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**POST GRADUATE DEPARTMENT OF ECONOMICS
UGC CENTRE FOR ADVANCED STUDIES
SARDAR PATEL UNIVERSITY, VALLABH VIDYANAGAR**

Department of Economics (UGC CAS Phase II) Sardar Patel University, Vallabh Vidyanagar

Post Graduate Department of Economics, Sardar Patel University was established in 1958. The Department is the first & the only Department of Economics in the state of Gujarat to have been awarded the status of Centre of Advanced Studies in Economics (CAS – Phase two) in January 2018 by the UGC. Prior to that the Department has been a recipient of SAP (Special Assistance Program) Phase 1, 2, & 3; a generous ASIHSS grant, & CAS (Centre of Advanced Studies) Phase 1. The Department undertakes multidimensional *teaching, research & extension activities*, with one benefitting the other.

In context of *teaching*, Department offers MA, & PhD programs (regular & part-time). Course content & curriculum up-gradation is its regular feature that strikes an appropriate balance between seeking solutions conducive for local economic problems & aspire to be at par with opportunities evolving at national & international level. A strong team of eight faculties include six faculties with a PhD, four being registered PhD guides, four faculties being gold medalists & all faculties have qualified for NET/SLET/JRF. Eminent faculties of the Department have served in various capacities in advisory bodies in State & Central Government, thereby enabling enriched classroom discussions with shared experiences. Department facilitates a learning ecology through hands-on-learning with well-equipped computer lab, electronic peripherals, & enriched library of the Department, AERC, & Bhaikaka library of the University. Learning is enabled through, lectures by eminent guest faculties/practitioners, seminars, assignments, short-documentaries, access to online resources, online blended resources sharing, mock budgets, viva-voce, etc. Besides major economic courses, elective subjects offered include courses sensitive to environment, gender, ethics, & of national & international economic relevance. Department facilitates awards/fellowships to students to motivate their achievements. Students are provided free classes for National & State level competitive exams & are also encouraged for start-ups.

As for the *research*, the department building houses the only Agro-Economic Research Centre, & Cost of Cultivation Scheme in the state of Gujarat, research wings of Ministry of Agriculture & Farmers' Welfare, New Delhi, & the Department has collaborated for more than 140 research projects. Projects have been undertaken for Ministry of Animal Husbandry, Dairying & Fishing, Ministry of Rural Development, National Dairy Development Board, other department of the university, among others to undertake multidisciplinary research. The inception of Artha-Vikas, a national research journal by the Department dates back to 1965 & has published more than 55 volumes including the golden jubilee issue. It is a bi-annual refereed journal with ISSN number 0004-3567 & is also listed in the ABDC list of journals. Since 1958 till date the Department has awarded more than 50 Ph.D. degrees & 50 M.Phil. degrees. Department has published more than 20 working papers, two District Human Development Reports, & more than 100 research projects & village surveys. Department has been continuously involved in organizing seminars, conferences, refresher courses, students' competitions, & memorial lecture series of great economic relevance. Faculties present research papers in national & international seminars & conferences & publish research papers in national & international journals & books.

The Department has been involved in undertaking various *extension activities* related to creating positive impact on raising the productivity of livestock farming, eco-friendly disposal of unused & expired medicines, preparing a statistical outline of the data of Sardar Patel University for two decades, preparing a standard tabulation format for data collection for various universities, charity for old age homes & orphanages, & tree plantation, among others.

However, the Department aspires to ascend knowledge, wisdom, & fulfilment of shared responsibilities by & for the various stakeholders associated with the Department & the larger sections of the society. As we endeavor on this journey, we seek to join hands & collaborate with like-minded & similarly inspired individuals & organizations.

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OUR CONTRIBUTORS

Deep G. Vaghela	Research Scholar, Department of Business Studies, Sardar Patel University, Vallabh Vidyanagar, Gujarat
Prof. Sandip K Bhatt	Research Guide, Head & Dean, Department of Business Studies, Sardar Patel University, Vallabh Vidyanagar, Gujarat
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Sarika Kumar	Research Scholar, Indian Institute of Foreign Trade, New Delhi

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AWARENESS & PERCEPTION OF GENERARION X AND Y TOWARDS CRYPTOCURRENCY WITH SPECIAL REFERENCE TO BITCOIN"

Deep G Vaghela* and Sandip K Bhatt**

Abstract

With technological innovation and interventions in various areas, concepts, practices and conventions are being changed and new ones are being adopted. Finance is no exception; a concept of e-currency named Bitcoin a cryptocurrency was developed and introduced for small cashless transactions back in 2009.

In recent years it is in headlines for various reasons like its high value, secured medium of transactions without any interference of banking agent or Govt. Regulations and its network of operations is also being expanded as many small and big players have started to accept it as mode of payment globally. Just like many other nations Bitcoin was discouraged by Govt. and was labeled as 'illegal tender' which repealed many potential investors from it. Now as Govt. has partially lifted the restrictions and is in process of making it legal for trade purposes many investors from the older Generation X (born between 1965 and 1980) and newer Generation Y (born between 1981 and 1996) are looking at it as an investment perspective. This study is an attempt to study the awareness of both the generations towards cryptocurrency in general and perception towards Bitcoin in specific.

Primary data collected from 140 respondents of both the generations and Secondary information in introductory portion has been used.

The results suggest that Bitcoin is most popular cryptocurrency among the respondents and its perception is affected by its Value and Security. However expanding network of operators does not affect investor's perception towards Bitcoin.

Keywords: *Bitcoin, Cryptocurrency, Digital Finance*

1. Introduction

In this era of technological invention and interventions, various areas in finance and banking has witnessed advancements since the inception and introduction of plastic cards followed by Digital modes of banking such as Internet and Mobile Banking which has inclined many customers towards performing more transactions and has improved financial inclusion and has positively affected their perception towards financial services by building trust and has become the part of their routine for financial matters, products and services from performing transactions to making investment. This does not end here; the game changer concept in the world of digital banking named 'cryptocurrency' had started to evolve in around 2008.

Presently, there are various crypto currencies existing in market which were evolved due to popularity of first ever crypto currency named 'bitcoin', few popular names among investors are Dogecoin, XRP, Liteocoin, Stellar, Ethereum, Cardano, etc. (Pavel, Miroslava, & d'Arti, 2016)

Now, there is a misconception among many people regarding the concept and actual essence of Bitcoin. Many think or perceive it as a mode of speculation or gambling or illegal way of earning money. But the reality is completely different.

* Research Scholar, Department of Business Studies, Sardar Patel University, Vallabh Vidyanagar, Gujarat.

** Research Guide, Head & Dean, Department of Business Studies, Sardar Patel University, Vallabh Vidyanagar, Gujarat.

Bitcoin is a type of online communication protocol that enables to use the virtual currency just like any other digital payment option does. (Raine, Nicolas, Edelman, & Tyler, 2015)

(Alstyne, 2014) stated that basic currency functions like medium of exchange can be performed by crypto currencies, it also has a store value and just like money it has a unit of account.

The operations of BTC depend on consistent system named Blockchain technology which keeps the records of activities and a transaction backed by secure cryptography technology which is capable of making secure transactions and is able to secure the formation of fresh units of Bitcoin.

The concept of Bitcoin is not new. It is just in the limelight in India as well as internationally since last few years due to its high value and other prospects and concerns in various economies. The Bitcoin was presented as digital payment medium in early 2009 after it was developed by anonymous developer group called Nakamoto. It is also first known cryptocurrency. (Carrick, 2016)

Nakamoto reported that financial activities were solely dependent upon financial intermediaries which acts as trusted third party among two people performing transactions had its own limitations like high costs, rigidity, intervention of Govt. -Politics and less scope of performing small day to day transactions.

Therefore a new, trusted, flexible and secured medium of transaction does not without third party, Govt. interference and free from political policies was the need of continuously developing economy. The Bitcoin was evolved as the solution to the bunch of these problems.

Just like other avenues of investment like Stock Market, Real estate, Commodities investment and others always has cost associated opportunities; crypto also has the same factor of opportunity cost associated with it considering it bearing the value in the market.

One popular incident recorded by (Zohar, 2015) says that Laszlo, who was one of the first users of Bitcoin had spent 10,000 units of Bitcoin to buy a pizza in May 2010. In 2010, a single unit of Bitcoin was having value of \$0.0025, which means that \$25 was opportunity cost taken by Mr. Laszlo in 2010 to buy a Pizza. He was unaware of actual potential of Bitcoin back in 2010, he had technically spent about \$50,000,000 worth BTC on pizza as per its average prices of BTC in initial days of April of 2019. (Cointelegraph)

The main factor for selection of BTC as the base of the research among all other options available is the market capacity and the popularity. In the beginning of this financial year, the market cap of BTC was around \$90 Billion followed by Ethereum with about \$36.6 Billion market cap, Cardano with around \$8 Billion. The daily trading volume of BTC is around \$31 Billion on an average day of August 2021 which makes it number 1 in the popularity among its counterparts with market dominance of 45.22% as on August 27, 2021. (Cointelegraph)

This research is an attempt to ascertain the awareness level of Cryptocurrency and especially Bitcoin among two generations viz. Generation X and Generation Y which has different perspective and understanding towards things which is reflected in their real world in terms of their 'behavior' which is inclusive of Investment Decisions.

Investors as well as Businesses must have an idea of perception of different generations to optimize their services to facilitate the suitability of it to both the generations.

With the help of following research questions, this study attempts to ascertain factors distressing the perception of Gen Y and X towards crypto currency as a whole with Bitcoin in specific.

R_{Q1} : How is the perception and adaptability of Generation Y and X towards Bitcoin is affected by its **Value**?

R_{Q2} : How is the perception and adaptability of Generation Y and X towards Bitcoin is affected by its **Security**?

R_{Q3} : How is the perception and adaptability of Generation Y and X towards Bitcoin is affected by its **extending network of operations**?

This study will highlight the effect of above factors on perception and adaptability of two generations towards Bitcoin. The notion of Bitcoin is still the new for many developing economies and modern monetary system but still it needs to be taken into consideration due to factors like its value and popularity. Despite high level of informative and educational growth in many areas, we still lack an institution which exclusively provides authentic education in the area of cryptocurrency. Having one can be beneficial in gaining insights and understanding this new monetary system. As (Carrick, 2016) has observed, many scholars are yet to fully explore and present the crypto despite its rise. This study will also provide insights to businesses and individuals accepting or consider accepting the BTC as currency in exchange of goods and services.

Review of Literature

When it comes to determining the perception towards anything like Cryptocurrency - Bitcoin, various theories can be applied for it. Many researches focusing on particular theories to determine the perception in this area has been conducted among various parts of the world which considered examination of different factors, one being monetary matter and perception of different people towards e-banking/online currency in pre, during and post introduction of this technology which includes Internet Banking, Credit Cards etc.

Worldwide, very few studies have been conducted to examine the perception towards Bitcoins in various financially and academically developed nations out of which relevant researchers are reviewed and highlighted in this portion. In India, only some studies are found whereas the state of Gujarat lacks such type of studies. This makes a gap in the area of research which is attempted to fill with the help of present study.

The introduction of internet and the technology current era is highly affecting the thinking of people and how they perceive things. (Yusuf, Dauda, & J, 2015) stated that it is need of an hour to investigate the perception of people towards these things as it is very essential piece of information for the organization which are indulged in providing online banking services as it will make it possible to understand the perception of the potential users and provide optimum output in terms of services that assists in increased efficiency level of the operations.

In various studies related to adoption and perception Digital Financial Services have considered constructs like PEU (extent to which the user can effortlessly use technology) and PU (the level till which new technology can render functional outcomes) from various versions of Technology Acceptance Model (TAM) including the original version by (Davis, 1989). (Folkinshteyn & Lennon, 2017) attempted present the useful findings for end users as well as developers by using the modified constructs of TAM and study the technology adoption with reference to Virtual Currency (Bitcoin) and the Technology behind it i.e. Blockchain.

Various studies are conducted on measurement of 'perception' of different groups. Perception is nothing but a Rational Psychological concept which according to (Youngson, 2005) it can be defined as "A process of becoming aware, informed/known to any idea or thing."

(Dhanapal, Vashu, & Subramaniam, 2015) conducted a study on users of internet technology usage in United States among three Generations inclusive of Baby Boomers, Generation X & Y and concluded that Generation Y, X and Baby Boomers respectively ranks in use of Internet and Technology. Which means a study like this which is based on technology which is dependent on Internet should be confined to only Generation Y and X. Therefore, only these two generations are taken into account for the study.

(Congress, 2018) The international status of Cryptocurrency is highlighted in this report, it shows that various nations including Canada, Taiwan, Switzerland, China, Thailand, Australia, Argentina, Italy, Colombia, Mexico etc. are having different nomenclatures like Payment Token, Crypto Token, Digital Currency, Virtual Asset, Virtual Commodity etc. for this technology. However it is not recognized as legal tender in many economies

and most central banks and governments of the US, UK, South Africa and Belgium have warned users that transactions performed with crypto is at their own risk.

Some nations viz. China, Macau, Pakistan and New Zealand have decided to regulate the crypto currency and treats them as investment security like equity/debt security as well as derivative. Sole reason behind this is to generate funds in the form of IPOs and attract international firms operating in the areas of electronics like electronic services, hardware production and data mining on which the operations of Bitcoin are based on. (Congress, 2018)

India is also focusing on making 'Digital India' through Digital Currencies; However Bitcoin is still not having a 'legal status' as a currency in India. Finance Minister Nirmala Sitharaman in an interview stated that precautions need to be taken by people while making transactions of Bitcoin. She also added that cryptocurrencies are the future and therefore India also needs to develop its own secure and adaptable cryptocurrency which can be used in every type of transaction by everyone but within legal framework. (hindustantimes, 2021)

Theoretical Frame Work

Value:

Just like any other currency or commodity, the Bitcoin's demand is also determined by its price and value in open market. (Li & Wang, 2017) stated that the value of Bitcoin is its exchange value with other currencies. The value of Bitcoin has seen many ups and downs in last decade, however they can be classified in four major period which are as under:

- a) Price Index of time frame from July 2010 to December 2016.

The bitcoin was quite worthless till April 2011 as 1 BTC was valued \$1 only in April 2011. It started to grow and reached to 1BTC = \$100 by the end of March 2013. In the end of November of same year it showed the peak value of 1BTC = \$979 post which in the years 2014-15 there was a constant decline until 2016 when it reached new height of 1BTC = \$1000. (Chart.2.1.1)

Figure1: Price Index of Bitcoin: July 2010 to December 2016.(Cointelegraph)



Source: www.cointelegraph.com

2017: The year of ups and downs

In the first three months of 2017, the trend was slow and constantly growing and showed average difference of about \$260 per unit. A continuously increasing trend was seen until mid-July, post which the price drop was seen which went down below \$2000. A new high of \$5000 was witnessed in initial days of September,

which was all time high value of the year. A fall of about \$2000 was seen during mid-September post which a boost was also seen which led to price of about \$4460. The boost in the value continued during November and in December, the highest average of \$20,000 was recorded. Value of \$21,000 was also seen due to high demand in international markets. A huge fall in value of Bitcoin was seen by the end of December as the records show that it was valued about \$15,000 per unit. (Chart 2.1.2)

Figure 2: Value of BTC during January to December 2017(Cointelegraph)



Source: www.cointelegraph.com

2018: The downfall

The initial weeks of 2018 was at par with the trend of previous year's end showing average value of \$16,000 till January 2018 when the volume trading was seen at higher rates due to high demand of BTC. Few reasons for rising demand of BTC were, rising demand for altcoin (other cryptocurrencies) out of which many could be exchanged against Bitcoins. The market share of BTC started to fall post February 2018 due to increasing demands of altcoins and the price started to fall to \$7000- \$6000 from \$11,000 due to roomers being spread by Goldman Sachs and as a result the low range of \$4000 was seen by December 2018. (Chart 2.1.3)

Figure 3: Value of Bitcoin from January to December 2018.(Cointelegraph)



Source: www.cointelegraph.com

The trend of 2019

The lowest average BTC saw in 2019 was \$3300 during first quarter of 2019 post which it jumped with 18% to \$5100 in April 2019. Later during the period of mid-June to July rise of 21% was seen which

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resulted in price range of \$10,000. The value of BTC is constantly increasing along with its remarkable market cap which was more than 180 billion during mid-July.(Chart 2.1.4)

Figure 4: The trend of 2019 (Cointelegraph)



Source: www.cointelegraph.com

During and Post Pandemic Period 2020-21

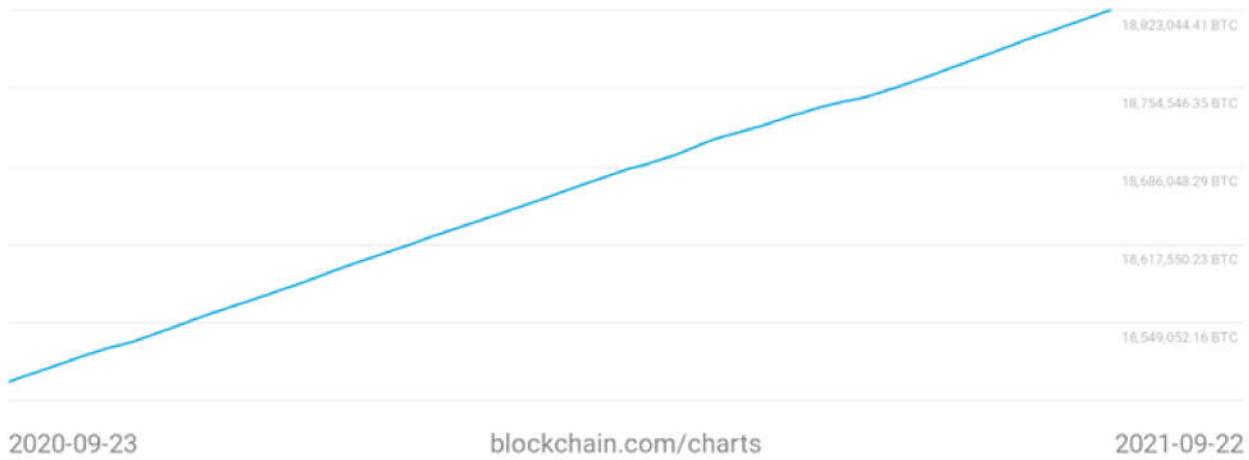
A stagnant growth in the value of Bitcoin was seen in the year 2020 when it surpassed the \$16,000 mark during first week of starting of COVID-19 pandemic. As of 22 September 2021 the value of one unit of Bitcoin is about \$42,338 and volume is \$1,807,576,533.

Figure 5: Value of Bitcoin from January 2020 to September 22, 2021(Cointelegraph)



Source: www.cointelegraph.com

Bitcoins in circulation
18,823,412.50 BTC



Source: www.blockchain.com

About 18.9 million bitcoins are in circulation as of 22nd September 2021 (Fig. 2.1.6) (blockchain.com)

Bitcoin against gold and the currency

Bitcoin is undoubtedly a winner and is unbeatable in terms of price and current value with an upward trend in future. It can be seen that the Bitcoin is valued five times more than the gold and is having same features like liquidity and rarity as gold possesses. However experts say that gold is more transparent and less volatile as compared to any cryptocurrency. (Times, 2021)Dyhrberg (2016) in his paper also conducted volatility analysis for comparison of BTC,Gold and USD and noted that Both BTC and Gold is having high cost of gaining compared to later.

