

ISSN No 2347-7075
Impact Factor- 7.328
Volume-4 Issue-5

INTERNATIONAL JOURNAL of ADVANCE and APPLIED RESEARCH



Publisher: P. R. Talekar
Secretary,
Young Researcher Association
Kolhapur(M.S), India

Young Researcher Association



**International journal of advance and applied research
(IJAAR)**

A Multidisciplinary International Level Referred and Peer Reviewed Journal

Volume-4

Issue-5

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Decation In Digitized Mode: A Movement Towards Student Enhancement

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Abstract

Digitized education is a methodology or method of learning that makes use of technology and digital gadgets to facilitate the learning process. Throughout this new and vast technological arena, every student can receive knowledge and information from any region of the nation, and it will benefit them in their future careers. It is widely considered that digitised education in India will be the new norm in terms of education and learning. Digitized education is also critical for the success of Indian students in their academic endeavours. The digitization in education is being driven by advancements in connection, widespread usage of gadgets services, the desire for personalised flexibility, and the pace with the fast need for digital skills. The primary goal of this article is to examine the role of digitised education in India, as well as the causes that contributed to the emergence of the digital education movement in India, and to analyse the present and future opportunities for students.

Keywords: Digitized education, students, Nation, opportunities

Introduction

We've all heard that knowledge is limitless. Every aspect of our society, such as the education business, has been dramatically transformed as a result of technological advancements. These days, youngsters wise up with internet-connected gadgets in home and in the institution, which has a significant impact on their learning. Digitized education will alter learning by providing instructors and students with a diverse set of new tools to use in the classroom and beyond. Digitized education will play a significant role in the future of education, ensuring that the new teaching tools are used most successfully will necessitate the development of a new generation of educators who recognise the significance of human involvement in educational settings. In the fields of education, learning, and research, digitization appears to be the developing trend.

Digitized education has permeated into the minds of students and young people. Many elements of work and daily life have been transformed as a result of rapid digitalisation during the past decade, according to Bukar and Azare (2019). Because of technology

advancement and innovation, the digital transformation is changing the way students live their lives. The usage of Digitized education is also critical for the success of Indian students in their academic endeavours. The Digitized education is being driven by advancements in connection, widespread usage of devices and digital apps, the desire for personalised flexibility, with the ever need for digital skills.

The COVID-19 crisis, which has had a significant impact on education and learning, has increased the pace of change while also providing a valuable learning opportunity for everyone involved. The use of digitised education can enable more individualised, flexible, and student-centered learning at all stages and phases of the educational and training process. In challenging and innovative learning environments, technology may be a very effective and compelling tool. It can assist students and instructors in gaining access to, creating, and sharing digital content. Also possible is the extension of learning outside the confines of the lecture hall, classroom, or business environment, allowing for greater flexibility from the restrictions of physical location and time schedule. Learning can take place

purely digital or in a blended format, at a time, location, and pace that is tailored to the needs of the particular learner. In order to reap the benefits of Digitized education, students with impairments of required tools that are completely accessible European commission (2020).

Review of Literature

“The education industry, more than any other, has gone through a number of stages in its development. From the Guru-Shishya system of conducting the class in an open garden beneath the trees to closed class room lectures, presentation form of teaching with the aid of an LCD touch-screen projector to digitalized learning in the educational system, everything is changing fast in the world of education” **Jha & Shenoy, (2016).**

The imperial education system that the British created in India during the first half of the twentieth century gave rise to the country's higher education system. There have been many inconsistencies in the delivery and management of education, despite the fact that it has reached a large number of people. An ambitious plan by the Indian government to implement digital enablement throughout the country's education sector is in place. Although these tactics are being implemented, they are not being implemented quickly enough or widely enough. The study examined the Organization for Economic Co-operation and Development, Chinese, and Australian institutions' digital activities. As a result, digital plans might be more easily put into action. The research was aided by the contributions of a wide range of stakeholders. The findings show that institutions lack the vision, preparation, and willingness to implement new technology said by **Chaudhary & Sharma, (2021).**

India's traditional schooling system has been severely affected by the COVID-19 pandemic, which has put enormous strain on the online education sector. A case study of Maharashtra's five-year-old attempts to digitalize government schools is used to demonstrate how equipped the state is for the implementation of current government recommendations on digital-mode education. Teachers' pedagogical capacities are highlighted, the assumption that digital tools are sufficient to meet the needs of online

education is questioned, and regulations on online education need to be tailored to the context in which they are implemented **Khanapurkar, Bhorkar, Dandare, & Kathole, (2020).**

According to Mazumdar (2020), 23.8 percent of all homes in India have internet access. This figure includes both rural and urban areas, with rural internet availability at 14.9 percent and urban internet availability at 42 percent. According to the report, 17 percent of Assamese homes (urban and rural) have access to internet service.

Digitized Education As A Saviour

1. Students and teachers alike can study at their personal pace and on a schedule that works best for them, thanks to the versatility of digitised education. As a result, students will have a more favourable work-study ratio.
2. Hundreds of Courses: There are unlimited possibilities for learning and teaching with the help of digitized education.
3. The number of institutions and colleges offering their programmes online is increasing as they cater to students at all levels and across a wide range of academic specialization.
4. Less money is spent, but the outcomes are better. Study materials and transportation costs are significantly reduced while learning on digitized mode of education
5. Customizable rescheduling of the educational schedule, as well as the exploration of solutions in partnership with schools, teachers, and parents, in order to provide access to education to a greater section of the student population.
6. Significant efforts must be made to guarantee that every student receives a high-quality, egalitarian education, which is a fundamental entitlement under the law.
7. Priority should be given to students who are less privileged and do not have accessibility to the digitized education.
8. Education is not really about competency, but rather about motivating people to learn through digitised mode of education makes students to learn more than simply what is in the syllabus.

9. Digitized mode of education provides quality of education to every student

Factors Leading To Digitized Education Movement In India

1. Era of digitalization: Educators throughout the world are taking use of the power of the digital revolution to transform and modernise their classrooms. There is a creative crisis in the modern educational system. Students' personal efforts to acquire something new and build objective connections between their knowledge and the real world are not supported by classwork or courses. Machekhina, a.k.a (2017). It is therefore imperative that students' minds are invested in, rather than just their knowledge being transferred, in the classroom of the future. Another thing to consider is that educational institutions around the world are scrambling to find effective ways to incorporate cutting-edge digital technologies while also keeping in mind the best practises of their respective cultures and traditions.
2. Reducing Unemployment: It's clear that traditional education approaches aren't equipping students to meet the needs of today's rapidly changing labour economy, as evidenced by a recent report from the Organization for Economic Co-operation and Development (OECD). Entrepreneurship is acknowledged as a crucial component for supporting job creation and economic progress across the country through digital modes of schooling. The key engines for creating jobs, increasing income, and reducing poverty in emerging nations like India are small enterprises and other jobs created as a result of digitalized education.
3. Digitized mode education is a development of education system in India: Regular classroom mechanics, which include students, textbooks, and teachers, limit students' opportunities for active participation. The digital education system, on the other hand, offers a vast range of learning possibilities for students. It is easier for pupils to grasp the digitized education approach because of the abundance of photos and video content, virtual reality, interactive

sessions, and more. Technology and a digitised education system fill in the gaps where traditional classrooms fall short. A number of advantages for students include the ability to study at a time and place that works best for them. Education has been made more accessible to the general public by overcoming the limitations of traditional educational paradigms through the integration of technology and education.

4. 'Covid' bring a revolution for digitized education: Classroom routines, including the presence of peers, textbooks, and teachers, severely restrict students' ability to take an active role in their learning experience. Digitised education, on the other hand, gives pupils access to a wide range of learning opportunities. Pupils have an easier time grasping the digital education approach because of the abundance of photographs and videos, virtual reality, interactive sessions, and so on and so forth. Digitised education based on digital technology fills the gaps that traditional classrooms cannot. Students can study whenever and wherever they want, which has several advantages. The digitised education has opened up education to a wider audience by removing the restrictions imposed by more conventional instructional paradigms. Strielkowski, (2020).

Digitized Education Builds The Nation

Opportunities for Today

1. Digitalized education develops skills of students
2. Digitalized education y helps students in retaining information better
3. Digitalized education improves learning
4. Digitalized education empowers students learn from anywhere

Opportunities for Tomorrow

1. Digitalized education helps students for career advancement
2. Digitalized education develops business opportunities
3. Digitalized education prepare students for future
4. Digitalized education improves learning effectiveness

Objectives Of The Study

1. To study the role of digitized education in India

2. To study the factors leading to digitized education movement in India
3. To analyse the present and future opportunities for students.

Hypothesis

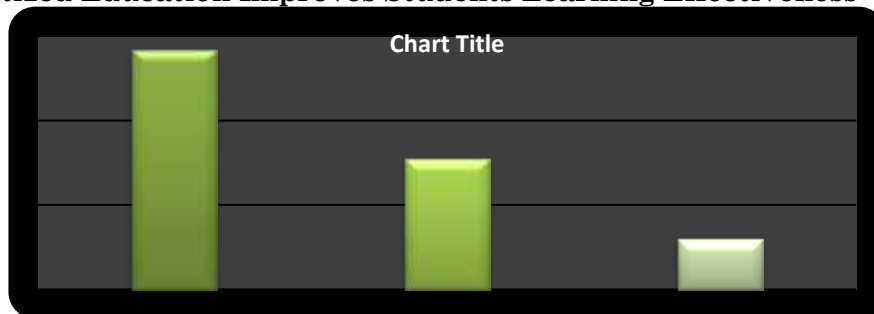
H0 “There is no significant difference between student perception towards present opportunities of digitized education”

H1: “There is significant difference between student perception towards future opportunities of digitized education”

Research Methodology Population And Sample Selection

Data Analysis and Interpretation

Graph 1. Digitized Education Improves Students Learning Effectiveness



From the above graph it is seen that the urban respondents are highly in favour of digitized education improves students learning effectiveness as compare to the rural students. Therefore the government and the

For the study, the sample is taken from the students of Mumbai city. The sample size for the study was 200 respondents

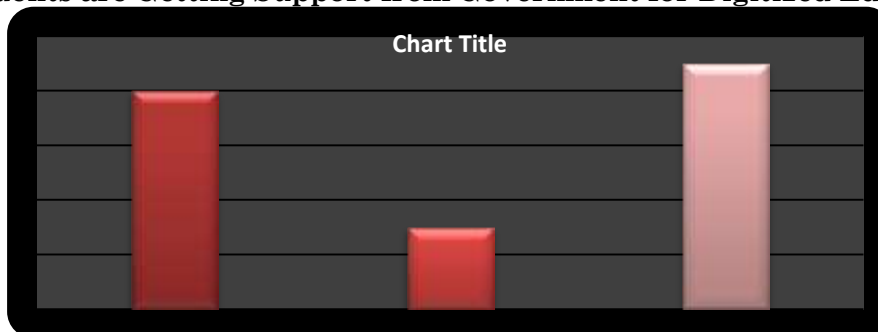
Collection of Data

The structured questionnaire was designed to collect the primary data from the 200 respondents and research papers, articles taken for secondary data.

Methods of Analysis

Analysis of the data collection was done with the aid of ANOVA statistical test and Bar Graphs.

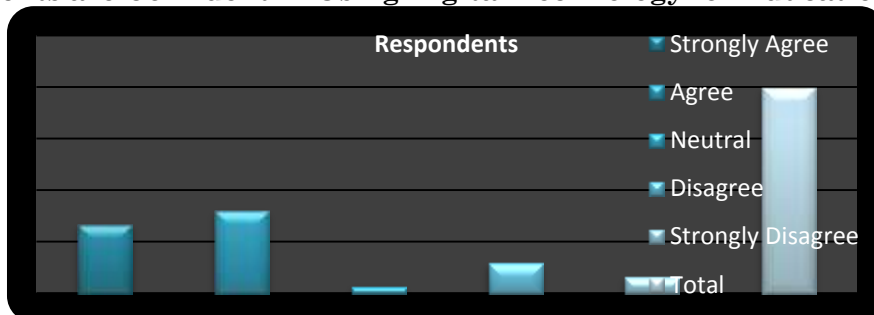
Graph 2: Students are Getting Support from Government for Digitized Education



The above graph presents that the students are disagree in getting support from government for digitized education. Therefore, the government should take care

educational institutions should focus more on the rural areas of Mumbai which helps in the education equality. It will also helps to builds nation with the development in literacy and economy.

Graph3: Students are Confident in Using Digital Technology for Education



As it seen that majority of the students are in favour with 'strongly agree' and 'agree' regarding the Students are confident in using digital technology for education. Students are now more aware of digitalization and they are much more confident in using it in education too. So the educational institution should prepare their learners and educators for digitized mode of education which will bring new achievement for Nation.

Table 1: Test of ANOVA (Opportunities of Digitized education for Student's Present)

		Sum of Squares	df	Mean Square	F	Sig.
P1	Between Groups	.631	2	.316	.254	.776
	Within Groups	244.924	197	1.243		
	Total	245.555	199			
P2	Between Groups	2.377	2	1.188	1.004	.368
	Within Groups	233.203	197	1.184		
	Total	235.580	199			
P3	Between Groups	3.045	2	1.523	1.182	.309
	Within Groups	253.750	197	1.288		
	Total	256.795	199			
P4	Between Groups	2.736	2	1.368	1.072	.344
	Within Groups	251.419	197	1.276		
	Total	254.155	199			

From the above table of ANOVA it is seen that there are four opportunities for the present of students and all the significant value are greater than the P value (.776, .368, .309 and .344) it means that the null

hypothesis is accepted. Hence the students were accepted that all the opportunities are true. Digitized education supports the present of students, which will influence their future.

Table 2: Test of ANOVA (Opportunities of Digitized education for Student's Future)

		Sum of Squares	df	Mean Square	F	Sig.
P5	Between Groups	.062	2	.031	.027	.974
	Within Groups	230.893	197	1.172		
	Total	230.955	199			
P6	Between Groups	.348	2	.174	.135	.873
	Within Groups	253.207	197	1.285		
	Total	253.555	199			
P7	Between Groups	.631	2	.316	.254	.776
	Within Groups	244.924	197	1.243		
	Total	245.555	199			
P8	Between Groups	4.707	2	2.354	1.863	.158
	Within Groups	248.848	197	1.263		
	Total	253.555	199			

From the above table of ANOVA it is seen that there are four opportunities for the present of students and all the significant

value are greater than the P value (.974, .873, .776 and .158) it means that the null hypothesis is accepted. Here the respondents

are in highly favour of all the four opportunities and accepted that these opportunities makes their future bright with the help of digitized education.

Need And Scope Of The Study

In India, digital education is critical. The introduction of the internet and high-tech equipment has revolutionised the educational industry. The advent of cutting-edge technologies like LCD projectors and smart boards in educational institutions across the country has caused a sea change in the way students are taught. Students can study at home on their smartphones, tablets, or laptops thanks to the convenience of digital education. Teachers' use of modern technologies in the classrooms drew students away from the traditional manner of learning. With a variety of possibilities, digital education helps students prepare for their futures while also strengthening the nation as a whole.

Findings of the Study

According to the above analysis the following findings were extracted

1. Urban respondents are highly in favour of digitized education improves students learning effectiveness as compare to the rural students.
2. Students are disagree in getting support from government for digitized education.
3. Students are in favour with 'strongly agree' and 'agree' regarding the Students are confident in using digital technology for education.
4. Respondents believe that Digitized education supports the present of students, which will influence their future
5. The respondents are in highly favour of all the four opportunities and accepted that these opportunities makes their future bright with the help of digitized education.

Conclusion

In India, digital education has a significant impact. The educational industry and the lives of students have undergone a radical transformation as a result of technological advancements. Students can study at home using their smartphone, tablet, or laptop thanks to the digitization of education. Teachers' use of new technologies in the classroom drew students away from the

conventional chalk and talk style of teaching. Another major source of cash for the government comes from digitized education, which is considered a boon for the country. With a variety of chances, digitised education strives to strengthen students' present and future as well as the strength of the nation.

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A Quantitative Study of Child Sex Ratio in Haryana

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DOI- 10.5281/zenodo.7740235

Abstract

Achieving gender equality and empowering all women and girls is one of the 17 sustainable development goals. Gender inequalities are still deep-rooted in every society. India is a patriarchal society. That is why sex ratio is always unfavourable for women in this country. Women in India did not have to fight for voting rights. But their fight for equality seems to be tough. India has the 8th most skewed Child Sex Ratio (CSR). The present study examines the causes of lowest CSR of Indian state, Haryana. It also finds correlation between literacy rate and CSR with respect to gender in all districts of Haryana. It concludes that negative correlation exists between LR and CSR. The study concludes that changing the mindset of the society and monitoring diagnostic centres are the only options to arrest further decline in CSR.

Introduction

The alarming decline in the CSR, has been unabated since 1961 in India. CSR is defined as number of girls per 1000 of boys between 0-6 years of age. The decline from 945 in 1991 to 927 in 2001 and further to 919 in 2011 poses a big challenge to gender equality. The CSR is a major indicator of the status of prevailing equality between men and women in a society. This paper reviews the CSR of India state wise. It focuses on CSR of Haryana, the state with lowest CSR according to both Census- 2001 and 2011. The study finds correlation between Literacy Rate (LR) and CSR.

Key Words: Gender inequality, CSR, male LR, female LR

Objectives of Study

The present paper attempts to

- review the status of CSR in Haryana
- find the relationship between CSR and LR of males and females

- to suggest recommendations for improving CSR

Research Methodology

The present study is based on secondary data. Reports of Government bodies are referred. Documents of survey conducted by national and international official organisations are researched. Newspaper articles are also used to note local updates. The data thus collected has been tabulated and analysed further using statistical operations for interpretation.

Research Area

The present study is about the demographic features of CHILDS SEX RATIO of Haryana. It is a state located in the northern part of the country. It is the 17th most populated state with population of about 25 million. Out of total population of Haryana, 34.88% people live in urban regions. Majority are the followers of Hinduism (87.46 %).

Review of Literature

Diagram 1



Source: Census 2011

The deficit of females in the age group of 0-6 years is not due to child mortality but has been mainly influenced by sex selection and sex selective elimination. The sex selective abortions are highly prevalent and widespread as the clinics are mushrooming in nook and corner of the country. The reason for second trimester abortions is given as contraceptive failure which is an eye wash and actually these are sex-selective abortions. (Navdisha, 2015)

A recent village-wise census of Mahendragarh has uncovered that Jorasi, a prosperous village and a literacy rate of over 80 % has the lowest CSR of all, an abominable 286 girls to 1,000 boys. Sex determination is all pervasive here. In the village of Jorasi, located at a short distance from the district headquarters of Narnaul, Sex determination is all pervasive here. (Kumar, S. ,2015)

The analysis of socioeconomic and educational status of mothers has provided valuable insight into the dynamics of sex-selective abortions. This can be explained by better access to prenatal diagnosis and abortion services in the richer and more educated households. (Saurabh et al. 2012)

Social construct discriminating against girls on the one hand, easy availability, affordability, and subsequent misuse of diagnostic tools on the other hand, have been

critical in increasing Sex Selective Elimination of girls leading to low CSR. The existing CSR reflects both, pre-birth discrimination manifested through gender biased sex selection, and post birth discrimination against girls. Since coordinated and convergent efforts are needed to ensure survival, protection, and empowerment of the girl child, the Beti Bachao Beti Padhao programme has been launched. It focuses on preventing female foeticide, improving the CSR, and women's education. (WDC,2017)

The Pre-Conception & Pre-Natal Diagnostic Techniques Act, 1994 (PCPNDT) was enacted in response to the declining sex ratio in India. The Act bans the use of sex-selection techniques before or after conception, prevents the misuse of diagnostic techniques for sex-selective abortions and prohibits the distribution and supply of any ultrasound machine or any other equipment capable of detecting the sex of a foetus.

The difficulty in achieving gender equality lies more in the implementation of laws and schemes and breaking the cultural and patriarchal knot that exists within our country than the lack of schemes. (Saxena, P. ,2019). The CSR in Haryana stood lowest among all states and much below national average as per both- 2001 and 2011 census.

Table 1: CSR according to States/UTs During Year 2001 and Year 2011

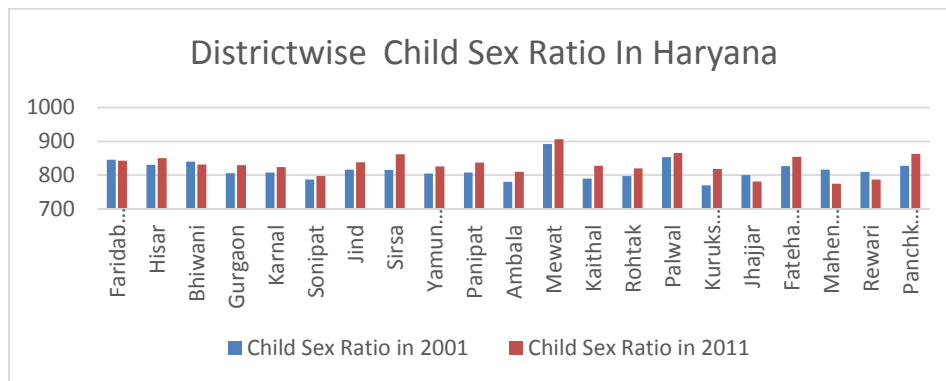
State/UTs	CSR (0-6) in Census-2001	CSR (0-6) in 2011
1. Jammu & Kashmir	941	862
2. Himachal Pradesh	896	909
3. Punjab	798	846
4. Chandigarh	845	880
5. Uttarakhand	908	890
6. Haryana	819	834
7. NCT of Delhi	868	871
8. Rajasthan	909	888

9. Uttar Pradesh	916	902
10. Bihar	942	935
11. Sikkim	963	957
12. Arunachal Pradesh	964	972
13. Nagaland	964	943
14. Manipur	957	936
15. Mizoram	964	970
16. Tripura	966	957
17. Meghalaya	973	970
18. Assam	965	962
19. West Bengal	960	956
20. Jharkhand	965	948
21. Odisha	953	941
22. Chhattisgarh	975	969
23. Madhya Pradesh	932	918
24. Gujarat	883	890
25. Daman & Diu	926	904
26. Dadra & Nagar Haveli	979	926
27. Maharashtra	913	894
28. Andhra Pradesh	961	939
29. Karnataka	946	948
30. Goa	938	942
31. Lakshadweep	959	911
32. Kerala	960	964
33. Tamil Nadu	942	943
34. Puducherry	967	967
35. A. & N. Islands	957	968
INDIA	927	919

Source: Census-2011

Out of 21 districts of the state, 20 had CSR below 880, the low category as per the Census norms.

Diagram 2



Source: Census 2011

Mahendragarh, Jhajjar, Rewari and Sonipat are districts with less than 800 females born per 1000 males according to census 2011.

