



# INDIGENIZATION OF SOCIAL SCIENCE RESEARCH AND TRANSNATIONAL COOPERATION WITH REFERENCE TO GLOBAL FINANCIAL INCLUSION THROUGH CRUPTOCURRENCY AS APPLICABLE TO INDIA

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## **Abstract:**

Social science research particularly research in Economic and Management needs be practical and useful for practical application, different countries with their different economic, social and cultural background need a methodology to solve the local problems. There a huge research gap as far as the research on indigenous social science research is concerned. Transnational research cooperation for financial inclusion involves the cooperation from different universities of the world for the successful implementation of the research findings for example the Ant financial services of Alibaba group , Lufax, ZhongAn, Qudian from china, Adyen from Netherlands, Xero from Newzealand, Sofi from san Francisco, Avant from Chicago, Klerna from Europe, Oscar from America are of great help in conducting financial research in India, Indian universities can have collaboration with these companies for research and thus global financial inclusion is possible through

transnational research cooperation. , Global Financial inclusion through crypto currency is possible. Financial inclusion through crypto currency in India will speed up the growth process particularly during this pandemic affected slow pace of economic growth. In India we need to do research in social sciences particularly in finance with regard to how best we can have a crypto currency of our own, Social science research is need based it requires international cooperation for financial inclusion, India is capable of having its own crypto currency for the financial inclusion

Bitcoin and other crypto currencies have been operating in India for a number of years. Crypto currency has many problems like hacking, security risk, money laundering, data loss, decentralization , black market, tracking transactions, mining, gold farming and need for high capacity computers and lack of common acceptance.

Theses drawbacks can be tackled through university research in social sciences and India needs research in to the above mentioned problems through coordinated integrated interdisciplinary research by the universities. Crypto currencies are rapidly mutating into real money that will give a healthy competition to the different currencies issued by the centralized governing bodies. It has a bright future. It can be used instead of physical money for payment. The genuine crypto currency is the decentralized, Crypto currency will dominate in future and will have a huge scope ahead but it should be legalized and lot of academic research has to be undertaken as mentioned in this study.

**Key words:** *Indigenization, crypto currency, Bitcoin, financial inclusion, gold farming, mining.*

**Abstract:**

## **Introduction**

Social science research particularly research in Economic and Management needs be practical and useful for practical application. Borrowed ideas will never provide solution to the burning problems of the country. With regard to research in finance in social sciences one needs to undertake research on such topics that are helpful for monetary and fiscal policy. In India there is a restriction on the use of crypto currency but we are allowed to use the black chain technology. This paper explains that how an international cooperation in research in social sciences particularly for financial inclusion is helpful and how best India can adapt the crypto currency through indigenization of research applicable to Indian conditions.

Different countries with their different economic, social and cultural background need a methodology to solve the local problems, no doubt there is globalization and one need to think globally and act locally with regard to the management of finances and the administration of the monetary policy, India is not an exception to this. Countries including India with its vast network of Universities and blooming research activities have to insist on conducting research in financial services particularly fin-tech services in which India has already a role

model. UGC must insist universities that the research should uphold Indian culture and background and the research should be practically applicable, for example the research in microfinance has created a revolution for financial inclusion and the same way the research in crypto currency should be practically applicable through monetary policy.

Transnational research cooperation for financial inclusion involves the cooperation from different universities of the world for the successful implementation of the research findings for example the Ant financial services of Alibaba group, Lufax, ZhongAn, Qudian from china, Adyen from Netherlands, Xero from Newzealand, Sofi from san Francisco, Avant from Chicago, Klarna from Europe, Oscar from America are of great help in conducting financial research in India, Indian universities can have collaboration with these companies for research and thus global financial inclusion is possible through transnational research cooperation. Internet of Things (IOT), Artificial intelligence, 5G Cloud, Big data, Blockchain, Robotic process automation, Voice technology, including natural language processing, Biometrics identity management will be of great help in financial inclusion.