Figure 6: Price movements of INR and Gold(goldprice)



Figure 7: Price movements of INR and Gold (goldprice)



Source: www.goldprice.com

Figure 8: Price movements of INR and BTC(tradingview)



Source: <https://in.tradingview.com>

Value of Bitcoin: The future

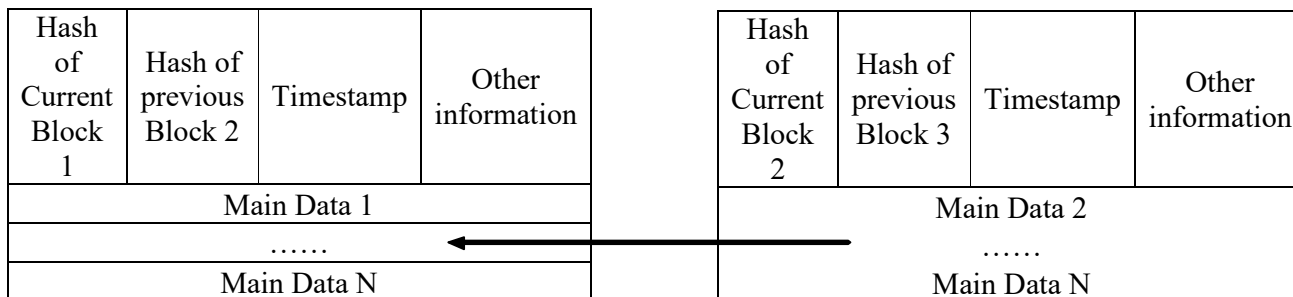
One of the important skills of a good investor is the accurate prediction of value of their investments. The trend of past 7 years shows that the Bitcoin has increased and will continue to increase in future as well. Luther (2016) stated that "The share of digital transactions will continue to increase". The current rate of adoption and usage of digital payments very well explains this statement. He further added that the value of altcoins also affects the price and the value of bitcoins, still BTC is constantly holding 1st place in terms of value and market cap as per data published on (Cointelegraph). The trend also forecasts that the value of BTC can touch milestone of \$1,00,000 in upcoming 5 years.

Security of Bitcoin

Just like any other avenue of savings and investment, an investor will expect the same from Bitcoin. Folkinshteyn and Lennon (2016) figured out security as key element for holders as well as developers of the Bitcoin. Mr. Tzu Chun journal of network security has figured out Anonymity, Transparency, De-centralization and Open Source as the major elements of blockchain technology.

Lin and Liao explained the complex operation of Blockchain technology with a simple figure. (Lin & Liao, 2017)

Figure 9: The structure of Blockchain. (Lin & Liao, 2017)



Source: Lin & Liao, 2017

Here,

- A. Main data is dependent on application of Blockchain.
- B. Hash is recording element which records the transactions between previous and the current blocks.]
- C. Time stamp denotes the time on which block is generated.
- D. Other information has data which users may define, just like signature of block.

(Barlin, 2017)discusses that currently Bitcoins can be stored for transactions on 1.Applications(Mobile/ Computer Programs), 2.Online Wallets, a medium where they can be created and stored at minimum cost and 3. Physical Wallets: Hardware wallets where the data can be stored in a device. The physical mode is least prone to risk of theft or hacking as compared other two.

Expanding Network of Usage

As the world is changing, many users have started to adopt and use cryptocurrencies including Bitcoins. (Barlin, 2017)noted that Subway and Virgin Galactic have started to accept Bitcoins as mode of payment in their business. Now, 22,000+ companies from different sectors like Food Industry, Financial Service Providers, Telecom companies and E-Commerce sitesetc. including Zynga, University of Nicosia, Bloomberg-Bay, T-Mobile Poland, Amazon Virgin Airlines, PayPal along with the "Microsoft" which was one of the early adopters in 2014 have started to accept the bitcoins as payments.

In India High Kart, Rug Republic, Purse and Sapna are few names of companies which are accepting Bitcoin as payment.

Internationally many events are organized to make people aware of blockchain technology and promote its usage and leads to extension of networks of operations. Many such events are arranged in Singapore, US, Europe and South Asia. 3 day event named "BlockShow" was organized in Marina Bay where more than 2800 people including investors and creators had participated. Therefore such programmes are contributing towards expansion of network of operations by creating awareness, providing more solutions and opportunities to capture more market.

Research Methodology

With the help of following research questions, this study attempts to ascertain factors distressing the perception of Gen Y and X towards crypto currency as a whole with Bitcoin in specific.

- R_{Q1} : How is the perception and adaptability of Generation Y and X towards Bitcoin is affected by its Value?
- R_{Q2} : How is the perception and adaptability of Generation Y and X towards Bitcoin is affected by its Security?
- R_{Q3} : How is the perception and adaptability of Generation Y and X towards Bitcoin is affected by its extending network of operations?

Objectives of Research

Above research questions can be answered using the outcomes of the research with following objectives:

- R_{O1} : To study the effect of Value of BTC over the perception and adaptability of generation Y and X.
- R_{O2} : To study the effect of Security of BTC over the perception and adaptability of generation Y and X.
- R_{O3} : To study the effect of extending network of operation of BTC over the perception and adaptability of generation Y and X.

Hypothesis and Theoretical Framework

Dependent Variable

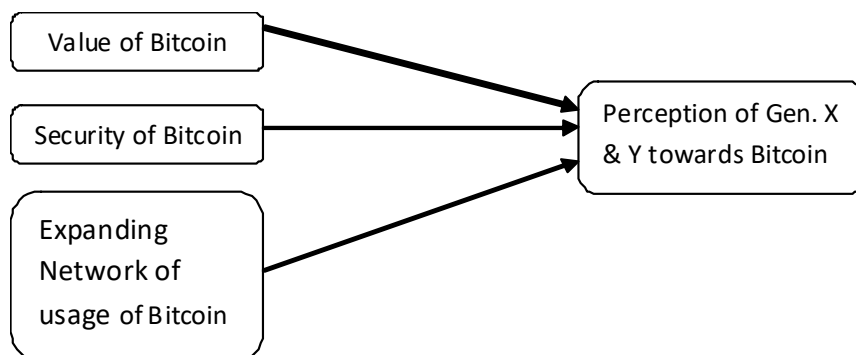
The dependent variable considered for this study is Intention of Generation X & Y towards Bitcoin. Any direct or indirect change occurring in the independent variables chosen will affect the dependent variable.

Independent Variables

1. Value of Bitcoin, 2. Security of Bitcoin and 3. Expanding Network of usage are the independent variables in this research. This means any change occurring in these variables will positively or negatively affect the dependent variable i.e. Intention towards bitcoin.

Theoretical Framework and Hypothesis are derived on the basis of these variables.

Figure 10: Theoretical Model for study



Source: Author's Interpretation

Hypothesis formulation

H₀₁ -As discussed and observed by many researchers, the first and foremost factor which affects the perception of any investor towards bitcoin is its Value. (Barlin, 2017)noted value of bitcoin as a factor for attracting new users to incline towards it. Similarly, weather the value of bitcoin can affect the perception of Gen. X and Y towards it or not. This results in creation of H1:

H₀₁ = Value of Bitcoin doesn't significantly affects perception of Gen. X and Y.

H₂ - The second important factor affecting perception of any user in terms of Digital Financial Services is the security. Security refers to ability of system to protect the stored invested funds against unauthorized access or theft resulting in financial loss and ability to prevent loss of money i.e. bitcoin while performing transactions as discussed by (Folkinshteyn & Lennon, 2017)

H₀₂ = Security of Bitcoin significantly affects perception of Gen. X and Y.

H₀₃ - Apart from Value and Security, another factor that affects the perception of investors/users towards bitcoins as noted by many researchers is Expanding Network of usage of Bitcoin. It refers to the ability to use bitcoins in different transactions. Researchers noted that many companies are now accepting bitcoins as medium of payments, thus making it convenient to use at many places which attracts more users to adopt and use it.

H₀₃ = Expanding Network of usage of Bitcoin significantly affects perception of Gen. X and Y.

Research Design:

Hypothesis testing research design is adopted by researcher to test hypothesis formulated on the basis of research questions and answer those questions with findings of the study.

Research Instrument: A questionnaire containing questions to fulfill research objectives were distributed among potential respondents from generation X & Y. The questionnaire contained various sections, first one being demographic information including Gender, Generation, Educational Qualifications and Annual Income.

Second section contained questions regarding general awareness of cryptocurrencies and Bitcoin.

Rest of the three sections contained questions of independent variables i.e. Value, Security and Network of usage. These questions were asked on 5 point likert scale ranging from Strongly Agree - Strongly Disagree.

Sample and Sampling Technique of the study: The total population was unknown and therefore **Non-Probability- Convenience Sampling** technique has been chosen by the researcher for present study. Total 160 responses were collected out of which 140 valid responses were utilized for the purpose of analysis.

Data Analysis, Findings from the Study and Discussion

Total of 140 responses were utilized for the purpose of data analysis. Data analysis was done using SPSS by applying various statistical tests, which showed following values:

Demographic Data

- Out of 140 respondents, 51.4% were Male while 48.6% were female respondents. Therefore, major portion of respondents are from Male Gender.
- 64.3% respondents were from Generation Y, whereas only 35.7% respondents were from Generation X. Meaning majority of users, forming almost double the number of later from sample belongs to Gen. Y.
- The educational qualifications of majority of respondents was recorded as Graduation/Diploma (65.7%), followed by Ph.D. and or Professional like CA/CS/ICWA etc. at 31.4% and least being Up to High school and No formal Education, each being 1.4%.
- The highest Income group of the respondents was reported below Rs.1,50,000 at 36.4% followed by Above Rs.5,00,000 at 32.9%. Whereas Income between Rs.1,50,000 to Rs.3,00,000 was 17.1% and least being Rs.3,00,000 to Rs.5,00,000 at 13.6%.

Awareness of Crypto currency

- Out of 140 respondents, only 19.3 % of respondents are well aware of Cryptocurrencies while majority i.e. 42.9% are having just common knowledge about it. 17.9% respondents just know the meaning of cryptocurrency and 20% respondents don't have any idea about it.

Table 1: Crypto currencies known to respondents as per data collected.

Which of the following cryptocurrencies you're aware of:	Counts	Rank
Bitcoin	120	1
Dogecoin	34	2
Ethereum	28	3
Tether	18	4
None of the above	17	5
XRP	12	6
Cardan	10	7

Source: Computed by the Author

- The most known cryptocurrency was reported as Bitcoin, followed by others and least known being Cardan. (Table 4.1.1)

Table 2: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.926	.928	19

Source: Computed by the Author

The results of reliability test cronbach's alpha in table 4.2.1 is 0.926 which is greater than 0.9 which confirms reliability.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Perception towards Bitcoin	140	1.25	5.00	2.8411	.80030	.419	.205	-.087	.407
Value of Bitcoin	140	1.20	5.00	3.2714	.87756	-.087	.205	-.659	.407
Security of Bitcoin	140	1.00	5.00	3.2386	.90368	-.379	.205	.014	.407
Network of Operations	140	1.20	5.00	3.4671	.80094	-.388	.205	-.027	.407
Valid N (listwise)	140								

Source: Computed by the Author

Descriptive statistics i.e. mean and standard deviations of all variables are depicted in table no. 4.2.2 along with normality test results which are acceptable.

Table 4: Correlations

		Value of Bitcoin (VB)	Security of Bitcoin(SB)	Network of Operations(Nos)
Perception towards Bitcoin	Pearson Correlation	.674**	.539**	.594**
	Sig. (2-tailed)	.000	.000	.000
	N	140	140	140

Source: Computed by the Author

Table 4.2.3 shows correlations among dependent variable (Perception) and Independent Variables (Value, Security and Network of Operations). The independent variable VB has value of .674, SB has value of .539 while Nos has .594 which all denotes positive correlation with dependent variable i.e. Perception.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.708 ^a	.501	.490	.57146

Source: Computed by the Author

a. Predictors: (Constant), Network of Operations, Security of Bitcoin, Value of Bitcoin

R-Square is the proportion of variance in the dependent variable Perception towards Bitcoin which can be predicted from the independent variables. Table 4.2.4 shows the R square of the model is 0.50. This shows that the independent variables of study (Value, Security and Expanding network of operations) are able to explain 50.1% of the variance of the perception towards Bitcoin.

Table 6: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44.614	3	14.871	45.539	.000 ^b
	Residual	44.412	136	.327		
	Total	89.026	139			

Source: Computed by the Author a. Dependent Variable: Perception towards Bitcoin

b. Predictors: (Constant), Network of Operations, Security and Value of Bitcoin.a

Table 7: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	.432	.224		1.931	.056
Value of Bitcoin	.440	.081	.482	5.419	.000
Security of Bitcoin	.180	.071	.203	2.525	.013
Network of Operations	.112	.098	.112	1.146	.254

Source: Computed by the Author a. Dependent Variable: Perception towards Bitcoin

Table expressions the ANOVA table, which shows how well the regression equation fits the data. Here the p-value (0.000) is less than 0.05. It shows volatility of independent variables have statistically significant relationship with the dependent variable (Perception towards Bitcoin).

Table shows model coefficients for the Value of Bitcoin, and Security of Bitcoin are significant at 5% level of significance.

The regression equation is,

Perception towards Bitcoin = 0.440 (Value of Bitcoin) + 0.180 (Security of Bitcoin) + 0.112 (Network of Operations).

Table 8: Hypothesis testing result:

Hypothesis	p-value	result
H ₁ = Value of Bitcoin significantly affects perception of Gen. X and Y.	0.000	Failed to reject.
H ₂ = Security of Bitcoin significantly affects perception of Gen. X and Y.	0.013	Failed to reject.
H ₃ = Value of Bitcoin significantly affects perception of Gen. X and Y.	0.254	Rejected

Source: Computed by the Author

Conclusion and Observations

This research was an attempt to study various theoretical aspects of cryptocurrencies and understand the awareness towards cryptocurrencies and perception of Generation X and Generation Y towards the highest valued and hyped crypto i.e. Bitcoin. For this purpose three independent variables viz. Value, Security and Network of operations of Bitcoin were taken for the study after reviewing various articles and research papers in this area of study.

Total 140 responses were collected from various respondents belonging to both Generations, while taking the responses it was observed that the newer generation (Gen. Y) is more inclined towards technology and is more known to the term Bitcoin and other cryptocurrencies, but majority of them still do not consider it to be an avenue for investment. On the other hand the older generation (Gen. X) is less familiar to the term cryptocurrency and Bitcoin but some of them do consider it to be an investment opportunity.

The results of the study revealed that High Value and Security of Bitcoin positively affects investor's perception towards which means the respondents were familiar with the value the Bitcoin is bearing and also confident with the security being deployed to maintain the privacy of the transactions. However, the Network of Operations does not affect the perception which means that still that area is untapped and Bitcoin is not having strong network of operations i.e. cannot be used in regular transactions at various places. Hence, there is potential for businesses and individuals to start accepting cryptocurrencies including Bitcoins looking at its value and security. But presently the network of operations is weak and therefore it is not having any impact on perception.

It is also observed that people are less aware of other cryptocurrencies, the top 10 cryptocurrencies

apart from Bitcoin also has high potential in future and therefore people needs to understand this and grab the opportunity which they had missed in case of Bitcoin. Studies with these variables and other variables on each as well as multiple cryptocurrencies with larger population size can also be conducted to get more in-depth results in this area.

In India, the cryptocurrencies were labeled as illegal, risky and medium of transfer of black money due to negative word of mouth and mass media which is not the case. Also it was deregulated which created negative image and hence many potential investors stay away from it. Now as Govt. has lifted the ban and is working towards making it legal as commodity, people are still having misconceptions and negative image due to reasons stated earlier. Hence, Govt. as well as other stakeholders should work in this area to clear the actual picture of Bitcoin with all its advantages and limitations to general public and investors to attract more investors.

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Alumni Engagement in Higher Education Sector: What does the literature tell us?

Prof. Seema Joshi*

Abstract

Unlike American universities, higher education in India has been largely government funded until recently and the tradition and culture of 'volunteerism' in its varied forms like 'directed philanthropy' or 'involvement in volunteering' are not widespread. That seems to be the reason why the potential of alumni engagement remained largely unexplored and untapped in India. But with the decline in government support to higher education institutes (HEIs), their inability to raise tuition fees, increasing demand-supply gap in the higher education sector, and the growing global pressure to stay competitive calls for the need for alumni engagement along with experimentation with other alternative methods to finance higher education. Though there are several studies on the alumni engagement in western universities, yet there is a dearth of literature on the subject in case of India. The existing literature mainly focuses on the monetary dimension of alumni engagement and the emphasis is somewhat less on the non-monetary contributions that can be made by the alumni who exercise their substantial 'soft power' over the incoming and current students in their alma mater. The study is an attempt to fill up these research gaps. The main objective of the study is to identify the various dimensions and mechanisms of alumni engagement in universities. The study will also focus on the benefits and challenges of setting up alumni associations so that the appropriate strategies can be designed in the case of Indian HEIs to leverage the untapped potential of alumni engagement.

1. Introduction

Unlike American universities, education in India has been largely funded by the Government (of India) until recently. The tradition and culture of 'volunteerism' in its varied forms like 'directed philanthropy' or 'involvement in volunteering' (and in turn recognizing alumni with awards for these time and efforts) is not widespread. The huge potential of alumni engagement remained largely unexplored in India. That is why the present study is so important. There has been a significant increase in the number of institutes in the higher education sector in the case of India over more than seven decades of independence. With 1043 Universities and 42343 Colleges, India has one of the largest higher education systems in the world in terms of institutions (Government of India, 2020). A perusal of intra-sectoral allocation of education expenditure in the immediate post-reform period (from 1991-92 onwards) reveals that higher priority was assigned to elementary and secondary education and therefore, higher education expenditure received a smaller share in the budgetary allocations made by the Centre and States together (see Joshi, 2006, Tilak, 2013). Higher education was marred by a 'policy vacuum for long' (Tilak, 2013). The downward trend in resource allocation to higher education (HE) and technical education (started from the 5th Five Year Plan onward) and experimentation with some alternative sources of revenue-raising like fee hikes, full cost recovery of other fees such as institutionally provided room and board, sale of research publications and consultancy, etc., participation of private sector and philanthropy for endowments, for direct operations and scholarship to students were initiated after the economic reforms (Rani, 2004) to reduce the burden on the public exchequer (Varghese, N. D). The redressal of some of the problems of the HE began with a series of legislations that aimed at reforming the HE landscapes in the country. So, there has been a transition from 'a system embedded in the welfare statism to a system based on 'neo-liberal market philosophy' (Tilak, 2013). Traditionally, the state had been an active player in the policymaking, planning, and provisioning of HE. However, the space has been given to the private players because of financial constraints (Varghese, n.d.). It is

* Kirori Mal College, University of Delhi, Delhi)

assumed that the state can confine itself to be an enabler that provides a framework of rules, regulations for those who wish to enter into a business of education, and a policy of laissez-faire can be adopted in education (Tilak, 2013). But with the decline in government support to higher education institutes (HEIs) especially after the 1990s, inability to raise tuition fees by HEIs², alumni engagement along with privatization and corporate financing seems to be the way forward for Indian HEIs. There has been a gradual shift in the approach of the University Grants Commission (UGC³) from the subsidization of HE (which was up to 90 percent in the 1990s) to slowly guiding institutions to become self-reliant first (Konana, 2015) and then subsequently guiding them to engage alumni too⁴ in the attainment of educational missions of the HEIs. There are studies that recognize the need for balancing state funding with contributions from additional external sources, specifically alumni from the institution (Barr & McClellan, 2011; Kretovics, 2011).

