

The Microfinance Impact on Rural Sector and its Contribution towards Indian Economy

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Abstract

The article outlines many unmistakable parts of microfinance; the present situation in India is concentrating on the effect of microfinance on rural areas. The commitment of Indian economy to concentrate on organizations and inspect the present situation is promising. Additionally from this paper we can realize that further advances should be taken by Microfinance foundations to build the consciousness of Organizations in India as larger part of the populace doesn't know about these establishments and they look for bank advances to adjust their monetary position. Further they need to instruct individuals with respect to various administrations like advances, reserve funds, protection and so forth In India, just a couple of Organizations survive in numerous towns and public and private banks are found. Additionally Organizations set out independent work open doors and that ends up being the most effective way of destitution easing and taking care of the issues of joblessness.

Key Terms: Microfinance, Institutions, Status, Impact

Introduction

Microfinance likewise call microcredit is a method for giving entrepreneurs and business people admittance to capital. Frequently these little and individual organizations don't approach conventional monetary assets from significant foundations. This implies it is more diligently to get to credits, protection and speculations that well assist in developing. It helps the monetarily underestimated giving the essential cash-flow to begin business and work toward monetary autonomy. These credits are critical on the grounds that they are given despite the fact that the borrower has no insurance. Microfinance is significant in light of the fact that it gives assets and admittance to cash-flow to the monetary inappropriate, for example, the people who can't get financial records, credit extension, or advances from customary banks. Without microfinance, these gatherings might need to turn to utilizing advances or payday progresses with incredibly exorbitant loan fees or even acquire cash from loved ones. Microfinance assists them with putting resources into their business and accordingly, put own resources.

Self Help Group

Improvement gathering is a little gathering of destitute individuals. The individuals deal with comparative issues. They help each other to tackle their concern. The saving is reserved with bank. This is the normal asset for the sake of the. It is a data bunch enlisted under Societies Act, state Co-employable Act. started by Banks Linkage Program Largest effort to the clients.

Bank Linkage Program intended to interface illuminated ladies' groups to formal banks. The program helped in expanding banking framework effort to unreached individuals and subsequently starting an adjustment of the bank's viewpoint toward low-pay families from recipients to client.

SHG a town based financial middle person council generally made out of 20 or less individual's o from who mass are ladies individuals from the least fortunate standing and clans. Individuals set aside little measure of money, as little as not many rupees a month in an extremely bunch reserve banks by and large loan up to Rs. 4 every Rs 1 inside the gathering store. Almost all groups contain around 20 million ladies at present approach banks for advances that assisted the Indian groups with banking connection model to turn into the greatest microfinance program on planet.

It very well might be enrolled or registered. It by and large contain a greater part of small business visionaries having a few social and financial foundations and everybody is deliberately coming, to set aside little amounts of money on customary premise.

Number of Mutual Fund Institutes

Dimension	Client base	No. of Institutions
TierI	Less than 2.5 Lacs	23
TierII	0.5 – 2.5 Lacs	40
TierIII	More than 0.5 Lacs	205
All		268

From the above table Tier III areas have more number of mutual fund institutions operating effectively without much difficulty.

Work Mechanism

Design of micro credit foundations comprises accompanying order:

The need to have such organizations is that most business monetary foundation that we have today like banks can't connect with the low pay area. They for the most part get forgotten about and, surprisingly, straightforward base monetary administrations like having record or formal credit isn't accessible to this populace bringing about awful practices like storing cash in house, informed cash getting a fake practice.

When the town is concluded an early on class is completed. After these intrigued people are assembled in bunch comprise of 5 persons. At the point when credit is given to an individual, residual individual from the gathering goes about as his grantors. In the event that this singular defaults from reimbursing the credit, whole gathering is punished.

After this gathering preparing program start and a town community is made where all installment will be gathered. Gatherings are consistently directed wherein reimbursements are gathered and advance conversation is completed. Getting of credit is done distinctly through the branch official of the gathering.