Global Financial inclusion through crypto currency is possible, examples of crypto currencies are Bitcoin (BTC), Litecoin (LTC), Ethereum (ETH), Bitcoin Cash, Ethereum Classic, Zcash (ZEC), Stellar Lumen (XLM), Bitcoin Satoshi's Vision (Bitcoin SV), Tether, Cardano, Ripple XRP, Dogecoin, etc.. There is shortage of international currency for trade and there is scarcity of Euro and Dollar, the research in crypto currency suitable to a country like India will be of great help and there is a need to do research in this field.

Financial inclusion through crypto currency in India will speed up the growth process particularly during this pandemic affected slow pace of economic growth, In India we need to do research in social sciences particularly in finance with regard to how best we can have a crypto currency of our own, because we are much ahead in innovations and there is no dearth of inventors of a new currency like Bitcoin in India, of course it is not a replacement for Indian currency, It should be such that even people excluded in financial services should be included and added in the financial inclusion.

This paper is based on indigenous thought purely of original thinking which will be of great help to researchers and also for policy makers in India.

## **HYPOTHESES OF THE STUDY**

The present study is based on the following hypotheses

1. Social science research is needed based on it requires international cooperation for financial inclusion
2. India is capable of having its own crypto currency for the financial inclusion.

## OBJECTIVES OF THE STUDY

The study us having the following objectives

1. To analyze & study the research in the field of financial inclusion
2. To find out the problems of financial inclusion through crypto currency
3. To suggest remedies to the problems of financial inclusion through crypto currency

## METHODOLOGY

The study is based on the secondary data collected through various sources, a sample of 10 crypto currencies is analyzed and the area of research activities going on in this field is taken in to consideration globally and suggestions are given based on such research, applicable to Indian conditions for the purpose if financial inclusion through crypto currency.

## REVIEW OF LITERATURE

*Dr. Supravat Bagli (2012)* in his article A Study of Financial Inclusion in India has analyzed the indicators of financial inclusion, he has analyzed the number of banks based on credit distribution and developed a Composite Index of Financial Inclusion. This study has constructed a composite index of financial inclusion for each state using a wide range of indicators and concluded that mass financial literacy and awareness among the marginalized sections of people are absolutely necessary to achieve financial inclusion.

*Dennis B. Desmond, David Lacey, Paul Salmon (2019)* in their article on evaluating crypto currency laundering as a complex socio-technical system has observed that- The crypto laundering process is considered to be a complex socio-technical system. The review demonstrates that no previous studies have defined crypto laundering as a complex socio-technical system or used systems thinking framework approach to evaluate how criminals, regulatory bodies or law enforcement entities understand processes and assess risk within crypto laundering systems.

*Arunmozhi Manimuthu , Raja Sreedharan V. Drishti Marwaha & Rejikumar G. (2019)* in their article entitled -Transformation of Crypto Currency in to a Global Phenomenon- highlighted that When Bitcoin came into existence, it seemed to signal hope for a better future, but the growth of Bitcoin is hard to predict. Bitcoin opens up an entirely new world for both practitioners and academicians. Further, this study presents an idea about the “potential” of Bitcoin, highlights the prerequisites, need, implications, and challenges faced by Bitcoin in processing business transactions.

*Ashish Kumar (2020)* in his article entitled - Empirical investigation of herding in crypto currency market under different market regimes – says that we have around 2,200 digital currencies trading across the world,

and designed a policy helpful for the policy makers in designing stricter regulations to provide safe investment environment to the investors.

**Mohd. Yousuf Javed, Rehan Husain, Bilal Mustafa Khan & Mohammad Khalid Azam in their article(2020)** identified major parameters namely: Financial risk, market risk, liquidity risk and operational risk and these the parameters that are impacting the values of crypto currency. They have also analyzed the issues and challenges in the crypto currency market of India.