Correlation between CSR and literacy rate of males and females

Based on the following data, correlation coefficient is calculated between (i) CSR and male literacy rate (ii) CSR and female literacy rate for both periods census 2001 and census 2011.

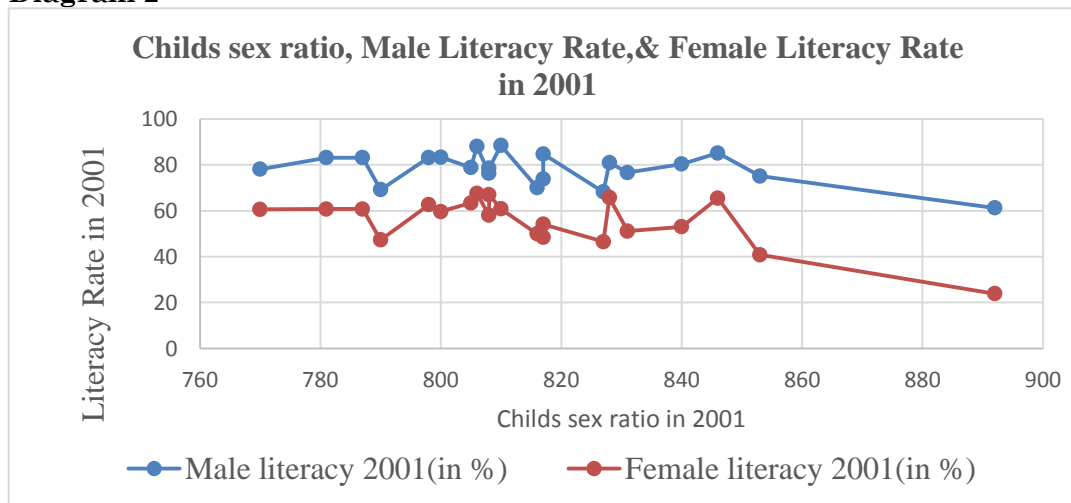
Table 2:CSR and LR with respect to districts, gender and census period

District	CSR in		Male literacy rate in		Female literacy rate in	
	2001	2011	2001	2011	2001	2011
Haryana	819	834	78.49	84.06	55.73	65.94
Faridabad	846	843	85.1	88.61	65.5	73.84
Hisar	831	851	76.6	82.2	51.1	62.25
Bhiwani	840	832	80.3	85.65	53	63.54
Gurgaon	806	830	88	90.46	67.5	77.98
Karnal	808	824	76.3	81.82	58	66.82
Sonipat	787	798	83.1	87.18	60.7	69.8
Jind	817	838	73.8	80.81	48.5	60.76
Sirsa	816	862	70.1	76.43	49.9	60.4
Yamunanagar	805	826	78.8	83.84	63.4	71.38
Panipat	808	837	78.5	83.71	67	58
Ambala	781	810	83.1	87.18	60.7	69.8
Mewat	892	906	61.2	69.94	23.9	36.6
Kaithal	790	828	69.2	77.98	47.3	59.24
Rohtak	798	820	83.2	87.65	62.6	71.72
Palwal	853	866	75.1	82.66	40.8	54.23
Kurukshetra	770	818	78.1	83.02	60.6	68.84
Jhajjar	800	782	83.3	89.31	59.6	70.73
Fatehabad	827	854	68.2	76.14	46.5	58.87
Mahendragarh	817	775	84.7	89.72	54.1	64.57
Rewari	810	787	88.4	91.44	60.8	69.57
Panchkula	828	863	80.9	87.04	65.7	75.99

Source: Census 2011**Result and Discussion**

1) For the census data of 2001, Spearman's rank correlation coefficient between male LR and CSR is -0.241143984

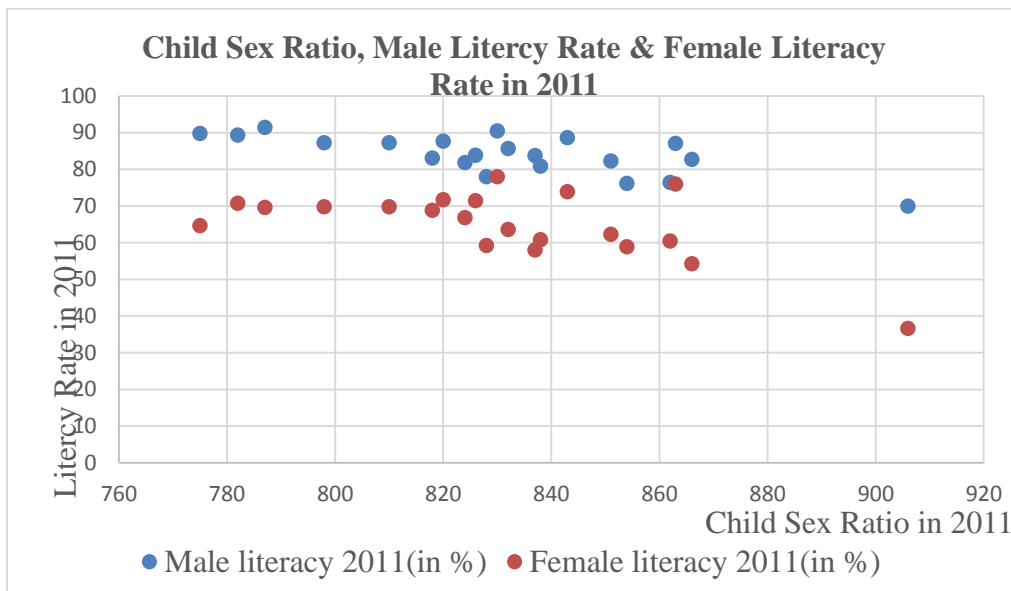
2) For the census data of 2001, Spearman's rank correlation coefficient between female literacy rate and CSR is -0.372440709.

Diagram 2**Source: Census 2011**

3) CSR in 2001 appears highly determined by female literacy.

4) For the census data of 2011, Spearman's rank correlation coefficient between male LR and CSR -0.639818157

5) For the census data of 2011, correlation coefficient between female LR and CSR is -0.43456.



6) CSR in 2011 and male LR appear highly correlated.

During both, census 2001 and census 2011, negative correlation exists between CSR and male LR, female LR. This means higher the LR, lower the CSR and vice versa. Also, All the districts with CSR lower than 800 during census 2011 are majority (above 95%) Hindu by religion. This means religious beliefs do not influence CSR.

Conclusion

CSR in Haryana continues to worsen. As the literacy rate of males and females increases, CSR decreases. Sex-selective abortion is still the major cause of missing girls, so efforts to restrict access to sex-selective technology are still essential. But the root cause is people's view of the value of girls throughout her life course. It is due to mind set of society and prevalence and spread of misuse of the technology that causes gender inequality at birth and continues further. Sustainability in numbers requires constant political and administrative focus and commitment from the state to ensure implementation. Hence Law will only act as a deterrent if it is strictly implemented. The attitudinal shift of the society is the tougher challenge. Hence gender sensitization campaigns at each level and monitoring diagnostic centres are the only options that can help improve CSR in Haryana.

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An analytical Study on Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District.

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DOI- [10.5281/zenodo.7740256](https://doi.org/10.5281/zenodo.7740256)

Abstract:

Farmers are feeding the nation. The research question is how floriculture farmers are looking towards insurance? The methodology of the study is descriptive and empirical. The study has been carried out by taking primary data collection through questionnaire. In order to accomplish the required study, 120 floriculture farmers were chosen from villages of Vasai Virar region of Palghar District as respondents for the study. Mean, Median, First Quartile and Cumulative percentage has been calculated for all the responses for statistical analysis of data. It is concluded that the farmers give high preference to insurance subscription as a necessity for their family members in terms of stability and security. They provide medium preference in terms of premium affordability and claim settlement

Key Words: floriculture farmers, Insurance subscription, Vasai Virar region

Introduction:

According to Mahatma Gandhi, "Agriculture is the lifeblood of India as it is the main source of livelihood for the Indian people." But since agriculture in India is dependent on seasonal rains, farmers are sometimes in financial crisis due to high rainfall, i.e. wet drought, and low rainfall, i.e. drought, but for sustainable . In Maharashtra state, Palghar is the district, located on the western coast of India and has a coastline that stretches for over 70 kilometres. Palghar district is surrounded by the Arabian Sea on the west, Thane district on the south, Nashik district on the east, and Gujarat on the north. The district is mostly hilly with the Sahyadri mountain range running through it. It is unfortunate that the fragmentation of land in the district has resulted in fewer opportunities for high-income farming, which can impact the economic prospects for farmers in the region. Overall, Palghar district has a diverse geography and population and offers several opportunities for agriculture and tourism. One of the Talukas of this district is Vasai. Vasai is a combination of urban and rural

population, includes city and many villages surrounding to the city. Farmers from Vasai

Virar region from Palghar district are using the geographical advantage of Mumbai suburban, and doing floriculture farming. Flower supply from Vasai is convenient with local trains and created high demand for fresh flowers. These farmers are living life of rural as well as urban citizen. Attempts have been made through research to find out insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District. How these floricultural farmers are looking towards insurance subscription. The research presented is important to see how the insurance subscription influence by many factors. How the economic condition of the farmers can be improved. It will help governments in framing policy decisions.

Literature Review:

(Isankandorav M*, March 2020) The researcher analysed the practice of using insurance mechanisms in government support for agriculture. The author talks

about the use of public-private partnership model in agricultural insurance. According to the author the state should play a leading role in initiating, organizing and financing the insurance. (Shengyue lee, Sept 2019) The researcher's surveyed 358 maize growers in North east china .They used the propensity score matching method. They found that farmers with crop insurance had used higher dose of fertilizers and that has caused the loss to the crop. The study also noted that 80% of the maize growers who has crop insurance claimed compensation during the study period as per Insurance company data. The reason for claim was drought and heavy rainfall. It also found that farmers are not using any risk mitigating methods to minimize the damage to crop due to crop insurance. (UNCTAD secretariat, June 1994) The UNCTAD secretariat report Of 1994 says the following about crop insurance .The scope of crop insurance is much wider than only field crops .It covers Horticulture, plantations, forestry, viniculture, rearing of animals such as livestock, aviculture (including poultry), aquaculture, sericulture, and apiculture are all related to agricultural activities. It also extends to post-harvest storage, processing and transportation of produce to the final markets. It also includes capital assets employed in the production processes, including dwellings, machinery, draught animals, equipment and tools, processing plants, etc.It also can be extended to various handicrafts and household products which are an important source of income for rural households. All these are within the scope of insurance. (M.M.Patil , March 1993).This study was done in the rice growing district of Raigad, Maharashtra The authors found that the promotion of crop insurance in the region was very low. They recommended that it should be made compulsory for all farmers. They also recommended uniform policy region wise in terms of cover of risk and premium. (Dr.V.M.Dandekar, June 1976).The author studied the crop insurance scheme of Maharashtra, India and recommended that crop insurance claim should not be assessed individually but in a group .Individual assessment of loss is difficult and would lead to litigation. The author termed this approach as Area Approach where the crop

loss assessment will not be made by physical verification or individual assessment but the area as a whole will be considered as a unit irrespective of the crop being sown or not compensation to be provided.

Objective Of The Study

1. To Study the perception of Floriculture Farmers for subscription of Life Insurance.
2. To evaluate the attitude of Floriculture Farmers for subscription of Insurance as necessary.
3. To examine the role of agent in subscription of insurance by Floriculture Farmers in Vasai- Virar region.
4. To analyse the difficulties in subscription of Insurance by Floriculture Farmers

Hypotheses:

Null Hypothesis (H₀):

H₀: "There are no significant changes in Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District"

Alternative Hypothesis (H₁):

H₁: "There is a significant change in Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District"

Research Methodology

The methodology of the study is descriptive and empirical. The study has been carried out by taking primary data collection. The study is based on both primary and secondary data. For the purpose of collecting data researcher has prepared questionnaire for the Study. In order to accomplish the required hypothesis of the study, 120 respondents, floriculture farmers were chosen from villages of Vasai Virar region of Palghar District as sample for the study. Mean, Median, First Quartile and Cumulative percentage has been calculated of all the responses for statistical analysis of data.

Significance Of Study:

The study is basically done to understand the factors influencing subscription of Insurance amongst the floriculture farmers from villages of Vasai Virar regionIt is an attempt to understand the perception of the floriculture farmers from villages of Vasai Virar region towards the subscription of Insurance To analyse the insurance necessity among the floriculture farmers from villages

of Vasai Virar region. To examine the role played by the insurance agents in subscription of Insurance among the floriculture farmers from villages of Vasai Virar region.

Analysis of Data:

Table 1: Grading Table

Grading of Response	Mean	Median	First Quartile	Cumulative Score of Strongly Agree and Agree.
Highly Preference	4 & 5	4 & 5	4 & 5	80% and above
Medium Preference	3	3	3	60% to 80%
Low Preference	1 & 2	1 & 2	1 & 2	Less than 60%

(Source : Statistical calculation on Primary Data) **Table: 2 Grading Table II**

Research Question: What are the Perceived changes in Insurance subscription perception of floricultural farmers in Vasai Virar region?						
Hypothesis: There are no significant changes in Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District.						
Sr. No.	Perceived changes in Insurance subscription perception	Mean	Median	First Quartile	%Cumulative of 4&5	
1	Insurance is a necessity for farmers	5	4	4	98	
2	Insurance will benefit family members	5	4	4	95	
3	Insurance products are available easily	4	4	4	82	
4	Insurance agents help in purchasing good policies	3	3	3	65	
5	Insurance companies keep their promise as per agreement	3	3	3	65	
6	Insurance policies removes fear of uncertainty	5	4	4	94	
7	Insurance premium is in affordable range of farmers.	3	3	3	64	
8	There are many good companies available to choose from in the insurance market	4	4	4	90	
9	Claim settlements of many companies are similar or are very high.	3	3	3	66	
10	Insurance policy provides a sense of security to family members.	5	4	4	95	

(Source : Statistical calculation on Primary Data)

Interpretation and Findings of Grading

Table II:

Insurance is a necessity for farmers

Mean score 5, Median score of 4, first quartile score of 4 and Cumulative preference score of 98% shows that the respondent are giving high preference value to Insurance as a necessity for them..

Insurance will benefit family members.

Mean score 5, Median score of 4, first quartile score of 4 and Cumulative preference score of 95% shows that the respondents are giving high preference value to Insurance will benefit family members of farmers.

Insurance products are available easily

Mean score 4, Median score of 4, first quartile score of 4 and Cumulative preference score of 82% shows that the respondents are giving high preference value that Insurance products are available easily.

Insurance agents help in purchasing good policies.

Mean score 3, Median score of 3, first quartile score of 3 and Cumulative preference score of 65% shows that the respondents are giving medium preference value that Insurance agents help in purchasing good.

Insurance companies keep their promise as per agreement

Mean score 3, Median score of 3, first quartile score of 3 and Cumulative preference score of 65% shows that the respondents are giving medium preference value that Insurance companies keep their promise as per agreement **Insurance policies remove fear of uncertainty** Mean score 5, Median score of 4, first quartile score of 4 and Cumulative preference score of 94% shows that the respondents are giving high preference value that Insurance policies removes fear of uncertainty.

Insurance premium is in affordable range of farmers.

Mean score 3, Median score of 3, first quartile score of 3 and Cumulative preference score of 64% shows that the respondents are giving medium preference value that Insurance premium is in affordable range of farmers.

There are many good companies available to choose from in the insurance market

Mean score 4, Median score of 4, first quartile score of 4 and Cumulative preference score of 90% shows that the respondents are giving high preference value that There are many good companies available to choose from in the insurance market

Claim settlement of many companies are similar or are very high

Mean score 3, Median score of 3, first quartile score of 3 and Cumulative preference score of 66% shows that the respondents are giving medium preference value that Claim settlement of many companies are similar or are very high.

Insurance policy provides a sense of security to family members.

Mean score 5, Median score of 4, first quartile score of 4 and Cumulative preference score of 95% shows that the respondents are giving high preference value that Insurance policy provides a sense of security to family members. H₀: There are no significant changes in Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District. H₁: There are significant changes in Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District.

From all above statistical information, it can be concluded that, Alternative Hypothesis should **be accepted**. There are significant changes in Insurance subscription perception of floricultural farmers in Vasai Virar region from Palghar District.

Limitations of the Study

Despite all sincere efforts, in order to collect relevant information and data, there are some limitations such as:

1. The scope of the present study is restricted to villages of Vasai Virar region of Palghar District.
2. The questionnaire respondents were floriculture Farmers from villages of Vasai Virar region of Palghar District.

Reply from the respondents may be biased.

Conclusion:

In conclusion, farmers' perceptions of insurance can be influenced by a variety of factors, including their level of awareness and understanding, access and affordability, and trust in the insurance industry. Improving access to education and information about insurance, as well as increasing the affordability and availability of insurance products, can help to increase farmers' understanding and appreciation of insurance and its benefits. It is concluded that the farmers give high preference to insurance subscription as a necessity for their family members in terms of stability and security. They provide medium preference in terms of premium affordability and claim settlement. Role of Insurance agents are also crucial in subscription of insurance policy by Floricultural farmers in Vasai- Virar region from Palghar District.

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A study on Financial Performance of Saraswat Co-operative Bank Ltd. (2017-2022)

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DOI- 10.5281/zenodo.7740278

Abstract:

Cooperative bank are established on the principle of cooperation they deal in normal banking business activities. co-operative banks are customer owned banks. Members elect the board of directors hence co-operative banks are owned and managed by democratic way. In India co-operative banks are playing important role especially for providing finance to agriculture and allied activities. Co-operative banks were introduced in India with the motive of inculcating saving and investment habits among the people especially rural people. Co-operative banks face challenges like it has to follow dual control, it has limited coverage. Co-operative banks have to face competition from big giants in the banking sector. Saraswat Co-operative Bank is among the leading co-operative banks in India. Saraswat Co-operative Bank was established in 1918. This study focuses on analyzing financial performance of Sarswat Co-operative Bank over the period of Five years. This paper will also put light on performance of Bank in Covid-19 pandemic . Financial performance of sarswat bank is anlysed by using some key indicators.

Keywords: Co-operative Bank, Sarswat Co-operative Bank, Fiancial Performance

Introduction

Co-operative movement was started in India when the Co-operative society Act 1904 was enacted. The Basic motive behind this movement was providing adequate rural finance. In India we have three tier co-operatives banking system

1. A State Co-operative Bank (i.e. works at the state level).
2. The Central Co-operative (i.e. works at district level).
3. Primary Co-operative Credit Societies (i.e. works at village level).

Cooperative bank are established on the principle of cooperation. Co-operative banks deal in normal banking business activities like accepting deposits and providing loans. Co-operative Banks are registered under Co-operative Societies Act applicable to concern state and if the co-operative bank has multistate operations then Multi-State Cooperative Societies Act, 2002.. Banking Regulations Act 1949 and Banking Laws (Co-operative Societies) Act, 1955 governs functioning of Co-operative Banks in India.

Like other commercial Banks Co-operative banks are also fall under supervisory and regulatory control of Reserve Bank of India. Capital of co-operative bank is contributed by members who are owners as well as customers of it means co-operative banks are customer owned banks. Members elect the board of directors hence co-operative banks are owned and managed by democratic way. In India co-operative banks are playing important role especially for providing finance to agriculture and allied activities. Co-operative banks were introduced in India with the motive of inculcating saving and investment habits among the people especially rural people. Co-operative Banks are spread across the country. They provide credit at affordable rate to serve the principle of 'no profit and no loss'. There are Rural Co-operative Banks as well as Urban Co-operative Banks in India. Rural Co-operative Banks provide finance to agriculture, livestock, milk, nursery and personal finance. Whereas Urban Co-operative Banks provide finance for Self-employment Industries, Small-scale units, Home finance, Consumer finance Personal finance etc. Co-operative

banks are also playing significant role in promoting financial Inclusion by mainstreaming unbanked rural population. Co-operative banks face challenges like it has to follow dual control, it has limited coverage. Co-operative banks have to face competition from big giants in the banking sector. Saraswat Co-operative Bank is among the leading co-operative banks in India. Saraswat Co-operative Bank was established in 1918, and now completing its 105th year of service to the people. It provides array of services to its customers; which includes accepting deposit, providing loans, NRI Banking Facility, Internet banking, Digital banking, Remittance services, Mutual fund Insurance Demat facility etc. Presently Saraswat Co-operative Bank is the largest Urban Co-operative Bank in India. The Saraswat Co-operative Bank k has its operations across the six states namely Maharashtra, Goa, Gujarat, Delhi, Madhya Pradesh and Karnataka. As on March 2022 bank recorded a total business of Rs.71,000 crore plus, 283 branches, and 311 plus ATMs, Sarswat Bank is awarded with various National and International Awards.

Position of Deposits and Advances Given

Financ ial Year	Deposits (in crore)	Advances (in crore)
2017-18	35056.66	23469.11
2018-19	36014.87	25797.49
2019-20	38083.49	25338.64
2020-21	40855.3	26241.7
2021-22	42870.53	28702.49

(Source: Annual Report 2021-22 – Sarswat Co-operative Bank)

Interpretation:

Deposits as well as loans of Sarswat banks are showing positive trends. In 2017-18 bank accepted Deposits of Rs. 35056.66 crore which gradually reach upto Rs. 42870.53 in 2021-22. In 2017-18 bank provided loans of Rs. 23469.11 crore which went upto Rs. 28702.49 in 2021-22. The graph of deposit and loans is increased at same pace amidst Covid Pandemic. .

2. Credit to Deposit Ratio

Objectives of the study

1. To study the role of cooperative banks in India
2. To study the financial performance of Sarswat Co-operative banks for the period of 2017-2022

Research Methodology

The study is based on secondary data which is collected from internet and annual reports of Sarswat Bank.

Limitations of the study:

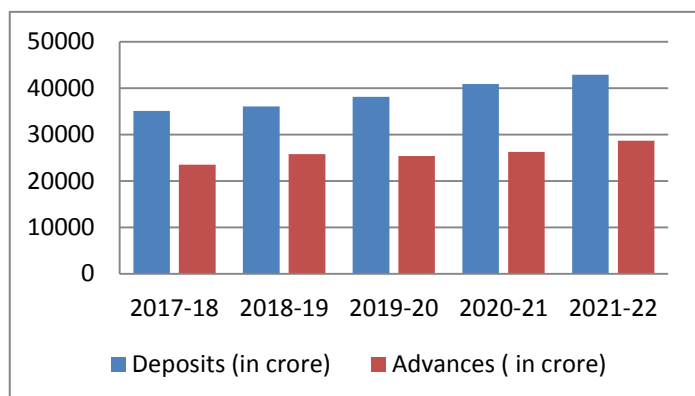
1. The study is limited to period 2017-2018
2. Only four indicators are taken into consideration for analyzing the performance of bank.