There are explicit standards which are trailed by all MFI before they authorize an advance. Highlights which make MFIs extraordinary and particularly fit is insurance on protections are not really needed for taking an advance. Beating the high gamble of default, the remarkable design of such establishment and their approach to working as expressed about has guaranteed a base fail to pay rate more than 95% of advances are reimbursed. Huge achievement it is that calls for much more development.

Augmentation of Microfinance in India

In India micro credit works in two fundamental channels.

(a) Banking industry through the under Bank Linkage Program demeanor program and

(b) By Micro credit Institutions attitude through individual and group approach. Institutions have advanced into an enthusiastic period of monetary area displaying numerous plans of action lately. Institutions recovered its footing from ten years ahead and are showing a uniform development. Wave of strategy activities to reinforce the guideline of Micro Finance area, along with RBI rules on consideration of credits to Institutions by banks under need area had done a universe of astounding for the area. Subsequently, demeanor by Institutions showed a solid development with half leap in advances dispensed successively all through most recent a long time from, 23682 Cr.

Groups are uncharitably being contrasted by a few and Institutions drove Micro money programs overlooking its commitment as far as frugality and reserve funds, handholding to mix monetary education, arrangement of credit other than bringing of the local area interest and building social capital and so on Inside the last four-five years, the buzz was that groups had lost its concentration and has been eclipsed by the Institutions area inside the country that is developing at a speedier rate and with effectiveness through corporate, administrative, ecological, and money related and innovation support. While the development of Institutions area has been uncommon, driven predominantly by corporate elements, the SHG Bank Linkage Program has conjointly been developing consistent regardless of its sluggish development in need states, issues concerning accounting, nature of groups and diminishing consideration of banks.. Endeavors of National bank all through the year had paid off and should be visible inside the circle back made. It's arousing to share that green shoots are apparent in all parts of the development when contrasted with the year before.

It is expressed that in the course of the most recent decade there has been fruitful encounters in giving money to little business people. Little business visionaries being the destitute individuals had the option to exhibit that they had the option to reimburse their credits and consequently increment their pay and resources. NGOs play had an enormous impact in advancing microfinance by collaborating with persuasive supposed entertainers for microfinance.

Growth and Outreach

As indicated by Dhan's "Bharat Microfinance Report - 2015" Institutions work in India. The 156 Institutions with a branch organization of 12,221 have contacted unequalled high of 37 million buyers with an amazing credit arrangement of Rs 48,882 Cr. This incorporates an over saw an arrangement of Rs 9854 cr. The regular advance exceptional per beneficiary remained at Rs 13,162 and 80% of advances were utilized for monetary benefit age capacities. Outreach developed by 13% and credit exceptional developed by 33% throughout the last year. The Southern area keeps on claiming the absolute best portion of every effort and advances remarkable, trailed by East. Be that as it may, development rates are higher inside the North-eastern and Central areas.

Literature review

Robinson, M. (2001) has analyzed the circumstance incredible and has not many close substitutes as far as general outline of the landscape, and the upheaval is presently best in class to such an extent that all is good and well for a set of experiences, or possibly a review. Similarly as with any insurgency, in any case, parts have arisen inside the development. On one side are the individuals who contend that the way forward is to require microfinance organizations to meet the trial of monetary supportability basically, requiring these foundations to take care of their expenses, regardless of whether this implies that the exceptionally least fortunate of the poor stay under-served. Against this, the destitution loaning approach underscores the

significance of effort, particularly to the extremely most unfortunate borrowers, as a neediness battling approach.

Titus Mathew (2002) say "regard for microfinance administration should be a piece of more extensive arrangement commitment with destitution mitigation and as he proposed with regards to positive, with miniature undertaking, remembering a profound comprehension of their job for giving occupation and adding to normal financial turn of events.