These studies don not insist on indigenous research and do not analyze the formation of a crypto currency as applicable to India, hence this study Indigenization of social science research & transnational cooperation with reference to global financial inclusion through crypto currency as applicable to India is undertaken.

## **INDIGENIZATION OF SOCIAL SCIENCE RESEARCH**

Challenges of Doing research in Sociology in a Globalizing South particularly between Indigenization and Emergent Structures, The analysis is concerned with the differences between the centre and the periphery in the growth of paradigms for disciplinary development, the role of communication theories and empirical research, and particularly with intrinsic and extrinsic dimensions of indigenization and their relationship to the ideologization of science. According to Kim Jae-un (1979), it is a general outlook or commitment, i.e., as meaning an attitude toward the national identity in the awareness of problems, pursuit of ideas for their solution, adoption of a right methodology, and interpretation of research results in social sciences.

## **TRANSNATIONAL RESEARCH COOPERATION FOR FINANCIAL INCLUSION**

There is a need for research in Anti-Money Laundering (AML) and Combating the Financing of Terrorism (CFT) controls on financial inclusion. IMF, IBRD, IDA, and international financial institutions should promote financial inclusion through academic research involving universities globally. Several examples of longstanding collaborations in research programming can be identified from programme collaborations over the last decade. There is an urgent necessity to coordinate the following aspects in international research cooperation. It can be done through four methods as done in Europe-

1. Alignment of structural and systemic differences in national research and innovation systems (Systemic dimension)
2. Horizontal co-ordination between research, innovation and other policy areas (such as competition, regional, financial, employment and education policies) (Horizontal dimension)
3. Vertical co-ordination between local, regional, national and transnational policy levels (Vertical dimension)

4. Temporal co-ordination ensuring that policies continue to be effective over time and that short term decisions do not conflict with longer-term commitments ('dynamic efficiency' or temporal dimension).

## **GLOBAL FINANCIAL INCLUSION THROUGH CRYPTO CURRENCY**

The empirical results show that crypto currency, internet usage, and mobile subscriptions have a significant positive relationship with financial inclusion and financial sector development, suggesting that countries with higher levels of crypto currency, internet usage, and mobile subscriptions have higher levels of financial inclusion and financial sector development. Elinor Ostrom has given a meta-framework for self-governance. Bitcoin falls short in its self-governing ambitions, while crypto currency software protocols and block chain technologies have potentialities within “permissioned” peer-to-peer private or hybrid networks. However, regulation and supervision by trusted third parties are required.

Crypto currency is a self-governing system. It fits in with the libertarian-inspired Silicon Valley dream that computer networks can create order in society without transaction cost increasing human control. Bitcoin, is developed as a general medium of exchange. Tokens or Initial Coin Offerings (ICOs) appear under the flag of fundraising for development and provision of a specific new service or product. Getting a crypto currency accepted is assumed to be subject to the market mechanism. However, the fact remains that one must convince the public that programmers will deliver what is promised and that the crypto currency will have value.

## **FINANCIAL INCLUSION THROUGH CRYPTO CURRENCY IN INDIA**

Crypto currency is a form of asset which exists in digital form that is in binary format and it comes with the right to use. In this context digital asset is being referred to national currency which is used as a medium of exchange. This transaction is secured using cryptography. Crypto currency acts as digital token that uses cryptography for exchanging digital signatures of token transfer, peer to-peer networking and decentralization.

India has witnessed a quick progress in financial inclusion particularly after the implementation Pradhan Mantri Jan-Dhan Yojana in August 2014. In spite of high growth of digital transaction, digital payment among the women, rural people, elderly people, and less educated people is much less than other groups of people. The provision of good digital infrastructure to the remote area, opening of more financial literacy centers and extension of credit to the marginalized people can help to fulfill the true essence of financial inclusion in India. India has a long way to go to become digitally financially inclusion. Indian government adopted demonetization in November 2016 to tackle with black money and make India a cashless digital economy. In a true sense financial inclusion is defined as having universal access to reasonably priced financial services, provided by sound and sustainable institutions, it includes saving, investing, borrowing and insurance.