Findings of the study

Financial Performance of Sarswat Co-operative bank is analysed over five years on the basis of following key indicators

1. Status of Deposits accepted and advances given

Accepting Deposits and providing Loans is the primary function of a bank. Following table and graph shows the position of deposits accepted by bank and advances given bank over the period of five years i.e. 2017-18 to 2021-22



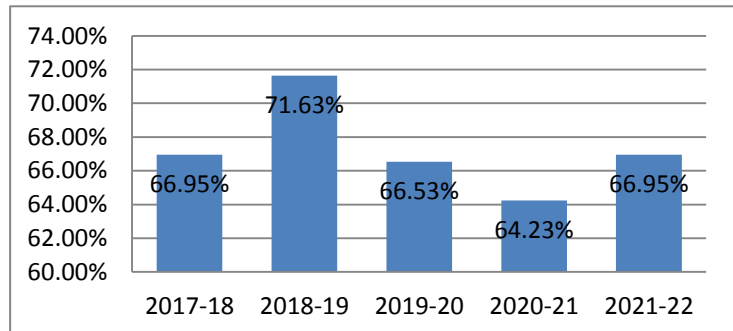
Credit to deposit ratio is a primary tool to assess banks liquidity and financial soundness. It shows how much funds are converted into loans. Very high ratio shows that bank has pressure on resources to extend the loans whereas very low ratio shows that bank is not using its resources optimally

Standard Credit to Deposit ratio as per Statista are as follow

Financial Year	2017-18	2018-19	2019-20	2020-21	2021-22
CD Ratio	68.96%	69.43%	68.06%	64.11%	65.72%

(Source: Statista.com) **Credit to Deposit Ratio**

Financial Year	Ratio
2017-18	66.95%
2018-19	71.63%
2019-20	66.53%
2020-21	64.23%
2021-22	66.95%



(Source: Annual Report 2021-22 – Sarswat Co-operative Bank)

Interpretation

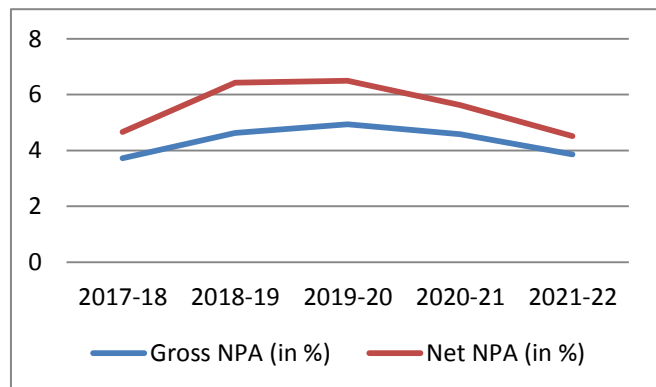
During all above mentioned year loans to deposit ratio of Sarswat bank is near to standard loans to deposit ratio. Bank has successfully maintained the Credit to Deposit ratio in pandemic too.

3. Status of Non-Performing Assets (NPA)

When over the period of 90 days no payment is received as a principle amount or interest on a loan given by bank then such loan is termed as Non-Performing Asset. Heavy NPA can lead bank towards severe financial position. Gross NPA means absolute value of unpaid loans whereas Net NPA means exact value of NPA after making provisions.

Position of Non-Performing Assets (NPA)

Financial Year	Gross NPA (in %)	Net NPA (in %)
2017-18	3.72	0.94
2018-19	4.63	1.8
2019-20	4.93	1.56
2020-21	4.58	1.04
2021-22	3.86	0.65



Source: Annual Report 2021-22 – Sarswat Co-operative Bank)

Interpretation

There is no fixed upper limit for NPA of bank but it is advisable to keep it up to 3%.(equity master). Gross NPA of ranges between 3% to 5% which slightly high but manageable. Net NPA is about 1% and in last financial year it is below 1% which is a good indicator.

Capital to Risk Weighted Asset Ratio shows financial stability of the Bank. It shows relationship between Bank's Capital and Risk Weighted Assets. It is calculated by dividing Banks capital by risk weighted assets. It is measure to show that depositor's interest is secured.

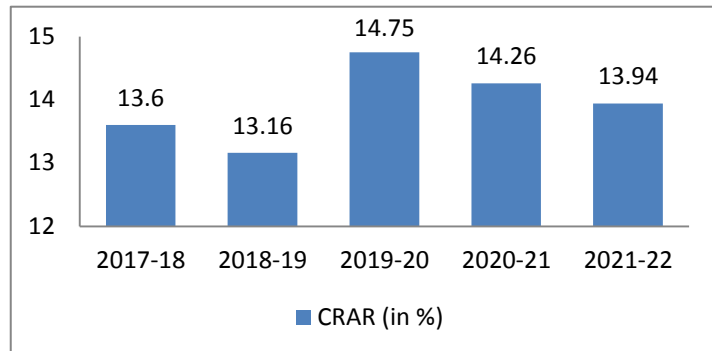
Standard CRAR as per RBI are as follow (at March end)

4. Capital to Risk Weighted Asset Ratio

Financial Year	2017-18	2018-19	2019-20	2020-21	2021-22
CRAR	13.5%	12.8%	14.3%	16.3	16.8

(Source: rbi.org) **Position of CRAR**

Financial Year	CRAR (in %)
2017-18	13.6
2018-19	13.16
2019-20	14.75
2020-21	14.26
2021-22	13.94



(Source: Annual Report 2021-22 – Sarswat Co-operative Bank)

Interpretation

Sarswat Bank is fulfilling the criteria of Capital Adequacy i.e. Capital to Risk Weighted Assets Ratio. Bank has successfully managed to maintain the CRAR as per the RBI'S directives. It means bank has required liquidity and financial stability to protect the interest of Depositors.

Conclusion

Co-operative banks work on the principle of co-operation democracy, Co-operative banks play important role in promoting banking services to the people, especially in rural area. Sarswat Co-operative bank is a leading co-operative bank; serving the society from more than 100 years. Deposits as well as loans of Sarswat banks are showing positive trends. The graph of deposit and loans is increased at same pace amidst Covid Pandemic. Sarswat bank is near to standard loans to deposit ratio. Bank has successfully maintained the Credit to Deposit ratio in pandemic too. Bank has very low net NPA. Bank has successfully managed to maintain the CRAR as per the RBI'S directives. It means bank has required liquidity and financial stability to protect the interest of Depositors.

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The Future is Green: Israel's Sustainable Development Initiatives

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DOI- 10.5281/zenodo.7740288

Abstract:

Sustainable Development is the advancement of a nation economically without damaging the quality of the environment for future generations. The world has paid the price for overlooking environmental concerns in the form of climate change, soil erosion, land deterioration, water pollution, polar ice caps melting, sea levels rising, etc. The price the planet coughs up surpasses the advantages of economic development. Countries need to accelerate their pace toward the common goal of a net-zero, nature-compassionate, fairer, and just future. Growing needs, due to the increase in population, will lead to overconsumption of resources which are unfortunately not renewable. When we discuss sustainability, the talk should not rotate around inflicting less harm but doing more good should be the epicentre. Countries need to be more committed to sustainable development goals. In this backdrop, the paper is an attempt to explore more about sustainable development. The paper is an effort to highlight country Israel's sustainability initiatives. The paper concludes that measures adopted by Israel offer learnings for various developed and developing countries across the globe.

Key Words: Sustainable Development, Sustainable Development Goals, Israel

Introduction

Sustainable development is an advancement that satisfies the present needs without trading off the capability of subsequent generations to meet their own needs. Sustainability is the cornerstone for today's worldwide structure for sustainable collaboration – the 2030 agenda for sustainable development objectives. In June 2022, environmental leaders across the globe had a dialogue and evaluated the world's present position and where we are marching to. The goal was to stimulate impetus, for the UN's decade-long action for the accomplishment of sustainable development goals. The sustainable development goals (SDGs) were embraced by members of the United Nation in 2015. Its worldwide appeal is for collaborated action to end acute poverty, save the planet, and nail down peace and prosperity by 2030. The 17 SDGs are merged as the conduct in one area affects consequences in the other. Living in harmony with the environment is one of the focal essences of sustainable development. World has failed on this ground and its effect is

climate change. There are three primary objectives of sustainable development namely economic growth, environmental protection and social inclusion. Effective sustainable development is possible when these three primary objectives are implemented simultaneously ensuring consistency and dedicated commitments. Sustainable choices have to be made if we desire to maintain our planet's ecosystem.

Review of Literature

According to J. Menash, (2019) though sustainable development has gained immense popularity, but the concept needs clarity as there is a lot of ambiguity. The paper (argues) affirms that the total concern of sustainable development revolves around inter and intragenerational justice based on essential environment, economy, and society. The paper concludes that much needs to be done by the UN, government, private sectors, and general society to guarantee its cognizance and implementation.

S. Chaudhare, (2019) points out that there are very few studies of sustainable development initiatives in India. The paper

identifies that inequality, peace and justice, and responsible manufacturing and consumption are important areas for further study in the areas of sustainable development measures in India.

O. S. Fayemi et al., (2018) conducted a study on the notable role played by research in the realization of sustainable development goals. The author feels the concept of sustainable development has gained prime importance as the survival of the human race on the globe is the agenda of various sustainability organisations.

P. Ozili, (2022) reviews existing studies on sustainable development. The paper drives to find an association between sustainability and sustainable development. The paper concludes that the challenges faced by regions are unique and have political, constitutional, corporate, and economic dimensions.

Statement of the Problem

The urgency and anxiety of sustainable development are gathering momentum. There is growing global recognition that reckless use of resources has an aftermath on the environment which includes climate change, poor health, and poverty. Taking constructive steps in sustainable development is the need of the hour. This paper is an attempt to decipher the importance of sustainable development by highlighting Israel country's initiatives.

Objectives of the Study

The objectives of the study are as follows:

- 1) To understand the importance of sustainable development.
- 2) To comprehend sustainable development measures adopted by Israel.

Research Methodology

The study is an attempt at exploratory research that is based on required secondary data. Secondary data was collected from journals, magazines, newspapers, media reports, and government and other websites keeping into consideration the objectives of the study.

Rationale and Significance of the Study

The United Nations 2015 adopted sustainable development goals. These goals aim at development without impacting the future generations' capacity of meeting their needs. In this context, the paper is an

attempt to understand the importance of environmental sustainability. The paper studies the sustainability strategies adopted by Israel. The brilliant strokes played by the country offer learnings for many countries across the globe. Though every country has its challenges and must craft its path to ensure sustainability. But Israel's transformation in water, agriculture, and renewable energy can undoubtedly fuel stimulus in their sustainability goal achievement.

Scope of the Study

The scope of the study is confined to understanding the importance and measures of achieving environmental sustainability. The paper studies Israel as a case for understanding the strategies to achieve sustainable development goals. The paper identifies Israel as a case study as the country is at a leading position in sustainable dairy and sustainable agriculture and offers teachings to various countries of the globe.

Limitations of the Study

The paper focuses on Israel as a single case to understand the sustainability approach. Secondary data was used for in depth understanding of the case, which has its drawbacks. The conclusions can pose a challenge to generalise.

Israel – Marching on Sustainability

Israel is a country in the middle east with a population of 9 million citizens speaking 35 different languages. It lies in a hot and arid region in the southern part of West Asia. New immigrants of over 3.2 million, often refugees, have been absorbed into Israel since their independence. Israel has an average population with a density of 400 people per square kilometre with a land area of 22,072 square kilometres. 90% of its population lives in an urban area. Israel has been innovative. They have long been at forefront of sustainable development with inventions and innovations in the fields of medical systems, biotechnology, internet security, communication, water desalination, solar energy, dairy production, agriculture, wastewater recycling and treatment, water management, digital printing, etc.

Sustainable Agriculture – Feeding the World

Simcha Blass a student engineer in the 1930s noticed a tree had grown and flourished considerably more than the other trees in the same row. Curious to find the reason he dug to find that its roots were fed by a minor leak from an irrigation close by. These observations resulted in drip irrigation. After years of experimenting and research Simcha and his son Yeshayahu developed experimental apparatus of drip irrigation in 1959 and floated the first drip irrigation company christened as Netafim. This system is found to be the most effective technological improvement used in agriculture. It nourishes the roots of the crops with just an adequate amount of water which results in paramount growth. Israel is a country in the desert. Water was their prime concern; with drip irrigation, the country could solve its water woes and water issues. The technology has an intelligently crafted device called a dripper which is a button-like valve that discharges the right amount of water. It is winded along the roots of crops so that the dripper is positioned directly above the roots. Each precious drop of water reaches the crops and harvests an enormous yield while using a fraction of water.

Netafim drip irrigation method for rice can save 70% of water which is being currently used in rice production. It utilises 1500 litres of water per kilogram of rice harvested rather than 5000 litres with the paddy system which required a conventional method of flooding the rice fields. Traditional flooding system produces one annual cycle of rice, but with drip irrigation, the same land can be used again for the second round of rice or other crops like beans and onions. Flooded paddies kill weeds and so were used as a traditional method. This consumed 30 percent to 40 percent of the earth's fresh water and generates 10 percent of the planet's human-caused climate warming, Methane, which is produced by microbes in soil submerged under water. 10 percent Methane was evaluated to be equivalent to the carbon footprints of the aviation industry for one day or 400 million cars over a year.

Sustainable Water Recycling – 'Making' Water Potable

The project of large-scale re-use of wastewater and desalination of saline water coupled with a well-equipped regulatory and pricing strategy has made the country reduce the over-exploitation of scarce freshwater resources. Israel re-uses nearly 90 percent of wastewater after recycling. That's four times higher than any other country on the globe. The water treated for use is primarily used for cultivation. This remarkable achievement and its advantages are not kept confined to the country alone. The country is sharing its expertise and offering lessons in recycling around the world like Africa and India.

Israel – One of the driest countries on the globe presently makes more freshwater than it needs. From water deficit to surplus, the remarkable turnaround was brought in by desalination plants. The country's innovative solutions can be a bridge between neighbouring old enemies who are sun-baked and parched with similar water stress.

The reversal started in the year 2007 when water-saving tactics like low-flow toilets and shower heads were installed countrywide. The country's requirement was 1.9 billion cubic metres of fresh water per year and was able to manage 1.4 billion cubic metres. The 500 million cubic metre shortfall was the reason the sea of Galilee was drying like an unplugged tap and there was a threat of loss of farm yields. With the desalination measures, the country could incredibly manage to put 600 million cubic metres of water in a year making it a water surplus.

Sustainable Dairy Farming – Milking with Care

Breeding with care, Israel's milk production, despite tough climatic conditions and arid land, has increased dramatically from 4000kg annually in the 1950s to more than 12000kg in 2021. Revolutionary technologies, which include computerised milking and feeding systems, Cow-cooling systems, and milk processing equipment coupled with excellent management techniques have paved Israel's dairy industry to become a global leader in efficiency, productivity, and sustainability. The secret behind dairy success is, the country adds management

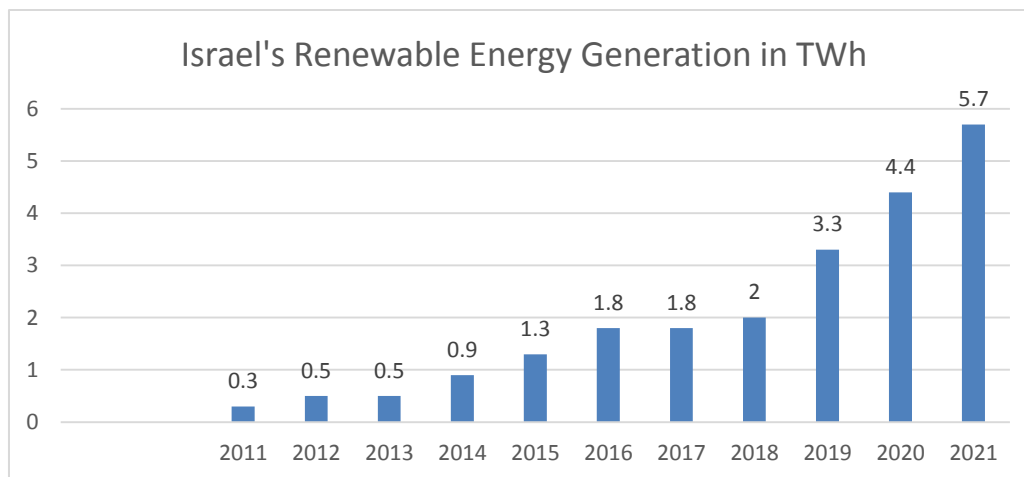
systems and technology to its smart farming. They place a microchip on one leg of the cow to monitor its activity. It indicates how much feed it has taken, how much rest, health problems, etc. The health problem of cows is quickly tracked, and immediate treatment is given. Each of the cows is given a monitored diet made-up of wheat corn silage with a proper quota of water daily. Though nutrition is a major expense, it is not compromised. Immediate alerts are given to farmers about cows that have not rested properly or provide an immediate alert to the treating veterinarian about the commencement of calving. Every cow is treated as a megastar. To battle the hot seasons, the cows are kept in a cool shed to keep them at a healthy temperature. There are separate beddings that are kept hygienic.

Sustainable Energy – Tapping the Sunshine

Sun is an excellent source of renewable energy, but energy drawn from solar and wind-powered systems cannot be stored

without additional cost. This is a major hurdle for the world's endeavours in setting itself away from fossil fuels. But Israel has developed a technology that can accumulate solar energy advantageously and can generate electricity even at night. The surplus energy from solar panels during the day is channelised to steer a system where water is used to condense air in underground tanks. After sunset, this stored air is discharged to power a turbine and produce electricity. Israel's goal in electricity production is the use of 80 percent natural gas and 20 percent or more to be tapped from renewable sources by 2030. The country intends to wind up coal-fired power stations in Hadera and Ashkelon. At present 28 percent of all the electricity production in Israel is coal-based. The objective is by 2028, the use of coal in all coal-fired power stations should stop entirely.

Chart No.1 – Israel's Solar Energy Market: Renewable Energy Generation, in TWh, Israel 2011 to 2021



Source: bp Statistical Review of World Energy 2022 In the industrial sector, the supreme mark to be achieved is the discontinuance of the use of gasoline, liquified petroleum gas (LPG), and diesel oil. The aim is to rely on cleaner and more efficient energy sources. Heavy industries depend on natural oil and smaller industries will bank on the natural gas supply network. Israel is planning a switch from gasoline and diesel oil vehicles to electric vehicles. The country strategies to completely ban on import of vehicles driven by polluting fuels. 100 percent of the new production of vehicles is powered by electricity and compressed

natural gas (CNG). The result of these positive initiatives will help the country to reduce its carbon footprint considerably.

Conclusions

If we want to make tomorrow better, we need to take this mission of a sustainable environment seriously. The government of every country must take concrete steps and lead the way, though collective actions by all is imperative. It is essential to discipline ourselves and fasten our greed to exploit more and more available resources on the pretext of economic development. The time to act is now. Festering this issue will lead to

leaving a degraded planet as a legacy for coming generations.

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Sustainable Development is a need of Hour: A Critical Survey

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DOI-10.5281/zenodo.7740297

Abstract

Sustainable development is the need of the hour to save the beautiful earth from further destruction. The role of the polluter should be fixed and the liability of the mending of the environment should be rendered on the shoulders of polluters. Climate change made humankind crippled; technological advancement could not control the degradation of the environment. This research article argues it is the responsibility of all the stakeholders of mother earth to make rational use of natural resources and the approach of sustainability should be adopted for the long live of human civilisation.

Key Words (Sustainable development, climate change, green House, water crisis)

Introduction

The world is at the stage of the apocalypse, global warming brought out disastrous challenges before human civilisation. Rise in temperature, uneven rainfall, cloud bursting, natural calamity, water crisis, and attacks of invisible viruses put the world order under constant threat. Even the scientists of the world failed to decode the changes that occurred in the atmosphere. Consumption of Fossil oil unleashes environmental hazards i.e. carbon dioxide, methane and nitrous oxides despite its toxic effects still it is the main source of energy to complete the world. Under the name of development, developed, developing nations have been using abundant natural resources for development. All of them are attempting their process of development should be unchecked, therefore the unmendable effects have been made in the Eco cycle. The reckless approach of humankind put the beautiful planet at the stake of risk.

Climate change:

Climate change is one of the flammable issues for the entire world community. The difference in the natural course of the environment brought out disastrous changes for human civilization. The world has been facing severe threats from climate change, the change in the cycle, unseasonal rainfall, and melting icebergs from the Antarctica continent have been seriously threatening the lifestyles of people across the world, it resulted in uneven compartments of development.

The reason behind climate change

Greenhouse

A modern greenhouse is typically made up of a frame made of glass or plastic that is used for producing fruits, vegetables, flowers, and other

plants which require special temperatures. There are two basic types of greenhouses: the span-type greenhouse, which has a double-sloped roof, and the lean-to greenhouse, which has one slope and leans against the side of a building. There are sometimes several span-type greenhouses attached to each other so that they have fewer external walls, which reduces heating costs. The plants in a greenhouse are exposed to natural light for most of the day due to the large area of glazing on its sides and roof. Greenhouse gases create difficulty in the insulation of the earth and it resulted risk of rising temperatures.

Exponential of foodstuff with increasing population, people have searched for alternative sources to increase food production. Greenhouses have been abundant to meet the food need of the world. Greenhouses have been generated various toxic hazards which directly cause the layers of the atmosphere. All the toxins disturb the earth's energy budget in the future earth's overall temperature will be increased by 1.5 degree Celsius and it would bring far-reaching impacts on the coastal areas of the world. Therefore it is the need of the hour to think in terms of the sustainability of the atmosphere for a better prospectus of the earth. The heat budget of the earth has collapsed due to the gas's emission from the green houses.

Recent Examples of Climate changes

The summer of 2022 eye-witnessed a high degree of temperature throughout the northern hemisphere, especially it badly heats North America. As per the analysis, if the rising temperature remains an uptick, it will be a regressive impact on the entire ecosystem. The report says: "According to the

analysis, if the world warms by 2C, which could happen in about 20 years' time, then the chances of having a heatwave similar to last week's drop from around once every 1,000 years to roughly once every 5-10 years" (<https://www.bbc.com/news/science-environment-57751918>) The increase of the temperature by 2 degrees Celsius will create complications for humankind. The example of northern America is a wake-up call to all the world humankind. They should seriously address the environmental issues to meet the solutions and sustainability.

The European continent eyewitnesses a very serious flood situation in 2022, which went beyond human efforts. The changes in the atmosphere could affect the ecological balance of Europe and will create room for the cataclysm and it will uproot the imprint of mankind permanently.