Susy Cheston (2002) has inspected that Microfinance can possibly capably affect ladies' strengthening. In spite of the fact that microfinance isn't continuously engaging for all ladies, most ladies really do encounter some level of strengthening accordingly. Strengthening is a perplexing course of progress that is capable by all people fairly in an unexpected way. Ladies need, need, and benefit from credit and other monetary administrations. Reinforcing ladies' monetary base and financial commitment to their families and networks assumes a part in enabling them. Item plan and program arranging should consider ladies' requirements and resources. By building a consciousness of the expected effects of their projects, MFIs can plan items, administrations, and administration conveyance systems that moderate adverse consequences and upgrades.

Cheston and Kuhn (2004) has inspected in their review inferred miniature money software engineers have been extremely effective in arriving at ladies. This offers miniature money foundations an unprecedented chance to act deliberately to engage unfortunate ladies and to limit the possibly adverse consequences a few ladies encounters. We likewise tracked down expanded regard by better associations with more distant families. Few reports of expanded aggressive behavior at home were found.

Linda Mayoux (Feb 2006) analyzed that Micro-finance programs not just give ladies and men admittance to reserve funds and credit, yet arrive at a large number of individuals overall uniting them routinely in coordinated gatherings. Through their commitment to ladies' capacity to acquire a pay, miniature money projects might conceivably start a progression of 'upright twistings' of monetary strengthening, expanded prosperity for ladies and their families and more extensive social and political strengthening Banks by and large utilize individual instead of collection based loaning and might not have scope for presenting non-monetary administrations. This implies that they can't be anticipated to have the kind of the engaged strengthening techniques.

Crabb, P. (2008) inspected the connection between achievement of microfinance establishments and the level of financial opportunity in their host nations. Numerous microfinance establishments are at present not self-maintaining and examination recommends that the monetary climate where the organization works is a significant element in the capacity of the foundation to arrive at this objective, advancing its central goal of effort to poor people. The maintainability of the miniature loaning establishments is investigated here utilizing a huge cross-segment of foundations and nations. The outcomes show that microfinance organizations work essentially in nations with a somewhat low level of in general financial opportunity and that different monetary strategy factors are significant.

Ashta, A. furthermore De Selva, R. (2009) analyzed that the connection among micro credit and religion, gives future examination headings around here. Strict organizations frequently assume a critical part in laying out microfinance frameworks, yet associations among microfinance and religion stand out of scientists. A portion of the themes tended to by inspection in this paper remember for Irish advance assets, indigenization inside help bunches for constantly sick Haitian ladies, effect of religion on getting examples of Jordanian miniature business people, Islamic microfinance in Pakistan and Indonesia, otherworldliness as a resource in a drive job of strict innovators in distinguishing enterprising ability, micro credit and good cause in Thailand and the Philippines, and broad financial investigations in India.

Tiwari, A. (2012) conducts a near report among India and Bangladesh as far as advances loan by organizations to clients, customer base, monetary supportability of MFIs to see how MFIs in India are proceeding as against those MFIs in Bangladesh as it is viewed as the originator of microfinance. The discoveries find that no question Indian MFIs are more productive and working more proficiently than those in Bangladesh.

Vadde, S. (2012) investigations the working arrangement of SHGs for assembly of saving, conveyance of credit to the poor, the board of gathering reserves, reimbursement of advances, in working of initiative, laying out linkage with banks and social advantages determined by the individuals. The discoveries show that the Self-Help Group (SHG) bank linkage developer in beyond eighteen years has turned into a notable apparatus for brokers, improvement organizations and in any event, for corporate houses.

Vijender, A. et al. (2012) weights on further developing ranch level proficiency through miniature financing and miniature protection in accomplishing their monetary and social objectives, which at present find have generally recognized just restricted achievement. The tracking down shows miniature money organizations (MFIs) need to turn out to be consistent beneficial to manage down destitution and job of state government in essential in increasing homestead speculation, miniature financing, miniature protection, working with private venture and spreading establishments to help the poor in acknowledging comprehensive

development of the India.