It is important to point out that American universities have nurtured the alumni engagement culture in the past two hundred years. Alumni remain strongly committed to their alma mater in American Universities because the universities believe and build the relationship with students not only during the years of their stay for studies but rather for a lifetime which creates a win-win situation for both alumni and the alma mater. Professional alumni relations and networks are a part of American culture nurtured over a century and gets reflected in philanthropic behavior of alumni, which is unlike numerous European or Indian universities. American universities are funded by student fees, fundraising and sponsorships. The choice of college by students is influenced to a large extent by the alumni who studied from the HEIs and also by the extra-curricular activities like cultural and social activities offered by the respective colleges in addition to educational experience (David and Coenen, 2014). In the present global economies where industry 4.0, 'digital economy' and 'green economy' are the new realities, growing competition, widening demand-supply gap in HE (see Joshi, 2012) and diverse needs of the markets, HEIs too are making it imperative to engage not only corporates but also alumni. Such associations with alumni are important to build 21st-century skills of the students and make them 'future-ready for the job markets and above all to help HEIs in the attainment of their educational missions (Joshi, 2021). Along with public-private partnership (PPP), partnership with alumni associations/networks is gaining importance. European universities realized the importance of such alumni networks in 1980s and among Indian HEIs this realization has occurred only recently. As per the recently issued guidelines of the University Grants Commission (UGC), it has been made mandatory for higher education institutions to undertake measures/ initiatives on the 'Student Career Progression and Alumni Network of Higher Education Quality Improvement Programme' or in other words to recognize alumni as one of the main stakeholders of the institutions and tap their full potential (UGC, 2020). The National Assessment and Accreditation Council (NAAC) has also revised its accreditation framework in shifting "several metrics to bring in enhanced participation of students and alumni in the assessment process" (NAAC, 2017). One of the criteria (out of seven criteria) specified by NAAC for assessing the HEIs is "student support and progression". The weightage varies from 100 in the case of universities to 140 for autonomous colleges 140 and 130 for affiliated under-graduate colleges⁵. Seemingly, the underlying objective is to establish an alumni culture in Indian colleges and universities like universities in the West. This indeed is a relatively new phenomenon for most of the HEIs in India (Kapur and Mehta, 2004) except for a few selected technical institutes like the Indian Institutes of Technology (IITs) and the Birla Institutes of Technology (BITs) and management institutes like the Indian Institutes of Management i.e., IIMs and Indian School of Business i.e., ISB etc. Therefore, alumni engagement in HEIs of India is still in the stage of infancy. Growing impetus on alumni engagement by UGC and revision of NAAC accreditation framework to factor in alumni engagements was the motivation behind reviewing the literature and research on various facets/dimensions and mechanisms of alumni engagement followed in different universities of the

² Because of the often-held view that universities are having an obligation to serve the public good (See Cuthill et al., 2014)

³ UGC is the apex body for coordinating and maintaining standards of higher education in India along with introducing the Quality Mandate initiative

⁴ See Public notice of UGC Dated 7th November 2019: 7945357_Student-career-progression-Alumni-Network-english.pdf (UGC.ac.in). A task force was appointed by UGC to formulate a policy for tracking students' progression after leaving the college (see Annual Report 2019-2020 of UGC). Also see: 0128028_Alumni-and-Career-progress-Policy_doc.pdf

world. Though there are several studies on alumni engagement in the case of American and European universities there is a dearth of literature on the subject in the Indian context. Secondly, the existing literature mainly focuses on the monetary dimension of alumni engagement or alumni giving and the emphasis is somewhat less on the non-monetary contributions or forms of giving that can be made by the alumni who exercise their substantial 'soft power' over the incoming and current students in their alma mater. The study is an attempt to fill these research gaps. It is timely and relevant if an attempt is made to understand the various dimensions and mechanisms of alumni engagement in universities⁶ by examining studies done globally and within the country so that the appropriate strategies can be designed in the case of Indian HEIs to leverage the untapped potential of alumni engagement.

II. Research Questions, Objectives, and Methodology of the Study

In this context, the study tries to examine the following three research questions: (i) what is the global experience of alumni engagement? (ii) What are the possible benefits of alumni engagement? and (iii) what are the likely challenges in establishing well networked alumni associations in India? In line with this, the following objectives will be pursued: (i) to examine the international experience of alumni engagement i.e., the origin of alumni associations and their importance, various dimensions and mechanisms of alumni engagement in universities, and how it can be applied in Indian situation, (ii) to discuss the benefits thereof, and (iii) also to identify challenges, if any, and to recommend policy actions.

Alumni have been defined as the graduates of HEIs in this paper. It is important to mention that there is no formal definition of alumni engagement given so far but literature shows that it refers to active engagement by the alumni in the affairs of their alma mater after receiving the degree, and it can assume monetary and/or non-monetary forms (Volin, 2016). Alumni giving, event attendance, communications involvement, or volunteer behaviors are a few examples of it (Gill, 1988; Weerts & Ronca, 2007; Volin, 2016).

The research has been carried out by examining some publications and materials emanating from academic research carried out in the past. This paper is an exploratory descriptive study into the dimensions, mechanisms, benefits, and challenges of alumni engagement. Therefore, the study relies on secondary sources of data to achieve the objective of the study.

After the introduction in Section I the brief outline of research questions, objectives, and methodology in Section II has been provided. Section III of the study will outline various dimensions/facets and mechanisms of alumni engagement as gets revealed from various publications. Section IV will point towards the benefits of such engagements and possible challenges in the process and policy actions will be discussed briefly in Section V. Section VI concludes.

III. Origin, Dimensions, and Mechanisms of Alumni Engagement: An Overview

It is important to point out that the idea of alumni associations is believed to trace its origin from the United States (West) which dates back to 1792 when a group of Yale Graduates came together to form an alumni network (Gill, 1998). If the alumni association originated in America in the 1920s (Niebergall, 2007 as cited in David and Coenen, 2014), the importance of alumni and alumni networks was recognized in the European universities in the 1980s (David and Coenen, 2014). Their establishment was driven primarily by global pressures to stay competitive and attractive (Rohlmann & Wömpener, 2009; Niebergall, 2007 as cited in David & Coenen, 2014). In Indian universities, the importance of alumni engagement has been realized only recently (see UGC 2019-2020). The potential remains largely unexplored in countries (like India too) where education is largely funded by governments and the 'tradition of volunteerism' as emphasized by some scholars in their study (Ebert, Axelsson & Harbor, 2015) is still not widespread.

⁵ See NAAC - Assessment & Accreditation

⁶ The fact is that there are several studies on the alumni engagement in western universities (especially the USA), yet there is a dearth of literature on the subject in case of India.

A plethora of research on alumni networks is based on American and European (i.e., Western) colleges and universities. Studies range from the need and importance of alumni engagement (Barr & McClellan, 2011; Kretovics, 2011) to attempting to understand alumni generosity (Baade & Sundberg, 1996) and delineate the advantages and disadvantages of alumni surveys as policy tools (Ewell, 2005).

Dimensions of Alumni Engagement

Broadly speaking, there are two main dimensions/facets of alumni engagement. It can be monetary (donations) or it can be non-monetary viz. providing mentoring, coaching, internships, career guidance, and placement opportunities to the current students. Besides, the alumni can help in improving policymaking and help identify areas of improvement by participating in extensive alumni surveys conducted by their respective HEIs as is done in the American Universities. In addition, the alumni outcome approach can act as a tool for evaluating institutional quality (e.g. Dellow & Romano, 2002; Melchiori, 1988). Undeniably, alumni can be termed as assets for their institution, not only because of their philanthropic behavior (Chi et al., 2012) but also because of their roles as volunteers and political advocates, experts, mentors, recruiters, etc. (Weerts & Ronca, 2008). Alumni are also an excellent source to understand the strength and weaknesses of the educational experience of the institution (Carr et al., 2006). These domains are critical for institutions to retain and strengthen their reputation (Etzelmüller, 2014). The Alumni outcome approach is one of the ways to evaluate the institutional quality (e.g. Dellow & Romano, 2002; Melchiori, 1988) as mentioned earlier. Alumni of an academic institution is the reflection of their past; act as a bridge between the present and the past and can help shape the future of an institution. Studies show that alumni are valuable for both institutions as well as current and prospective students. Fundraising, personal and social connections and volunteer activities prove useful to the institutions (Weerts & Ronca, 2008) whereas knowledge about job prospects and a first-hand view of relevance and quality of education of the institution is useful for students (Moore and Kuol, 2007). In short, alumni are the true 'brand ambassadors' of the institutions they study from and a strong and positive relationship with alumni and current students can benefit a HEI, its alumni and current students socially, academically, and professionally. Therefore, there is a need to leverage the alumni community and create a win-win situation for both i.e., alumni and HEIs.

Having discussed the dimensions of alumni engagement, we will focus on the formal/ institutional mechanisms now which have been developed and followed the world over to engage alumni in HEIs globally.

Mechanisms of Alumni Engagement

The HEIs in Western countries strengthened alumni engagements over the years through formal alumni networks/associations and by holding regular activities and programs involving their alumni. The history of alumni groups /associations in the USA dates back to 1792 when graduates from Yale University formed an organized group (Gill, 1998). However, the alumni association of Williams College (a small liberal arts college located in Williamstown, Massachusetts) was the first official alumni association founded in the United States. Originally the group was named the 'Society of Alumni' (Dolbert, 2002). The purpose of the official association was that its members wanted to know the state of the college where they study from. It has been noted by Shaw et al (1917, p.11) that the alumni committee who played an instrumental role in organizing the group of alumni convened a meeting to know 'the true state of the college'. Following the example of the Williams College alumni group, the other colleges which followed suit in establishing their alumni associations/groups were Brown (in 1823), Princeton (in 1826), Miami (in 1832) and Amherst (in 1842). The alumni organizations of the 1800s were led by 'alumni secretaries', or executive directors and aimed at communication with alumni through publications. It was the gathering of alumni association leaders that led to the formation of professional organizations i.e., 'the Association of Alumni Secretaries' in 1913 (Curtis and Nash, 1965). It was in 1917 that a Hand Book of Alumni Work was produced which provided a framework (like direction, guiding principles like membership dues programs) for setting up alumni associations (Shaw et al, 1917) which exist till date. The structure of membership like annual or life membership options with a variety of benefits was proposed in the handbook. For example, the life

membership fee of the Michigan Alumni Association was kept at \$35, however, the option was also given to members to pay it over 7 years with an annual installment of \$5 per annum (Shaw et al, 1917).

From the above, it is clear that the relationship between alumni and alma mater is formalized through the establishment of alumni networks or associations. Newman (2011) observes a positive co-relation between alumni giving and dues-based membership of alumni associations and therefore, he suggests that membership of alumni associations' does matter. The membership of these networks helps in developing a committed alumni engagement which can promote loyalty towards the institution and can bring in student satisfaction too. Positive feedback from alumni can help in strengthening the relationship further says Al-Alak (2006). Besides, organizational identification which is 'a form of social identification whereby a person comes to view himself or herself as a member of the organization' (Boro?, 2008, Etzelmueller, 2014) can play an important role in institutional advancement and fundraising (Newman, 2011). The role of alumni networks as a potential tool for gaining and retaining highly skilled workers has been analyzed in some studies in times of increasing skills shortage, in certain regions (David and Coenen, 2014).

Some recent studies (Ding and Riccucci, 2020; HUST, 2020) have highlighted the role of alumni associations in times of the humanitarian crisis caused by Corona virus in 2020. Ding and Riccucci (2020) in their writing give the example of two universities viz. Wuhan University and Huazhong University of Science and Technology (HUST, 2020) which were significantly affected by the virus. The students as well as faculty suffered from shortage in food and water supplies. However, the alumni played a pivotal role during the time of this crisis. They came forward to help not only the students and faculty but also to all the residents of Wuhan, who were also in lockdown. Peking University in China received one of the largest private donations ever since its establishment, from its alumnus during the Coronavirus pandemic (PKU News, 2021). Therefore, the potential of this alma-connect is huge and can bring in several benefits.

The varied kinds of roles performed by the alumni association around the world have been forcing people to rethink and re-engineer the traditional alumni systems. Chi et al. (2012) emphasizes the need for re-engineering traditional alumni systems to boost mentoring between alumni and students. Keeping with the requirements of this digital age, he suggests the use of a smart alumni system (SAS, which is an online networking system). He suggests to extend the reach of SAS to the current students, faculty, and other members associated with the university and by using the principles of data mining to use data obtained from alumni to enhance the functionality of the SAS.

IV. Benefits of Alumni Engagement⁷

Coming now to the benefits of alumni engagement (Konana, 2015), the 'alumni engagement vehicles'⁸ (see Volin, 2016) can be beneficial to the personal and continued professional development of alumni and assist the institution financially (Mael & Ashforth, 1992) through fundraising success, recruitment assistance, or mentorship opportunities (Weerts & Ronca, 2007). It has been rightly pointed out that 'alumni bring context and practical relevance to what is being taught in the classroom' (Konana, 2015). When in the present-day, world driven by digital and green technologies along with industry 4.0 necessitates peer to peer learning of 21st century skills, the alumni of an institution have the potential to impact the students studying in HEIs or the incoming students through their technical and domain knowledge along with their experiential learning. Career exploration, career planning, career goals can be achieved by the current students through mentoring and coaching by the alumni of the college. During coronavirus times, several HEIs in India including IITs and some colleges engaged their alumni through lecture series that were largely experience sharing sessions. If such a formal alumni arrangement (like alumni associations or networks) is created a bit early then it will be easier for students to get several benefits from the alma-connect in the form of alumni giving, scholarships, internships, and help in the preparation

⁷ This section is largely based on Konana's (2015)

⁸ See Volin (2016)

for their career. The alumni can contribute more at the policy-level too by being part of the governing bodies of the colleges or universities or various academic and non-academic advisory bodies of their respective universities and can bring their professional experience to these bodies. They can contribute by providing a long-term vision for the growth of the institute, through their leadership skills and participation in alumni surveys. The alumni can be role models for their juniors. The culture of loyalty and pride towards the alma mater has been nurtured in the US universities for long but is a relatively new phenomenon in India. Studies observe in the context of American universities (David and Coenen, 2014; Weerts et al., 2010) that various forms of alumni giving can vary from being mentors (for the existing / current enrolled students) to giving lectures to be a part of the university advisory boards before and after graduation. Besides, bringing in job opportunities for students and graduates, establishing their careers, acting as ambassadors or prominent university alumni through advertisement and above all giving financial support to the university are the other methods to pay back to their alma mater.

The extent of alumni engagement and generosity in American universities becomes clear when we look at the donations made by the alumni in some of the American Universities. For example, the alumni association of the University of Texas at Austin gave scholarships worth \$ 3.45 million in 2015-16 benefitting 641 students. The capital campaigns too are launched by numerous universities to raise funds to support scholarships or to support faculty research buildings from time to time. These funds can be utilized and prove to be beneficial for the advancement of knowledge, innovation, and teaching and attract young, bright innovative minds. The funds raised through capital campaigns varied with \$ 3.9 billion by Yale University, \$3.12 billion by the University of Texas, \$ 4.75 billion in Cornell University, \$6.2 billion in Stanford, and \$ 6.5 billion by Harvard University (See Khatri and Raheja, 2018).

An intriguing question which arises after seeing huge donations made by alumni of Indian origin like Ratan Tata (\$50 Million in 2010), Anand Mahindra (\$ 10 million)⁹, and Narayan Murthy (\$5.2 Million) to their alma mater i.e., Harvard University, is that how and why Indian Universities are unable to avail such a source of financing when for Indians, philanthropic contributions is not a new phenomenon. Philanthropic contribution is a tradition in India and religious Hindu texts like Bhagavad Geeta¹⁰ emphasize the importance of charity. In case of Indians, charity used to be largely personal unlike the institutionalized charitable giving, practiced in the West. However, with changing times, the institutionalization of charitable giving has been taking place in India too. Eloquent evidence of that is provided by recently released 8th annual ranking of the most generous individuals in India by EDEFGIVE and HURUN¹¹ India on 28th October 2021 which shows that 72 philanthropists have cumulatively donated Rs. 9659 crores and their most favored cause is education. Azim Premji retained 'India's most generous' position title worth INR 27 crore donation per day (INR 9713 crore annual). With a donation of INR 1263 crores, HCL's Shiv Nadar stood at the second spot and Mukesh Ambani was at the third spot with a donation of INR 577 crore). Rohini Nilekani has thereby earned the title of India's most generous woman by donating Rs. 69 crores in her capacity. What is more noticeable is that young entrepreneurs like Binny Bansal (40 yrs.) and Nikhil Kamath (35 years) are venturing into philanthropy. They are the first philanthropist under the age of 40 in the year 2020 and 2021 respectively to enter the *EdelGive Hurun India Philanthropy List*. This will inspire more young wealth creators to donate more for social causes. Therefore, seeing these examples of generosity¹² of Indians in general, the generosity of even Indian alumni cannot go unnoticed. There are some cases in point as that of Nandan Nilekani, former CEO of Infosys who donated to his alma mater IIT-Bombay to build a new hostel wing (Shroff, 2012). Similarly, a donation of \$ 2 million by Prabha Kant Sinha, who runs a marketing and sales consulting firm in the US donated to his alma mater IIT-Kharagpur for research into biofuels

⁹ See [https://news.harvard.edu/gazette/story/2010/10/anand-mahindra-gives-10m-for-humanities-center/#:~:text=Harvard%20University%20announced%20today%20\(Oct,of%20his%20mother%2C%20Indira%20Mahindra.](https://news.harvard.edu/gazette/story/2010/10/anand-mahindra-gives-10m-for-humanities-center/#:~:text=Harvard%20University%20announced%20today%20(Oct,of%20his%20mother%2C%20Indira%20Mahindra.)

¹⁰ Bhagvat Gita 17.20: Charity given to a worthy person simply because it is right to give, without consideration of anything in return, at the proper time and in the proper place, is stated to be in the mode of goodness. It also says that "From the wealth, you have earned by rightful means, take out one-tenth, and as a matter of duty, give it away in charity. Dedicate your charity for the pleasure of God." (See Chapter 17, Verse 20 - Bhagavad Gita, The Song of God - Swami Mukundananda (holy-Bhagavad-gita.org))

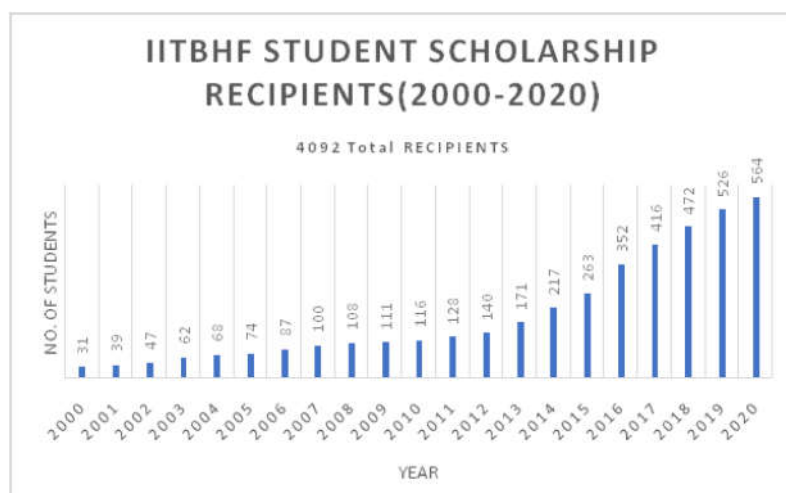
(Mishra, 2011) need special mention (also see Khatri and Raheja, 2018). A million has been contributed by Mohit Aron, an entrepreneur, and businessman, an IIT Delhi alumnus who is commonly referred to as the 'Father of Hyper-Converged Infrastructure' to establish itself as a world-leading Computer Science department. The funds will be used to support the faculty's research activities and to ensure that the undergraduate, masters' and PhD students of the department can attend conferences, workshops, and competitive events in India and abroad¹³.