"Researchers are just beginning to unravel the complex web of climatic, hydrological, and social factors that contributed to the catastrophe. But they already have some suspects in mind, including a warming climate that can supercharge rainstorms and European disaster plans that focused on major rivers, rather than the lower volume tributaries hit hardest by the storms. smaller streams." scientists have warned climate change will mean more flooding in Europe and elsewhere. Warmer air holds more moisture, which can translate into heavier rainfall. By 2100, flood damage on the continent could cost as much as €48 billion per year—up from €7.8 billion now—if nothing more is done to prepare, and the number of people affected could more than double to some 350,000, according to the European Commission's Joint Research Centre."

(<https://www.sciencemag.org/news/2021/07/europe-s-deadly-floods-leave-scientists-stunned>) The Himalayas is considered one of the youngest mountains in the world. The changed environment put this entire region in a vulnerable situation where the disastrous impact have been occurring. The recently occurring tragedies at Uttarakhand are linked to the environmental imbalance. Ananth Krishnan explains the reason behind the catastrophe that occurred at Kedarnath, he explains that mountain erosion and unkempt development made the region more vulnerable. He predicted more disasters could hit the region. The recent the sinking of Joshi Math could be the result of human interference in the natural cycle. He says in his article published in the Daily Hindu:

"The IPCC (Intergovernmental Panel on Climate Change) Special Report on the Ocean and Cryosphere in a Changing Climate found that in the Himalayan ranges, there could be variations in overall water availability, but floods, avalanches and landslides were all forecast to increase. Changes in

monsoonal precipitation could also bring more frequent disasters.

In 2013, catastrophic loss of lives was seen in the floods that swept Kedarnath. They were triggered by heavy rainfall over a short period in June, first destroying a river training wall, and then triggering a landslide that led to the breaching of the Chorabari moraine-dammed lake, devastating Kedarnath town. What this means is that aberrations in the Indian summer monsoon caused by changes to long-term climate could produce even greater damage, by bringing debris and silt down the river courses, destroying physical structures, reducing dam life, and causing enormous losses. These problems are also aggravated by the erosion of mountain slopes and the instability of glacial lakes in upper elevations. On the other hand, as the IPCC Special Report points out, the retreat of glaciers in the high mountains has produced a different kind of loss — of aesthetic and cultural values, declines in tourism and local agriculture." (Ananthakrishnan) Cloud bursting and uneven rainfall phenomenon has been happening across the world. Cloud bursting brings unexpected flood which remains uncontrolled. The existing institutional structure could not tackle it. The uneven rainfall creates an uneven compartment of farm cultivation, the region that used to get a good amount of rainfall now it is being eye witnessed scanty rainfall and where used to get a large amount of rainfall is now seriously short of that remark. It made serious questions before humankind for their survival. It exacerbates the risk of famine. Many African nations have been facing a serious food crisis. It made them crippled, they could not take any concrete action because of the changing dimensions of the environment. The food security of the world is under threat, and in future, it is going to bring out more regression. The decadal growth of the population and the changing scenario of the environment could not compatible with each other. Naturally, in near future, it is going to affect seriously. The world community should understand the changed dimension of the climate and initiate serious work to minimize the impact of climate change.

Lebanon Water crisis

The water supply system of Lebanon is on the verge of collapse. Millions of the people are at immediate risk of losing access to safe water. Lebanon was to be described as the water tower of the Middle east. But due to changes in the climate, the system has almost collapsed, water is available abundantly but due to the availability of toxic chemicals, it is not potable water. The water challenge is the major challenge due to the toxic water systems. Water scarcity would be the major issue. Unfortunately, water, the essential resource on the planet, is in danger of becoming scarcer at this juncture as the population explosion results in an alarming increase

in demand for water. The scarcity of water jeopardises the socio, economic and environmental stability of the country. It is urgently required to encourage the practice of the rational use of water for better sustainability. To ensure ecological balance, development of optimum human resources, and effective management of available water, efficient planning, equal distribution, and efficient conservation of open water are urgently needed other wise waterborne disease could cripple human civilisation badly.

The role of the Developed nations

The role of a developed nation is more, as per the polluter's pay principle. The responsibility and liability rested on the shoulders of polluters, formally it is recognized as Rio Declaration. Emitters are responsible for the pollution the responsibility and liability are fixed for further development. How much portion has been used and created pollution per that the liability and responsibility should be fixed on the shoulders of the polluters.

Carbon footing.

The term sustainability should understand in terms of the social, political and economic points of view. Social sustainability explains that all humankind has the right to make their survive. Developed, under developing and least developed nations should make coordinate proper mechanisms to redressal climate-related issues. The responsibility has rested on the shoulders of the developing nation to channel the mechanism to reduce environmentally threatening components by making rational use of carbon. Economic sustainability has been used in terms of the capability and independence of the nation, the economic activities should not be unleashed at the cost of environmental loss. A sustainable approach is required to understand the term development.

Conclusions

There is no doubting the fact that we, human beings, have been responsible for more environmental degradation than any other living species. As we continue our search for longer lifespans and more comfortable living, we seem to be indiscriminately damaging the world around us.

Despite the knowledge we possess and the awareness of the damage we are causing, there seems to be a little collective will to lead to resolute actions on a consistent basis. That said, there have been a number of individuals through the course of history who've made change possible with their doggedness.

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Sustainable Road Connectivity For The Improvement Of Socio-Economic Development Of Rural Area In Palghar District

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DOI- 10.5281/zenodo.7740305

Abstract

This study of sustainable road connectivity in rural areas is taken as a studio exercise for PhD course. Out of the various aspects of development the study emphasizes on the road connectivity as it is a critical force for sustainable development that is interwoven with many other sectors. Rural transport is one of the key components for rural development as it promotes access to economic and social services generating increased agricultural income and productive employments. Though the demand for transportation is not as fundamental in human nature, it is indispensable for socio-economic development. Prioritizing the road network remains one of the bottlenecks for the policy makers so this research highlight on the study of sustainable road networking helping the government to alleviate the problem and provide them with the base line data for managing their resources and providing sustainable road connectivity leading to socioeconomic development of rural people.

Keywords : sustainable, road connectivity, socio-economic, rural area, palghar district

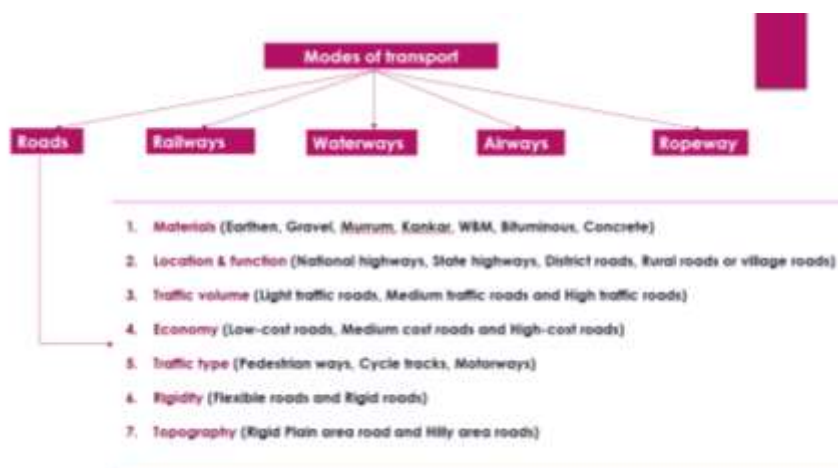
Introduction

1.1 What is Rural Area

A rural area is an open swath of land that has few homes or other buildings, and not very many people.

1.2 Importance of Transport (Emphasis on Road)

Transport is the backbone of the economy of any Country. It is indispensable for the socio-



economic development. Transportation has brought the world together. It carries ideas and inventions for the people of different countries and has considerably contributed to the evolution of civilization. Though the demand for transportation is not as fundamental in human nature as the demand

for essential commodities, “yet it is an indispensable part of culture, as the hallmark of civilization.” The first roads were probably the beaten paths leading to food and water. Roads are artificial pathways formed through a country for the transit of travellers and the carriage of commodities. Accessibility

and mobility are essential to almost everything the developing countries are striving to accomplish. Immobility perpetuates poverty while mobility is an essential ingredient of prosperity. While food, shelter, health, education and useful jobs are the ultimate goals, transport may be the catalyst essential to the realization of these objectives.

Statement of the problem (Emphasis on Road Transportation)

Until now, the road transportation is regarded as leading means of transport in the country, carrying around 85 to 95 percent of passenger and freight traffic; utmost rural peoples are accessible only via road.

In recent times, government is showing good improvement through allocation of funds and building road infrastructure, however still there is information gap regarding impact assessment of rural road connectivity which remains one of the bottlenecks that policy makers do not have adequate know how about the task to give priority for the project work so this research highlight how the access to road impacted the socio-economic developments in the society and to sensitize the information gap in the area of study so that the government can act to alleviate the problem and provide base line data for future study.

Majority of rural areas do have scanty access to roads. The association between transport developments is still one researchable major topic. It is known that; road is vital infrastructure that provides access to rural and urban areas in the country. However, most areas in the country are located far from economic centres, market and basic social services. Even the existing road networks were worsened to larger extent and are in dreadful condition. However, there is limited scientific study conducted regarding road accessibilities development of sustainable roads.

Most rural community is found isolated and have a limited access to the road owing to meagre road connectivity, besides, less emphasis was given during the past regimes to the road expansion specially in the rural area lead to underutilize the benefit of development that could be as a result of developments in the transport sector.

Consequently, this study is planned at deciphering how sustainable road transport can be provided for improvement of socio-economic development of rural area in Palghar district.

1. Review of Literature

International and National journals, Research papers and reference books were reviewed. The above review helps in drawing following conclusions:

1. Project was done for Transportation to fulfil needs in a rural environment.
2. Researchers specified that rural roads enable and foster rural connectivity important for improving rural incomes, creating productive jobs and promoting access to economic and social services.
3. Unplanned and uncoordinated growth of cities has seriously compromised existing transportation systems and increased challenges for any further development in this sector.
4. The researcher also suggested improving the local transport and accessibility in rural areas through partnerships.
5. The International forum has shown the link between Rural Transport and accessibility, mobility and economic opportunity for poor communities in developing countries.
6. Rural transport services often have to operate on poorly maintained, low-volume roads.

4. Conceptual Frame Work

1. To facilitate the access people have to goods, services and information.
2. Improved transport reduces isolation.
3. People need to have access to a wide variety of goods, services and information in order to live a productive economic and social life.
4. Improving the mobility of individuals and the goods and services they need.
5. Faster, safer, cheaper, more reliable and more comfortable travel of people and less spoilage of products.

5. Selection of case Study

Palghar district has 4,69,699 hectares of the total geographical area in a total 1008 villages and 3818 sub-villages. Located in the northern part of Konkan, Palghar district is spread over the Sahyadri Mountain ranges and has tribal population. Due to its

geographical location Road network in the region is a challenging task. Located near economic capital of country, Mumbai, Palghar is still an undeveloped tribal area which needs to be accessed to draw its tremendous potential of growth.

5.1 Significance of the Study

The system of rural transport plays a vital role in socio-economic development of nation. Development in rural transport affects the social culture more dynamically. India, which is predominantly a country of villages and where agriculture is the main occupation of the people, Road transport is one of the most basic necessities to the community. Railways, Waterways and Airways services can be availed of only by those who are in a position to pay for them. Roads are however, the common man's means of transport. The state, therefore, provides and maintains roads in interest of maximum social benefit. Roads are characterized by a variety of traffic. Road transport is the only form of inland transport where door-to-door service can be rendered. It provides great convenience to the traders and businessmen. In road transport, the vehicle goes near the goods while in other transport services the goods have to be carried to the vehicle. The transportation of goods by a railway or airplane requires good packing. Road transport does not require any such thing. Road transport is a business of small size and as such personal service is frequently developed. The transport system is the barometer of the overall economic and industrial growth and a switchover of the functional life of trade and industry. Provision of efficient transport helps industries in getting raw materials and other requisites cheap and quickly. Development of small-scale industries becomes possible in rural areas due to their closed road contact with their urban markets and the availability of raw materials at cheap prices. The development of the roads affects agriculture directly by enlarging the areas under cultivation. Rural district roads increase the mobility of labour and bring amenities of city life within the reach of countryside peoples.

Roads also form convenient and accessible thoroughways for telephones and telegraphs and for electricity, gas, water and sewage mains. Transport is the basic service for

increasing national income. As the national income rises, the infrastructure should support the changing patterns of demand. Numerous Nations have made impressive strides in their infrastructure expansion during their period of development. Transport system is the indicator of development in the country. Hence transport development is synonymous with social and economic growth. To overcome the deficiencies in various modes of transport, emphasis has been laid on the improvement of transport infrastructure. Effective transport system has been playing a vital role in the economic prosperity of the nation. The research study is undertaken to provide sustainable road connectivity for improvement of socio-economic development of rural area in Palghar district.

6. Objectives of the Study

1. To study the present structure of management of rural transport in Palghar District.
2. To study the administrative problems of rural transport in Palghar District.
3. To study the opinions and expectations of villagers about road conditions.
4. To study the rural road management system and its effect on socio-economic transport services.
5. To analyse and suggest remedies regarding sustainable road transport.
6. To study road pattern and suggest connectivity in terms of sustainable road development system.

7. Research Hypothesis

The general hypothesis of the current study stated to provide sustainable road transport for Basic, Social and Economic needs in rural area of Palghar district are mentioned as: -

- I. Economic transformations are associated with road accessibility.
 1. The closer the household from the road, the more is the household income.
 2. The occupation of the household heads improves with road accessibility.
 3. Dependency on agriculture decreases with road accessibility.
- II. The availability of basic social services is associated with road accessibility.
 1. Availability of basic social services increases with road accessibility.

2. Access to road facilitates educational opportunities.
3. Health services increase with road accessibility.

8. Scope of the Study

The present study was undertaken to analyse the sustainable road connectivity for the improvement of the socio-economic



development of rural area in Palghar district. Palghar district has 4,69,699 hectares of the total geographical area in a total 1008 villages and 3818 sub-villages as well as 477 gram panchayats. In District the literacy rate is 66.65% and Male percentage is 72.23% and female literacy rate is 59.28%.

Palghar, the 36th district of the state, came into existence from August 1, 2014, by dividing the country's largest Thane district, which has maritime-mountainous and civil parts. In the presence of then Chief Minister Prithviraj Chavan and then Revenue Minister Balasaheb Thorat, the work of the new district started from 1 August 2014. Palghar is the 36th district of the state. Located in the northern part of Konkan, Palghar district is spread between the Sahyadri mountain range in the east and the Arabian Sea coast in the west. To the south of the district are Mumbai, Thane and to the north are Valsad (Gujarat) and Dadra and Nagar Haveli. The total population of Palghar district is 29,95,428. Palghar district has a total of 8 talukas including Jawhar, Mokhada, Talasari, Vasai, Vikramgad,

Palghar, Dahanu and Wada talukas. 112 km to the district, it has a beach. Historical forts of Vasai, Arnala, Tarapur, Kelwa, Shirgaon, Kaldurg, Kamandurg, Gambhirgad are located in this district. Jivdani Mandir and Mahalakshmi Mandir are the spiritual glory of this district.

Palghar district has a tribal population. Warli painting and Tarpa dance are the cultural identity of this district. Chikus of Gholwad in Dahanu taluk are famous. The district headquarters is at Palghar taluka and are connected to other talukas by roads and railways. Dahanu and Vasai talukas are connected by both roads and railways to the district headquarters.

Palghar Manor Wada state highway road no 34 is connected with Wada Vikramgad Jawhar talukas. About 20 km from the district headquarter on National Highway-8 (NH Ahamadabad Mumbai) being the way Dahanu and Talasari are connected Blocks to State Highway road.

Overall road sustainable road transport may be the catalyst essential to the realization of objectives.

9. Research Methodology

9.1 Sources and Methods of Data Collection

For the present study, the researcher has considered the pros and cons of sources and methods of data collection. The researcher has used both, Primary and secondary methods of data collection.

9.1.1 Collection of primary data

1. **Questionnaire:** The researcher had collected first-hand information through drafting appropriate questionnaires. As part of qualitative research techniques in-depth interview was used in form of schedule. The simple random sampling method was used to collect these primary data.
2. **Observations:** while conducting a survey, the researcher also used to observe the reactions of all classes of respondents and their daily routine and their problems and challenges they faced.
3. **Unstructured Interview:** the researcher used to discuss some extra issues with the respondents to arrive at the root cause of the problem.

9.1.2 Collection of Secondary Sources

Secondary refers to data that has been collected by someone other than the user. Secondary data is the data that have been already collected by and readily available from other sources. Such data is more quickly obtainable than the primary data. For the present study the researcher has referred,

1. Books on Transportation and Rural Road Transport.
2. Research articles on the transportation topics.
3. Visit to libraries
4. District Collector Office, Zilla Parishad, Panchayat Samiti, Gram Panchayat selected villages, Regional Transport Office, Public Works Department, Maharashtra State Road Transportation Corporation, Regional Transport Office
5. Information from Internet

For the present study, the researcher has also considered the pros and cons of sources through studies and have used Integrated Rural Accessibility Planning (IRAP) methods.

9.2 Scope of area

1. Administratively, Palghar district is divided into seven talukas which are grouped into four sub-divisions
2. It is not possible to cover entire and every village of Palghar District due to time constraint
3. However, the research area is restricted to two taluka place that connects each other and District
4. The research area is further restricted to two village that connects each other and Taluka Palghar.

10. Limitations of the Study

1. The research area is restricted to two taluka place that connects each other and District followed by study of two villages connecting each other and Taluka
2. It is not possible to cover entire and every village of Palghar District due to time constraint.

11. Conclusion

The project gives idea for sustainable road connectivity for improvement of socio-economic development of rural area in Palghar district by providing access to a wide variety of goods, services and information in order to live a productive economic and social life and improve the mobility of individuals

and the goods and services they need with faster, safer, cheaper, more reliable and more comfortable travel of people and less spoilage of products.

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Emerging Trend in Digital Payment and Its Impact

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DOI- 10.5281/zenodo.7740319

Abstract:

This research project about the emerging trend in digital payment and its impact. This research project also tries to understand if there are any specific variables that persuade people to opt for digital payment system. The project needs to survey a group of people from various age group to either approve or disprove of the stated hypotheses and give appropriate suggestions based on the findings thus obtained. It covers numerous variables like safety, convenience, incentives offered, financial literacy, internet connection among other factors. It has also tried to list the importance of having a cashless payment widely implemented. An attempt has been made in this research project to enumerate the advantages and disadvantages of digital payment system. While researching for this project, I came across numerous initiatives taken by the Government to further motivate people to make the transition to cashless payment systems.

The push towards having a predominantly cashless economy has certainly not been easy. The challenges encountered have been itemized in this project as well. All of the primary data collected with the help of a questionnaire has been tabulated. Percentage analysis and rank analysis has been conducted to become aware of which factor contributes the most and which variable has the least impact on an individual's decision on whether a cashless economy has positively or negatively affected them. Lastly, this lengthy research project aspires to come up with recommendations as to what can be done by the concerned authorities to make certain that more people choose to start using cashless payment systems in their day-to-day life.

Key Words: Financial Literacy, Cashless Payment, Cashless Economy

Introduction:

Money has been existing in some way, some shape or in some form has been in existence since 3000 years ago. Before that many historians have agreed that Barter System was in existence. But he needs for the currency arose as the barter system had several issues namely impossibility of subdivision of goods, lack of a standard unit of account, double coincidence of wants, etc. If we go through the evolution of human history initially it is observed that the humans did not have many needs. But gradually when the development happened the need increased the Chinese transitioned from using actual working objects such as tools, weapons as a medium of exchange. Yet, certain parts of Europe were using metal coins as their sole form of currency right up until the 16th century and later the banks slowly started using paper bank notes for depositors and borrowers to carry around instead of metal coins.

In India, our Honourable Prime Minister, Mr. Narendra Modi launched the Programme "Digital India" on 1 July 2015, with a vision to transform India into a digitally empowered nation and to create a cashless, paperless economy. On 8 November, 2016 the Government of India brought about a major change in our economic environment by demonetizing the high value currency notes of Rs 500 and Rs 1000 and pushed India towards a cashless time to come. Demonization is a term that delineates the situation when a currency note of a specific denomination ceases to be a legal tender and is no longer accepted in the market in exchange for any goods or services. In simpler words, it means that a specific note or coin is no longer accepted as a valid or legal means of payment. Demonetization was the efforts taken by the government to remove black money from the economy. The best way to deal with the black money was to create a cashless and paperless economy.

Literature Review:

Review of Literature paves a way for a proper understanding of the areas of research already taken up and throws a light on the potential areas which are yet to be covered. Keeping this in mind, an attempt has been made to make a brief survey of the work undertaken on the field of cashless economy. The reviews of some of the important research papers are presented below:

I. Preeti Garg & Manvi Panchal (2017):

Examined that most people have a positive opinion about the concept of a digital payment system. They, similar to the government believe that cashless payments help in combating various crimes like terrorism, corruption, money laundering etc. However, there arises the issue of theft of valuable data and cybercrime. Hence it is of utmost importance that steps be taken to ensure safety of valuable and sensitive data. The government can encourage the use of digital payment systems by increasing transparency, ensuring financial literacy and withdrawing any and all service charges on cards and digital transactions carried out. The Reserve Bank of India can also take steps to ensure that people find it feasible to shift to digital payment modes by promoting mobile wallets, licensing payment banks, etc.

II. Dr. Anthonima K. Robin (2018):

Focused on cashless transaction having a long-term impact on the lives of the people. However just as there are two sides of a coin, there are positive and negative impact of the scenario generated after demonetization. With the increasing usage of cashless payments means people tend to feel save as they are can refrain from carrying a wallet full of physical notes along with us, which is not safe in amidst all of the anti-social happenings that occur around us. People choose to use their mobile phones as the most effective method of payment. Mobiles have started serving as an important instrument for all kinds of transactions these days. In addition to this, some other crimes such as burglary, extortion, bank robbery, etc. can also decline. One of the most significant motives to implement cashless transaction is to curb all the illegal happenings and all activities related to terrorism.

III. NC (2016): Observed that India is a high cash-usage economy and believes that demonetization was the most ambitious step to curb the menace of black money and fake currency and to move India towards increasing the number of cashless transactions carried out. Stated that during demonetization the number of online transactions has been increasing through card payments. Unfortunately for small merchants, card payments were expensive and in that set-up the e-wallets were useful. It also provided a picture of the future of mobile wallets by mentioning that India is one of the fastest-growing markets for smartphones in the world. In addition to this, the e-wallets apps are more attractive for consumers as these apps are free and can also offer discounts on products through cash back facilities.