Mula, G. et al. (2012) endeavored to analyze the development and advancement of SHGs and execution of monetary establishment in miniature money in Cooch Bihar District, west Bengal. The review uncovered that District required the second situation in credit linkage notwithstanding being more slow actual development of SHGs (seventh situation) in the state. The concentrate likewise uncovered a slanted development of SHGs in various phases of advancement among the various squares.

Nasir, S (2013) attempts to layout the overarching state of the microfinance in India in the radiance of its rise till now and its point is to give a savvy instrument to offering monetary types of assistance to poor people. The examination finding finds the overall hole in working of MFIs, for example, rehearses in credit conveyance, absence of item expansion, client covering and with practicable ideas to defeat the issues and difficulties related with microfinance in India.

By integrating the monetary journal technique with 90 unfortunate families in Ramanagaram, Karnataka, India, Kamath, R., Dattasharma and Ramanathan, S (2013) examine how daily family earnings are changed with or without MFI advances. The observation reveals that India's microfinance development has a long way to go before it is truly "base up."

Barinaga, E (2013) portrays the main year of endeavors to acquaint microfinance as an apparatus with work with weak gatherings in Sweden and to examine whether microfinance should be visible as a device to break down friendly change in created government assistance states like Sweden. The investigation shows the preparation and age of social capital and the casing arrangement process put into high gear by Microfinance.

Objectives

1. To ponder on current circumstance of Self Help Groups and Institutions in country.
2. To contemplate on effect of microfinance on country area and commitment towards economy.
3. To focus on MFI and SHG functional advancement.

Methodology of the Study

All progress is brought into the world of request. Question is frequently better compared to carelessness, for it prompts request and request prompts creation.

Research approach is a approach to methodically take care of the issue. Research philosophy is said to spine of exploration. For each extensive examination an appropriate exploration approach is vital and it must be appropriately considered.

Study Problem

“An empirical study on present working scenario of MFIs and SHGs in rural areas”

Research Design

The plan utilized for this exploration is expressive examination technique. The term unmistakable examination alludes to the kind of exploration question, plan, and information investigation that will be applied to a given point. Spellbinding measurements determine what is, while inferential insights attempt to decide circumstances and logical results. Spellbinding exploration is subjective. It can include assortments of quantitative data that can be organized along a continuum in mathematical structure, for example, scores on a test or the times an individual decides to utilize certain component of sight and sound program, or it can portray classes of data like orientation or examples of collaboration while involving innovation in a gathering circumstance. Engaging examination includes gathering information that portrays occasions and afterward sorts out, classifies, portrays, and depicts the information assortment.

Data Sources

It is realized that just the information in the course of which we can demonstrate our theory. There are two sorts of information essential and optional. Essential information is those which are gathered a new and interestingly and in this way end up being unique in character. The optional information, then again, are those which have as of now been gathered by another person and which had effectively gone through the measurable interaction.

This examination report's, essential information is gathered from end to end polls through mail.

Optional data gathered from different sites, pamphlet and articles from different diaries and so on.

Instruments of Research

The study was based on primary source of information which was supported by framing a suitable questionnaire. The structured straight forward questionnaire was developed to collect valid and accurate information. Statistical package of social sciences software was used to analyze the data.

Study Time

The study lasted three months, from the first of February to the 30th of April 2021.

The study's limitations

Respondents were reluctant to provide information; therefore the study was limited to a few villages in Telangana state, India.