Best Practices of IITB and IITD

Following the pattern of the western university and other universities globally, Indian universities and HEIs (Technical and Management especially) have been trying to engage their alumni not only for raising funds but also for bringing out improvement in an educational experience for students by establishing Endowment chair or starting lecture series, etc. Indian Institute of Technology, Delhi (IITD) in its Diamond Jubilee celebrations is reaching out to its alumni around the world through its fundraising campaign viz. 'Going Further, by Giving Back'. The IITD is seeking support from its alumni to realize the eminent institute's strategic vision for 2030.

IITB is having an alumni organization that has 33 chapters, 12 of which have been in the USA. The purpose of the chapters is to build local communities of IITB alumni. In the case of IIT Bombay, the alumni organization has been there for more than two decades. IITB Heritage Foundation (IIBHF) which is a tax-exempt organization from the IRS has been set up on July 5, 1996 to assist the Indian Institute of Technology, Bombay to support students, alumni, faculty and employees. As in the US universities, a separate unit called 'development' focuses on fundraising and works closely with the alumni relation unit (Ebert et al., 2015). Similar seems to be the role of IITBHF in the case of IITB. IITBHF is created with a mission to fund and promote education and research among students of the Indian Institute of Technology, Bombay (IIT Bombay) and support alumni gatherings for service to IITB.

During the time of pandemic when remote learning became anew normal which was inconceivable a few decades back, the alumni of IIT Bombay (IITB) collectively responded to the needs of their alma mater. In Spring/Summer 2020, the director of the institute appealed for alumni donations to cover unanticipated remote learning needs, i.e., laptops and broadband connections for many needy students. IITB raised \$300,000 to help 500 needy students - all with family incomes of less than eight lakh rupees per year and a majority with less than



Source: IIT Bombay Heritage Foundation, Annual Report 2020. Available at: IITB Scholarships recipients.pdf

¹¹ See EdelGive Hurun India Philanthropy List 21 | hurun-india
¹² Besides, these few examples of alumni giving in Indian HEIs, studies also note that philanthropy in India is becoming 'philanthropy capitalism' as is reflected in the establishment of Azim Premji University, Shiv Nadar, and Vedanta university (Roberts, 2018).
¹³ Mohit Aron gifts USD 1 Million to CSE at IITD - Alumni Affairs, IITD

three lakhs' rupees per year. It is important to mention that it was one of the fastest IIT Bombay Heritage Foundation (IITBHF) fund-raising campaigns over a short period and IITBHF's efforts received extensive coverage in India's national press. The number of scholarship recipients out of the donations given by the alumni has gone up from just 31 in 2000 to 564 in 2020.

In 2019 the donations received by IIT Bombay Heritage Foundation (IITBHF) from 687 donors stood at \$1,920,018. The donations were used for the provision of scholarships and financial aid, recognition of faculty, building staff research/teaching facilities, and advancement of student welfare programs (IITBHF,2020).

By following examples of the prestigious institutes abroad and that of IITs in India¹⁴, Indian universities too can work on similar lines to engage their alumni to bring about improvement in the functioning of their respective HEI. Gallo (2018) very rightly looks upon alumni as key enablers who contribute through giving (time as well as philanthropic donations) to not only the university's mission but also its vision. In the present time when state resources are drying up, it is not only corporate engagement but alumni engagement which is a must for building 21st century skills of our students, to make them future-ready for job-markets and also to meet the strategic visions of the HEIs.

V. Building ALMA-Connect: Challenges ahead and Recommended Policy Actions for India

The alumni culture in Indian universities is largely lacking. It is only recently that the apex body of HEI in India i.e., UGC (2019-2020) has shown inclination towards the creation of this alumni culture in Indian colleges and universities. As has been mentioned earlier in this paper that the recent UGC guidelines make it mandatory for higher education institutions to take proactive initiatives on the 'Student Career Progression and Alumni Network of Higher Education Quality Improvement Programme'(UGC,2019-2020). The National Assessment and Accreditation Council have also revised its accreditation framework in shifting "several metrics to bring in enhanced participation of students and alumni in the assessment process"(NAAC, 2017). But creating an alumni culture and building alumni associations from scratch presents various challenges. In the case of India HEIs, it's even more challenging where alumni culture is in the stage of infancy and alumni awareness and consciousness is lacking, unlike American and European counterparts.

Before the Indian HEIs move towards expecting alumni generosity in financial and non-financial form, the need is for building and cultivating a relationship with the alumni first as alumni activities have yet not started in many HEIs in India whereas in the United States these have been built over the decades or centuries. Indeed, fundraising or alumni giving is a key component of alumni relations but building an alumni culture in Indian HEIs is of utmost importance. There are a few steps that need immediate policy action.

First, spreading awareness about the need for cultivating this alumni culture is a must which is largely lacking seriously amongst Indian HEIs. The early adopters whether individuals or departments can be helpful and their success can motivate and convince others to get involved. At times, the programs and ideas from outside the organization i.e., best practices of other institutes (e.g., in Indian context the examples of IITB, IITD) can also motivate them to get more involved in alumni relation-building (Ebert et al., 2015) and for forming lifelong learning relationship between the alumni and alma mater. If this relationship between the alumni and alma mater is managed successfully, it can help in enhancing the image and reputation of the HEIs. Alumni consciousness is of utmost importance as they are the connecting bridge between the past and the present of the institution and enjoy huge 'soft power' which if leveraged properly can contribute to the institutional effectiveness.

The second step for building a strong alumni relationship is the creation of an alumni database. Earlier HEIs may not have been able to understand the incentive for having it (Khatri and Raheja, 2018) but in today's

¹⁴ 'The Go IIT-B initiative' and 'Cherish IIT-Bombay' initiatives of IIT B are laudable as they have helped IITB to manage the problem of fund crunch (see :IIT-B receives record USD 3.6 million in donations from US alumni body | Mumbai news - Hindustan Times)

world it is of utmost importance and the potential of this important stakeholder is still untapped in many Indian HEIs. HEIs will require alumni records for formalizing this relationship with their alumni. But developing successful alumni networks/associations becomes a huge challenge if the institution does not have a proper record. Therefore, the institutions will have to invest time and effort, and money in creating alumni databases by reaching out to them through different methods including e-mails, social media platforms like Facebook, LinkedIn, and Instagram. It has been proposed in a recent study (Mukherjee, 2019) that a Centralized Alumni Management System (CAMS) which is an institution independent and concentrates on alumni network pan organizations can be very useful in this regard. Since alumni relations are a new phenomenon in Indian Universities, therefore, resources are required to be invested in having proper alumni infrastructure and programs with staff. The lack of financial and staff resources may emerge as the main obstacles to developing alumni programs. Inability to gauge the long-term benefits which may far exceed the initial cost, inaction, and modest investment can be the initial barriers that need to be overcome by Indian HEIs to develop a meaningful, productive alumni relationship. Thirdly, if the HEIs in India are looking for a fruitful engagement with the alumni then the institutes will have to explicitly identify their clear goals so that the appropriate strategies can be designed to match with the institutions' goals. The creation of a network from scratch itself poses a big challenge when neither the history nor track record of alumni is available (Ebert et al., 2015). Therefore, it's high time that the HEIs should prepare their long-term strategic visions and define the role of alumni in that. The next step may be the creation of alumni databases and the establishment of alumni networks to organize various activities to keep alumni engaged in the affairs of the HEIs. Over the years, as the US higher education system has strengthened alumni networks via reunions, alumni seminars, career events, mentor programs, and many more activities which keep the alumni actively engaged with the institution, Indian universities may benefit by following the suit. It has been very rightly said that the higher education institutions (HEIs) in developing countries (like India) having a weaker or non-existent alumni culture have to learn from the HEIs in developed countries which have 'long held solid alumni-alma mater relationship'. Therefore, the example of the latter needs to be emulated by other countries which are lagging behind in this respect (Pedro et al., 2017).

VI. Conclusion

The dwindling resources of the government of India (which was more notable during the corona times), inability to raise tuition fees by HEIs, the increasing demand-supply gap in India's HE sectors, and growing global competition can impede governments' ability to provide quality and sustainable HE. This calls for the need for engaging alumni in the affairs of the universities along with exploring/experimenting with other alternative sources of funding for higher education in India. Since the tradition and culture of 'directed philanthropy', 'involvement in volunteering' and recognizing people with awards for their devotion of time and efforts' is not widespread in India, the potential of alumni engagement remained largely unexplored and untapped in India. Growing impetus on alumni engagement by UGC and revision of NAAC accreditation framework to factor-in alumni engagements was the motivation to review the literature and research various facets/dimensions and mechanisms of alumni engagement followed in different universities of the world. The review of literature carried out in this paper brings out the two main dimensions of alumni engagement which can be monetary or non-monetary. The literature also tells us that alumni behavior is influenced by economic, sociological, institutional, and other factors. But for strengthening alumni-alma mater connections formalization of the relationship can be very beneficial as it can encourage alumni giving behaviors on the one side and encourage them to contribute also to their alma mater in non-monetary ways on the other. But developing these associations from scratch is going to be an uphill task as many HEIs might not be having alumni consciousness or awareness. Building alumni databases by creating consciousness is another big challenge. Therefore, it requires an investment of time, energy, and money/resources to create the alumni database first. The HEIs can make use of technology-based interventions and social media platforms for the purposes. But the commitment of people involved in this work is going to play a crucial role. The colleges/universities will have to determine their long-term vision from these programs. The creation and maintenance of data using new technologies and platforms can widen the reach to the alumni and improve

participation in the affairs of the HEIs. In this data-driven age, effective use of data to strategically plan and implement programs targeting alumni affinity¹⁵ can improve institutional effectiveness. Alumni awareness, alumni database, and alumni programs will help in ensuring alumni engagement. The commitment of the leadership at the institutional level (Principals, Heads of the Departments, Staff Coordinators) who drive the long-term vision of the institute will play an instrumental role in the success of alumni engagements and ensuring institutional effectiveness.

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¹⁵ Sun et al. (2007) notice that it usually does not happen

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Participation of Smallholder Farmers in Export of High-Value Spices: Role of Producer Organizations in India

Shilpa S. K.*

Abstract

The emergence of producer organizations (PO) as institutions for the development of smallholder farmers in India has greater potential to enable them in exploring global market opportunities. This study depicts the export trade performance of high-value spices and examines the role played by the producer organizations in aiding the smallholder farmers' participation in export markets. The investigation of the spices export trade over a period exhibits an upward trend. From the discussion with the directors and members of POs involved in spices business activities, it was understood that majority of the POs market spices through local traders, while some POs go for pre-harvest contract agreements. Though few POs shared their willingness to export spices, the majority of them face serious challenges in accessing the export markets.

Key Words: *Smallholder farmers, producer organizations, export market participation*

Introduction

Agriculture plays a major role in the development of the economies as the sector can generate greater employment opportunities, and is imperative for the growth of emerging economies. The world agricultural economy is undergoing significant structural changes due to both supply-related and demand-related issues as a consequence of changing climate, environmental, economic, market, and socio-political conditions (Markelova et al., 2009). One such significant change is the growth of smallholding farmers with more landholdings getting fragmented and their increasing contribution to meeting future food demand. Worldwide, it is witnessed that greater than 80 percent of the farmlands are below two hectares, but they account for merely 12% of the world's farmland and these smallholder farmers contribute almost 80% of the food produced in Asia and sub-Saharan Africa (Lowder et al., 2014). Despite their significant contribution to food security, economy, and livelihood they face serious challenges due to their size of operation (Fan and Rue, 2020). Therefore, smallholder farmers need to be innovative in their approach to address their concerns and exploit the potential arising out of these structural changes. Moreover, globalization is creating export market opportunities for high-value products. Evidence has indicated an accelerated flow of exports of high-value food products from developing to developed countries (Diaz-Bonilla and Recca, 2000; Aksoy 2005). Research studies have underlined the need for the development of smallholder agriculture and many studies suggested linking farmers to the markets and the necessity of their active participation in markets (Fisher and Qaim, 2012). Melanie and Michael (2011) reveal that various institutional setups have empowered small-scale producers socially, economically, and politically as they overcome market constraints, augment their skillsets and provide information and technologies. Producer organizations or collectives are being considered to protect small farmers from the effect of globalization and support them to take part productively in the competitive markets (Trebbin and Hassler, 2012). There is ample evidence that smallholders can gain substantively by participating in high-value commodities and food products supply chains (McCulloch and Ota 2002; Maertens and Swinnen 2009).

The scenario in Indian agriculture is not an exception to this, dominated by smallholders; about 86 percent of farm households have a landholding size of 2 hectares (DAC&FW 2019) and producer organizations, a collective by smallholders are functioning as an institutional setup to make value chains inclusive of smallholder farmers. Growing spices is a dominant slice of the horticultural industry in India contributing significantly to the livelihood of smallholder farmers, where about 50 types of spices are grown (Panda, 2010). Globally, Asia and

* Indian Institute of Plantation Management Bengaluru, Jnana Bharathi, Mallathahalli, Bengaluru, Karnataka 560056

specifically India is the dominant producer, exporter, and consumer of spices, and fulfills almost half of the demand for spices globally, with over three million smallholder producers (Jaffee, 2005). Indian spice trade has achieved greater success in earning a global reputation for meeting the quality specifications and marketing service, in selected destinations such as the USA, UK, Germany, Sweden, and Japan. The total spices export was valued at US\$ 4.2 billion in the financial year 2020-21, which increased to 115% from 84% between the years 2014-21 (PIB, 2022). The international spice trade is predominantly done by exporters excluding the smallholders taking part in it. Smallholders encounter several challenges in gaining access to markets such as constraints on production, high transaction costs, lack of information on markets, grades and standards, legal environment, storage facilities, market transport, and value-adding (Salami et al., 2010). While Herman et al., (2012) highlight, that the limitation in terms of value-added and poor processing are the major reasons for poor market access amongst smallholder farmers.

In development economics, it is a widely accepted fact that exports play a dominant role in the growth of an economy, as exports lead to foreign exchange earnings and gaining economies of scale (Lall, 2001; Wangwe, 1995). The smallholding spice farmers in India are becoming members of the producer organizations intending to link themselves with high-value niche markets and build their market competitiveness. However, the export trade continues to be dominated by big players who are primarily non-producers. Given this context, this study intends to investigate the role of producer organizations in facilitating smallholder farmers' participation in the export of high-value spices. Specifically, this study has a threefold purpose: (1) to review the export trade market of high-value spices from India; (2) to examine the marketing system of spice POs in terms of the marketing channels, product form, and value addition; (3) to explore the spice POs willingness to participate in export markets and understand the constraints faced by them in export market participation.

Review of Literature

Smallholder farmers experience poor agricultural information concerning crop selection, technologies, weather information, pests and disease, and information related to markets for various farm produce (Gulati et al., 2007, Hegde, 2019), leading to marketing disadvantages (Ruijs 2002). There is a need for linking smallholder farmers to processors and retailers for effective value chain management (Miehlbradt and McVay, 2005).

Studies have proved that the formation of producer organizations could be instrumental in addressing the changing requirements of the farming community (Sugden et al., 2018) and being competitive in changing markets (Ochieng et al., 2018). The producer organizations are formed to increase the net income of farmers by planning decision-making, offering agro-services, and providing access to inputs, institutional credit, and market linkage. Hellin et al., (2009) demonstrate the prominence of producer organizations in providing market linkage for high-value commodities for small farmers. Trebbin and Hassler (2012) put forward that producer organizations can help enhance the competitiveness of farmers and augment their income in this emerging market scenario while integrating small producers into modern supply networks. This can be made possible by reducing expenses while gaining from economies of scale (Lanting 2005), and reducing transaction costs for greater access to market-related insights (dos Santos, et al., 2020).

Erstwhile studies have exposed the success stories of producer organizations in facilitating smallholder farmers to access high-value markets (Shiferaw et al. 2008; Bernard et al. 2008; Bernard and Spielman 2009; Hellin et al. 2009; Narrod et al. 2009; Kaganzi et al. 2009; Wollni et al. 2010). In Costa Rica, cooperatives' member farmers' participation in specialty coffee marketing, helped them gain higher prices (Wollni and Zeller 2007). Similarly, (Stockbridge et al., 2003; Thompson et al., 2009) observed the success of producer organizations in linking members to the export of horticulture crops in Kenya.

The rising demand for high-value spices, the emergence of producer organizations for vertical coordination, and other structural changes in agricultural supply channels present some challenges for small farmers in developing countries. With the growing market dynamics, the growth prospects for smallholder farmers

are enormous in the export markets for high-value spices, however, small farmers face challenges as high-value agricultural commodities often involve higher costs of production and greater marketing risk (Gulati et al., 2007). There is more emphasis on increasing farmers' access to markets, especially through high-value agricultural products, by engaging in value-adding activities such as agro-processing and by group marketing (Gulati et al., 2007; Miehlbradt and McVay, 2005). Studies have presented the determinants of smallholder farmers' participation in collectives and markets, however, there lies a gap in understanding the role of producer organizations in linking the smallholders to high-value spices.

Methodology

The study comprised two parts, a brief quantitative analysis of export trade performance of high-value spices in India based on data collected from spices board India and a qualitative study to understand the role of producer organizations in enabling the smallholder farmers' participation in the export markets. For the qualitative analysis, the details of producer organizations involved in spices business activity were obtained from Spices Board India (refer to annexure 1). Out of 445 spices producer organizations, it was noticed that 186 POs were dealing in two or more spices, with cardamom, black pepper, chili, and turmeric being the major spices marketed by them. So, 34 producer organizations that were marketing a minimum of two spices (cardamom, black pepper, chili, turmeric) were selected (refer to table 1) for this study. Using an interview schedule, the data was collected from the farmer members and board members of the POs. A few of the interviews were for individuals, while some others were for small groups. The data with specific modules on POs marketing practices in terms of product form; channels used and value addition was collected. Moreover, questions related to POs' willingness to participate in export markets were included. The POs sharing their willingness to be part of the export market were further probed to specify the factors persuading their behaviour. Also the possible constraints the POs faced for accessing the export markets were assessed. The list of potential constraints was identified in pre-survey interviews with PO farmer members.

Table 1: Producer organizations interviewed

Sl. No.	State	No. of Producer organizations	Spices grown and marketed
1	Kerala	10	Cardamom and Black pepper
2	Tamil Nadu	1	Cardamom and Black pepper
3	Karnataka	6	Cardamom and Black Pepper
4	Assam	4	King Chilli, Turmeric
5	Sikkim	4	Large Cardamom, Turmeric
6	Andhra Pradesh	4	Chilli, Turmeric
7	Telangana	3	Chilli, Turmeric
8	Maharashtra	2	Chilli, Turmeric
	Total	34	

Source: Spices Board India

Results and Discussion

India is acknowledged as the land of spices, with a history of trading spices from ancient times. Indian

spices have enormous demand from the global markets due to their aroma, taste, and medicinal applications and the same applies to the market in India with a huge consumer base. With changing times, the spices industry in India has evolved to meet the expectations of the dynamic market ecosystem, leading the industry players to achieve a competitive advantage over spices-growing countries. Indian spices have its key customers in the USA, China, Vietnam, UAE, Indonesia, Malaysia, UK, Sri Lanka, Saudi Arabia, as well as Germany. Cardamom, pepper, chili, ginger, turmeric, coriander, cumin, fenugreek, garlic, clove, and nutmeg are among the chief spices exported from India. Also, value-added spice products such as spice mixes, spice blends, curry powder/mixtures, oleoresin, extracts of essential oils, de-hydrated, and spice in brine, contribute significantly to the spice export market as the demand for Indian spices scaled up phenomenally.