IV. Suri (2016): Concluded that there is an association between black money, counterfeit currencies, crime and terrorism. Provided few estimations on black money as a percentage of GDP, and also discussed the money circulation in Rs. 500 and Rs. 1000 denomination notes in the pre and post demonetization phases. The paper made a mention of a few policies implemented by the government to curb the menace of black money and listed a few merits of demonetization. Some of these pros include removing all the illegal cash, no longer fuel price rise, ceasing of counterfeit currency notes, improving the profitability position of banks by maintaining control Non-Performing Assets, control over the unnecessary price rise of real estate, etc. The study considered demonetization as a first step towards cashless economy because after this move many new methods are being used by the people excluding cash like Unified Payments Interface (UPI), Digital Wallets, Plastic Cards, ATMs, Aadhar Enabled Payment Systems (AEPS) and Unstructured Supplementary Service Data (USSD)

The Impact Of Cashless Economy On Various Sectors

- 1. Businesses:** The cashless payment systems have had the following effect on Indian businesses: Merits: 1) Businesses are legally strong. 2) Their audit can be

done properly with no secret excess tax liability. 3) All cash handling costs can be eliminated including the labour or cost it requires to safely deliver cash to the bank. 4) Having a cashless payment system considerably reduces the risk of money getting robbed. 5) At times, it helps businesses when customers end up impulsively buying or adding purchases that they might normally think twice about when paying with cash. This means increased sales for the businessman.

Demerits:

- 1) Accepting only cashless payments might end up alienating customers. Customers who prefer to make cash payments only may choose to purchase from a competitor who accepts cash payments.
- 2) Usually, a certain percentage of the sale plus a flat fee is levied when accepting credit card payments. Multiple daily transactions will result in those fees really adding up and proving to be a burden on some businessmen.

2. Education:

The impact of cashless transactions on the education sector is most likely to be very insignificant. However, the effect of cashless payments on education has been stated below: ✓ The decision taken by the Government of India to withdraw high-value bank notes namely the Rs500 and Rs1000 notes to minimize the cash that goes unaccounted for will hurt educational institutions that accept hefty donations for giving out admissions. ✓ Private institutions in particular are said to take huge sums of money as donations in exchange for a seat in their esteemed university. ✓ This is especially a given in medical and engineering colleges where students have to pay a donation that often exceeds their fee amount in exchange for a seat that is quite difficult to obtain considering the amount of students that apply for that course every year. ✓ Demonetization ensured that all black money and under-the-table transactions are curbed. This in turn affects the ability of a university to ask for a donation which proves to be a demerit for 52 them. However, for intelligent students from poor family

backgrounds that deserve a seat will find this move to be a boon for them. 3.

3. Economy:

The cashless payment systems have had the below effect on the Indian economy: 1) The cost of printing money has considerably decreased. Data from a Right to Information answer by the RBI in 2012 shows that it costs Rs. 2.50 to print each Rs.500 note, and Rs. 3.17 to print a Rs.1,000 note. 2) Other than the cost incurred for printing the note, the RBI and the Government of India also has to undergo additional expenditure to store the notes correctly and transport the notes to ensure citizens in all nooks and corners of our country get the notes. They also need to invest in devices that can detect counterfeit currency. All of these expenses can be curbed by switching to a cashless payment system. 3) It is a well-known fact that illegal activities are mostly dealt with in cash as it is very easy to go undetected and very problematic to trace back to where it originated from. If cashless payments are enforced, all transactions will be trackable since all payments are visible. This helps the economy stay safe as illegal activities like terrorism, armed robberies, money laundering etc will reduce. 4) A cashless economy aims at reducing the cost of the commodities by setting aside the black market and the proper deposit of the tax. All this leads to the development of the system where one can find the cost of the commodity going down in the market. A developed economy like China is the best example for this.

4. Information Technology:

The repercussions of a cashless economy on the Information Technology sector are indexed below: 1) With the help of information technology, cashless payments have become easier to transact. 2) The advancements in the IT sector like biometrics help to carry out secure payments.

5. Society:

The effect of cashless payments on society in general is stated below: 1) The presence of a cashless economy ensures that there is a

reduction in the black money in circulation in society. 2) Reduction in black money makes the levels of organized crime fall. Crime like terrorism, money laundering, counterfeiting, corruption, terrorist financing etc that relies on anonymity and secrecy will automatically reduce. This is because a cashless payment system ensures that all the money is visible and huge amounts of money will not be able to be transferred to shady accounts without raising some suspicion. 3) Concealing income is inherently tougher and thus people will have to pay the appropriate amount of tax. 4) Citizens paying the correct tax results in the government having the ability to use the funds available for infrastructure, schemes etc. Basically, these funds can be utilized for the overall betterment of society.

Scope and Limitations Of Study Scope of Study

Post demonetization carried out by the Government in 2016, a number of people preferred cashless payments. The reason being that cash denominations were overnight not considered to be legal tender. People felt like it was safer to opt for digital payment systems and reduce the risk of having to stand in long queues to deposit demonetized notes again. This led to the introduction as well as the frequent usage of digital payment systems. This is because people did not wish to carry around cash for their day-to-day transactions anymore especially when there was a more feasible alternative available. These cashless payment systems became rather widespread and gained traction because these systems ensured that the transactions carried out were faster, more accurate and more transparent. However, not everyone has

made this switch to digital payment systems. Despite the numerous incentives offered by not only the Government but also by various digital payment companies, a small minority of people still seem to be sceptical due to a number of reasons. This research study intends to discover the reasons behind why, people from various age groups prefer making a cashless transaction over a physical cash payment or vice versa.

Limitations of Study

The limitations faced in this study are:

- 1) Due to time constraint, the sample size is limited and hence is not the true representation of the entire population.
- 2) As the study was conducted on students only, the findings and conclusions obtained cannot be generalized for overall populations' awareness level about the cashless economy.

Research Methodology

Research methodology is a way to methodically solve the research problem. Research undertaken in the study is descriptive. For primary data, a questionnaire was handed out online to 37 people living in Mumbai and nearby area.

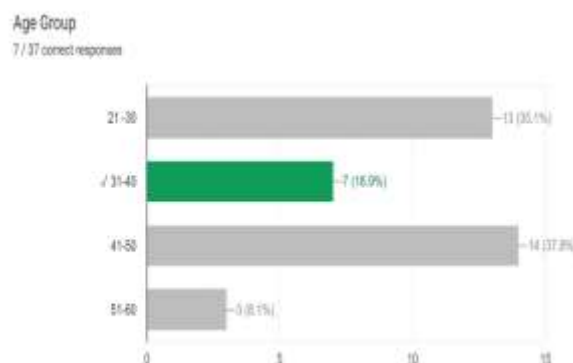
Collection of Data

The data for this research was collected using a questionnaire, online articles etc.

Data Analysis, Interpretation And Presentation

Emerging trend in digital payment and its impact:

Out of total 37 responses of 13 responses were from the age group of 21-30 years. 7 responses were from the age group of 31-40 years. 14 responses from the age group of 41-50 years and 3 responses were from the age group of 51-60 years.



Out of the total respondents 92% use digital payment systems like UPI, mobile wallets, internet banking etc. Only a mere 8% (4) of students surveyed did not use digital payment systems. This survey wishes to ask responders if having a cashless payment

system has affected them. Thus, it was essential that students who responded actually made cashless payments. This would in turn enable them to have either a positive or negative opinion about the same

1. Do you use digital payment systems like UPI, mobile wallet, internet banking etc?

3 / 37 correct responses

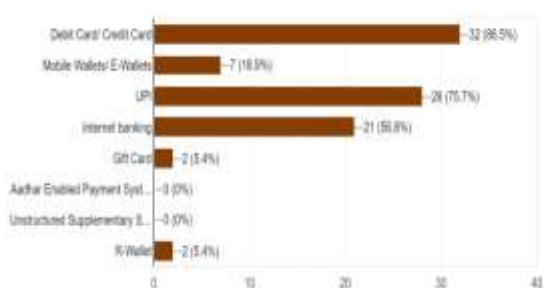


Further 86.5% use a debit card or credit card, 7 use mobile wallets or e-wallets, 28 use

Unified Payments Interface, 21 use Internet Banking 2 use gift cards, 2 use the R-Wallet

2. Which digital payment systems do you use? (Tick all applicable)

37 responses

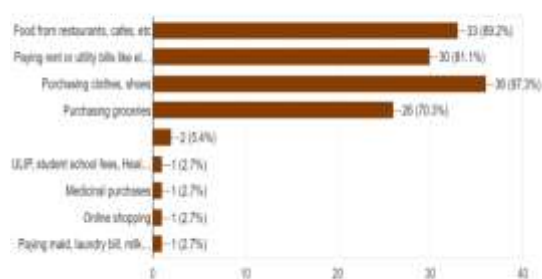


Out of the people surveyed, 33 use digital payment systems to order food from restaurants, cafes etc. 30 pay rent or utility bills like electricity, gas, etc digitally. 36 students purchase clothes, shoes, etc and pay

using online payment systems. 26 students surveyed purchase groceries and pay online. 1% (1) pay their fees digitally and 1% (1) pay for their over-the-top (OTT) subscriptions online

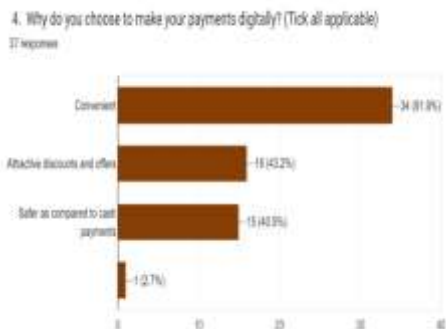
3. What payments do you make digitally/online? (Tick all applicable)

37 responses



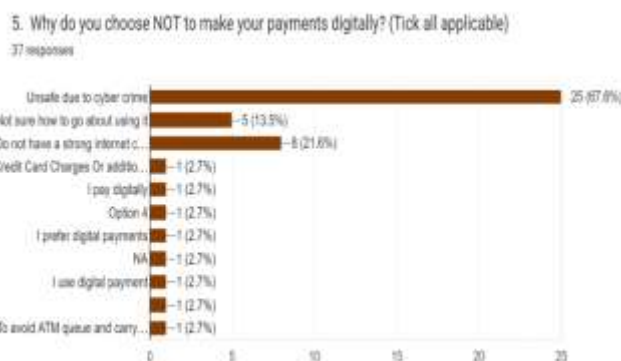
34 people choose to make their payments online as it is convenient. 58.6% (58) choose online payment systems as they receive attractive discounts and offers. 28.3% (28)

students choose digital payment systems over cash as they feel like it is safer as compared to cash payments.



25 people do not make digital payment systems as they think it is unsafe due to cybercrime. 5 do not know how to go about

making their payments digitally. 8 do not make online payments as they do not have a strong internet connection.

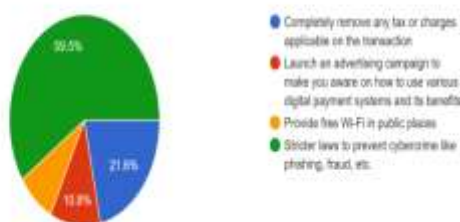


21.6% think that they will increase the number of cashless transactions carried on by them if any taxes or charges applicable on the online transaction are completely removed. 10.8% believe that an advertising campaign should be launched to make them aware of the various modes of digital payment systems. 45.5% (46) students

surveyed will consider increasing the quantity of online payments made by them if free Wi-Fi is provided in public places. 86.1% (87) students feel stricter laws should be implemented to prevent cybercrime like phishing, fraud, etc. 1% (1) feel like people should be made aware on how to transact digitally.

6. What do you think can be done by the relevant authorities to increase the number of cashless payments you make?

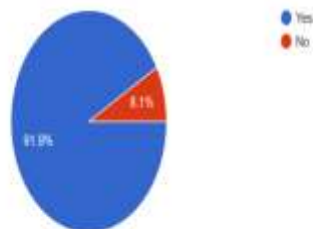
37 responses



91.9% respondents feel that cashless economy will have the positive effect on them

while remaining 8.1% feel that cashless economy will have the negative impact

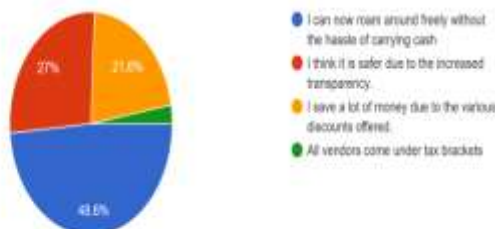
7. Do you think that having a cashless economy has positively affected you?
37 responses



The reason why the cashless economy will have the positive impact on the respondents. 48.6% respondents feel that they can roam around freely without the hassle of carrying

cash 37% of the respondents feel that it leads to increased transparency. 21.6% of the population feels that it helps save the money due to various discount offered

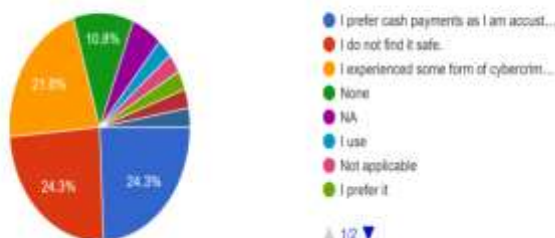
8. If yes, what are the reasons for this?
37 responses



Out of the remaining 8.1% respondents who feel that cashless payment will have the negative impact is because 34.3% of the respondents still prefer the Cash mode of the

payment, whereas 24.3% felt that it is not safe mode of the payment 21.6% have experienced some form of cybercrime.

9. If no, what are the reasons for this?
37 responses



Conclusions And Recommendations Based on the research conducted throughout this research project, an appropriate conclusion **Conclusions** A complete cashless society seems to be many years away. But a major

has been made. A few suggestions have also been made to assist in increasing the number of cashless transactions FinTech advancement could very well shorten this period. With the introduction of

cutting-edge technology and constant improvement of existing technologies, we might see faster, more transparent and more secure cashless payments than ever. But only time will tell when we will truly become a cashless society. From the data collected it can be concluded that although demonetisation and the push towards having a cashless economy received its fair share of criticism, the population surveyed in this research project seem to be mostly in agreement with this initiative taken up by the Indian Government. Despite the fact that people have begun using digital payment systems for their transactions, it will take a while for the number of people making online payments to steadily increase. The younger generation is usually receptive to change and have seemed to effortlessly make the switch to cashless payments. However, with more incentives the government can ensure that more and more youth increase the cashless transactions they make. These incentives include lowering or removing entirely the taxes levied on cashless payments, making stricter laws to prevent cybercrime, etc.

Recommendations

From the primary data collected in this research project, a few recommendations have been made to increase the number of transactions carried on using digital payment systems by college-going students.

They are as follows:

1. The government can completely abolish any tax or charges applicable on an online transaction. This will incentivize people to make their payments digitally. Instead, charges can be imposed on cash transactions above a specified slab.
2. Since there are still a few students who do not fully understand how to use digital payment systems, steps can be taken to launch a campaign to make students aware about the various payment systems, their advantages and disadvantages if any and steps detailing how to proceed using that online payment system. This will help students make an informed decision if they want to make their payments online or not and also make them feel more confident when using digital payment systems.
3. Free Wi-Fi can be provided in public places so that people can make more of their payments online. At this moment, a lot of students do not have an internet connection or data pack and hence this hinders them from transacting digitally. With free Wi-Fi they will be able to increase the number of online transactions they make.
4. The attractive discounts offered should be continued as they push people in the direction of making more payments using digital payment systems.
5. Stricter laws should be put into place to ensure safety of online transactions. This will make students feel safer and more likely to use digital payment systems.
6. To change the perception of people towards cashless payment systems, the ideal thing to do would be slowly but steadily make people adopt cashless payments. Awareness could also be spread to eventually change the habits and attitude of people and hopefully end up successfully shifting their preference.



Study on Consumer attitude towards Millet Products in Mumbai Region.

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DOI- 10.5281/zenodo.7740341

Abstract :

The General Assembly of the United Nations has proclaimed 2023 as the International Year of Millets. India and other countries proposed making this statement in order to honour the cultural and nutritional value of millets, and it was officially adopted on December 7th, 2018.

Millet refers to several species of small-seeded grasses that are cultivated as cereal crops for human and animal use. Due to their high nutrient density and abundance of essential nutrients like vitamins, minerals, fibre, and protein, they are an essential part of any balanced diet. Millets are significant for both food security and sustainable agriculture since they can be cultivated in marginal sites and are resistant to drought.

The purpose of this research paper is to look into consumer attitudes towards millet products in the Mumbai area. Secondary Data and opinion revealing conversations with many individuals interested in the subject were conducted. As well as, random sample of 50 consumers was chosen from various areas of Mumbai, and a self-administered survey questionnaire was used to collect data on demographics, millet knowledge, attitudes towards millet products, and purchasing behaviour. The collected data was analysed and interpreted using descriptive and inferential statistics. The literature review shed light on the health benefits and barriers to millet product consumption. The findings of this study will provide a better understanding of consumer attitudes towards millet products in the Mumbai region and can be used to develop strategies to promote millet-based product consumption.

Key Words :

1. **Consumer Attitude** : Based on their views, values, and experiences, consumers form an overall opinion of a product, service, or brand. It encompasses a person's affective (emotional) and cognitive (intellectual) perceptions and might impact their behaviour, such as whether to buy a product or service. Personal experiences, social norms, marketing, and cultural values impact consumer attitudes. Businesses and marketers must understand consumer attitudes to create effective marketing strategies and better understand target audience preferences and demands.
2. **Millet Products** : Millet is a sort of cereal grain that's grown and eaten all over the world. Millet goods are foods derived from millet. Millet is a gluten-free grain that is incredibly nutrient-dense. It's rich in fibre, protein, vitamins, and minerals. Millet is used to make a wide variety of foods and drinks, from porridge to bread to pasta to snacks and even alcoholic beverages. Nutritional value, health benefits, and the possibility of addressing food security and sustainability challenges have all contributed to a recent uptick in interest in millet products. Products made from millet are eaten in many forms and are being included in contemporary, healthier diets all around the world.

Introduction :

Millet is a form of cereal grain that has been cultivated and used for food in many different regions of the world for many

decades, if not centuries. In many rural parts of India, millet has long been regarded as a staple food; yet, in more recent years, it has seen a surge in popularity as a "superfood"

due to the great nutritional content it offers. Because it does not contain gluten, is rich in fibre, and has a low glycemic index, millet is an excellent choice for diabetics and those who suffer from various types of chronic conditions. In spite of the fact that it is beneficial to one's health, the consumption of items made from millet is still relatively low in urban regions such as Mumbai.

The purpose of this research paper is to investigate the opinions held by consumers in the Mumbai area on the use of millet-based goods. Understanding the attitude of consumers is essential for designing marketing strategies that are successful because it is one of the most critical factors that determines their purchase behaviour. The following research questions will be addressed throughout the course of this paper:

What percentage of people in Mumbai are familiar with millet products and where they may buy them? What kind of feelings do people in Mumbai have for the items that are made from millet?

What are the factors that influence the buying decisions of customers in Mumbai with regard to millet products, and what are those factors? In order to get answers to these study questions, in addition to secondary data readings, a preliminary questionnaire for a survey was developed, and it was distributed to a sample population of 50 customers living in various parts of Mumbai. The questionnaire for the survey had questions about demographics, as well as knowledge about millet, sentiments towards millet goods, and purchasing behaviour. Following the collection of the data, basic descriptive statistics was applied to evaluate it, and then the results were interpreted.

This study article includes a literature analysis that sheds light on the health advantages of millet products, as well as barriers to the consumption of millet-based products and past research that has been undertaken in this field. The findings of this research report will aid in understanding the consumer attitude towards millet products in the Mumbai region, and they may be utilised to build successful marketing strategies to boost the consumption of millet-based

products. The research was conducted in Mumbai.

Review of Literature:

A study conducted in India by Manikanta et al. (2020) indicated that consumer purchase behaviour was substantially related to their understanding of the health advantages of millet products. Consumers were more willing to purchase millet goods that were labelled as gluten-free and high in fibre, according to this study. According to a study by Zha et al. (2019), the glycemic index of millet-based products is lower than that of wheat-based products. Research indicates that millet products can help regulate blood sugar levels, making them a good choice for diabetics.

According to a study by Khattak et al. (2020), consuming millet can lessen the risk of chronic diseases like cardiovascular disease and cancer. This study indicated that millet contains significant antioxidant and anti-inflammatory capabilities, which can help minimise the chance of developing chronic diseases. According to a study by Kaur et al. (2020), the sensory characteristics of millet goods, such as flavour, texture, and scent, have a substantial impact on consumer approval. The study advises that manufacturers should concentrate on enhancing the sensory characteristics of millet products in order to boost consumer acceptance.

According to a study by Sahyogita et al. (2018), Indian consumers have a favourable attitude towards millet goods, but the scarcity of millet-based items on the market is a significant obstacle to their use. According to the study, boosting the availability of millet-based products on the market could enhance its use.

A study by Dora et al. (2019) discovered that customers in India believe millet is a diet for the poor and is unfit for the higher class. This notion has affected the demand for items containing millet. The study advises that efforts should be made to alter this impression by highlighting millet's health benefits. According to a study by Kaur and Singh (2020), the price of millet-based products was a crucial factor that influenced consumer purchasing behaviour. In order to

improve its demand, the study advises that millet-based products should be priced competitively with other staple foods. *Anjali et al. (2018)* discovered that the nutritional profile of millet products had a substantial effect on consumer approval. This study shows that manufacturers should prioritise enhancing the nutritional profile of millet products in order to boost consumer appeal.

According to a study by *Abhilash and Shashikumar (2020)*, Indian consumers have a favourable view of millet products; nonetheless, a lack of knowledge about millet's health benefits is a significant obstacle to its usage. The study proposes that initiatives should be conducted to raise awareness of the health benefits of millet. According to a study by *Shete et al. (2019)*, Indian consumers prefer traditional millet-based foods such as roti, bhakri, and porridge. The research advises that manufacturers should promote traditional millet-based products in order to enhance demand.

Summary of Literature Reviews :

The literature review on Mumbai millet consumer sentiments yields several intriguing findings. First, millet products are popular because they are gluten-free, nutritious, and can tackle food insecurity and environmental issues. Second, several studies have shown barriers to millet consumption. Lack of marketing, poor taste, and awareness are these causes.

Finally, a positive viewpoint on health is connected to a larger willingness to spend for millet products, according to studies. According to research, millet can be combined with other grains or flavoured. Finally, age, income, and education significantly affect millet product consumption. The literature review illuminates the pros, cons, and potential marketing strategies for millet-based products in Mumbai, which are vital to public health. This research can improve healthy eating advertisements.

Research Gap :

Although a number of studies have looked into the consumption of millet goods in India, there is a limited understanding of the consumer attitude towards millet products

specifically in the Mumbai region. This is due to the fact that there have only been a few of these studies conducted. The vast majority of research have concentrated on rural areas, and they have not effectively addressed the perception of millet goods held by the urban population. In addition to this, there is a pressing need in the Mumbai region to investigate the elements that influence the customer behaviour with regard to millet-based products. There is a gap in the research that has been done on the level of awareness, attitudes, and factors that influence purchase behaviour towards millet goods in the urban population of Mumbai. Specifically, this research has been done in Mumbai. This research paper seeks to address this gap by examining the consumer attitude towards millet products in the Mumbai region. The results of this investigation, which will provide useful insights into developing effective marketing strategies to promote millet consumption.