Sample size was also not that large

Time was a constraint

Statistics

Table 4.1: Showing Gender

		Frequency	Percent	Valid Percentage	Cumulative Percentage
	Male	45	73	75	75
	Female	15	24	25	100
	Total	60	97	100	
		2	3		
Total		62	100		

From the above table it is observed that male respondents were 75 percentage and female respondents were 25 per cent

Table 4.2: Showing the Profession of the Respondents

Profession

		Frequency	Percent	Valid	Cumulative
	Employed	24	39	40	40
	Unemployed	36	58	60	100
	Total	60	97	100	
		2	3.2		
		62	100		

Table 4.3: Showing the housing status of the Respondents

Housing Status

		Frequency	Percent	Valid	Cumulative
	Rented house	26	41.9	43.3	43.3
	Own house	34	54.8	56.7	100.0
	Total	60	96.8	100.0	
		2	3.2		
Total		62	100.0		

Table4.4: Showing Occupation of borrowers

		Frequency	Percent	Valid	Cumulative
	Agriculture	29	47	48	48.3
	Employee	10	16	17	65.0
	Business	7	11	12	76.7
	Others	14	23	23	100
	Total	60	97	100	
		2	3		
Total		62	100		

Table 4.5: Showing Duration status of the business

	Frequency	Percent	Valid	Cumulative
0-1 yrs	1	1.6	1.7	1.7
1-5 yrs	12	19.4	20.0	21.7
5-10 yrs	16	25.8	26.7	48.3
More than 10 yrs	31	50.0	51.7	100.0
Total	60	96.8	100.0	
	2	3.2		
Total	62	100.0		

Table4.6: Showing family members

	Frequency	Percent	Valid	Cumulative
3	3	4.8	5	5.0
4	33	53.2	55	60.0
Valid	24	39	40	100.0
MORETHAN4	60	96.8	100	
	3	3.2		
Total	62	100		

Table4.7: Showing income status of the borrowers

BELOWRS. 5000	1	1.6	1.7	1.7
RS. 5000-15000	27	43.5	45.0	46.7
Valid	32	51.6	53.3	100.0
ABOVETHANRS.15000	60	96.8	100.0	
	2	3.2		
Total	62	100.0		

Table4.8: Showing the awareness of microfinance institutions

Frequency	Percent	Valid	Cumulative
32	51.6	53.3	53.3
28	45.2	46.7	100.0
60	96.8	100.0	
2	3.2		
62	100.0		

Maturity of Loan

The above table shows that 23 percent of the respondents have maturity length of more than 5years, eleven.7% of them have maturity length of up to 2 years and 20% of them have adulthood duration of more 2-5years out of 60 respondents besides the ones who've now not taken the microfinance mortgage and that they constitute 45 percent of the total sample

3. Findings

1. From this investigation we discovered that in the majority of the towns individuals don't know about microfinance. They ordinarily obtain credit from banking institutions.
2. In Telangana state and in India there are Institutions in many towns and public and private banks are found. To that end individuals don't know about microfinance and assuming needs reserve for any

reason.

3. When we directed this study we got to be aware of that there are such countless individuals who don't have any familiarity with it and the people who have taken the advance they dealt with issues while getting it and furthermore while repaying it.
4. People of country region are less proficient and current realities of microfinance being controlled by the microfinance participation's. They don't get legitimate direction and preparing concerning this and which prompts the fragmented conveyance of advantages and disadvantages of the microfinance.
5. People while taking care of the advance 15% are repaying it by taking cash from family members and rest of them pay by their reserve funds with the exception of the people who don't have any familiarity with MFI.
6. Among every one of them 56% of the respondents don't know about microfinance organizations which guide to presenting plans for attention to institutions.
7. 41% individuals get to be aware of microfinance organizations from their family members and rest from different sources.

4. Conclusion

Taking everything into account, we might want to articulate an exciting undertaking to investigate on the Micro credit industry. Microfinance is viewed as a significant apparatus for neediness lightening all over the planet. There is no question that institutions have incredible potential later on. From this paper we can infer that further advances should be taken by Micro credit foundations to build the familiarity with institutions and groups in Telangana, India as greater part of the populace doesn't know about these organizations and they look for bank advances to adjust their monetary position. Further they need to instruct individuals with respect to various administrations like credits, reserve funds, protection and so on In Telangana, just a couple of institutions exist and in numerous towns public and private banks are found. Likewise institutions set out independent work open doors and that ends up being the most effective way of neediness easing and tackling the issues of joblessness. The potential for Microfinance to fill in India is extremely high. In the event that the designs for microfinance are executed, India will have new aspect to it. It will expand India's norm and make it one of the strong countries of the world.