Export Trade of High-Value Spices

The spices trade to global markets is one of the chief foreign exchange earners to India. The investigation of the spices export trade over a period exhibits an upward trend. CAGR* of the quantity of spices exported is 7.78 % over the last 10 years and the value exported has registered CAGR of 12.98%. The export of value-added spices though increasing over the last 10 years, has reflected the same rate of growth as that of undifferentiated spices. Moreover, the share of value-added spices in quantity is around 24% and it continued to be the same for the previous 10 years. The growth of organic spices is very impressive and it is necessary to exploit the growing market potential for organic spices. India ranks top in the export trade of chili, coriander, and turmeric (refer to table 2).

The export trade performance of key spices in terms of calculated CAGR for quantity is good except for pepper and large cardamom. The calculated CAGR for the value of major spices is impressive in the case of small cardamom, cumin, turmeric, and chili, average in the case of large cardamom, and poor in the case of pepper. The calculated CAGR in the case of large cardamom is high in comparison to all other spices. It can be inferred that efforts need to be taken to enhance the quantity of production (refer to table 3).

Table 2: Export trade of high value spices

Year	Total Export		Export of Value added spices		Export of Organic spices	
	Quantity(Tons)	Value (Rs. Crs)	Quantity(Tons)	Value (Rs. Crs)	Quantity(MT)	Value(Rs.Cr)
2009-10	502750	5560.50	132532	2937.69	668	13.75
2010-11	525750	6840.71	123821	3771.18	798	23.65
2011-12	575270	9783.42	128679	5007.45	1458	48.24
2012-13	726613	12112.76	164008	7208.00	2031	71.92
2013-14	817250	13735.39	170165	7133.25	1859	70.44
2014-15	893920	14899.67	209934	7405.26	1676	67.11
2015-16	843255	16238.23	212969	7894.34	2228	112.43
2016-17	947790	17812.24	238153	8539.39	2839	137.00
2017-18	1028060	17980.16	251285	9183.51	3630	159.01
2018-19	1100250	19505.81	259250	9591.08	4395	179.33

Source: Spices Board India

Table 3: Export performance of selected high value spices

Name of Spices	CAGR of Quantity	CAGR of Value	CAGR of Unit Value
Pepper	-6.04%	3.23%	9.86%
Cardamom(small)	14.28%	22.38%	7.08%
Cardamom(large)	-7.49%	10.34%	19.29%
Chilli	9.56%	17.47%	7.22%
Turmeric	9.79%	19%	8.39%
Cumin	13.12%	18.15%	4.45%

Source: Calculated based on Spices Board India data

*CAGR- Compound Average Growth Rate

It is implicit that both the domestic supply factors and foreign demand factors influence the export performance of Indian spices. The demand for Indian spices in global markets and the revival of export competitiveness can benefit Indian spice producers. Over million Indian smallholder households produce spices and hundreds of thousands of others are involved in spice processing, distribution, and trade (Chawla 2016). Producing spices for high-quality markets such as Europe, UAE and the US creates opportunities (price margins are usually higher) as well as constraints (higher requirements on quality). Producers need assistance to overcome these constraints. The pressures of globalization and liberalization are creating exclusive supply chains between preferred business partners. Smallholder agriculture is poorly prepared for these changes. A targeted effort is needed to include poorer households in value chains: organizational development, technical upgrading, management skills, and access to financing are all required.

Marketing System of Spice POs

Marketing Channels

It was observed that the POs interviewed were marketing their spices through intermediaries. The marketing channels used by the POs were examined especially for cardamom, pepper, chili, and turmeric as the majority of the POs were dealing with these spices. Two major marketing channels, namely the local market and middlemen (traders/dealers) were used by POs for marketing the spices except for cardamom which has an additional channel i.e the auction centers (refer to table 4).

POs sell spices through local traders or to markets in their specific areas. Various factors such as financial commitments or relationship with a trader, distance to the markets, and notably the market price influence the POs decision of channel choice. Few POs also market the spices by having a contractual agreement with pre-harvest contractors. In this model, the POs will get early payment for the agreement and the commission agents sell the spices to domestic market players and exporters through the brokers. The motives behind farmers selling spices to the traders quoted were to be the prominence of the unorganized spice business, poor market linkage for their products, and unsatisfactory market benefits. The marketing channels adopted by POs has great implication on the perception of the price realized by the smallholder farmers through these channels. As the POs are expected to play a greater role in aggregating the farm produce, clean, grade, and warehouse and connect them to bulk buyers/processors or to organized retailers.

Table 4: Marketing Channels of POs

Cardamom	Producer/PO → Licensed dealers and traders → Retailer Producer/PO → Auctions- licensed dealers and traders → Retailer
Pepper	Producer/PO → Pre harvest sale → Assemblers (village merchants) - post harvest sale Producer/PO → Pre harvest sale → Assemblers → Local traders (primary market) → wholesalers (at secondary market) → Distributors for domestic market/exporters/international wholesalers
Turmeric	Producer/PO → Processor-cum-Wholesaler-cum-Retailer → Retailer Producer/PO → Processor-cum-Wholesaler-cum-Retailer
Chilli	Producer/PO → Commission agent → Retailers Producer/PO → Wholesaler → Retailers Producer/POs → Post-harvest contractor → Wholesaler → Retailer Producer/POs → Village Merchants → Commission Merchants → Wholesalers → Retailer

Source: Authors description based on interviews with POs

Product Form and Value Addition

The spice POs interviewed were majorly marketing the raw form of spices through various intermediaries, excepting few organizations involved in basic value addition such as making powders. The raw form of spices and the value-added spice powders were marketed through intermediaries in the domestic markets. On further interrogation about their specific plans for value addition considering the requirements of importing countries, only four POs mentioned that they are planning to intensify their processing patterns for introducing value-added spices. Two of the POs were dealing with cardamom and pepper and the other two were marketing turmeric and chili. Furthermore, only two POs are planning to increase production, in response to the demand for value-added spices in the market. The POs stated their plan to go for value additions to the spices in terms of powders, oils, and oleoresins.

Participation of Smallholder Farmers in Export of High-Value Spices

When inquired about the POs willingness to be part of the export market for spices, only eight POs shared their willingness to participate. Two POs who were in cardamom and pepper trading from Kerala have completed the legal formalities and were market ready for distributing spices to the respective global destinations. Also, it was noted that the POs were interested and willing to export spices to various destinations, however, they were facing certain constraints in the marketing ecosystem. The study demonstrates the willingness of only four POs to increase the production of high-value spices to match the quality specification norms of the importing countries and only two producer organizations are motivated to increase exportable value-added spices.

Further, an investigation was undertaken to know the factors driving these eight POs who exhibited their willingness to be part of the export market of spices. The directors and members were asked to rank (with rank 1 being the most critical) the factors determining their willingness to export spices. A total of 6 factors were identified based on the maximum rank score given by the respondents, viz selling price, transaction cost, access to market information, the role of the leader, age of the PO, and market linkage service provided by the POs. The average age of the POs sharing their willingness to participate in the export market was 12 years, implying that experience in dealing with spices in the domestic market has facilitated them to explore the export market potential. The POs are empowering the smallholder farmer members to be export market ready by providing the relevant information, working on scale economies, and negotiating with importers for the right price under the supervision of an able leader. It is implicit that these producer organizations are working towards achieving the fundamental purpose of their establishment. However, they need to emphasize developing a strategic business model to overcome the problems of smallholder farmers in reaching the export markets.

The factors influencing export participation perceptions in this study are grounded on previous studies related to farmers' market participation. Suvedietal., (2017) considered institutional variables such as market access, distance, training, membership, and local off-farm and migrant off-farm as the influencing variables along with farm and household characteristics for assessing the farmers' decision to participate in extension programs. Also, a strong institutional infrastructure is essential to induce market access (Barrett, 2008). While, Hassan, (2015), used distant market, market information access, transaction cost, market organization, number of spice crops, quantity sold, spice selling price, demand, spice grading, and value addition variables as determinants of market participation among spice farmers in Zanzibar. Place et al., (2004), assessed the farmer groups' performance in Kenya with the factors such as age and size of collective, age of leader, group members' diversity, education of members, and type of decision making.

Devaux, et. al., (2009) highlights the role of capable leaders in motivating farmers' participation in the market chain. Furthermore, Castella and Bouahom (2014), signifying that effective leaders empower group members through a participatory approach, leading to group sustainability. The study by Markelova, et. al., (2009) examined the characteristics of group members, institutional setup, types of commodities, type of markets, and external environment variables in facilitating smallholders' market access by farmer collectives. Whereas, (Barham and Chitemi 2009), proposed mature groups along with strong internal functioning activities and a good asset base promote groups' market performance. A recent study by, Abdul-Rahaman and Abdulai (2020), stated that farmers' participation in collectives had a significant impact on farm revenues.

Constraints in Export Market Participation

Additionally, the study discovered the possible constraints the POs faced in accessing the export markets. From the discussion with directors and producer members, it was noted that POs face certain challenges in linking with export markets. It was implicit from the discussion that the links between producer organizations and export markets are in the nascent stage. So PO members and directors were requested to share their views regarding the constraints they faced in market access for exporting spices. The directors and members were asked to rank the problems they faced in exporting spices, distinguishing the market-related problems and organization-related issues (with rank 1 being the most critical). A total of 6 ranks were identified based on the maximum rank score given by the respondents (Refer to table 5).

Table 5: Summary of constraints

Rank	Market Related	Organization Related
1	High transaction costs	Smaller capital base
2	Lack of information on markets	Poor professional management
3	Quality Specifications	Lack of technology and poor infrastructure for marketing and value addition
4	Legal environment	Resistance from local traders
5	Value adding	Lack of risk mitigation mechanism
6	Storage facilities	Poor member equity mobilisation

Source: Authors description based on interviews with POs

POs stated a smaller capital base as the primary constraint followed by poor professional management, lack of technology, poor marketing infrastructure, resistance from local traders, lack of risk mitigation mechanisms, and poor equity mobilization impeding the smallholder farmers' participation in the export of high-value spices. The findings are in line with previous studies discussing the capabilities and performance of POs in India. They have emphasized the problems of selected POs to be insufficient external finance, low capital base, talent gap, operational issues, weak governance, insufficient storage, and processing infrastructure (Singh and Singh 2014, Kanitkar 2016, Shah 2016, Mahajan 2014, Sastry 2017, Rutgers 2010). Papers have also analyzed the capabilities and performance of POs and recorded the issues of POs to be limited working capital base, not able to fulfill statutory requirements, absence of vision and mission, weak management, and poor market information and access, (Singh and Singh 2014, Kanitkar 2016, Rutgers, 2010). Additionally, low risk-taking behavior and poor implementation of marketing strategies are the major constraints faced by dairy producer organizations (Kalamkaret. al., 2018).

The discussion with PO directors and members further demonstrates high transaction cost to be the prime market-related issue, along with lack of market information, difficulty in accomplishing the stringent quality specifications, legal environment, poor value addition, and lack of storage facilities. These reasons are in conjunction with Delgado (1999) who states, that high transaction costs as the embodiment of market access barriers among resource-poor smallholders. The high transaction costs result from individual produce transportation and selling, difficulties in getting trading partners, and poor bargaining power. These include the costs of searching for a trading partner with whom to exchange, the costs of screening partners, bargaining, monitoring, enforcement, and, eventually, transferring the product to its destination (Hobbs, 1997; Jaffee and Morton, 1995). Besides these problems, the prices of high-value food commodities are highly volatile. This may intensify the transaction costs and augment the marketing risks that may be unpromising for smallholders. While, Tomar and Katani (2020), state the importance of adherence to quality standards of the importing countries, Pingali et al., (2019) pointed out the importance of lowering the power of middlemen in enabling farmers to participate in markets.

CONCLUSION AND IMPLICATIONS

The study highlights the export performance of Indian spices and the need for timely assistance to smallholder farmers to leverage emerging global opportunities. So it is indispensable to engage in the improvement of market performance and to create an `entrepreneurial culture (Barham and Chitemi, 2009) in rural communities through the development of institutional setups such as producer organizations (Lundy et al, 2002; Markelova et al, 2009). The results reveal a greater dependence of the POs on the traders/dealers which has a direct linkage with the price realized by the farmer members. Alternative marketing channels such as marketing directly to bulk

buyers, processors, or organized retailers may be explored by the POs for offering remunerative prices to the smallholder farmers. Trebbin A (2014) studied connecting marginal farmers to retail chains through farmer organizations and found those organizations to be capable of improving farmers' position in their relationship with retail chains in India. Although the export of value-added spices is increasing over the last 10 years, the contribution of POs in this category is unnoticed. This has greater implications for the strategic planning process of POs as it is understood from experience that value-added spice products fetch premium prices in both international as well as national markets (Mani and Kabiraj, 2019). As the demand drive is changing, quantitatively and qualitatively, maintaining the quality standards and meeting the expectations of the global market by encouraging the producer organizations to trade in value-added/branded spices could fetch higher unit value and better price realization to the smallholder farmers.

The study demonstrates the willingness of few POs to participate in export markets, however, the majority of the POs faced market and organization-related issues impeding their export market participation. Experience suggests that producer organizations offer a means by which these constraints can be reduced, thereby enhancing smallholder farmers' participation in agricultural markets (Stockbridge et. al., 2003). In light of the importance of producer organizations' role in facilitating smallholder farmers' participation in the export of high-value spices, there is an urgent need for developing a strategic business model for the POs.

Provision may be made allowing subordinated loans into the equity with a guaranteed return, to strengthen the capital base, and Channelizing the venture capital fund for supporting the activities of producer organizations can also be explored. Also, there is an immediate need to take experienced individuals on board. Considering that the producer organizations benefit smallholder farmers and in the initial period they handle low volume or the required credibility to attract buyers, the promoting organizations or the State Governments, the government of India or organizations such as the National Bank for Agriculture and Rural Development (NABARD) may support and facilitate creating market linkages. Abetting smallholder farmers to address critical market-level issues (high transaction costs and poor infrastructure) will incentivize them to participate in high-value spice exports.

The producer organizations can play an active role to facilitate the smallholder farmers, only when the members and board develop a business mindset. As the overall performance of the producer organizations can be augmented through diversified and value-added products from farm activities, their performance can be strengthened by linking them to the export markets along with corporate and bulk buyers. The heart of any market linkage for smallholder farmers is not access to the market but effective participation in the market. This can be achieved by the use of information and communication technologies, partnerships, financing across the value chain, and workable contracts for the inclusiveness of small farmers (Mendoza and Thelen, 2008). The business model of stable producer organizations needs to be replicated in different parts of the country to ensure the sustainable growth of marginal farmers. The benchmark practices of successful producer organizations should be communicated for adoption by other producer organizations.

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Annexure 1: List of POs

S. No	State	No. of Farmers Producer Company/Spice Producers Society/Spice Farmers Producers Society	No. of PO's with two or more spices	Spices grown
1	Kerala	83	43	Cardamom Pepper Nutmeg, Mace
2	Tamilnadu	11	1	Pepper Cardamom
3	Karnataka	38	19	Cardamom Black pepper Ginger & green chilli
4	Jammu & Kashmir	7	NA	Only saffron
5	Assam	20	13	Turmeric Ginger Black pepper & king chilli
6	Mizoram	14	4	Mizo chilli Ginger Turmeric
7	Arunachal Pradesh	7	2	Ginger Turmeric
8	Tripura	11	10	Ginger Turmeric Black pepper
9	Manipur	9	9	Ginger King chilli Turmeric
10	Nagaland	11	7	Large cardamom Ginger Chilli
11	Meghalaya	17	3	Turmeric Black pepper Ginger
12	Sikkim	28	22	Ginger Turmeric Large cardamom
13	Andhra Pradesh	70	16	Turmeric Black pepper Ginger Chilli
14	Gujarat	15	11	Turmeric Cumin Chilli Ajwain & mustard

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15	Rajasthan	13	1	Ginger Turmeric
16	Telangana	50	9	Chilli Turmeric
17	Bihar	3	3	Turmeric Mint Chilli
18	Uttarakhand	5	5	Coriander Turmeric Garlic Chilli
19	Uttar Pradesh	9	3	Red chillies Mint Turmeric Ginger
20	Maharashtra	24	5	Chilli Garlic Ginger Turmeric
	Total	445	186	

Source: Spices Board India

Analytical Study on Efficiency of Health Care Services with reference to Tribhuvandas Foundation

Jaimin H. Trivedi*

Abstract

Local Non-Government Organizations (LNGOs) are playing a crucial role in the development of local communities. Local NGOs/ trusts/ charitable institutions are considered NFP (Not-For-Profit) organizations that are not established with the monetary objective. However, it's a matter of concern for them to generate revenues for ensuring their operations. NGOs face financial crisis and therefore struggle to achieve the objective of serving communities for which they are established. In this context, it is required to examine financial resilience of such charitable organizations to understand the efficiency and stability which determine the effectiveness of LNGOs. Financial resilience can be enhanced with administrative efficiency, good performance in providing services, efficient governance and sufficient revenue generation among other strategies. The efficiency of the services should be increased to improve the revenue generation from various services and programs run by the organization, while not earning profits from such charity programs.

One such NGO - Tribhuvandas Foundation provides health services. Here an attempt is made to study the financial resilience of Tribhuvandas Foundation with the application of most commonly accepted tool of financial analysis viz. ratio analysis. Variables like expenses and income of program, projects and clinic are considered for the purpose of statistical analysis and hypothesis testing. Correlation is being measured between income and expenses of various services of Tribhuvandas Foundation. It is observed that, there is significant correlation between expenses and income of project and clinical services where as in case of program, there is no significant correlation ship between expenses and income.

Key Words: *Non-Government Organization, Financial resilience, ratio analysis*

JEL Codes: L31, G32, L39, I00

Introduction

A Non-Government Organization-NGO is a non-profit making organization. Revenue is essential for such a kind of organization to achieve its sustainability, which depends on projects/programs organized and services rendered to the society. Charges decided and received for offering various services, along with the donations received from donors are pivotal. Various grants, funds received for performing corporate social responsibility on behalf of some corporate, funds received from various other donors, etc. are additional sources of revenue but they do not ensure the constant flow of fund in long the run. Therefore, it is advisable for the NGO to generate its own revenues for organizing various activities sustainably

Good health is not only beneficial to an individual but also contributes to a nations' development through development of human capital. Therefore, the importance of active health care NGO's are significantly increasing in contemporary times. NGOs are organizing various health awareness camps, programs, surveys etc. Tribhuvandas Foundation, is an NGO located at Anand district of Gujarat. Its primary objective is to undertake three types of major activities towards healthcare services, which are identified as (i) programs, (ii) projects and (iii) rural clinics. To assure their continued services towards improving the health standards of rural communities in a developing country like India, it is necessary for NGOs like Tribhuvandas Foundation to have sufficient financial resources for the continuation of the various health care projects and programs. Hence, the current study is descriptive research followed by financial analysis for Tribhuvandas Foundation. Initially, a brief description

* Assistant Professor, Faculty of Management Studies, CHARUSAT, Changa

about NGOs in general and Tribhuvandas Foundation in particular is provided and subsequently the performance of various services provided by the NGO is analyzed to assess the financial feasibility of various charity work undertaken by the said NGO.

Objectives

The prime objective of the study is to examine the sustainability of the various functions of the foundation with regard to financial resilience. The subsidiary objective is to comparatively assess the performance of various activities by the foundation, so as to enhance all functions simultaneously. An attempt is made to achieve the following objectives.