Research Methodology :

Introduction

The objective of this study is to understand the consumer attitude towards millet products in the Mumbai region. To achieve this objective, two fold strategy was used

- 1) Major thrust was on Secondary Data. From various sources, information about the types of Millet grown in India and it's usage in day to day life was analysed. Research Papers, Study Articles, Newspaper reports etc were primarily used to understand the consumer attitude towards millet products.
- 2) In addition to Secondary data Analysis, the researchers had conversation/ interview with many individuals having an interest in the subject of Millet. Kind of focused interview and open ended discussion helped researchers to understand the awareness, inclination to alternative food practices and attitudes.
- 3) Researchers also prepared Survey questionnaire, which was used to gather data from a sample of 50 consumers in Mumbai. The questionnaire was preliminary and with an objective to gather data, which would enable

researchers to know the basic demographics and descriptive analysis.

Sample Selection

The sample of 50 consumers was selected randomly from different areas of Mumbai. The sample was selected to be representative of the population in terms of demographics such as age, gender, education, and income.

Data Collection

Data was collected using a self-administered survey questionnaire. The questionnaire was designed to gather information on demographics, knowledge of millet, attitudes towards millet products, and purchasing behavior. The questionnaire was designed to be simple and easy to understand, and was tested for reliability and validity prior to the study.

Data Analysis

Majorly Secondary Data was referred to understand the awareness, palate habits, inclination and understanding about Millet products. Opinion fetching interactions and open ended discussion with individuals from diverse demographics helped to get the actual level of understanding of the people of Mumbai. The collected data was analyzed using descriptive statistics such as frequency distributions, percentages.

Ethical Considerations

The participants were informed of the purpose of the study and their rights as participants. Confidentiality was maintained throughout the study, and the participants were given the option to withdraw from the study at any time.

Conclusion:

Analysis and inferences drawn from readings, observations of Secondary Data plus the survey questionnaire was a suitable method for gathering data for this study, as it allowed for the collection of a specific amount of data in a short amount of time. The sample was selected to be representative of the population, and the data was analyzed using appropriate statistical methods. The ethical considerations were taken into account to ensure that the participants were treated fairly and their rights were protected.

Interpretation, Finding and Conclusions :

The goal of this study was to find out how people in the Mumbai area feel about millet products. Only descriptive statistics were used to analyse the 50 people who filled out the survey. These are the results of the study:

Awareness of millet products and how many people use them: The study found that only a small number of people were aware of millet products, and even fewer had used them. Most of the people who answered the survey had never heard of products made from millet, which shows that not many people know about them.

Perception of health benefits: People who knew about millet products thought they were good for their health. People thought that millet products were better for them than other cereals, so they were willing to pay more for them.

A big reason why people don't eat millet products is that they don't like the way they taste. Most of the people who had tried millet products said they didn't like them and found it hard to add them to their regular diet.

Marketing and availability: The study found that the lack of marketing and availability of millet products made it hard for people to buy them. Most of the people who answered had never seen millet products in stores or supermarkets near them.

Based on the results, we can say that consumers in the Mumbai area don't know much about millet products and don't use them much. Taste preference is also a big reason why they don't use them more. Also, there aren't enough millet products available and selling them. These results show that more marketing needs to be done to spread the word about the health benefits of millet products and to make them taste better and be easier to find. The study says that businesses and policymakers in the Mumbai area should take steps to deal with these problems and encourage the use of millet-based products.

Recommendations :

Based on the study's findings and conclusions about how people in the Mumbai area feel

about millet products, the following suggestions are made:

Increase awareness: Because consumers don't know much about millet products, it is suggested that businesses and policymakers do more to spread the word, such as through ads, product demos, and public campaigns. This will help people learn about how millet products are good for their health.

Taste is a big reason why people don't eat millet products, so businesses and policymakers should work on making millet-based products taste and feel better. This can be done with new ways of processing, by mixing it with other grains, or by adding flavours.

The study found that there aren't many millet products available in the Mumbai area. It is suggested that businesses and policymakers take steps to make millet products more accessible by making them easier to find in local stores, supermarkets, and online marketplaces.

Develop good marketing plans. The study found that the lack of marketing efforts was a big reason why millet-based products didn't catch on. Businesses should come up with good marketing plans that focus on the health-conscious part of the population and highlight the nutritional benefits of millet products.

Give subsidies and incentives: By giving subsidies and incentives, policymakers can encourage farmers to grow millets. This could make there be more millets on the market and make them cheaper for people to buy. Overall, the study suggests that businesses and policymakers work together to make consumers more aware of millet products, improve their taste and availability, and come up with good marketing plans to get people in the Mumbai area to buy them. These steps can help more people use products made from millet, making the food system in the area healthier and more sustainable.

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11. Paper Contributed by :



A study of people using rooftop solar panels in Vasai West

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DOI- 10.5281/zenodo.7740347

Abstract

This study examines the attitudes and behaviors of 25 households of only middle-class salaried people in Vasai using rooftop solar panels in an on-grid system. The research employed a Likert scale to measure respondents' opinions about the effectiveness of their solar panel system, financial benefits, and overall satisfaction. The findings suggest that the majority of respondents are satisfied with their solar panel system and feel that it is financially beneficial. However, the study also revealed some concerns related to the initial cost of installation and maintenance. Overall, this research provides insights into the perceptions and experiences of households using rooftop solar panels in an on-grid system, which may inform policy and decision-making related to renewable energy adoption.

Introduction

Solar panels on rooftops are becoming a very popular and practical solution for producing electricity and cost-effective way. With the advancement of technology and decreasing prices, many households are turning to solar power. The Vasai West area is located in the northern part of Mumbai, India. The area is known for its scenic beauty and well-connected transportation system. Local electricity bills in Vasai West are becoming a cause of concern for many households and businesses due to the increasing electricity demand. The area has been slowly shifting to solar energy on rooftops in hybrid mode to reduce people's reliance on the traditional grid and lower their electricity bills in recent years. In the hybrid mode, a household or business uses both solar power and traditional grid power to meet its energy demands. This shift towards solar energy is due to the high cost of electricity bills and the awareness of the benefits of renewable energy. This study aims to see the factors that encourage people in Vasai West to adopt solar energy, the challenges faced by them, and the economic impacts. This study hopes to shed light on the potential of rooftop solar in reducing energy costs and contributing to a sustainable future.

Solar panels are devices that convert solar energy from the sun into electrical energy that can be used in homes. Solar panels are made up of photovoltaic (PV) cells, which are

responsible for converting sunlight energy into electricity. These cells are made up of silicon, which is a semiconductor material that absorbs photons from the sun and releases electrons.

The process of how solar panels work is quite simple. When the sunlight falls on a solar panel, it excites the electrons in the PV cells, causing them to break free from their atomic bonds and flow through the cell to create an electrical current. This current is then sent to an inverter, which converts it into the type of electricity that can be used in homes.

A solar panel system is made up of several components. The first component is the PV cells. These cells are arranged in an array on a frame, which is made of aluminum. The frame is then mounted on a structure, such as a roof or ground-mounted rack, that allows the panels to be angled toward the sun for maximum exposure. The second component is the inverter, which is responsible for converting the DC (direct current) electricity produced by the PV cells into the AC (alternating current) electricity that is used in homes. Inverters used can be either micro-inverters, which are attached to each panel itself, or central inverters, which are located in a central location and are connected to all of the panels in the array. The third component is the electrical panel, which distributes the AC electricity produced by the inverter throughout the home. The electrical

panel is connected to the inverter and allows the electricity to be used by appliances and electronics.

Finally, a solar panel system also includes a battery storage system, which stores the excess electricity produced by the panels for later use. Battery storage systems can be useful for homes that are in the area that experience frequent power outages.

The factors that can affect the efficiency of a solar panel system are, the angle and orientation of the panels, the amount of sunlight received, and the temperature of the cells. Panels that are angled towards the sun and receive a consistent amount of sunlight throughout the day will be more efficient than those which are shaded or receive intermittent sunlight.

Overall, solar panels are a clean, renewable, and sustainable source of energy that can be used to power homes. While the initial cost of installing a solar panel system is high, the long-term savings and environmental benefits make it a worthwhile investment for many homeowners.

Objectives of the Study

1. To find the economic viability of installing solar panels on rooftops and determine the potential cost savings
2. To know the satisfaction level of respondents who are using rooftop solar panels
3. To know the challenge and barriers faced by a household when using solar panels on rooftops

Review of Literature

1. A Brief Study of an Installation of a Rooftop Solar PV System in India Journal of Energy Research and Reviews 3(4):1-6, 2019; Article no. JENRR.52643 ISSN: 2581-8368 Karthik Sivaraman^{1*} and Aniket Rawool¹ concluded that solar panel is one of the best methods of power generation systems to exist in this era.
2. Roof Top Solar Installation: A Case Study March - April 2020 ISSN: 0193-4120 Page No. 15629 - 15633 Sagar Pandey¹, Harpreet Kaur Channi Electrical Engineering Department² Chandigarh University, Gharuan, Mohali, India concluded that Solar energy has the capability to provide all of the energy we need it's a Onetime investment. Once the solar power plant is installed the

maintenance is nil and the life of panels is also 25+ years.

3. Factors Affecting Customer Satisfaction towards Solar Panel Bhavna Bhavna Prajapati International Journal of Marketing & Human Resource Research e-ISSN: 2746-4040 Vol. 3, No. 2 April 2022.ITM University, India is of the opinion that people are satisfied and happy with rooftop solar panel.

Concepts

On-grid solar refers to a type of solar panel system that is connected to the traditional electricity grid. This means that the solar panels generate electricity during the day, and any excess power that is not immediately used by the household is fed back into the grid. Conversely, when the solar panels are not generating electricity (e.g., at night), the household draws power from the grid as usual. In an on-grid solar system, the household can sell any excess power generated back to the grid and earn credits or receive payments from the electricity company

Off-grid solar, on the other hand, refers to a separate solar panel system that is not connected to the traditional electricity grid. The solar panels generate electricity during the day, which is stored in batteries for use during times when the sun is not shining, such as at night. In an off-grid system, the household is fully responsible for meeting its energy needs and is not able to sell any excess power back to the grid.

A net meter or bi-directional meter is an unusual type of meter used in on-grid solar panel systems that measures the flow of electricity in two directions - from the grid to the house and from the house to the grid. When the solar panels generate more electricity than the household needs, the excess electricity is fed back into the grid and the meter measures the amount of electricity being exported. This exported electricity is credited to the household and can be used to offset their electricity bills. The net meter helps keep track of the amount of electricity used and generated, allowing households to manage their energy use more efficiently and save money on their electricity bills.

When choosing a type of solar panel for rooftop installation, it is important to consider factors such as efficiency, cost,

durability, and the specific needs of your house. Some of the solar panels are:

1. **Monocrystalline Solar Panels:** These panels are made from a single crystal of silicon, and are known for their high-efficiency rates, typically between 15-20%. Monocrystalline panels are also sleek and aesthetically pleasing, making them a popular choice for residential installations.
2. **Polycrystalline Solar Panels:** These panels are made from multiple crystals of silicon, and are slightly less efficient than monocrystalline panels, with typical efficiency rates of 13-16%. However, they are also more affordable and widely available, making them a popular choice for both residential and commercial installations.
3. **Thin-Film Solar Panels:** These panels are made from a thin layer of photovoltaic

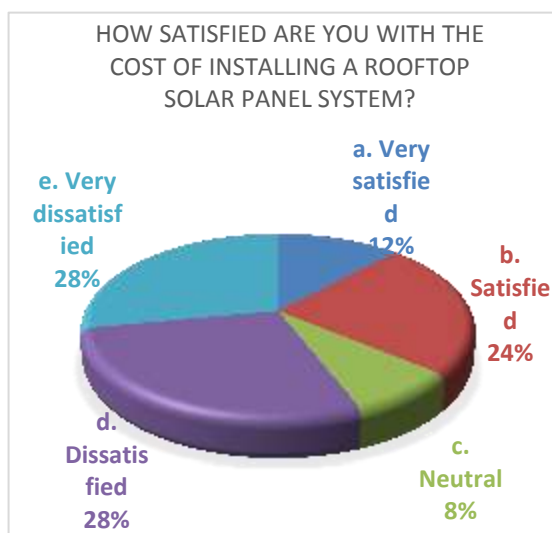
material, such as amorphous silicon or cadmium telluride. Thin-film panels are less efficient than crystalline panels, with efficiency rates typically between 7-13%, but they are also more flexible and lightweight, which can make them easier to install on certain types of roofs.

4. **Bifacial Solar Panels:** These panels have a transparent back sheet that allows light to pass through, which can increase their efficiency by up to 30% when installed on reflective surfaces such as white roofs or snow-covered ground.

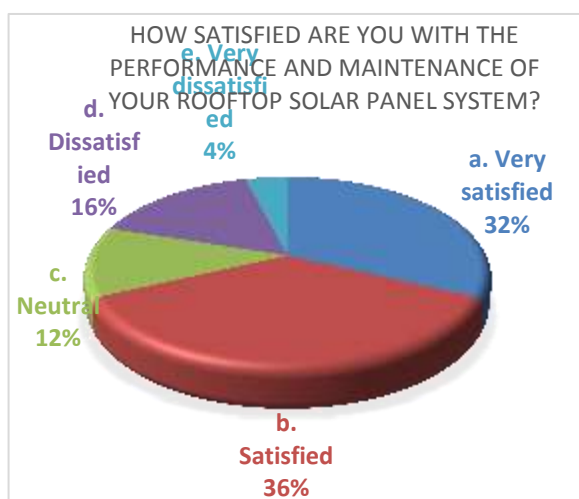
Research Methodology

The study covers primary data of 25 households using rooftop solar panels. A personal interview and questionnaire using a Likert scale is used for data analysis. Five-point Likert scale for measuring the factors ranging from Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree is applied.

Data Analysis

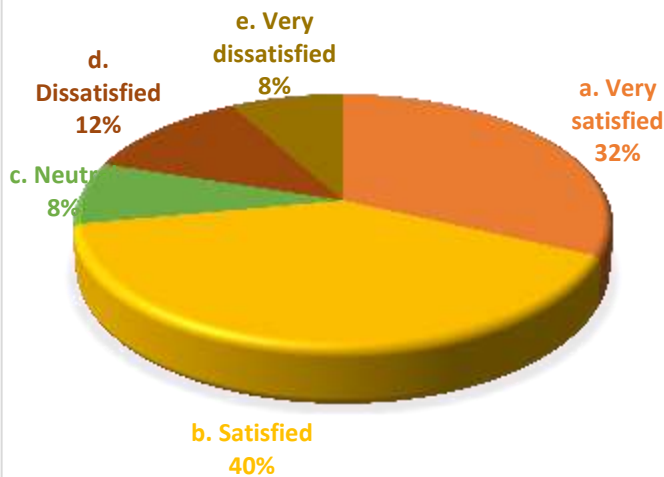


Based on the data provided, it appears that the majority of respondents are not satisfied with



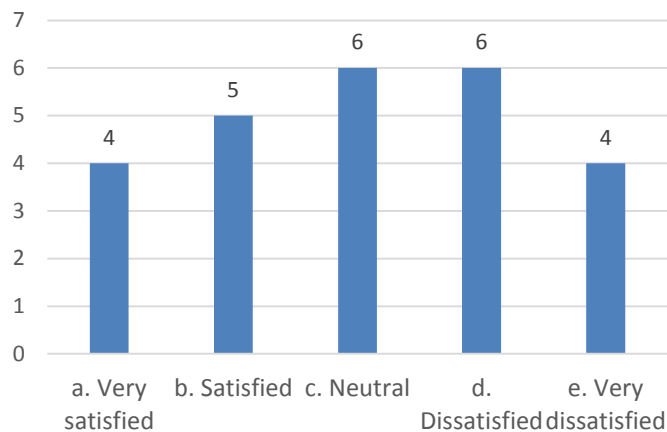
Based on the data provided, it appears that the majority of respondents are satisfied with the performance and maintenance of their rooftop solar panel system.

HOW SATISFIED ARE YOU WITH THE AMOUNT OF MONEY YOU SAVE ON YOUR ELECTRICITY BILL SINCE INSTALLING A ROOFTOP SOLAR PANEL SYSTEM?

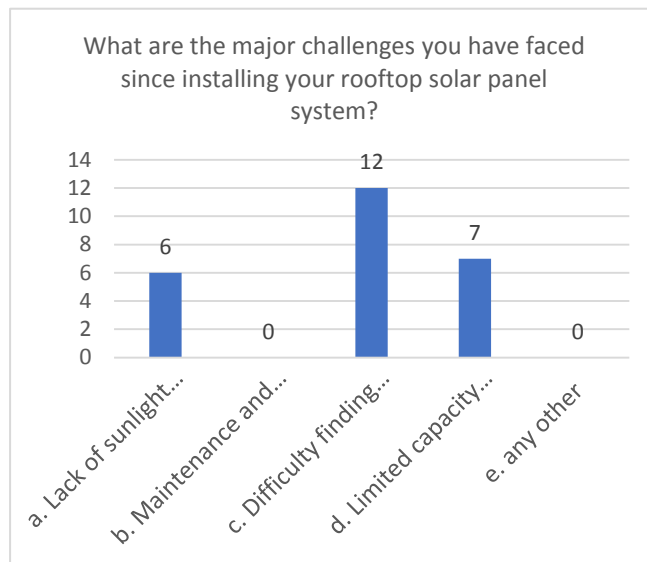


Based on the data provided, it appears that the majority of respondents are satisfied with the amount of money

How satisfied are you with the level of support and guidance provided by your solar panel vendor during the installation and maintenance of your rooftop solar panel system?



Based on the data provided, the level of satisfaction with the level of support and guidance provided by solar panel vendors during the installation and maintenance of rooftop solar panel systems appears to be



Based on the data provided, the major challenge that respondents have faced since installing their rooftop solar panel system is difficulty

Conclusions and Findings:

1. **Cost:** Even though rooftop solar panels are a long-term investment, the initial cost of installation can be a significant burden for people in the middle class. Some households may have chosen lower-quality solar panels or hired inexperienced contractors to save money, which can lead to poor performance and reliability issues in the future.
2. **Performance issues:** Some rooftop solar panels may not perform as well as expected due to factors such as location, weather conditions, and shading. This can result in lower-than-anticipated energy production and cost savings.
3. **Electricity bill issues:** Some people may still receive high electricity bills despite having installed rooftop solar panels, possibly due to inefficient energy use, high energy consumption, or other factors beyond the control of the solar panel system.
4. **Perception of benefits:** While rooftop solar panels can provide a range of benefits, some people may not be fully aware of or appreciate the potential benefits of solar energy, such as reduced carbon footprint and energy independence. This can impact their satisfaction with the solar panel system.
5. The solar power system in actual operation is greatly affected by external factors such as dirt/dust and unusual weather changes
6. The batteries used are not properly maintained or not up to the standards

According to the research on middle-class households using rooftop solar panels, there are mixed feelings. There are some people who are satisfied with solar panels and the benefits they received, while there are others who are not satisfied. The reasons for dissatisfaction can vary from issues with installation, performance, the cost of the panels, and the amount of energy they generate. Despite these mixed feelings, rooftop solar panels remain an important source of energy.

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Tribal Identity, Justice, and Inclusive Growth in India

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DOI- 10.5281/zenodo.7740362

Abstract

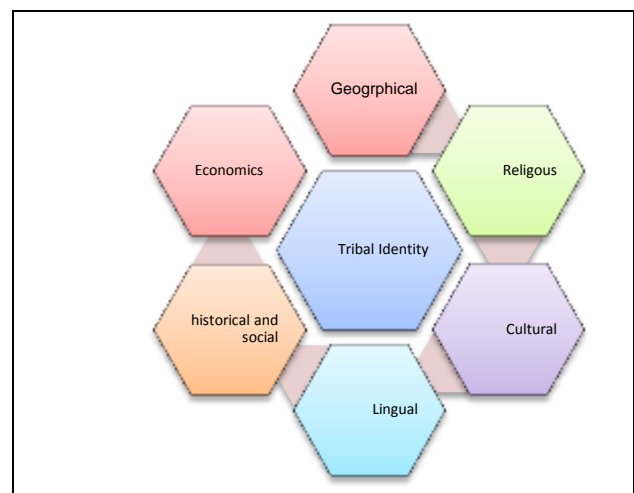
There are more than 645 distinct tribes in India having their unique identity in the form of their cultural, social, economic, and religious characteristics. They are scattered all over India in different states. According to the 2011 Census, there are 10.43 crore Scheduled Tribes in the country or 8.6% of the total population. 2.8% of Scheduled Tribes live in urban settings, which is a pitiful percentage. In the Lok Sabha, 47 seats are set aside for Scheduled Tribes. The first schedule of the Representation of People Act, 1950, as amended by the Representation of People (Amendment) Act, 2008, provides a breakdown by State. Their presentation is there but still the overall development among the tribes is not visible. There are not all-inclusive and suffer from major socio-economic issues and challenges. This paper highlights their identity, justice, and growth-related aspects.

Keywords: STs, Adivasis, inclusive growth, identity

Tribes in India: The characteristics that set Scheduled Tribe communities in our nation apart from other communities include their primitiveness, geographic isolation, shyness, and social, educational, and economic backwardness as a result of these factors. (National Commission). Schedule tribes are classified as "backward tribes" according to the Census of 1931 and are said to reside in "Excluded" and "Partially Excluded" areas. The first time "backward tribes" were requested to have representatives in provincial legislatures was in the Government of India Act of 1935. The States with the highest concentration of Scheduled Tribes include Madhya Pradesh, Maharashtra, Orissa, Rajasthan, Gujarat,

Jharkhand, Chhattisgarh, Andhra Pradesh, West Bengal, and Karnataka. 83.2% of the nation's Scheduled Tribe population resides in these states. 15.3% more Scheduled Tribe people live in Assam, Meghalaya, Nagaland, Jammu & Kashmir, Tripura, Mizoram, Bihar, Manipur, Arunachal Pradesh, and Tamil Nadu. The remaining states' and Uts' part is insignificant.

Tribal identity: It is a group of people having a common ancestry, a common culture, and living in their own enclosed society.



Tribes are always different from others communities. They are centralized in the areas they do reside and do not belong to any religious group actually. They do worship to them and try to induce them by providing access to food and other things. Every tribe has its geographical identity and has always been found there. They have their own cultural traits and system, which they follow very particularly. E.g Varlis and Katkaris in Maharashtra have their own marriage norms. Adivasis have their own history and social perspectives as well. They have their own language and dialects for communication. They do earn by selling forest products in local markets and nearby cities and towns. They are unique and different.