Suggestions

- Government should likewise place their drives to make MFI prosper and develop.
- Government can contribute more by setting sound macroeconomic arrangement which gives strength for expansion.
- MFI ought to likewise keep beware of the loan fees and documentation required.
- Exceptional preparation projects should be coordinated to make Microfinance more successful.
- Government ought to present a few plans or ought an agent to towns to provide information that ought to give something similar so that individuals won't deal with any issue while getting the credit.
- Every one of the agreements ought to be educated to individuals. As they are very little instructed so they don't have any familiarity with the arrangements and method of acquiring the credit. Every one of those data ought to make simple for them and it will likewise help decreasing destitution for nation's development.

References

1. Prema Bhaskera N .(2009),“How Empowering is in Micro Entrepreneurship Developed through Microfinance”, Asia-Pacific Business Review, Vol.V.pp.67-76.
2. Kumar, Bohra, Johari A. Microfinance as an Anti Poverty Vaccine for Rural India International Review of Business and Finance 2010;2(1):29-35.
3. Mahanta, Panda, Sreekumar. Status of Microfinance in India A Review –International Journal of Marketing financial services and Management Research 2012:1(11).
4. www.google.com
5. <http://www.indiamicrofinance.com/microfinance-in-india-2014.html>
6. www.indiamicrofinance.com/
7. <https://en.wikipedia.org/wiki/Microfinance>
8. <http://www.investopedia.com/terms/m/microfinance.asp>
9. <https://abhinavjournal.com/journal/index.php/ISSN-22771166/article/viewFile/822/pdf184>
10. www.isca.in/IJSS/Archive/v4/i11/1.ISCA-IRJSS-2015-221.pdf
11. serialsjournals.com/serial_journal_manager/pdf/1446547872.pdf