1. To find out the efficiency ratios of the health care services offered by Tribhuvandas Foundation
2. To study the revenue concentration ratios in respect of its programs, projects and health clinic
3. To examine correlation between income and expenses for various selected health care services of Tribhuvandas Foundation

Literature Reviews

In the research the author attempts to evaluate various existing studies undertaken in the area of financial resilience of NGOs. It would also facilitate to develop an appropriate methodology for the existing study. Further, the author has reviewed several articles for the study which are mentioned and explained considering the need of this study. The reviews of existing literature also examine the performance and financial aspects of various health care services of selected NGOs of Anand district.

Christin & Helen (2012), have focused on organizational efficiency measurement for international aid organizations for external stakeholders. Various ratios such as efficiency ratios, stability ratios, capacity ratios and sustainability ratios have been computed by the authors to find out stability, liquidity, gearing and sustainability to examine the financial resilience of the NGOs. The basic purpose of this study was to develop various ratios basically for the non-profit organization by means of which the performance can be measured. The NGOs selected for the said study was performing at 65% of the efficiency.

Trussel & Parsons (2003), had emphasized on the development of a framework to identify the factors in Non-Profit organizations that can impact donations. The factors considered by the authors include the efficiency of the organization in allocating resources to its programme, the financial stability of the organization, etc. Factor analysis has been used to conceptualize and analyze the variables in the study.

Saungweme (2014), found that Local Non-Government Organizations (LNGO) of Zimbabwe were not financially sustainable. Four selected factors of financial sustainability of LNGOs were analyzed in this research and they were found to influence the financial sustainability of LNGOs in Zimbabwe. It was found that good financial management practices were the most important factor that was used to analyze financial sustainability of the LNGOs, followed by income diversification, own income generation, and lastly good donor relationship management practices.

A study conducted in the United States of America (USA) by Harvey & McCrohan (1988) revealed that donors were more favorably disposed to contribute to an organization with programme spending of 60% or more spendings. It was suggested by Charity watch that 60% or more is reasonable for most charities (AIP 2010), with the US Better Business Bureau (BBB 2010) recommending that at least 65% of the total expenses of an NFP organization should be spent on the programs.

According to Parsons, financial stability is a nonprofit organization's ability to continue operations if faced with decreased resources. Tuckman and Chang have identified four measures of stability in 1991: adequacy of equity, operating margin, revenue concentration and sustainability ratio. All NFPs should ideally have a

continuous flow of revenue into the organization and need to be aware of their reliance on particular revenue sources. That is why, revenue concentration is selected to determine in this research. Any disturbance in this particular identified income source could threaten their financial stability and their ability to continue offering services (Tuckman & Chang 1991).

Silva & Burger (2015), revealed in their paper that during periods 2000 to 2001 and 2006 to 2007, financial vulnerability observed a drop of at least 25 percent in recurrent revenue as a percentage of total revenue. This was predicted using the linear probability model to predict the variations of financial variables. The findings showed similar results by the study of Greenlee & Trussel (2000) through related literature reviews. The revenue concentration index was a significant predictor of financial distress in both periods. The surplus margin was only significant to predict financial vulnerability for the second period under consideration. The equity variable, particularly equipment and machinery, supposedly helped to cope with decreases in recurrent funding. Regarding the size of NGOs, it was observed that the size of the organizations was negatively associated with financial problems, i.e., large organizations faced lesser problems. However, such large organizations were not funded mainly by donors but instead a larger part of their funding was sourced from the revenues from their core activities.

Research Gap

From the literature review it was observed that no studies were found that were conducted on local NGOs in the state of Gujarat with respect to its performance and financial resilience. Local NGOs are defined as those operating only in a particular locality. While reviewing the literature it was found that many studies were carried out on the financial feasibility for various NGOs but, no specific study was available for Local NGOs.

Therefore, the studies on performance and financial resilience requires an extensive study to examine the efficiency of such local NGOs. Hence, Tribhuvandas Foundation is selected for the purpose of this study, which is one of the active Local NGO at Anand city situated in Gujarat state of India.

Research Design

The method used in the following research is based on secondary data retrieved from the audited statements of the foundation. Various financial ratios have been calculated and analyzed for analyzing the financial feasibility three specific health related activities of Tribhuvandas Foundation, namely health care programs, health care project and health clinics separately. Further, selected variables observed in the study are income and expenses related to the health care services that have been assembled separately for such health care programs, health care projects, and clinics and are examined critically. Moreover, efficiency ratios and revenue concentration ratios are computed with respect to the various health care services mentioned in the study along with hypothesis testing to measure the relationship between expenses and income of Tribhuvandas foundation for the period from the year 2015 to 2020.

Brief details about Tribhuvandas Foundation (TF)

This paper is a study of Tribhuvandas Foundation, Anand which is a local NGO actively contributing in providing health care services, in general and the health of women and children, in particular. Established by Shri Tribhuvandas Patel -the Founder Chairman it was registered in 1975 and became functional in 1980. It was linked with local milk co-operatives and was financially supported by AMUL. The role of Village Health Workers (VHWs) is crucial in the health care programs and projects carried out by the foundation. Village Health Workers are those women who are visiting villages to facilitate pregnant women and kids with the objective to serve them for health care purpose. The foundation attempts to integrate traditional Indian health care approaches with modern medical practices. Major activities of the foundation include * Primary health care (Treatment of common ailments), * Prevention & promotion of healthy practices, * Maternal and child health care namely 'Tapovan' (which includes various activities for pregnant women such as 'Garbh-Sanskar', Adolescent health-oriented

activities, Clinical and curative services & referral linkages, textile patchwork and embroidery, 'Child line number' (1098), etc). While various activities of the foundation can be classified as educational, awareness programs, projects, clinic and handicraft, only health care services have been considered for the present study.

Overview of foundation's activity 'Health care Programs'

Various programs are organized by the foundation for creating awareness among the rural communities regarding health care practices by organizing various kinds of camps in villages. Awareness about Kangaroo Mother Care (care for children in the form of vaccination, treatment of malnutrition, etc.), health care for new born kids with weight less than 2.4 kilograms, diseases of women and children, health care for young females, health care for pregnant women, availability of 32 medicines for different diseases, etc. are spread among the rural groups. Further, camps for educational training to the village health workers have also been organized at frequent intervals. Supervisors supervise and guide the field workers for the field visits at different villages regularly to facilitate village health workers under various programs run by the foundation.

Overview of foundation's activity - 'Health care Projects'

Foundation is also running several projects like Kangaroo Mother Care Projects, Child Helpline Project, Tapovan Project, etc. which are focused on providing health care services to children and mothers. The prime objective of the health care projects is to serve them to prevent malnutrition and improve the health standards of the rural populations.

Overview of foundation's 'Health care Clinics'

Foundation has established number of clinics in the selected villages and provide health care services on daily basis to women through village health workers. They are extending their services for minor diseases as well as guiding pregnant women so that they can deliver healthy babies. They are also providing medicines at a subsidized rate to the rural people.

Financial Resilience of TF

The analysis of efficiency and revenue concentration of the health care LNCO helps to understand the financial resilience of health care services, which is quite essential for ensuring sustainable performance of the NGOs at the local level. Based on such analysis the effective financial management practices followed by LNCOs can be known. Of course, several factors affect the financial soundness of an NGO like donor relationship management, government policies for granting subsidies and other grants, etc. However, the generation of reasonable revenue from the core activities undertaken by NGO is equally important to be considered for the capacity building of its operations. Here, three major services provided by TF in the area of health care i.e. health care programs, health care projects, & health care Clinics have been considered to study their efficiency and sustainability.

Financial Efficiency Ratios

The most commonly accepted efficiency ratios to assess financial efficiency are administration cost ratio, program cost ratio, project cost ratios, fundraising expense ratio, etc. The efficiency ratios reflect how funds are converted into direct benefits for beneficiaries. They are of immense interest to stakeholders, who support organizations with higher spending on programs and projects instead of administration and fundraising. Here, the efficiency ratio of selected core activities has been computed to check the rate at which the expenditure is directly converted in benefits to the beneficiaries. Further, which activity is stronger in respect of the efficiency ratio can be measured to find out the financially most efficient activity of the organization.

The table 1 reveals the efficiency ratios of all three health care services of the LNCO, which indicates that, the efficiency needs to be improved as compared to the observations made during the particular period

Table 1: Activity Wise Efficiency ratio of TF During 2005 to 2020 (In %)

Sr. No	Year	Program	Project	Clinical	Total
1	2015	63.99	3.83	2.82	70.64
2	2016	10.38	4.44	4.37	19.19
3	2017	12.44	2.91	0.23	15.58
4	2018	8.93	3.33	0.28	12.54
5	2019	38.48	3.34	2.15	43.96
6	2020	29.28	15.47	5.87	50.61
Average Result					35.42

Source: Computed by the author based on TF Annual Reports for the period 2015 to 2020

selected under study. Efficiency ratio is computed by dividing expense of particular activity with total expense.

$$\text{Efficiency Ratio} = \frac{\text{Expenses of a particular activity}}{\text{Total Expenses}}$$

Initially the ratio indicates good performance by showing 70% conversion of expenses into the direct benefits to the rural communities. Further, it is observed that there is a swift decline for the years 2016, 2017 and 2018 with 19.19%, 15.58% and 12.54% respectively which indicates poor performance. The major factors affecting the sharp decline was due to demonetization and introduction to Digital payments in India. Finally, there has been a significant increase during last two years i.e. 2019 and 2020 with 43.96% and 50.61% respectively during the period of study.

The above table shows that the average efficiency ratio for the period selected under study is 35.42%, which is less than the ideal efficiency ratio i.e. 65% which has been recommended by Charity watch and US better Business Bureau as well. Hence, the efficiency of the core activities of the Tribhuvandas foundation should be leveraged further by enlarging scale of operations of the selected health care services.

Stability (Revenue Concentration) Ratios

Revenue Concentration: The most appropriate ratio that ensures a sustainable revenue generation process from the services, ensuring consistent performance for an extended period is revenue concentration ratio. It reveals the revenue generation from particular services of an organization which turns out to be one of the most credible source of funds. Revenue concentration ratio can be computed by dividing revenue generated from a specific activity with total revenue. The objective of the stability/revenue ratio is to measure revenue concentration as an indicator of an organization's ability to continue to provide services by maintaining a healthy balance of funding sources.

Table 2: Activity Wise Revenue concentration ratio of TF During 2015 to 2020 (in %)

Sr. No.	Year	Program	Project	Clinic	Total
1	2015	32.35	4.35	36.28	72.98
2	2016	10.45	4.65	55.53	70.63
3	2017	76.75	-	15.37	92.12
4	2018	34.35	4.96	0.33	39.64
5	2019	44.18	3.83	24.69	72.70
6	2020	19.97	11	40.03	70.54
Average Result					69.77

Source: Computed by the author based on TF Annual Reports for the period 2015 to 2020

The above table reveals the percentage of revenue concentration in each of the services. The percentage of revenues are computed by dividing revenue from a particular service like Program, Project and clinical services with total revenues of Tribhuvandas Foundation. It indicates the proportion of a particular service in the total revenue of the NGO. It can be observed that the revenue concentration from the core activities is comparatively high. The average of revenue concentration for the period selected under study reveals that 69.77% is derived from the core activities of the selected health care of LINGO. It can be seen from the results presented in table 2 that the highest proportion of the revenue is from the Program category, since it is associated with spreading awareness and thereby attracting beneficiaries to camps. Such beneficiaries avail such facilities at subsidized rates, thereby contributing a larger share in the Foundation's revenue. In comparison other programs from the health care services were not as successful in generating enough revenue.

Further, it is required to identify whether there is any association between the income and expenses of selected health care services so that it can help us to analyze all of them to increase the overall revenue of the LINGO. There may be low levels of revenue as it is not established with profit motive. However, it may affect the operation of other activities in positive or negative ways. The positive impact will lead to an increment in the activity level of another two services if there is a significant association and adverse impact will lead to a decrement in the activity level of other services. Therefore, primarily it is essential to know whether there is any association between all of these three activities performed by the NGO to contribute for health care of the rural communities. Accordingly, here a small attempt is made by the researcher to estimate the correlation between expenses incurred for the various services and income generated from the same. Descriptive statistics for the same are given in the table 3 which depicts the normality of the data through skewness and kurtosis values given below. As it is identified, the value of kurtosis is more than three (3) the normality of data is having greater values and considered as above the normality values. This analysis is based on the data which are collected and gathered through secondary sources and financial statements of Tribhuvandas foundation, Anand, Gujarat.

Table 3: Descriptive Statistics for the variables in the study

Study Variables	Range	Mean	Std. Deviation	Skewness	Kurtosis
Program Income	22981088.95	14668981.85	7796712.30	0.63	1.06
Project Income	7528022.36	3308671.85	3010542.18	2.43	5.93
Clinic Income	35704173.10	15582031.78	13489499.80	0.33	-.635
Program Expense	24232034	15162856.95	11236735.30	0.38	-2.45
Project Expense	7972875	3189529.00	3080481.65	2.39	5.78
Clinic Expense	34696215	14490605.50	12888235.45	0.76	0.52

Source: Computed by the author

The above table summarizes the entire set of measurements in the form of descriptive statistics. It is observed from the above table that the distribution is positively skewed. Since $n > 50$ the researcher used the Shapiro-Wilk test to calculate the p-value to determine normality of the data using distribution table. Since the p-value is $0.2579 > 0.05$, the difference between the data sample and the normal distribution is big enough to be statistically significant. Further, data analysis is carried out to test the relationship between the variables namely - financial income and various financial expenses namely (Program, Project and Clinical) through ratio analysis and hypothesis testing for effective analysis. To test the relation between the variables hypothesis were constructed to perform the analysis using SPSS statistics and results are mentioned in the subsequent tables.

Hypothesis Testing

H₀ : There is no correlation between health care program expenses and income

H1_a : There is a significant correlation between health care program expenses and Income

Based on the above statistics the following hypothesis are tested for analysis between health care program Income and program expenses. The results are depicted in table 4 and table 5 respectively.

Table 4: Paired Samples Statistics between Income and Expense (Health care programs)

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Income Program	14668981.85	6	7796712.30	3182994.46
	Expense Program	15162856.95	6	11236735.30	4587377.97

Source: Computed by the author

Table 5: Correlations between Income and Expense (Health care programs)

		N	Correlation	Sig.
Pair 1	Income Program & Expense Program	6	0.725	0.103

Source: Computed by the author

From the above analysis through table 5 it can be concluded that, the P (Significance) (0.103) value is not less than 0.05. Therefore, the author fails to reject the null hypothesis. This reveals that there is no significant correlation between expenses and income of programs organized by the Tribhuvandas foundation. It means there is no association between Income and Expenses pertaining to programs offered by Tribhuvandas foundation.

H0_b : There is no correlation between health care project expenses and project income

H1_b : There is significant correlation between health care project expenses and project income

Based on the above data the following hypothesis are tested for analysis between project income and project expenses. The results of the same are depicted in table 6 and table 7 respectively.

Table 6: Paired Samples Statistics between Income and Expense (Health care project)

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Income Project	3308671.85	6	3010542.18	1229048.70
	Expense Project	3189529.00	6	3080481.65	1257601.36

Source: Computed by the author

Table 7: Correlations between Income and Expense (Health care Project)

		N	Correlation	Sig.
Pair 1	Income Project & Expense Project	6	0.997	0.000

Source: Computed by the author

The above analysis in table 7 reveals that, the significance value (p = 0.000) is less than 0.05, so the null hypothesis is rejected. This indicates that, there is significant positive correlation between project expenses and project income which are offered by Tribhuvandas foundation. Hence, while the health care project expenses are high, health care project income is also high, and vice-versa.

H₀: There is no correlation between clinical expenses and clinical income

H₁: There is significant correlation between clinical expenses and clinical income

Based on the above statistics the following hypothesis are tested for analysis between clinical income and clinical expenses which is depicted in table 8 and table 9 respectively.

Table 8: Paired Samples Statistics between Income and Expense (Clinical)

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Income Clinical	15582031.78	6	13489499.80	5507065.23
	Expense Clinical	14490605.50	6	12888235.44	5261600.08

Source: Computed by the author

Table 9: Correlations between Income and Expense (Clinical)

		N	Correlation	Sig.
Pair 1	Income Clinical & Expense Clinical	6	0.987	.000

Source: Computed by the author

The above analysis from table 9 reveals that, the significance value ($p = 0.000$) is less than 0.05, so the null hypothesis is rejected. This indicates that, there is significant positive correlation between clinical expenses and clinical income offered at the Tribhuvandas Foundation. Thus, when clinical expenses are high, clinical income are high and vice-versa.

Observations

Following observations have been made based on the study of annual reports and their analysis.

- Majorly, NGO is contributing through three health care activities like health care program, health care projects and clinical facilities for rural communities, particularly, women and children.
- The efficiency and revenue concentration of 'health care programs' is high compared to the other health care services such as 'health care projects' and 'clinical facilities.'

Recommendations

- NGO should try to extend its efforts to maximize the efficiency of the health care projects and clinics run at selected villages for the rural communities.
- NGO should apply financial management practices to improve the revenue concentration from various services rendered by itself.
- NGO should extend the scale of operations and also explore the other opportunities for other required services in the villages to increase their revenue sources.
- NGO should also extend its services to other villages in co-operation with other local NGOs who have focused exposure in the other villages, where its services are yet not rendered. This would further enhance their revenues.
- NGO should increase its centers to increase the efficiency of the operations and thereby improve the ratios measuring efficiency.

Conclusion

LNGOs are serving the local communities without concentrating on profit as they don't have a profit motive. However, the consistency and continuity in the services rendered by NGOs matter a lot in the developmental process. Without having income and economic resources, it will be difficult to ensure consistency and continuity and thus, it's a challenge for them to find out the most creative and innovative ways to create funds for the operations of an NGO. Tribhuvandas Foundation is efficient enough in raising funds for its activities through donors and other activities, but not as much from the health care services. However, activities are carried on consistently, which proves that the NGO can ensure funds with their constructive strategies, through sources other than generating revenue.

Financial management plays a pivotal role in determining the efficiency and sustainability of the services of LNGO. Further, it is observed that Tribhuvandas Foundation NGO is practicing good donor relationship management to ensure the flow of funds for its various activities. It is equally essential to participate in self-revenue generating activities also. Tribhuvandas Foundation is doing well in the respective areas of its services, particularly in terms of health care programs. However, there is also some scope of improvement by enhancing efficiencies of the various other services such as execution of the health care projects and clinical services.

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Exploration of Relationships between Educational Levels and Income Levels of Tribal Community in Narmada District of Gujarat

Ashish Vasava* and Jignesh Barot**

Abstract

Education is an important indicator of Economic development. The present study tries to find the role of education in influencing income levels for the sample respondents in the study area. The major objective of the current paper is to examine relationships between education and income of tribal community in Narmada District of Gujarat. The current paper uses stratified convenient sampling method for primary data collection. A total of 300 respondents have been selected as sample size of the study. The study concludes that there is a close relationship between education and income levels in the study area. It is observed that when the education level increases, the level of income is also found to be increasing among the sample respondents in Narmada District.

Keywords: *Income, Tribal Community, Education*

Introduction - Importance of Education

Education is an important instrument to raise income of working population. Qian Xiaolei (2007) found that growth in human capital made a statistically significant contribution to China's economic growth and that growth in human capital accounted for approximately 19 percent of growth in real GDP from 1990 to 2000. Wang Y (2001), observed using national data from 1978 to 1999 that human capital stock, measured by average years of schooling, contributed up to 11 per cent of GDP growth. However, empirical evidence from studies at the provincial level is not conclusive. Based on provincial data from 1978 to 1989, using higher education enrolment as an indicator of human capital accumulation, Feng (2000) found that education had a positive and significant effect on economic growth. Schultz (1960) analysed the contribution of education to growth in national income in the US from 1900 to 1956. He found that income elasticity of demand for education was about 3.5 times during the period, and investment in education contributed 3.5 times more to the increase in gross national income than investment in physical capital.

