiences as announced by (World Economic Forum, New Vision for Education in 2015).

Current article depends on reviewing the historical development of (CBE) from 1862 then reviewing Industrial Revolution era that brought many advanced ways of thinking and / or introducing many complicated machineries which leads us to *do more than think,* then how to adopt the matching of learning and training at the same time.

For more than six decades the way of learning was described as progressive movement and many idioms were known such as "*problem-based learning*", "*mastery-based learning*", "*outcome-based learning*", "*performance-based learning*" but unfortunately all of them are failed to capture the essence of CBE; moreover, still there is a gap between skills, competencies and what industries expected unless such individual competencies or skills.

On the contrary, technological applications exceed the traditional ways of learning due to its huge ability to align the learning technology with industries expectations and by novel technologies the path is paved enough for having affective industries as authors denote; online learning platforms draw an easiest way of having knowledge in a right way; but still the question is *Could these learning online platform continue without individual skills or competencies especially after the technological revolution and the appearance of AI? Could the whole world platform be ready to receive such AI applications or not yet?*

Authors of this article conclude that most of candidates have a gap between *what they got and what they have to get* to enhance to foster knowing-by-doing to be familiar with digitalization of skills to ensure the matching between learning requirements and skills to achieve professional development processes. They also recommended urgently to unify efforts of educational institutes towards practical outcomes.

In this context, current article presents the main four benefits of adopting Blockchain in education depending on the main idea of blockchain technology that firstly introduced by Satoshi Nakamoto in 2008 as a (peer-to-peer money exchange system), and then by Mainelli M. & Smith M. in 2015 in addition to MIT Sloan who is assistant professor in Christian Catalini; in which they describe blockchain technology as a balancing between different sources of shared data, records and / or diverse financial transactions that has its positive reaction on education industry i.e., *Efficiency; Integrity; Transparency; and Ownership;* where authors proven these benefits by saying that education is transformed into immersive experience rather than passive learning as we have before.

Current article concludes that digital CBE and competencies micro-credentials are highly demanded from now on and education have to start with applicable programs, the relationship between needs and desires, between practical activities and learning systems become tightly more than before; and adopting Blockchain will enhance the outcomes of CBE, in addition to improving the outcomes of "knowing"- "doing" approach through aligning standard knowledge with practices.

After reviewing these two articles and to join their ideas with subject title purposes; for the first time, it would be a sense of being wonder if these two articles are flowing on the same channel or not? But after reviewing them in deep and thinking deeply with our subject title, it seems that there is tight relationship to join them especially when we are talking about cryptocurrencies, knowing- doing approach and digital stocks.

The two articles are succussed in describing the current and future situation of cryptocurrencies and digital stock under the condition of technologies and rapid changes; they also succussed in focusing on the gap between the rare knowledge, and skill or competencies with future needs of industries. Another point of view which was introduced with high respect is the limitation of using only two kinds of cryptocurrencies for (**Article I**) and using Blockchain digital applications rather than others in (**Article II**); which means that there is ambiguity to get right decisions towards the future of all cryptocurrencies in addition to other digital systems.

It is clear now that understanding the future of cryptocurrencies & digital financial systems have to balance knowledge, skills, competencies; with experiences, practical programs to achieve the main four benefits of adopting Blockchain in education industry; due to the ability of blockchain to capture the activities that have been drawn before with its competencies, moreover, blockchain technology could score each competency individually and / or in a group as programed and conclude every detailed competency level, otherwise, traders will start their stocks trading without estimating the ends; *which is easy at beginning does not mean that the easiness is continue*. In other words, adopting knowing- doing approach is useful to understand the financial equation policy of those cryptocurrencies.

Moreover, the global economic environment trends appear as "*abb & flow*" paths between who supports the adoption of novel technologies and sever their ability to develop and improve their financial systems towards blockchain technology and those who oppose it citing their argument on the risks of adopting such technologies especially for exchanging cryptocurrencies in virtual climate (out of control). Thus, rapid dynamic improving and testing skills and competencies is MUST for adopting knowing-doing approach, otherwise, the future of this market is risky!

Finally, it seems that many works could be written for many decades to add more knowledge to shelves, and many serious efforts have to be taken to avoid or at least decrease the risks of those cryptocurrencies and their novel financial systems such as blockchain and AI.

To increase knowledge, here below list of references of these two articles as cited by authors.

Data Availability:
The data used to support the results of this study has been included in the article.

Conflict of Interest:

Funding Sources:

Acknowledgments:

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Article II

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