India a country steeped in mystery, history, and culture, it is also not one to fall behind when it comes to technological advancement. Bitcoin and other crypto currencies have been operating within the country for a

number of years. As early as 2012, small-scale Bitcoin transactions were already taking place within the country. A vintage era pizza shop called Kolonial in the World area of Mumbai became the first restaurant service in India to accept Bitcoin payments.

In a short span of time, crypto currency exchanges began to spring up within the country. Pioneers like BtcxIndia, Unocoin, and Coinsecure began offering crypto currency exchange and trading services in India. Over time, others like Zebpay, Koinex, and Bitcoin-India were added to the list. India only contributes 2 percent of the total global crypto currency market. While the government of the country has not banned crypto currencies, they have not exactly been endorsing it. The coming years will reveal the direction in which the crypto market will move as far as India is concerned. Since there is no universal virtual currency across the digital medium, there are several different ways and methods to obtain or generate the virtual currencies. We can predict the future of virtual currency from the current expanding and growing of platforms that provide virtual currency and from the huge volume of trading virtual currency. Until crypto currency is being well regulated and controlled, users need to take extra precautions of using such virtual money.

Many social games, social networks and applications developers are tend to monetize their systems by implementing virtual currency. Strict legislations and laws must be set up to control and manage this new era of digital money in India because it is not real money; it is in the form of virtual currency. There is a need for financial literacy particularly with regard to crypto currency. Here arises the question of research in social sciences, in India to undertake research in this field, the problems of crypto currency calls for a remedy through research in the subject.

## FINDINGS OF THE STUDY

Crypto currencies are not free from some financial problems and security concerns.

1. It may lead to the Collapse of the crypto currency systems itself: If the crypto currencies are issued in unlimited quantity without considering the demand and supply it may lead to the collapse of the entire system.
2. It has ups and downs in its value: If the popularity of the virtual currency is lost it will lose its value .According to Chow and Guo study, it is observed that when the popularity of a virtual community drops, the value of its virtual currency will be devalued.
3. Possibility of money laundering through exchange with real money: One of the risks of virtual currency is that of money laundering. Fraudsters may use it for exchanging with real money and it will disrupt the financial stability.
4. Problem of Security through hackers: If an extraordinary intelligent person can mine the currency and break the system of chain & will create a fake currency thus may change the account balance.

5. Data losses can cause financial losses: The person doing transaction will be given a code and it is recorded in the computer or laptop, if the data is lost and could not log in it may create financial loss to the investor.
6. Decentralized but still operated by some organization: The crypto currencies are known for its feature of being decentralized but still they are controlled by their creators and some organizations. These holders can manipulate the coin for large swings in its price.
7. Demand for real money may decrease: If the payments are allowed through virtual currency the demand for real currency will decrease and the real money transactions are affected.
8. Black market through gaming: some social games may create black market for buying and selling their virtual currency. The increasing popularity of virtual currency in online environment has led to a thriving black market for trading virtual currency with real money.
9. Inability to track the transactions: Since most of the accounts in games done through virtual currency, gamers can create more than one account and use it for illegal transactions; hence the source of cashing will not be traced.
10. Gold farming risks: Gold farmers are players who play in social games in order to gain gold, which is virtual currency of the game, and then sell it for real money. The targeted buyers are the players who do not have enough time to play and compete for gaining virtual currency.
11. Mining crypto currencies require a lot of computational power and electricity input: This leads to highly energy use and mining needs advanced computers. It cannot be done on ordinary computers.
12. Crypto currencies are relatively new in the market: Many people are not aware of how to use crypto currency and hence may lose their investments by purchasing the crypto currency.
13. Lack of common acceptance: Many websites and companies do not accept crypto currencies, very few countries have legalized the use of crypto currencies and thus it may limit the transactions.
14. Losing the money paid mista
15. kenly: There is a fear that if the money is paid mistakenly to someone who is not a recipient, it is very difficult to get it back.