Educational Scenario of Schedule Tribes: Comparison with All Social Groups

Education is a key indicator of economic development and it plays a significant role in employment and income generation. Education is very important for socio-economic development of any social group. In this context education development is discussed here below. The literacy rate of schedule tribes and other social groups is presented in Table no. 1.

Table 1: Comparison of Literacy rates among different social groups in India (1961-2011)

Sr. No.	Years	Literacy Rates in India (in percentage)					
		All Social Groups			ST		
		Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8
1	1961	40.4	15.35	28.3	13.83	3.16	8.53
2	1971	45.96	21.97	34.45	17.63	4.85	11.30
3	1981	56.38	29.76	43.57	24.52	8.04	16.35
4	1991	64.13	39.29	52.21	40.65	18.19	29.60
5	2001	75.26	53.67	64.84	59.17	34.76	47.10
6	2011	80.89	64.64	72.99	68.53	49.35	58.96

Source: MTA, 2014

* Ph. D. Scholar, Department of Economics, Sardar Patel University, Vallabh Vidyanagar, Gujarat

** Associate Professor & Guide, Department of Economics, Sardar Patel University, Vallabh Vidyanagar, Gujarat

The data mentioned in Table no. 1 shows that literacy rate of all social groups increased continuously. It is observed that literacy rate of all population was 28.3 percent in 1961 and it increased to 72.99 percent in 2011. In the last five decades literacy rates of male and female both were found to have increased significantly. It is important to note that in the last one-decade growth of female literacy was observed to be greater than that for males. The data shows that in 2001 male literacy rate was 75.26 percent whereas female literacy was 53.67 percent and it increased at the rate of 80.89 percent and 64.64 percent in 2011 respectively.

A comparative analysis of literacy rate reveals that literacy rate of Schedule Tribes is less as compared to other social groups. It is observed that in 1961 literacy rate of Schedule Tribes (ST) was only 8.53 percent which is very less as compared to all social groups (28.3 percent). In 2011 literacy rate of ST was also lagging behind of other social groups. It can be seen in the table above that the literacy rate of all social groups was 72.99 percent whereas literacy rate of STs was 58.96 percent.

From gender point of view, there is a big difference between literacy rate of STs and all social groups. It is important to note that the female literacy rate of STs was 49.35 percent in 2011 which was 31.54 percent lower as compared to all social groups. On the other hand, male literacy rate of schedule tribe was also 21.93 percent lesser as compared to other social groups.

Review of Literature

A review of relevant literature has been attempted to examine the relationship between education and income. De Gregorio and Wha Lee (2002) examined empirical evidence on relationship between education and income distribution. The study used panel data set covering a broad range of countries for the period between 1960 to 1990. They have discussed in their research paper that income distribution is related to the population's average schooling and its dispersion. Income inequality increases with education inequality. The study analysed that countries with higher educational attainment also have a more equal income distribution. Considering that the standard deviation of the cross section of educational attainment is between 2.5 and 2.9 years, the coefficients (-0.009) suggest that an increase of one standard deviation in educational attainment reduces the Gini coefficient by about 0.03 (that is, 3 percentage points), which may account for about 30 percent of the standard deviation of the Gini coefficient.

Carnoy (2006) discussed in their research paper the positive economic payoff to individuals with more education in the form of higher earnings suggests that their economic value is higher than those who have lower education. Economists estimate the payoff to attaining more education relative to the cost of that education just like they would estimate the payoff to any investment. They calculate what the amount invested in education yields higher earnings over the lifetime to those with more education. This rate of return to the investment in education is generally positive in almost every country. In Europe, rates of return to education are about 7-8 percent, but in many developing countries, they can be much higher. In Brazil, for example, the overall rate of return to the investment in education is more than 12-14 percent. A positive rate of return to education suggests that investing in education contributes to economic growth. Levels of education associated with higher rates of return should be the levels in which additional investment is done so that it produces the greater contribution to economic growth.

Guangjie (2010) used data collected from China Health and Nutrition Survey (CHNS) in 1997 and 2006. It is found that education explains only a small fraction of personal income and income gap across different income groups. However, more educated people tend to work in the state-owned sector, have a low probability of moving in the labour market and work less time, which have a pronounced impact on income inequality. The study has done quantile regression, it results indicate that the low-income group's education return rate is lower, particularly at the secondary school and high school level, which helps little in narrowing the income gap.

Turcinkova and Stavkova (2012) undertook an analysis on relationship between attained level of

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education and the income situation of households in the Czech Republic. The source for the analysis of the effect of achieved level of education on the income situation of household are the results of a survey conducted by European Union Statistics on Income and Living Conditions (EU-SILC) from 2005 to 2009. The level of education of household was determined based on the level of education of the household member with the highest income of the head of household. The income situation is determined by mean and median values, differentiation and development. The study found that citizens having education of elementary, secondary, and vocational levels, do not even reach the national mean income, while their representation in society is more than 57% of households. In the Czech Republic, the household income was increased by 30.6%, the mean income increased by 30.9% of people having a trade through apprenticeship, 29.9% of the group having elementary education and 28.8 percent of people having secondary education and 28.2 percent of the group having higher education which is the lowest among all the groups.

The study made by Binu Paul (2013) provides detailed information related to income, livelihood and education of tribal community of Kerala. The specific objectives of the study were (1) to depict the income, livelihood, and educational attainment of tribal communities in Kerala, (2) to depict the disparities, if any, among tribal communities in terms of income and livelihood options, (3) to depict the disparities, if any, among tribal communities in term of educational attainment and (4) to depict the disparities, if any, in reservation benefits enjoyed by tribal communities in Government jobs. The major findings show that the tribal community still remains outlier in education with visible gender differences. The females lag behind their male counterparts in literacy. Many factors affect literacy of tribal community like inaccessibility, language barrier, cultural barrier, lack of tribal sensitive functionaries, lack of libraries/reading materials, lack of continuing efforts, alcoholism, etc. R. Nisha & M. Asokhan (2015) found that 56.67 percent of the tribal women were observed to be illiterate followed by functionally literates (28.33%), those with middle education (10.83%) and those with primary education (4.17%). This was mainly observed due to the fact that the tribal women were more restricted by their traditions and they did not come forward to upgrade their educational standards. The researchers found that nearly half (46.67%) of the respondents belonged to income category of Rs. 19,501 to 24,500. Out of total respondents' 36.67 percent of the respondents were observed to have earned annual income less than Rs. 19,500.

Wolla and Sullivan (2017) observed that the relationship between education and income is strong. Education is often referred to as an investment in human capital. People invest in human capital for similar reasons as people invest in financial assets, including to make money. In general, those with more education earn higher income. The higher income that results from a college degree is sometimes referred to as the 'college wage premium'. Research shows that this premium has grown over time. In general, the more skills people have, the more employable they are. As a result, workers with more education have a lower average unemployment rate than those with less education.

Ramya (2017) analysed, 'Characteristics Determining the Livelihood Security of the Tribal Farmers'. The respondent's age was found to be non-significant with livelihood security of tribal farmers. Similarly, all other components of livelihood securities had shown non-significant relationship except education. Further it can also be interpreted that tribals belonging to younger age groups might possess sufficient educational qualifications and might be utilizing the available education facilities more than tribal farmers belonging to older age group. The relationship of farming experience with livelihood security was found to be non-significant. On the same line, all the twelve components of livelihood security also have shown the non-significant relationship with farming experience of tribal farmers. It can be interpreted that experience gained through their farming might not be a responsible factor for enhancing their livelihood security.

Stryzhak (2020) undertook a study on panel data for 145 countries for 2018. The Pearson correlation, the Spearman rank correlation, and Kendall's Tau correlation were used in this research paper. It is assumed that the relationship between educational level and awareness of being happy exist. Education not only allows its owner to receive a higher income, but also gives the opportunity for self-expression, creative fulfilment, as well

as moral satisfaction from current activities. The study for a panel sample from 145 countries of the world showed strong direct relationship between the Education Index and Happiness Index. More educated people generally feel happier than less educated people. The analysis showed that education is closely related to the level of income and self-awareness of happiness.

VenugopalaRao (2022) has written a research paper on 'A study on socio-economic conditions of scheduled tribes' The study has adopted descriptive and analytical research design. Primary and secondary data have been used in this study. Through random sampling method total 150 respondents have been selected as a sample size from Kurnool District of Andhra Pradesh. The major objectives of the study were (1) to examine the socio-economic conditions of scheduled tribes in the selected study area, (2) to measure the relationship between the factors of development and socio-economic conditions of the tribals in the selected study area and (3) to suggest measures for uplifting the socio-economic conditions of the tribals in the selected study area. The study developed a null hypothesis mentioning that increased education levels have no significant impact on socio-economic conditions of the tribes. The results of the test proved that increased education level has a significant impact on socio-economic conditions of the tribals. The major observations of the study are that there is a certain relationship between the education levels of the tribals and its socio-economic impact in their lives and the income levels have a significant impact on their economic wellbeing and allied aspects of their family life.

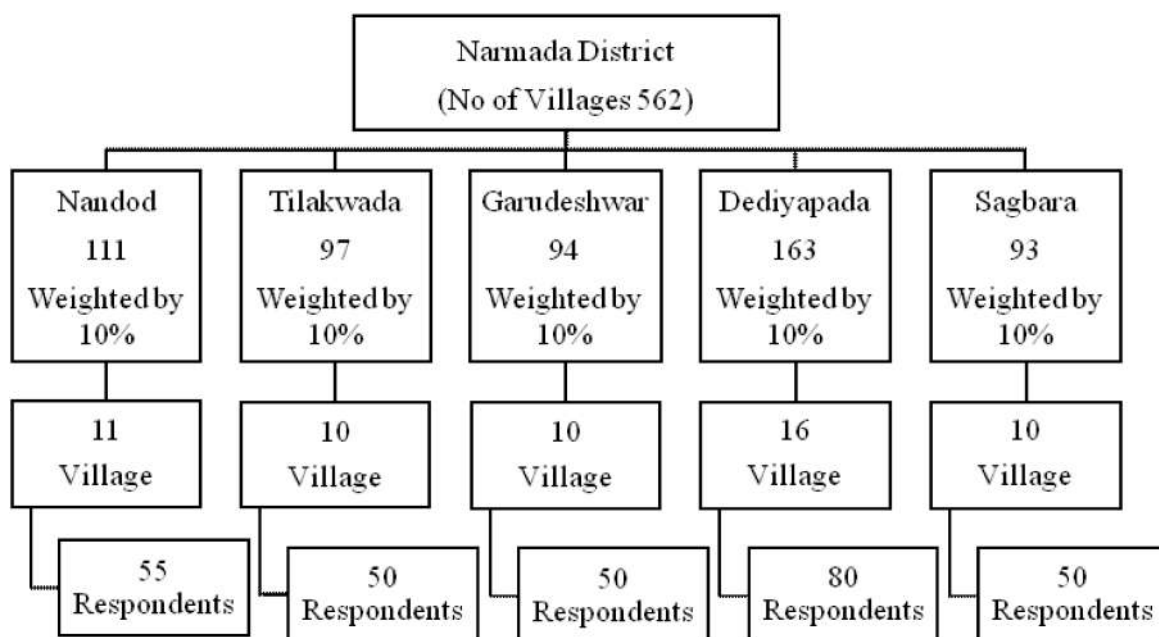
Objective of the study

The studies reviewed so far indicate that education has proved to be an important instrument for raising income levels of the tribal community. In this context, the current research paper is an attempt to examine relationships between education and income levels among tribal population in the Narmada District of Gujarat.

Sample Design

Narmada District of Gujarat being predominantly a tribal district, has been selected as study area. The study has used stratified convenient sampling method. There are 562 villages in Narmada district, and the district is divided into five Talukas. Of the total villages of each taluka, ten percentage villages were randomly selected and out of each village five respondents were randomly selected for the purpose of primary survey. Thus, as the sample of the study is of total 285 respondents, and 300 sample respondents are selected for the purpose of analysis, to make the study more effective.

Figure 1 : Sample selection



As shown in the chart above, from each of the five talukas about 10 percent of villages were selected. From each of these villages, five respondents were selected.

Hypothesis

H_0 : There is no association between the level of education and level of income of the respondents

H_1 : There is association between the level of education and level of income of the respondents

Source of Data

For the purpose of the study the researchers used the primary survey. The researchers developed a schedule based on the prioritised information that was required to be collected to reach the generalization of facts pertaining to the research. The data were collected by the researchers directly by contacting the respondents.

Results and Discussions

The distribution of sample respondents by education level and income level in the Narmada District is presented in Table 2. The education level was classified into four categories viz: (1) illiterate, (2) primary level of education, (3) secondary and higher secondary level of education and (4) graduate, post-graduate, and technical type of education/vocational education. It is attempted to find out income levels obtained by all the respondents falling into the above mentioned four categories of education. Income is analysed using five aspects: namely; (1) Total income of the respondents, (2) Average income of the respondents, (3) Total income of the Family, (4) Average income of the family and (5) Per Capita Income.

Table 2: A Comparative analysis of educational status and income levels of the sample respondents in the Narmada District

Sr. No	Education Level	Number of Respondents (Absolute & Percentage)	Total Income of total Respondents in each category	Average Income of Respondents by educational category	Total Family Income of total respondents in each category	Average Family Income of respondents by educational category
1	2	3	4	5	6	7
1	Illiterate	43 (14.33)	3510000	81627	4660000	108372
2	Primary	159 (53.0)	20130000	126603	24695000	155314
3	Secondary & Higher Secondary	90 (30.0)	14205000	157833	17980000	199777
4	Post Graduate, Graduate & Technical	8 (2.66)	3270000	408750	3750000	468750
5	Total Respondents	300 (100.0)	41115000	137050	51085000	170283

Source: Based on primary data

As shown in Table 2, out of 300 sample respondents the highest number of respondents 159 (53.0 percent) were found to be having primary education, 43 (14.33 percent) respondents were illiterate, 90 (30.0 percent) respondents were having secondary and higher secondary education, and 8 (2.66 percent) respondents were found to have acquired higher education in the Narmada District.

An analysis of average income of the respondents reveals that, out of 300 sample respondents 43 respondents who were illiterate, had an average income of INR 81,627. 159 Respondents who had primary education, had their average income as INR 1,26,603. Out of 300 sample respondents 90 respondents having secondary and higher secondary education were found to be earning average income of INR 1,57,833. Among the total sample respondents 8 respondents with higher education had an average income of INR 4,08,750 in the study area. Primarily, it is inferred that there seems to be positive relationship between educational level and income level of the sample respondents in the Narmada District. In order to check the statistical significance of the said relationship between parameters, Chi-Square Test is applied and the results are presented below.

Chi-square test between level of education and total income of the respondents

The result of the Chi-square test between level of education and total income of the sample respondents are presented in Tables 3. a and 3. b given below.

Table 3. a: Chi-square test results for relationship between level of education and total income of the respondent

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Interval by Interval	Pearson's R	.466	.067	9.102	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.395	.055	7.429	.000 ^c
N of Valid Cases		300			

Source: Computed by the author from data collected using primary survey

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Table 3. b: Chi-square test results of association between educational level and total income of the respondent

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	317.209 ^a	117	.000
Likelihood Ratio	177.110	117	.000
Linear-by-Linear Association	65.043	1	.000
N of Valid Cases	300		

a. 143 cells (89.4%) have an expected count of less than 5. The minimum expected count is .03.

Source: Computed by the author from data collected using primary survey

The above Tables 3. a and 3. b present the results of Chi-square test for the relationship between the level of education and the total income of the sample respondents. As per the test result shown in Table 3. a, there appears a moderate relationship between these parameters. The Pearson's R is found to be 0.466, which is significant at 1 per cent significant level as the P-value is found to be 0.00. Thus, it can be inferred that there is a moderate correlation between level of education and total income of the sample respondents.

Table 3. bis related to the Chi-square test applied for testing the hypothesis. The test results show the value of Pearson Chi-Square as -317.209, which is significant at 1 per cent significant level as the P-value is found to be 0.00. Therefore, the null hypothesis is rejected and the alternate hypothesis is accepted. So, it can be concluded that there is a positive correlation between the level of education and total income of the respondents in the Narmada District of Gujarat.

Chi-square test between level of education and total family income

The result of the chi-square test between level of education and total family income of the sample respondents are presented in Tables 4. a and 4. b given below.

Table 4. a: Chi-square test results for relationship between the level of education and total family income

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Interval by Interval	Pearson's R	.469	.066	9.174	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.383	.057	7.159	.000 ^c
N of Valid Cases		300			

Source: Computed by the author from data collected using primary survey
 a. Not assuming the null hypothesis.
 b. Using the asymptotic standard error assuming the null hypothesis.
 c. Based on normal approximation

Table 4. b: Chi-square test results for association between the level of education and total family income

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	312.541 ^a	150	.000
Likelihood Ratio	198.959	150	.005
Linear-by-Linear Association	65.847	1	.000
N of Valid Cases	300		

a. 188 cells (92.2%) have an expected count of less than 5. The minimum expected count is .03.

Source: Computed by the author from data collected using primary survey

The above Tables 4. a and 4. b present Chi-square test results for the relationship between the education level and total family income of the sample respondents. As per the test results shown in the Table 4. a, there appears a moderate relationship between these parameters. The Pearson's R value is found to be 0.469, which is significant at 1 per cent significant level as the P-value is found to be 0.00. Thus, it can be inferred that there is a moderate correlation found between level of education and total family income of the sample respondents

Table 4. b is related to the Chi-square test applied for testing the hypothesis. The test result shows the value of Pearson Chi-Square- 312.541, which is significant at 1 per cent significant level as the P-value found to be 0.00. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted. So, it can be concluded that there is a positive association between the level of education and total family income of the sample respondents in the Narmada District of Gujarat.

Conclusion

The study analysed the relation between education and income level of the sample respondents in the Narmada District. Education has been recognised as an important instrument for economic development. There is a close relationship between education level of the sample respondents and their income levels. Chi-square test is used to check the relationship between level of education and total income of the respondents and total family income of the sample respondents. Chi-square test results proved that there is moderate relationship between level of education and total income of the respondents and total family income of the respondents. So, the null hypothesis can be rejected and alternative hypothesis accepted. It means the relationship between the level of education of the sample respondents and the family income of the respondents is found to be positively correlated. A critical analysis of selected 300 sample respondents revealed that an increase in the level of education is found to have close association and relation with increased level of income among the sample respondents in the Narmada district. Therefore, it can be concluded that when the education level of respondents was observed to be high, then their income levels were also found to be high.

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Mergers and Acquisition Activities Impacting the Performance Measures of the Acquiring Firms: Evidence from Indian Listed Firms

Sheeba Kapil* and Sarika Kumar**

Abstract

M&As (Mergers and acquisitions) are considered as the major restructuring activity which directly affect the firms' profitability and other working strategies. The aim of the study is to examine the increasing trend of M&As in India during the period 2011-2019 effecting the profitability and solvency ratios of the acquiring firms. The data collected for the study considering the event window of (-3, +3) medium term and (-5+5) years long term effect, the empirical results suggests that M&A activity positively effects the profitability ratios in the long run however there is no such effect noticed on the solvency ratio of the acquiring firms in the short run period but the same is improved in the long run period. Further making a comparative analysis between top 2 sectors viz IT/ ITeS and manufacturing, which actively participated in the M&A activities. The results shows that the IT/ITES sector experienced increase in profitability in the both the time period whereas the manufacturing sector experienced the improvement in the profitability in the long term only. This study can help the academicians and practitioners to evaluate the synergy gains from deals in different sectors.