Literature Review

Ajit and Tarnjeet (2020) described the tribal status in India using secondary-based data focusing on their population, employment, and literacy rate. **B Suresh Lal(2019)** studied the literacy, educational, and economic status of the tribes in India. The study was descriptive in nature and highlighted the issues and problems of the tribes in India. **B. Ranganatha(2014)** studied the tribes in Karnataka in the light of their identity and cultural development. The study was sociological in nature and focused on the livelihood of the tribes in detail. **Kiran D and B.k Patnaik (2020)** carried out a survey on 400 households in eight tribes of Odisha and studied their issues and problems to find out the disparity they do face in the process of development. **Kshitiz Kumar Shukla(2015)** The objective of the current research was to study one unique justice delivery system to address non-criminal cases that cannot be dealt with by normal procedure due to lack of evidence, witness, and formal proof among eastern tribes in Himalaya. **Sayar Singh Chopra(2016)** The primary goal of this research paper was to analyze the subject of tribes in literature as a discourse in sociocultural, customs, traditions, and rituals with reference to Gopinath Mohanty's writings in *The Ancestor* (1944). This study work was focused on the historical transformation of images, rituals, customs, and social structures of tribal traditional identities. **Vishwanatha Puvvada(2018)** discussed the problems of tribes in India and

nature and have their own God and Goddess to worship. They are influenced by the other religious groups who reach out

their development since independence. He concluded that there is a failure in developing STS in India and needs strategies for it.

Objectives of the study:

1. To highlight the Tribal Identity in India
2. To discuss the status of the Tribes in the process of development
3. To analyze the paradox of the inclusive growth of Tribes in India.

Significance of the study

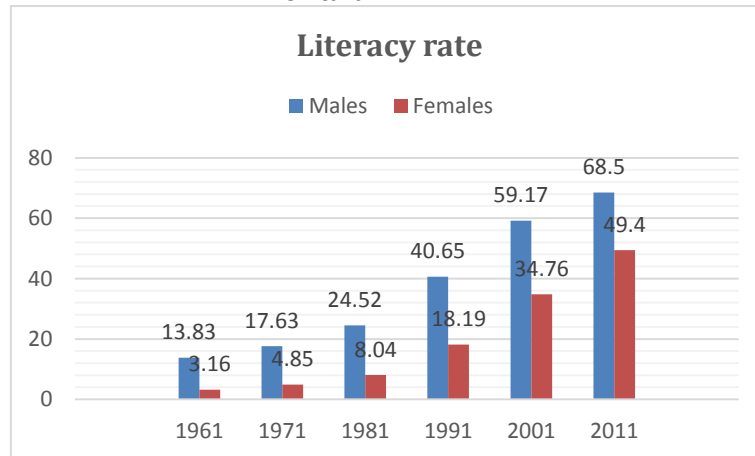
The Tribes have always been backward in every dimension of human development for years. Their uniqueness is under threat due to urbanization and also are far away from the standards of living of other communities. Very few are successful in taking good education and getting well-to-do classes. Their presentation in the government is also very less. They are not inclusive in many dimensions of their socio-economic development in India. Therefore, there is a need to highlight and discuss their issues and problems enabling government to frame strong and fruitful policies for them.

Methodology

This paper is purely secondary data-based. The data has been used from the census 2011 and different reports by various agencies indicating the development of Tribes in India. Some case studies have been mentioned as a part of sociological perspectives on the tribes in India.

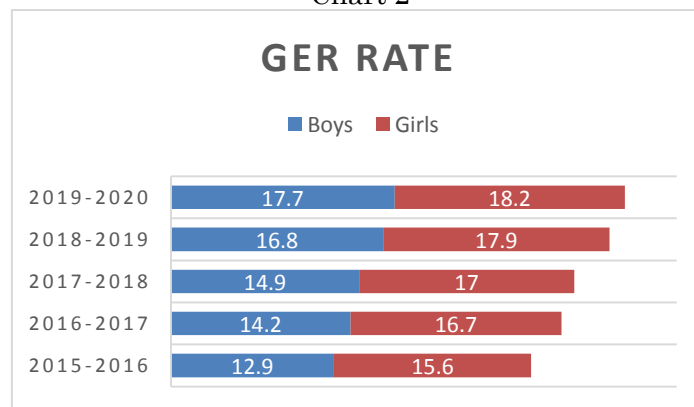
Analysis of the data

Inclusive growth intends to provide access to all and empower them through education and skill provided. It looks for generating employment opportunities and reducing poverty among the people. The inclusive growth of the tribal people is not so satisfactory in India and the most vulnerable are the tribes who reside in remote areas. There is still a disparity in literacy rate, enrollment rate, and unemployment rate between the general population and STS in India.

A) Literacy Rate:**Chart 1**

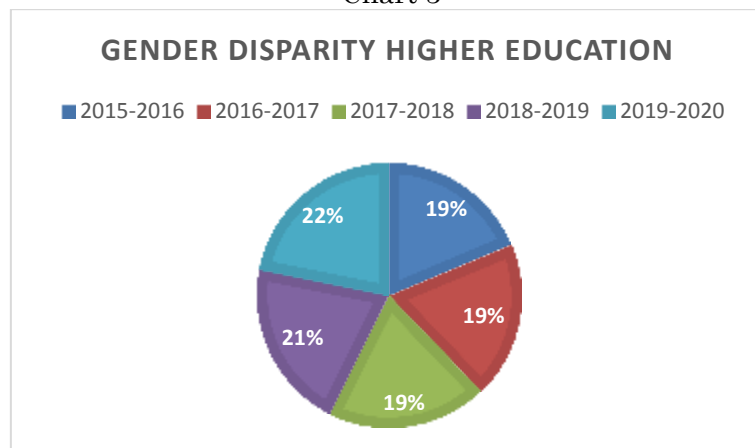
The rate of literacy has increased over the years among Tribes in India. In 1961 it was 13.83 among males and 3.16 among females. It has increased to 68.5 among men and 49.4 among women. Even though, it is less as compared to the general literacy in India, **B) Gross Enrollment Rate (GER):**

which is more than 80 percent. The literacy rate among women is very less as compared to men. It is below 50 percent and moreover, the quality of education is not a predetermined parameter here.

Chart 2

There is a gap between the General enrollment rate between Tribal boys and girls, As compared to 2015-2016, there is an increase in enrollment rate but when **C) Gender Disparity in Higher Education**

compared between males and females, there is a gap and it clearly shows Tribes do not have an inclination of the teaching girl child.

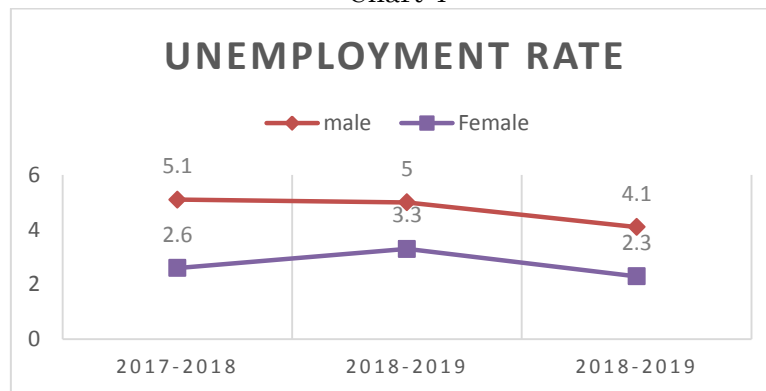
Chart 3

Gender disparity in higher education among the Tribals males and females is falling down but still as compared with all. It is not satisfactory. The girls are made married at

the higher secondary level only and there is no awareness of teaching girls at higher education.

D) Unemployment Rate

Chart 4



The rate of unemployment among the male and females of the Tribal community is high. The gap between both also shows disparity. The main reason is the low literacy rate, lacking of skills, and difficult access to the main cities and towns. The main problem is also the language, which leaves less scope for their employment.

Programmes for STS in Education

1. Eklavya Model Residential schools to provide education keeping cultural identity unaffected.
2. pre-matric and post-matric scholarships for increasing enrollment in the schools
3. National fellowship for pursuing M.Phil. and P.D.
4. Tribal Talent pool by MoTA
5. National overseas scholarship for pursuing master's and doctorate abroad in India.

Although there are a number of programs being initiated by the government in India, the results are not the same when compared with all the states of India. In the states, where there is a large tribal population such as M.P. and Odisha, the condition is not so good. There is injustice made to them related to land holdings, identity proof, and unfair treatment.

Socio-Economic Problems of the Indian Tribes:

Talking about the society of the tribes, they are more custom and tradition-bound and victims of magic, superstitions, harmful habits, homicide, child marriage, and strange customs. They believe in ghosts and the spirit. When talking about their economic problems, they fall below the poverty line,

and they are more into agriculture activities. They are exploited by outsiders and landlords. They are not economically empowered. They are excluded from banking activities.

Conclusion

Adivasis constitute nearly 8.6 percent population in India and are the oldest inhabitants of India. They do not enjoy access to quality education, better life, and government facilities. They have to be isolated due to the loss of forests today. Surprisingly, after so many years of independence, the majority of the tribal children are found Malnutrition. It itself shows its Human development low index of tribes in India. More than 72 percent fall under the lowest wealth bracket and are very poor. Tribals have been living in threat of losing their identity due to rapid industrialization and urbanization, suffering from social discrimination, and are yet to achieve human development like others.

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A Study of Available Facilities to Enhance Quality of Education in Palghar District Ashram Schools

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DOI- 10.5281/zenodo.7740468

Abstract

Education commission (1964-66) in its report states that “the destiny of India is now being shaped in her classrooms. The education and school physical facilities are two sides of same coin. The facilities of the schools play a key role in promoting effective teaching and learning process and which results in quality education in Ashram schools. The absence of these facilities may affect the learning process of the students. Most of our ashram schools are recessive in physical facilities which in turn badly affects the entire structure of quality education in ashram schools. In this study researchers tried to find out availability of facilities in Palghar district ashram schools to enhance quality of education. For this, 27 Government and 17 Aided Ashram schools were selected as sample by researchers. Data was collected through a Self-written Questionnaire given to Principals, wardens, Teachers and students. Survey Method of Descriptive Research was employed by personally visiting the ashram schools. Analysis and interpretation of data was done by tabulation, and using statistical methods like average, percentage, frequency and t-Test. In the present study it was observed that basic facilities like building, gated compound wall, CCTV, Garden, Separate Classroom, laboratory, light facility, library, computer lab, drinking water, cultural hall, playground, hostel, washroom, breakfast and meal, DBT are available in the ashram schools but are not up to the mark. Researchers also conclude that, there is significant positive difference in the facilities provided for students to increase the educational qualities of Government Ashram schools and aided Ashram schools of Palghar district. In the Present study Researcher presents relevant data about facilities used in Ashram schools to enhance quality of education in Palghar

Key Words: Ashram schools, evaluate, facilities, educational qualities.

Introduction

Education is the key to all round development. A nation's economic, social and cultural progress is determined by the educational development of its citizens. Education commission (1964-66) in its report states that “the destiny of India is now being shaped in her classrooms. The education and school physical facilities are two sides of same coin. The facilities of the schools play a key role in promoting effective teaching and learning process and which results in quality education in the schools. The absence of these facilities may affect the learning process of the students. We cannot receive proper standard education without provision of physical facilities. The aims of education in ashram schools are to induce healthy, critical

and dynamic abilities in the ST and SC students. Therefore, it is necessary to provide all sorts of physical facilities to all Ashram schools like five star private schools. The presence of these facilities motivate both the teachers and the teaching process. It works like an energizer and speeds up the whole process of learning. The school shapes the personality of the students and promotes ethical values and culture to the society. The school should have a conducive environment for accomplishing objectives of education. The school environment is that environment which provides ease to both the teachers and the students to make the whole process effective as far as teaching and learning is concerned. School environment includes physical, emotional, social, mental,

organizational and instructional parameters that attributes to the overall teaching learning process within the school building which positively effects on the quality of education, students teachers relations and enhancing the achievement of students". The future of a nation lies in the hands of future generation. To train, educate and prepare the younger generation for the future is the responsibility of the state . Students' academic performance is enhanced by positive student teacher relationship, academic support, facilities, effective management and evaluation strategies. The environment of institution comprised of provision of physical facilities as well as utilization of these facilities. The academic support facilities facilitate the teaching and learning process. These physical facilities are also called basic facilities present in every institution. These facilities in ashram schools includes standard building, compound wall, garden, wash rooms, audio visual aids, playground, water electric pump, separate classroom, hostel, cultural hall, breakfast ,Meal, DBT, library, science laboratory and information technology laboratory etc. These basic facilities promote the effective learning at ashram schools. Most of our ashram schools are recessive in physical facilities which in turn badly affects the entire structure of quality education in ashram schools. So, the physical facilities which required should be provided on priority basis to all ashram schools in the region of Palghar District of Maharashtra State to enhance quality of education. In the Present study Researcher presents relevant data about facilities used in Ashram schools to enhance quality of education in Palghar district.

Study Area

This study was conducted in Palghar District Ashrams schools of Maharashtra. In Palghar District there are two Integrated Tribal Development Projects, one is at Dahanu and second is at Jawhar. In a Dahanu Project there are four Talukas, Dahanu, Talasari, Palghar and Vasai. Percentage of Tribal population according to 2011 census are Dahanu (69.11), Talasari (90.6), Palghar (30.56), and Vasai (7.32). There are total 54 Schools, 34 Government Ashram Schools and 20 Aided Ashram Schools. In a Jawhar Project there are four Talukas, Jawhar, Mokhada, Vada and Vikramgad. Percentage of Tribal population according to 2011 census are Jawhar (91.64),

Wada (57.02), Mokhada (92.08) and Vikramgad (91.82). From above data maximum Schedule Tribes are found in Mokhada, Vikramgad, Jawhar and Talasari. Palghar and Vasai talukas having less percentage of Schedule Tribes population. In a Jawhar Project there are total 48 Schools, 30 Government Ashram Schools and 18 Aided Ashram Schools

Need And Importance Of The Study

Physical facilities are an essential part of every educational institution & it applies to Ashram schools too. The availability of Facilities positively affects the teaching learning process. Absence of any or all facilities badly affects the educational process. The Government has provided large number of facilities in Ashram schools for bringing the Tribal students in mainstream education . Are these physical facilities enhance quality of education in Ashram schools? Are these facilities are fully used & properly maintained?. This affects the quality of education provided to the students thereby affecting the Objectives of setting up of Ashram Schools and hence ,to answer this the Researchers felt the need to evaluate the available facilities in Ashram Schools to enhance the quality of education and hence planned this research in Palghar district Ashram Schools . This study will assist Government administrators to get an idea in understanding the actual use of these facilities and upgrade them as per requirement of these Ashram schools.

Objectives of Study

1. To evaluate facilities provided for students to increase the educational qualities of the Ashram School of Palghar district.
2. To compare available facilities to enhance quality of education used in Government Ashram Schools & Aided Ashram Schools in Palghar District.

Hypothesis of the Study

There is no significant difference in the facilities provided for students to increase the educational qualities of Government Ashram schools and aided Ashram schools of Palghar district.

Scope & Delimitation of the Study

Researchers have selected Ashram schools situated in Palghar district region. The researchers has selected eight Talukas out of total geographical area of Palghar districts for his research and it is kept limited for Palghar district only. Present study is

delimited to evaluate facilities provided for students to increase the educational qualities

in Government and Aided Ashram School of Palghar district of the Maharashtra.

Methodology

a) **Sample & sampling technique** 27 Government Ashram schools and 17 Aided Ashram schools are selected using random
Table 1: Facilities provided for students to increase the educational qualities of the Ashram Schools.

sampling technique out of which lottery method was used.

b) **Research Tools** The researchers has

present research.

Statistical Interpretation Of Data The

Sr. No.	Government Ashram schools					Aided Ashram schools			
	Facilities	Headmaster	Teachers	Wardens	Students	Headmaster	Teachers	Wardens	Students
1	Building	24(88.9%)	166(100%)	27(100%)	300(74.07%)	17(100%)	106(100%)	17(100%)	255(100%)
2	Compound wall	22(81.5%)	148(89.2%)	18(66.7%)	315(77.8%)	13(76.5%)	88(83%)	13(76.5%)	210(82.4%)
3	Gated compound	24(88.9%)	160(96.4%)	18(66.7%)	300(74.07%)	14(82.3%)	100(94.3%)	14(82.3%)	210(82.4%)
4	Garden	21(77.8%)	166(100%)	22(81.5%)	343(84.7%)	17(100%)	106(100%)	13(76.5%)	255(100%)
5	Separate Classroom	21(77.8%)	148(89.2%)	12(66.7%)	360(88.9%)	17(100%)	106(100%)	14(82.3%)	255(100%)
6	Subject wise information boards displayed	24(88.9%)	142(85.5%)	19(70.4%)	343(84.7%)	17(100%)	106(100%)	15(88.2%)	195(76.5%)
7	Medical facilities	27(100%)	166(100%)	27(92.6%)	405(100%)	17(100%)	106(100%)	17(100%)	255(100%)
8	Library	24(88.9%)	158(95.2%)	21(77.8%)	360(88.9%)	17(100%)	90(84.9%)	15(88.2%)	225(88.2%)
9	Computer lab	23(86%)	154(92.8%)	16(59.3%)	300 (74.1%)	13 (81.2%)	98(92.5%)	15(88.2%)	240(94.1%)
10	Drinking water	26(96.3%)	166 (100%)	27(100%)	405(100%)	17 (100%)	102(96.2%)	17 (100%)	255(100%)
11	Cultural hall	19 (70.4%)	152 (91.6%)	18(66.7%)	360(88.9%)	17(100%)	102(96.2%)	17 (100%)	240(94.1%)
12	Play ground	22(81.5%)	166 (100%)	20(74.1%)	405 (100%)	17 (100%)	106(100%)	17 (100%)	255(100%)
13	Hostel	24 (88.9%)	162 (97.6%)	20(74.1%)	240(59.3%)	17 (100%)	82(79.2%)	17 (100%)	210(82.4%)
14	Washroom	27(100%)	166 (100%)	27(100%)	390 (96.3%)	17 (100%)	106(100%)	17 (100%)	255(100%)
15	Organise Co-curricular activities	27 (100%)	164 (98.8%)	25 (92.6%)	390(96.3%)	17 (100%)	102 (96.2%)	16(94.1%)	255(100%)
15	Breakfast/ Meal	27(100%)	166(100%)	27(100%)	405(100%)	17(100%)	106(100%)	17(100%)	255(100%)
16	Light facility	27(100%)	166(100%)	27(100%)	405(100%)	17(100%)	106(100%)	17(100%)	255 (100%)
17	DBT	27(100%)	166(100%)	27(100%)	405(100%)	00	00	00	00
18	Science lab	22(81.48%)	160(96.4%)	19(70.4%)	285(70.4%)	12(75%)	70(66%)	11(64.7%)	240(94.1%)

used the a well prepared Self-written Questionnaire for Principals, wardens, teachers and students . Researcher personally visited ashram schools and the tool was administered to the Principals, wardens, Teachers and students of Government and aided ashram schools of Palghar district for data collection.

c) **Research Methodology** Researchers used the Survey Method of Descriptive Research in

data collected was analysed and interpretation of data was done by tabulation

and using different statistical techniques such average, percentage, frequency and t-Test; and is presented in the following table: To evaluate facilities provided for students to increase the educational qualities of the Ashram School of Palghar district.

Table 2: Paired Samples Statistics

Factors under study	Mean	N	Std. Deviation	Std. Error Mean
Governments Ashram schools	255.79	34	96.596	16.566
Aided Ashram schools	194.18	34	73.167	12.548

Table 3: Samples Correlations

Factor under study	N	Correlation	Sig.
Governments Ashram schools & Aided Ashram schools	34	+ 0.517	.002

Table 4: Paired Samples Test

Pair-1	Paired Differences					t	df	Sig.
	Mean	Std. Deviat ion	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Governments Ashram schools - aided Ashram schools	61.618	85.879	14.728	31.653	91.582	4.184	33	.000

Interpretation: Test value of the t-test is 4.184 with degree of freedom 33, p-value (.000) is less than level of significance ($\alpha = .05$) So we reject null hypothesis at 5% level of significant. According to t-test there district. Here from Karl's Pearson coefficient of correlation we conclude that as the Education qualities of Government Ashram school increase, simultaneously the Education qualities of aided Ashram school are also increase for students.

Findings of the Study

On the basis of the analysis and interpretation of data, the researchers has arrived at the following findings and drawn the conclusions.

1. Majority of Government and Aided ashram schools have their own building but not well maintain.
2. Most of the Government and Aided ashram schools have gated compound wall.
3. Majority of Government and aided ashram schools have garden area but they are not maintain.

is significant positive difference in the facilities provided for students to increase the educational qualities of Government Ashram schools and aided Ashram schools of Palghar

4. Majority of Government and aided ashram schools have separate classrooms but this classroom are used for sleeping at night.
5. Majority of Government and aided ashram schools students get medical facilities but not on time.
6. Majority of Government and aided ashram schools have subject wise information boards displayed .
7. Majority of Government ashram schools and aided ashram schools have library without librarian.
8. Few of Government ashram schools and aided ashram schools have well equipped Computer lab by some NGO's .
9. Majority of Government and aided ashram schools have drinking water facility .

10. Average Government ashram schools have permeant cultural Hall and majority of aided ashram school's permeant have cultural Hall.
11. Majority of Government ashram schools and aided ashram schools have playground area but they are not maintain .
12. Majority of Government ashram schools and aided ashram schools have hostel but without basic facilities.
13. Majority of Government and aided ashram schools have washroom but there are not clean.
14. Majority of Government ashram schools and ashram schools have organised co-curricular activities.
15. Majority of Government ashram schools and aided ashram schools students get breakfast and meal.
16. Majority of Government ashram schools and aided ashram schools have light facility.
17. Average Government ashram schools and aided ashram schools have Science lab.
18. DBT facility is available to all Government ashram schools students but it is not available for Aided ashram schools students.
19. There is significant positive difference in the facilities provided for students to increase the educational qualities of Government Ashram schools and aided Ashram schools of Palghar district. As the Education qualities of Government Ashram school have increased, simultaneously the Education qualities of aided Ashram school have also increased for students.

Conclusions

From the findings of the study, it is concluded that to enhance quality of education in Ashram schools, Principals, Teachers, Wardens and Students try to use available physical facilities like building, compound wall, garden, wash rooms, audio visual aids, playground, , water electric pump, separate classroom, hostel, cultural hall, breakfast ,meal, DBT, library, science laboratory and information technology laboratory etc for the educational development of Government and Aided Ashram schools in Palghar District . Similarly, there is significance positive difference in the facilities provided for students to increase the educational qualities

of Government Ashram schools and aided Ashram schools of Palghar district. Researchers also conclude that as the Education qualities of Government Ashram school increase, simultaneously the Education qualities of aided Ashram school are also increase for students of Palghar district Ashram schools.