## SUGGESTIONS AND POLICY MEASURES

As far as transactions are concerned there are no limits in using Crypto currency. It is readily available to the general public. It protects from inflation. Making payment using crypto currency is very easy. It provides an easier way to transfer funds between two parties in a transaction. These transfers are facilitated through the use of public and private keys for security purpose, fund transfers are done with minimal processing fees .More over The inter country transaction is extremely easy with crypto currency because its function is not under any central bank, it is self-governed and managed and cost-effective mode of transaction. There is no third party involved like a bank on whom you need to trust. Investors are the masters of their money. Nobody can steal the personal information from merchants, which ensure the privacy of sensitive data,

All said and done the introduction of a new crypto currency in India is not so easy, the study suggests that utmost care should be taken in allowing crypto currency in India, in this background this study suggests that a lot of research has to be done in universities and policy measures are suggested to the government & financial policy makers. Following suggestions and policy measures are suggested which are the outcomes of the present study.

1. Research has to be done in universities as to the quantity of currency to be supplied, in this regard research topic may have, Crypto currency in India – A need based study. It may be also a study of demand and supply of crypto currency in India. University Department of Economics, Department of Management, Department of commerce can undertake such research which should help for the development of the indigenous ideas with regard to India where a large number of business families exist, it should also take in to consideration the Jan-dhan account and the demonetization policy with the large scale survey conducted all over India. The university departments can assist the Government finance department in such surveys.
2. There is plenty of manpower and the mind power in universities, department of computer science and department of information technology in the universities, they can do research on developing a new crypto currency and the effort must be rewarded. Research study can be done in Department of sociology on the subject, the social impact of digital currency in India with particular reference to Crypto currency. A point to be noted here is that the research should not be restricted to the traditional subjects, it should be need based and it should be inter disciplinary, the Department of kannada and Department of Linguistics can also be involved in this research, the topic for research in kannada department should be the communicable language for digital currency in India, The awareness of digital currency and crypto currency in India etc. A survey based analysis can be conducted. Research can also be conducted on value of crypto currency vis-a vis real money with reference to India, so that the value and the popularity of both the currencies are intact.
3. Research has to be done in the field of money laundering, India has already has Prevention of Money Laundering Act, 2002 and the research topic in social sciences will be , efficacy of money laundering Act in India its social and economic implications. Research can also be done in this field with the topic, Crypto currency and real money, the role of money laundering Act in preventing the illegal conversion of currency in India A study across the states, this will take in the consideration the history, culture and the life styles of people of India and we will be successful in doing the indigenous research in social sciences particularly with regard to the finance and monetary activities In India.
4. Research is also possible with regard to Security systems in the prevention of hacking digital accounts in India this topic will be researched from not only through departments of economics, commerce &

management but also by the engineering colleges and university departments of computer science and Information technology.

5. Research possibilities are plenty in the field of Insurance as to Insurance against crypto currency and its operation in India the role of global Insurance companies. This will prevent loss of finance in the operation of crypto currency and the research possibilities are there as to Insurance against data loss in India with reference to crypto currency. The strengthening of security systems in India in protecting the data loss with reference to crypto currency in India, these are the areas in which the research can be conducted. It is also possible to do research in the field of cloud computing and data recovery so that the draw backs of crypto currency can be easily overcome.
6. Research possibilities in the field such as Decentralization of crypto currency in India the role of RBI. It is also possible to do research on Coordination between virtual and real currency in India a study with reference to crypto currency. Another possibility is asking all the universities to conduct research on India having crypto currency of its own and the future transactions.
7. In order to prevent the decrease in demand for real money, research is possible as to Share of crypto currency in transaction in India particularly in investments. Not only in investments but also in certain payment the payments can be made through crypto currency and the research possibilities are plenty in this field.
8. Some social games may create black market for buying and selling their virtual currency. Research has to be conducted as to enacting a law to prevent the black marketing in crypto currency, this research can be done through the university law department or it can be interdisciplinary research between economics, management and law departments.
9. Inability to track the transactions can be overcome conducting research as to registration of all the traders in crypto currency and it can be Partial decentralization of crypto currency in India, a way to track the transactions and prevent frauds.
10. Gold farming risks can be overcome by framing legislations against gold farming and prevent the risk for gamers. The research by the universities in this field is to Tracking gold farming activities in India a security check through machine learning can be done.
11. Since mining crypto currencies require a lot of computational power and electricity input, research has to be done as to Use of solar energy for operation of crypto currency in India, research on new