Keywords: Mergers, Acquisitions, Firm performance, profitability.

Introduction

M&As (Mergers and Acquisitions) are the main strategy of expansion, growth and restructuring which is globally accessed (Renneboorg 2019). M&A activities contributes in the development of industries and sectors. The pre- and post-performance of M&A in emerging economies has attracted much attention from the researchers examining the motivation of mergers and acquisitions (Carline et al 2009, Ismail et al 2011). The increasing trend in the number of M&A deals have given much opportunity to the researchers to analysis different proxies of performance variables for the acquiring firms (Boateng et al 2011). M&A's are known to be the critical development of the firm (Gao et al 2008). With the increasing trend in the M&As in India have resulted into the failures and success of the deals, when a deal is conducted, the entire structure of market is affected along with the environmental policies (Aggarwal 2019). The success and failure judgement of the deal depends on the synergies realised after the deal (Renneboorg 2019) which can be measured based on the profitability and solvency ratios of the firms (Ismail et al 2015, Renneboorg 2019, Das and Kapil 2015). The impact would depict the success of the deal conducted. Conducting a M&A activity involves huge amount of costs, resources, time and other substantial cost; therefore, it is of vital importance of the firm to evaluate the profitability and solvency ratios of the firm. The reasons for the failure and success of deals are a matter of considerable debate among researchers and practitioners (Bhaskar et al 2012). For which various researchers have used different proxies to measure the success and failure of deals, Rani et al 2018 have used the CAR (cumulative abnormal returns), Kapil and Mishra ((2018) mentioned different measure (accounting and market-based measures) of firm performance.

Figure 1 shows the increasing trends of M&A activities conducted since 1996. Indian firm are facing tough global competition and in this firms are expanding through various strategies to dealt with the competition. M&As are one of those strategies/ inorganic growth that results into geographical expansion, increase in the

* Professor, Indian Institute of Foreign Trade, New Delhi

** Research Scholar, Indian Institute of Foreign Trade, New Delhi

Figure1: Trend of M&A in India from 1996-2020

Source: IMAA

market share in their respective sector (Bi, 2016). "M&A process starts with the due diligence process that has to be based on multiple levels of analysis for identifying risks and opportunities of markets, industry characteristics and strength of the target's competitive positioning" (Caiazza et al 2015, Renneboorg 2019). The motive behind every deal activity conducted is to release synergies from the combined entity and further increase in the profitability ratios, that is, the accounting performance of the firms however, every firm is not able to achieve their expected goals and ratios stated during the deal (Dell et al 2018). The main reason behind the failure of a deal is the corporate governance variables, selection of targets, cost of premium paid for the deal, cultural difference and many more (Renneboorg 2019). Whatever is the reason behind the success or failure of deal conducted, it's the accounting performance of the firm that gets effected initially. The literature witnesses the mixed blend of results while analysing the deal affecting the different firm performance accounting-based measures. Varied literature on the analysis of accounting-based measures, few studies (Eichholtz et al (2009), Chidambaran et al (2009), Irina et al (2009), Jackling et al (2009), Bhagat et al (2009), Tampakoudis et al 2018, Zhao et al 2018, Yacoob et al 2018) have opted ROA and few considered ROE (Yacoob et al 2018, Al Manaseer et al., (2012), Obiyo et al (2011), Entebange et al (2011) to validate that the success and failure of M&A. Researchers have contradictory options on the same. The purpose of this study to add in the existing literature of M&A in the context of developing country India, where M&A trend is on increasing trend. "Accounting performance is an important aspect to be examined to evaluate the success of a corporate restructuring plan" (Renneboorg et al (2019). "External investors place more value on accounting disclosure by well-governed firms because firms with superior governance standards are less likely to intentionally disclose misleading information" (Song, 2015). "Accounting standards are the most popular measure of a firm's economic performance widely used by market participants and stakeholders for making economic decisions" (Lee & Choi, 2016). Chen et al 2001 highlighted that the financial reporting and accounting disclosures are important in the capital market. From the lens of corporate governance mechanisms Li et al 2018 emphasised on the role of board to control the managerial behaviour, which is responsible in considerably affecting the accounting performance of the firms. The objective of the study to analyse the impact of deals on the profitability or the accounting performance of the acquirer. Deals' success and failures results are directly dependent on the accounting performance of the firms, therefore it is important to evaluate and has been taken into consideration to analysis the effect the deals conducted on the profitability or accounting performance of the firms. To analyse this effect the study have considered the medium term effect by considering the event window of (-3,+3) and long term effect by considering the event window of (-5,+5) years (Ismail et al 2015, Tampakoudis et al 2018) for the 547 firms for the year 2011-2021. Different accounting parameters have been taken into consideration for the pre and post deal accounting performance. The comparative analysis has been done for 3- and 5-years period to highlight the effect of M&As on the accounting performance of the firms. Literature has witnessed varied results on analysing the deal effect on different accounting measures of the firms taking different time period. "There are some studies that reflect abnormal negative returns for acquirers (Agrawal et al., 1992; Walker, 2000) from a long-term perspective of 5 years, other studies which

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shows positive higher returns of acquirers specifying domestic deals (Cosh & Guest, 2001; Kennedy & Limmack, 1996; Sudarsanam et al 2006). Deals based on the methods of payment made, cash transactions are given more importance in comparison to equity-based transactions for both medium term and long-term perspectives (Dong et al., 2005; Draper & Paudyal, 1999; Travlos, 1987; Walker, 2000) and long run (Cosh & Guest, 2001; Linn & Switzer, 2001; Loughran & Vijh, 1997) whereas some researchers have highlighted that Cash-based bids are likely to receive an insignificant loss over equity-based ones which generally underperform in the initial 2-3 years of acquisitions" (Conn et al., 2005).

This study purports to answer the gaps that researchers have focused on the abnormal returns or on the stock performances when M&A is taken into consideration however the effect on the accounting performance must also be considered to analyse the deal performance and make a comparison between the medium term and long-term perspective of the deal and simultaneously to establish a picture of post-acquisition performance in emerging economies like India, where studies on similar issues are rare. Therefore, the objective of this study is:

1. To examine the growth trend of M&A deals.
2. To analysis the impact of deals on the financial performance (accounting-based measures: ROA, ROCE, ROE has been taken into consideration) of the acquirers for the medium term and long-term time period.
3. To analysis the deal impact on the solvency ratio (debt ratio and interest coverage ratio has been considered).
4. Comparative approach between the top 2 sectors involved in M&A activities during the studied time period.

Data and Methodology

Sample and Sources of Data: The proposed analysis presented in this paper considers the M&A activities conducted during the time period from 2011-2019. Extraction of data has been carried based on the following criteria:

1. The initial sample consisted of 1717 completed acquisitions of NSE listed Indian acquiring firms. All M&As in India occurring between 1 January 2011 and 31 December 2019 have been identified. The selected period includes a varied range of M&A deals across different sectors which includes manufacturing sector, IT/ITes service sector and other sectors.
2. The acquiring firms' details are extracted from the prowess IQ (maintained by CMIE) and EMIS database (maintained by ISI markets) during the selected period.
3. Acquisitions with more than 15 per cent share have been considered for the analysis.
4. Deals with the latest acquisition date has been considered during the studied time period.
5. completed deals.

Following exclusions were made from the collected data:

1. The firms from the financial sectors were excluded as they follow different accounting standards.
2. Firms, for which necessary data for the calculation of ratios are not available.
3. Allied form of acquisitions or friendly acquisitions whose objective was of restructuring have been excluded.
4. The firms with mere existence/ nominal existence and simultaneously not active in its business activities, having concrete assets in different form like investments, employees, liabilities are excluded so to avoid any kind of discrepancies in the analysis of the study.

Based on the above-mentioned points, we considered 305 firms for the study.

Empirical results

Below table 1 shows the number of deals conducted in the analysed period 2011-2021 and further show the percentage change in the number of M&A yearly. The change depicts the upward trend in the number of firms actively participating in the M&A activities. M&A are the strategies that effect the accounting performance of the firms directly.

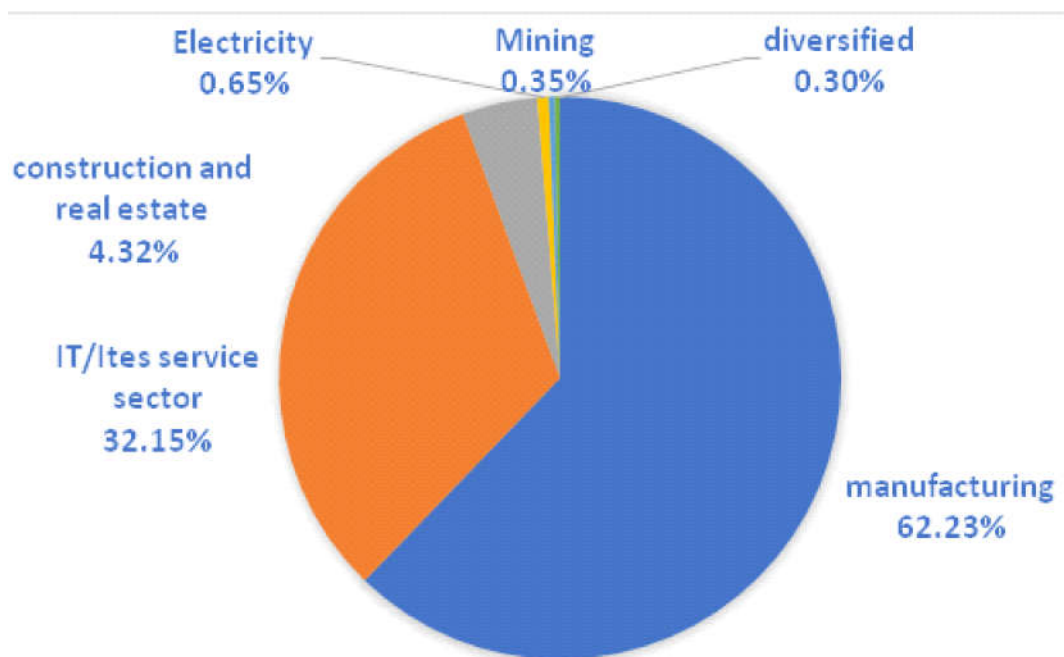
Table 1: Shows the number of deals conducted in the period 2011-2021 and the percentage change in the number of deals.

Year	No. of Mergers and Acquisitions	Change (%)
2011	1,046	-
2012	1,072	2.425373134
2013	959	-11.7831074
2014	1,087	11.77552898
2015	1,257	13.52426412
2016	1,316	4.483282675
2017	1,547	14.9321267
2018	1,870	17.27272727
2019	1,008	-85.51587302

Source: IMAA statistics on M&A

The trend in the number of deals has been upward mainly in the last 10 years and it is been observed that the manufacturing and IT/ITes service sectors are the two main sectors which experienced the highest number of deals in the said time period as per the data collected (refer figure 2).

Figure 2:



SOURCE: IMAA STATISTICS ON M&A

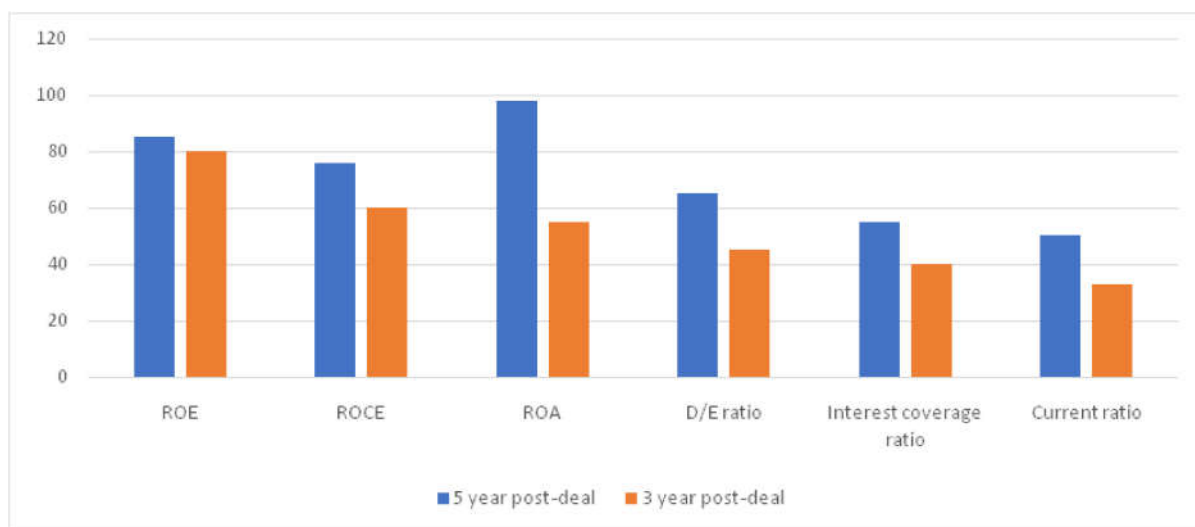
Table 2 shows the Paired Sample t-Test Result for 3 and 5- Years Pre- and Post-Merger Comparative Ratios

Ratio	t-Statistic for 5 Years Comparative (pre -merger)	t-Statistic for 3 Years Comparative (pre-merger)	p-Value 5 years Comparative (post-merger)	p-Value 3Years Comparative (post -merger)
Return on equity (ROE)	4.977	2.885	0.000*	0.004*
Return on capital employed (ROCE)	6.983	1.589	0.003*	0.114
Return on assets (ROA)	4.106	2.573	0.000*	0.011**
Debt equity ratio	1.620	0.202	0.106	0.841
Interest coverage ratio	-1.369	-0.887	0.172	0.376
Current ratio	2.484	1.711	0.013**	0.089***

Source: The authors.

Note: The table shows the t-statistic value and p-value of the paired sample t-test where *, ** and *** Denote significance levels at 1%, 5% and 10% respectively.

Figure 3: Represents the number of firms experienced improvement in varied financial measures in their medium-term and long-term performance after the M&A.



Source: Author's analysis as per the data collected

The findings of the paired sample t-test for the data are shown in the table 2 for 3 years (medium term performance) and for 5 years (long term performance) pre and post deal performance. ROE (return on equity) shows that the equity shareholders are the primary owners of the firm who bears the maximum risks on their investment. Therefore, it is important to give expected returns on their equity and maintains their interest in the firm. Table 2 shows the ROE's t statistics is more favourable in the post-merger period in comparison to pre-merger time period with which the shareholders may find themselves in the better profitable positions after the M&A conducted. Table 3 shows that number of firms experienced improvement in ROE, ROA after the M&A deal in firm's long-term performance. Further ROCE (Return on capital employed) that is belongs to the debt providers who helps the firm in raising capital in future at comparatively lower rates of interests. Table 3 shows that for the elected sample after the deal ROCE improved for the medium term and long-term accounting performance of the firm. ROA (Return on assets) which actually depicts the firms' profitability position that how

profitable the firm would be in employing its assets. Table 3 shows the number of firms experienced significant improvement in the ROA ratio after the deal for its medium term and long-term performance.

For the solvency position of the firms, we considered: debt equity ratio and interest coverage ratios, debt and equity ratio has been taken into consideration which shows the amount of debt on the firm in comparison to equity funds. Table 3 shows that this ratio has not improved much for either of the performance years for a smaller number of firms in the data collected further the interest coverage ratio which shows that a debt always comes with a fixed rate of interest and a firm must be having enough to pay such interest amount and here also less firms have experienced improvement in their interest coverage ratio after the deal.

Accounting performance of the firms depicts the actual situation of the firms based on which synergies from combined entities are realised. Table 4 shows the *t* statistics and *p* value for the 3 years and 5 years performance of the manufacturing sector (MF) and for the IT/ITES service sector. We have opted for the manufacturing and the IT sector have experienced the highest number of M&A deals (refer figure 1). The data collected for this study reveals that the IT/ITES sector experiences the improved performance in the medium term (3 years) and long term (5 years) performance, manufacturing (MF) sector have not experienced positive result in the 3 years (medium term) performance but improved performance in long term time period (5 years). IT/ITES sector's profitability increases at the 5 percent significance level for the medium-term performance (3 years) and for the long-term performance in the IT/ITES sector the results the significant at the 1 percent level. Realisation of synergies takes time in the manufacturing sector in comparison to IT/ITES sector, which could be because the integration of facilities in the manufacturing are not perfect and requires efficient implementations

Table 3: Comparative approach between the sectors participating in M&A activities

Ratio	Comparative (MF) pre		Comparative (MF) post		Comparative (IT) pre		Comparative (IT) post	
	<i>t</i> -Stat	<i>t</i> -Stat	<i>p</i> -Value	<i>p</i> -Value	<i>t</i> -Stat	<i>t</i> -Stat	<i>p</i> -Value	<i>p</i> -Value
	5 Yrs	3 Yrs	5 yrs	3 yrs	5 Yrs	3 Yrs	5 Yrs	3 yrs
Return on equity	3.386	1.543	0.001*	0.134	2.622	3.671	0.000*	0.011**
Return on capitalemployed	0.862	0.367	0.345	0.603	3.502	1.845	0.001*	0.042**
Return on assets	2.876	1.845	0.004*	0.053***	3.009	1.634	0.002*	0.064***

Source: The authors' calculations.

Notes: The table shows the *t*-statistics value and *p*-values of the firm performance measurements of the paired sample *t*-test. *, ** and *** Denotes significance at 1 percent, 5 per cent, 10 per cent levels, respectively.

Conclusion

Deals are the opportunities that leads to competitive gains, profitability and economies of scale (Zahid et al 2011) for the Indian firms as well to initiate cross border investments, welcome FDIs and therefore highlighting India as one of the economic liberal countries (Ray et al 2009). "This is the reason that the process has gained substantial importance within the Indian corporate world, since the past decade. M&As provide Indian companies with a window to face the increased international competition and strategically make their mark through enhancing their market share, broadening the portfolio thereby reducing business risk, venturing into new markets across geographies and profiteering from economies of scale, to name a few"(Saboo et al, 2009). M&A activity are the growth strategy that are responsible for the major corporate restructuring and are for many other activities, for example, replacing those underperformed labour force, accelerating the wealth and maintaining the interest of shareholders from various other sources and achieving the required synergy from the combined entity. Ismail et al 2015 highlighted in his studies that acquiring entity gain more in the deals in comparison to the target firms. To

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further prove this some researchers have studied the stock performance of the target firms to analyse the relation between the deal and firm performance. However, it is important that researchers must understand that the effect on the firm performance is better predicted with the trends in the profitability of the combined entity. All these trends are associated with the deal activities and deal parameters only. Researchers (Kapil and Mishra 2018, Rani et al 2017, Tampakoudis et al 2018) highlighted that the deals conducted realise the synergy gains in the long-term time period only which are associated with huge costs involved in the acquisition process, other integration processes and cultural amalgamation. Due to these factors, the synergies are not experienced in the short span of time period. Therefore, it can rightly be said that, "gives positive results and improves accounting and financial position of a firm in long term. In long term,

Indian firms are able to generate synergies from the acquisitions made by them."

Future Scope of study

For future scope of study, this study can further be elaborated by considering the following point: By dividing the deal data into cross border deals, domestic deals. Further sectoral analysis can be conducted. By considering various corporate governance and sustainability performance variables. By considering various deal characteristics, say, mode of payments, etc. Only 10 years of data has been taken into consideration and further it can elaborate by considering more years of M&A activities. Comparative analysis can be conducted with in sectors or with developed nations as well. More ratios can be analysed for further addition into the literature of M&As.

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