12. https://crawford.anu.edu.au/acde/asarc/pdf/papers/2007/WP2007_15.pdf
13. www.iosrjournals.org/iosr-jef/papers/SIFICO/Version-2/3.23-31.pdf
14. <http://indianresearchjournals.com/pdf/IJMFSMR/2012/November/13.pdf>
15. http://www.internationalseminar.org/XIV_AIS/TS%203/14.%20Rajni%20Sinha.pdf
16. <http://abhinavjournal.com/journal/index.php/ISSN-2277-1166/article/view/822>
17. Sengupta, Rajdeep, and Craig P. Aubuchon. "The microfinance revolution: An overview." *Federal Reserve Bank of St. Louis Review* 90.January/February 2008 (2008).
18. Cull, R., Demirgüç-Kunt, A., & Morduch, J. (2009). Microfinance meets the market. *Journal of Economic perspectives*, 23(1), 167-92.
19. Mader, Philip. "Rise and fall of microfinance in India: The Andhra Pradesh crisis in perspective." *Strategic Change* 22, no. 1-2 (2013): 47-66.
20. Ghate, Prabhu. *Microfinance in India: A state of the sector report, 2007*. SAGE Publications India, 2008.
21. Poongodai, A., Suhasini, R., Muthukumar, R., "Regression based on examining population forecast accuracy", *International Journal of Recent Technology and Engineering*, 2019, Vol. 8-Issue 1 Special Issue 4, PP-690-692.
22. Khare, V., Sudhakar, M., "Quality of service parameters evaluation for real time traffic in cellular networks", *International Journal of Recent Technology and Engineering*, 2019, Vol. 8-Issue 1 SpecialIssue4, PP-679-681.
23. Syam, P.U., Kondaiah, V.V., Akhil, K., Kumar, V.V., Nagamani, B., Jhansi, K., Dumpala, R., Venkateswarlu, B., Ratna, S.B., "Effect of heat treatment on microstructure, microhardness and corrosion resistance of ZE41 Mg alloy", *Koroze a Ochrana Materialu*, 2019, Vol. 63-Issue 2, PP-79-85.
24. Narasimha, V., Satyanarayana, B., Krishnaiah, K., "Classification of knowledge based image using decision tree algorithm", *International Journal of Recent Technology and Engineering*, 2019, Vol. 8-Issue 1C2, PP-1227-1231.
25. Narayana, V.A., Sreevani, G., Srujan Raju, K., "An ameliorate approach for near duplicate page detection considering synonyms of keyword", *International Journal of Recent Technology and Engineering*, 2019, Vol. 8-Issue 1C2, PP-1232-1239.
26. Malathi, A., Muthubalaji, S., Malaka, D.C., "An improved power quality solution for power system using custom power devices", *International Journal of Recent Technology and Engineering*, 2019, Vol. 8-Issue 1, PP-2006-2011.
27. Dash, C.S.K., Behera, A.K., Nayak, S.C., Dehuri, S., Cho, S.-B., "An Integrated CRO and FLANN Based Classifier for a Non-Imputed and Inconsistent Dataset", *International Journal on Artificial Intelligence Tools*, 2019, Vol. 28-Issue 3, PP.
28. Malik, M.Z., Mukhopadhyay, S., Chatterjee, A., "Ground-state phase diagram of the 1-D Holstein-Hubbard model", *Physics Letters, Section A: General, Atomic and Solid State Physics*, 2019, Vol. 383-Issue 13, PP- 1516-1519.
29. Amudhavalli, N.K., Ravi, C., "A review on nano technology in concrete", *International Journal of Civil Engineering and Technology*, 2019, Vol. 10-Issue 1, PP-2990-2997.
30. Ansari, M.D., Koppula, V.K., Ghrera, S.P., "Fuzzy and entropy based approach for feature extraction from digital image", *Pertanika Journal of Science and Technology*, 2019, Vol. 27-Issue 2, PP-829-846.
31. Bathula, A., Basha, S., "Block chain technology with internet of things in the real time network stream", *International Journal of Recent Technology and Engineering*, 2019, Vol. 7-Issue 6, PP-435-442.
32. Kadam Vinay, R., Soujanya, K.L.S., Singh, P., "Disease prediction by using deep learning based on patient treatment history", *International Journal of Recent Technology and Engineering*, 2019, Vol. 7-Issue 6, PP-745-754.
33. Khan, M., Ansari, M.D., "Security and privacy issue of big data over the cloud computing: A comprehensive analysis", *International Journal of Recent Technology and Engineering*, 2019, Vol. 7-Issue 6, PP-413-417.
34. Venkataiah, V., Mohanty, R., Nagaratna, M., "Application of hybrid techniques to forecasting accurate software cost estimation", *International Journal of Recent Technology and Engineering*, 2019, Vol. 7-Issue 6, PP-408-412.

35. Das, S., Nayak, S.C., Nayak, S.K., Sahoo, B., "A GA-based polynomial FLANN with exploration and incorporation of virtual data points for financial time series forecasting", International Journal of Recent Technology and Engineering, 2019, Vol. 7-Issue 6, PP-422-430.
36. Sruthi, P., Premkumar, L., "Attribute-based storage supporting secure de-duplication of encrypted data in cloud", International Journal of Recent Technology and Engineering, 2019, Vol. 7-Issue 6, PP-418-421.
37. Mishrara, R., Khare, V., "Low cost HD video surveillance and recording system using raspberry Pi", International Journal of Recent Technology and Engineering, 2019, Vol. 7-Issue 6, PP-22-25.