generation computers with high capacity to operate crypto currency can be undertaken in India. Environmental impact of using crypto currency through computers and use of thermal energy in India is also a research topic for the department of Environment in the universities and the IIMS & Indian Institute of Science.

12. Since Crypto currencies are relatively new in the market, many people are not aware of how to use crypto currency and research should be on Awareness on crypto currency in India, Few diploma and short term courses can be conducted in universities on the investment use and operation of crypto currency.
13. Research will be possible on universalization of crypt currency and its impact on India, another possibility is enacting laws to legalize crypto currency in India.
14. As in the case of Banking any transaction made mistakenly through crypto currency should be rectified and the transactions should be protected, research in this field could be on tracking transactions of crypto currency in India through black chain method.

These are the suggestions brought out through research on Indigenization of social science research & transnational cooperation with reference to global financial inclusion through crypto currency as applicable to India.

### **LIMITATIONS OF THE STUDY**

The study is based on the secondary data only, the availability of data on the subject is the other constraint, and the study is based on the data collected from different sources and also on the basis of the research experience of the researcher.

### **SCOPE FOR FURTHER STUDY**

Crypto currencies are rapidly mutating into real money that will give a healthy competition to the different currencies issued by the centralized governing bodies. It has a bright future. It can be used instead of physical money for payment. The genuine crypto currency is the decentralized Crypto currency will be grown in future and will have a huge scope ahead but it should be legalized and lot of academic research has to be undertaken as mentioned in this study. There is lot of scope for research on the subject; in fact all the recommendations made in the study are capable of doing research in the field. The study can be extended to other departments in the universities on the indigenization of social science research particularly on crypto currency.

## SUMMARY & CONCLUSION

Social science research particularly research in Economic and Management needs be practical and useful for practical application, different countries with their different economic, social and cultural background need a methodology to solve the local problems. Transnational research cooperation for financial inclusion involves the cooperation from different universities of the world for the successful implementation of the research findings; Global Financial inclusion through crypto currency is possible. Financial inclusion through crypto currency in India will speed up the growth process particularly during this pandemic affected slow pace of economic growth, In India we need to do research in social sciences particularly in finance with regard to how best we can have a crypto currency of our own, Social science research is need based it requires international cooperation for financial inclusion, India is capable of having its own crypto currency for the financial inclusion. There is a huge research gap as far as the research on indigenous social science research, Bitcoin and other crypto currencies have been operating in India for a number of years. Crypto currency has many problems like hacking, security risk, money laundering, data loss, decentralization , black market, tracking transactions, mining, gold farming and need for high capacity computers and lack of common acceptance. Theses drawbacks can be overcome through university research in social sciences and India needs research in to the above mentioned problems through coordinated integrated interdisciplinary research by the universities. Crypto currencies are rapidly mutating into real money that will give a healthy competition to the different currencies issued by the centralized governing bodies. It has a bright future. It can be used instead of physical money for payment. The genuine crypto currency is the decentralized Crypto currency will be grown in future and will have a huge scope ahead but it should be legalized and lot of academic research has to be undertaken as mentioned in this study.

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