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A Study on the Extent of Financial Literacy among Tech-Savvy Young Adults in Mumbai City

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DOI- 10.5281/zenodo.7740476

Abstract

After seeing the financial impact of coronavirus on many families, young adults in Mumbai are now getting interested in investing through different avenues using mobile phones and many other applications available at the tips of their fingertips, to save for their own and their family's future. They are also getting aware of the benefits of investing and through these investments, especially through their very owned device, they know that they can achieve their personal and financial goals. An online survey method containing 20 questions was used to get information from the respondents in Mumbai city. 43 tech-savvy respondents filled out the survey that was distributed via Google Forms. The result of the survey showed that young adults who invest or trade via online mode in different avenues are financially literate, whereas those who do not, either using technology or don't do at all, were interested to know more about finance and investments. One thing that can be seen is that they have a strong attraction towards the world of finance using digital tools.

Keywords: Young adults, Financial literacy, Finance, Trading, Investments, Tech Savvy, Digital Instruments

Introduction

A devastating pandemic like “The Coronavirus” (2020-2021) awoke individuals, especially young adults to realize the necessity of educating themselves about financing, investing and trading as the capital required can be as minimum as five thousand rupees. Financial literacy analyzes various skills such as personal financial management and other aspects related to finance. An adequate level of financial literacy is necessary for the overall well-being of young adults and their future. It helps an individual to formulate short and long-term plans accordingly. Financial education, financial inclusion and financial stability are three important components of an integral strategy. The research will help to understand the shortcomings faced by young adults when it comes to investing or trading and help them understand what and how investing and trading are different from each other and what these young adults are

into. Some financially literate students who are self-taught use electronic means and applications like youtube, linkedin, investing.com, and trading view to get their selves educated.

Review of Literature

To understand financial literacy among young adults in Mumbai we prepared, distributed and reviewed questionnaires. Our goal with this research paper is to understand and comprehend the data that we have collected. We have asked a few very basic questions about a young individual's finances. Our questions revolved around personal finances on the lines of investing, trading, different brokers, using benchmarks when investing, and trading using archaic guesswork.

Sobhesh Kumar Agarwalla, Samir K. Barua, Joshy Jacob and Jayanth R. Varma published a paper in 2013, which concluded that Indian youth have similar levels of knowledge and understanding of

finance. Social-economic situations do have a lot of influence on one's financial literacy. Also, higher levels of financial education did not equate to greater or better financial literacy as this topic is multi-dimensional.

Naman Jain, Miloni Sanghani, Nidhi Surana, Nihal Sohal and Peeya Barath published a paper which concluded that traditional methods of spreading financial awareness are ineffective. The "Mutual funds sahi hai" campaign is the most well-remembered financial ad campaign. They also suggested that financial education can be made a subject in schools and colleges to inculcate the basics right from the beginning. They also suggested a separate campaign specifically for women, who are becoming a part of the workforce but have very little financial knowledge.

Dr Vijetha S. Shetty and Baby Jaison Thomas concluded that the financial knowledge of students in Mumbai is poor when compared to global standards. India needs financially literate youth as it embarks on high economic growth as the growth wouldn't be meaningful without well-educated masses.

Mr Hazlaili Binti Hashim, Mr Andy Lim Yee Chee, Mr Yeo Sook Fern, Mr Anushia Chelvarayan and Mr Khairul Nizat Bin Lajis concluded as Malaysia marches towards becoming a developed nation by 2025 youth having financial skills are very important for the country. Universities should inculcate financial literacy as one of the subjects for graduation. Families always perform better financially if they start planning their finances early on.

Ms Aina Caplinska and Ms Alina Ohotina concluded young people need more awareness towards their finances and their inner workings. The Ministry of Education and Science, the Ministry of Finance, as well as local governments, should improve their cooperation to ensure the accessibility of additional information about financial literacy.

Objectives of the Research

1. To find out the financial awareness of young adults based in Mumbai city.
2. To gauge the quality of financial awareness.

3. To understand the penetration and reach of financial education among young adults.
4. To understand how they are involved in the finance domain.

Statement of the problem

1. Unawareness about personal finance among young adults.
2. No information on the existence of discount brokers to youth as they save 90% or more on brokerage than traditional brokers.
3. Youth not having about increasing capital allocation towards assets rather than mundane expenses like spending on fast fashion, restaurants, etc.

Scope of the Study

The study is limited to the age group of 15-25 years. Data were collected from college students and fresher or interns who were from Mumbai city and studying in commerce, science and arts streams. 43 responses are collected in total. An online questionnaire was circulated to cover major areas of personal financial knowledge among the participants. The survey includes 16 financial questions. The study focuses on investment and trading patterns along with money management and financial literacy among the students.

Limitations of the Study

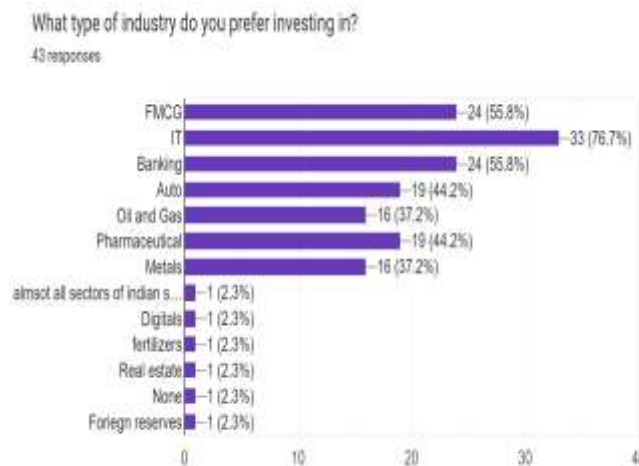
1. Mumbai city was taken into consideration, and not any other city.
2. The age limit was 15-25 years which included young adults.
3. Only people who were aware of finance were able to understand the questions.
4. The questionnaire was in only one language which is English.
5. Certain jargon was used which was difficult for some to understand.

Research Methodology

Primary and secondary data were used for the formation of the research paper. In the primary data, a questionnaire was spread across the college and other known contacts of the mentioned age group. A total of 43 answers were received out of 100 that we have spread to the college students in Mumbai city. Secondary data was taken from the google scholar website, and different research papers mentioned in the bibliography.

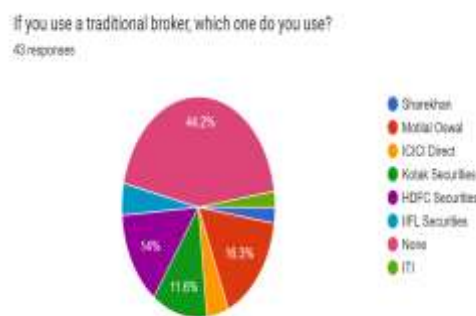
Investing in financial assets such as gold, bonds, stocks, mutual funds, real estate, fixed deposits, commodities, NFTs, cryptocurrency and other such assets is one of the ways that investors can use to build their wealth over a longer time frame. Most asset investors prefer to park their money in our stocks or equity. 76.6% of the respondents chose stocks as their investments. The next asset respondents have invested in our mutual funds. 48.8% of the respondents have chosen the option of

5. What type of industry do you prefer investing in?



Investors and traders participate in the stock market by investing or trading companies in companies representing different sectors. 76.7% of the respondents chose the IT sector as the preferred sector of investing. The IT sector is a flourishing sector in the economy and the majority of the stocks representing the major indices are IT sectors. An equal percentage of respondents, 55.8% of the total number of people have chosen FMCG and

7.If you use a traditional broker,which one do you use?



mutual funds. A mutual fund is a professionally managed investment fund that pools money from many retail investors to purchase securities such as stocks, bonds etc. The next investment tool preferred by 39.5% of respondents is fixed deposits, which are considered safe and traditional investments by many investors. 34.9% have chosen gold as their preferred investment avenue. Gold is considered a defensive investment among the people as it is a safeguard against inflation.

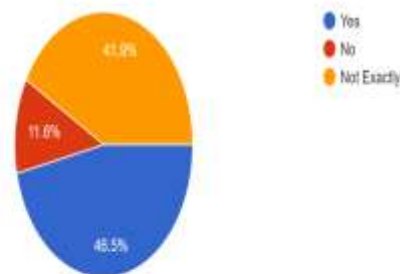
banking as the sector of stocks they invest their funds in. This is followed by the Auto and the Pharma sector, where 44.2% of the total respondents have chosen these sectors. Oil Gas and Metal follow with an equal 37.2% of the respondents choosing these sectors of stocks to invest in. An equal percentage of respondents have chosen digital, fertilizers, and real estate and 2.3% have chosen these options.

Traditional brokers provide a vast assortment of products and services to their customers. These services include securities trading, investment advice, retirement planning, management of investment portfolios etc., in exchange for a hefty commission. They are a part of the stock market as an intermediary along with

discount brokers. 44.2% of the respondents do not use the services of traditional brokers. 16.3% of the respondents use Motilal Oswal as their traditional broker. This is followed by HDFC securities and Kotak securities with 14% and 11.6% of the respondents using their services respectively.

8. Do you use a particular benchmark when investing long term or short-term?

Do you use a particular benchmark when investing long term and or short term?
43 responses

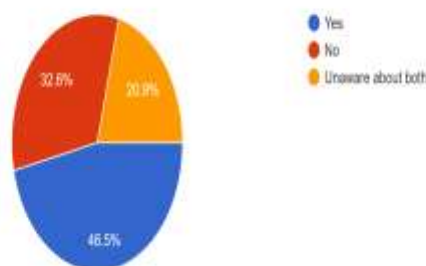


The above pie chart indicates whether respondents rely on benchmarks while making their investment decisions. According to 46.5% of respondents do rely on

benchmarks while investing, irrespective of tenure. While 41.9% prefer to rely on their research and analysis before investing in any asset classes.

10. Do you follow a rule of diversification and rebalancing in your portfolio?

Do you follow a rule of diversification and rebalancing in your portfolio?
43 responses



This question is added to further understand respondents' mindset and their knowledge of diversification and rebalancing of one's portfolio. Around 46.5% of the respondents believe and follow the rule of diversification

and rebalance of the portfolio according to the movement of the market, whereas 32.6% of respondents do not believe in the above-mentioned formula.

Recommendations

1. Understand Different Financial Products

Before investing, an investor must analyze different financial products, and understand their working mechanism and the associated risks. By doing so, they can gauge if the product is in sync with one's risk tolerance and objectives or not. For instance, if

someone likes assured returns and gets unnerved by the slightest volatility, it doesn't make sense to invest in market-linked products such as stocks and mutual funds.

2. Start Small

It's advisable to start small and stagger one's investments. This is especially true if someone is investing in equities for the first time. Equities are a volatile asset class. If they initially lose a large amount of money, it leads to a bitter investing experience.

3. Have a Financial Goal

Investing without a financial goal is akin to sailing a ship without radar. Financial goals lay the blueprint for one's investment and help to identify the investment avenues one should choose to achieve them. They must invest depending on their goals and the amount needed to achieve them.

Conclusion

The main purpose of this research paper was to identify the extent of Financial Literacy among young adults in Mumbai who use technology to invest or trade. In conclusion to all the interpretations, we observed that most of the respondents are financially literate to the extent that they observe the important difference between trading and investing and are aware of different investment avenues. We interpreted this based on some basic questions the respondents responded to wisely. As a part of our first objective, it was observed that many of our respondents based in Mumbai city, the financial capital of India, are financially literate and equipped with the latest digital tools. Based on the survey conducted, it was observed that the respondents preferred investing over trading in the long term and participating in the market in this exact capacity. The majority of the respondents were from a commerce background, a few from science followed by arts, comparatively science students were more updated with the tech world. On observation, it was clear that a commerce background has a greater affinity for being financially literate as compared to science and arts. This could be due to a lack of awareness among respondents about financial literacy as the former emphasizes a lot on investing, trading and the stock markets as compared to the other two. In conclusion, some respondents are financially literate and possess quality knowledge about finance whereas a few are still not that aware of finance. Nevertheless, India is a developing country and there is a lot to achieve and explore in the field of FinTech, hopefully, one day India will be a developed and financially literate country very soon.

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Analytical study of Surge in Direct Tax collection in India before and during Modi Government Regime

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DOI- 10.5281/zenodo.7740496

Abstract:

Direct Tax plays an important role in Public Finance of any economy. The Govt. expenditure depends on how much amount it has received by way of Taxes (Direct & Indirect). The Fiscal policy of any nation depends upon collection Direct & Indirect Taxes. It also shows growth of any nation. This paper examines the causes that has contributed to surge in Direct tax collection in India since 2004 In India.

Key Words: AIR – Annual Information Return, AIS – Annual Information Statement, ITD – Income tax Dept.

Introduction:

The contribution of Direct tax in Total tax has always remained low as compared to Indirect Tax. As such total collection of Direct tax is also less. The reason behind this is that, Indians shy away from Income tax, they do not like to pay Income tax and file Income tax return even though it is mandated by the Law. There is tax evasion instead of tax planning. There are many, who do not file Income tax returns and pay proper tax even though they have huge income which is in the form of cash. Though there are different means of tapping direct tax, in the Income tax Act, 1961, Income tax Rules, 1962, it was not properly implemented. Therefore, Income tax Dept. has resorted to Search & Seizure operation, as the way to unearth the hidden treasure of the Govt. of India.

Objectives of the Study:

1. To analyse the surge in Direct tax collection in India in last 10 years.
2. To study the ways adopted by the Govt. pre and post Modi Govt.
3. To suggest the areas to be discussed in implementation of Laws.

Research Methodology

The present paper is based on secondary data available on various govt. websites, RBI, the

Income tax Act, 1961 and Income tax Rules, 1962.

Direct Tax – Income Tax:

Direct Tax is the tax payable by the person on income earned by him or wealth he posses. The burden of tax falls directly upon that person (assesse) and it cannot be shifted like Indirect tax. Income tax law was there during British regime also, and post Independent, Govt. of India, passed Income tax Act, 1961, which came into effect from 01/04/1961 and Income tax Rules, 1962 which came into effect from 01/04/1962. Initially the rates of tax were high and non-taxable income was also low. The basic exemption limit upto Assessment Year 2005-06 was Rs.50,000 and income above Rs.150,000 attracted tax @ 30%. Therefore, return filers were very less and revenue collection by way of direct tax was also low. The revenue by way of Direct tax was Rs.68,305 crores in F.Y. 2000-01, which reached to Rs.132,771 crores in F.Y. 2004-05 The Direct Tax kitty reached to Rs.11,35,754 crores in F.Y. 2021-22. Following chart shows Direct tax collection since F.Y. 2000-01, its share in total tax revenue and percentage of Direct Tax to GDP of India.

Direct Tax Collection
(Rs. crore)

Financial Year	Corporate Tax	Personal Income Tax	Other Direct Tax	Total	Contribution in total tax revenue	Direct Tax to GDP Ratio (%)
2001-02	36,609	32,004	585	69,198	37.10%	3.03
2002-03	46,172	36,866	50	83,088	38.52%	3.38
2003-04	63,562	41,386	140	1,05,088	41.42%	3.81
2004-05	82,680	49,268	823	1,32,771	43.72%	4.10
2005-06	1,01,277	63,689	250	1,65,216	45.32%	4.47
2006-07	1,44,318	85,623	240	2,30,181	48.80%	5.36
2007-08	1,93,561	1,20,429	340	3,14,330	52.97%	6.30
2008-09	2,13,395	1,20,034	389	3,33,818	55.34%	5.93
2009-10	2,44,725	1,32,833	505	3,78,063	60.78%	5.85
2010-11	2,98,688	1,46,258	1,049	4,45,995	56.48%	5.81
2011-12	3,22,816	1,70,181	990	4,93,987	55.82%	5.48
2012-13	3,56,326	2,01,840	823	5,58,989	54.17%	5.53
2013-14	3,94,678	2,42,888	1,030	6,38,596	56.32%	5.62
2014-15	4,28,925	2,65,772	1,095	6,95,792	56.16%	5.55
2015-16	4,53,228	2,87,637	1,079	7,41,945	51.03%	5.47
2016-17	4,84,924	3,49,503	15,286	8,49,713	49.65%	5.53
2017-18	5,71,202	4,19,884	10,951	10,02,037	52.24%	5.86
2018-19	6,63,571	4,73,121	993	11,37,685	54.78%	5.98
2019-20	Individual data is not available.			10,49,549	52.28%	
2020-21				9,47,959	50.04%	
2021-22				11,35,754 Rev.estimt.	51.36%	

Source: [www. Incometaxindia.gov.in](http://www.Incometaxindia.gov.in) and RBI Statistical reports.

Number of Persons Filing Income-Tax Return (Return Filers)

Financial Year	Taxpayers
FY 2009-10	52,51,820
FY 2010-11	90,50,251
FY 2011-12	1,64,33,684
FY 2012-13	2,14,86,807
FY 2013-14	3,31,47,159
FY 2014-15	3,51,02,185
FY 2015-16	4,33,43,737
FY 2016-17	5,28,68,037
FY 2017-18	6,74,74,904
FY 2018-19	6,68,09,129
FY 2019-20	6,77,90,660
FY 2020-21	7,38,93,170
FY 2021-22	7,54,79,837

Source: incometaxindia.gov.in Surge in Direct Tax Collections

India collected more direct taxes during the current fiscal year 2022-23 than expected and above compared to pre-pandemic levels. The Finance Ministry said that the net direct tax collection for FY22-23 increased 48.4% over FY21-22 and 42.5% over FY20-21. According to the statement, it is 34.96% greater than in FY19-20, before the COVID-19 pandemic began. The amount is higher than both the budget's and the revised estimate respective projections of Rs. 11.08 lakh crore and Rs. 12.50 lakh crore. As the bank continues to update its data, the numbers are anticipated to rise as Govt. has permitted to file income tax returns upto 31st March 2023 with penalty.

How this happened? What are the causes? Let us analyse it.

Government Initiatives to Improve Direct Taxes

1. **Personal Income Tax:** The basic non taxable income which was Rs.50,000 in F.Y. 2004-05 was increased to Rs.100,000 in F.Y. 2005-06, Rs.150,000 in F.Y. 2008-09, Rs.180,000 in F.Y. 2011-12, Rs.200,000 in F.Y. F.Y. 2012-13 and Rs.250,000 since F.Y. 2014-15. The increase in income tax basic limit, increased tax filers and Direct tax Revenue.
2. **Introduction of New Tax Regime U/S.115BAC:**
Modi Govt. introduced new tax Regime since 01/04/2020, under which rates of tax were kept low but exemption and deductions were withdrawn. An individual who is not claiming exemption and deductions, or deductions are low, can take advantage of this to bring down their tax liability. This improved the return filers as more and more persons opted for this scheme by paying less tax under the Act.
3. **Timely filing of Return and Late Fee**
Section 139(1), which is about filing of return, was strictly enforced by Modi Govt. If income of an individual is less than Rs.5 lacs and he files return after due date of 31st July subsequent to Financial Year, he will have to pay fine of Rs.1,000; if income is above Rs.5 lacs, fine will be Rs.5,000 upto 31st Dec. and beyond 31st Dec. it is Rs.10,000 apart

from interest U/S.234A @1% p.m.. This improved timely compliance of filing of return.

4. **Pre-ponement of filing belated return:** If a person is sick or forget to file return, he can file belated return beyond due date with late fee upto the end of the Assessment year i.e. 31st March. E.g. For Return of F.Y. 2020-21, due date is 31st July 21, but with late fee it could be filed upto 31st March 2022. This date was preponed by 3 months by Finance Act, 2021 w.e.f. F.Y. 2021-22. So the last date of filing belated return U/S.139(4) is now 31st December. Even with late fee, one cannot file Return beyond 31st Dec. Those, who are late this time, will now remember to file it in time.

5. Widening Tax Base:

1. **Rule 114B** was amended in 2015 w.e.f. 01/01/2016, which requires compulsory quoting of PAN for certain transactions, which are as follows:
2. Sale or purchase of vehicle other than two wheeler.
3. Opening a bank account with any bank including co-operative bank.
4. Making an application for debit card and credit card.
5. Opening a demat account with Depository Participant.
6. One time Payment to hotel / restaurant where the bill exceeds Rs.50,000.
7. Payment in connection with travel to any foreign country or purchase of foreign currency, where such payment exceeds Rs.50,000 at any one time.
8. Payment for purchase of Mutual fund units where amount exceeds Rs.50,000.
9. Payment made to an institution or a company for the purpose of procuring bonds or debentures issued by it, where amount exceeds Rs.50,000
10. Payment to R.B.I. for acquiring bonds issued by it where amount exceeds Rs.50,000.
11. One time cash deposit exceeding Rs.50,000 in one day with a bank or Post Office.

12. Aggregate of cash deposit exceeding Rs.250,000 during the period 09/11/2016 to 31/12/2016 with any bank including co-op. bank or Post Office (de-monetisation period).

13. Time Deposit aggregating Rs. 5 lacs or more during financial year with bank or P.O.

These rules were strictly enforced and wherever PAN is quoted, it will be reflected in **Annual Information Statement of that PAN holder**. Banks having old accounts without PAN, were compelled to comply with KYC through R.B.I. directives. Non-compliance amounts to account becoming non-operative (no debit were allowed). Similarly any tax refund (direct tax

as well as indirect tax) was compulsory through ECS. But if the bank account given by person to whom refund is due, is KYC non-compliant, refund will not get credited through RBI. Duty was also cast upon Statutory auditor of the Bank by R.B.I. to check that all operative accounts (Saving, Current, Cash Credit, Overdraft etc.) are KYC compliant.

Rule 114E was also amended w.e.f. 01/04/2016 to widen its base. Financial transaction statement (Annual Information Return) that needs to be furnished under subsection (1) of section 285BA of the Act shall be furnished with respect to a financial year in Form No.61A online covering

transactions covered by this Rule; which are as follows:

S r.	Value and Nature of transaction	Reporting Person
1.	Cash deposits aggregating to over Rs.10 lakh in one financial year, and in saving account a person in that bank.	A co-operative bank or banking company to which the Banking Regulation Act, 1949 applies or Postmaster General as referred to in clause (j) of section 2 of the Indian Post Office Act, 1898.
2.	One or more time deposits (other than a time deposit made through renewal of another time deposit) of a person aggregating to ten lakh rupees or more in a financial year of a person.	a) A banking company or a co-operative bank to which the Banking Regulation Act, 1949 applies b) Postmaster General as referred to in clause (j) of section 2 of the Indian Post Office Act, 1898 c) Nidhi referred to in section 406 of Companies Act, d) Non-banking financial company which holds a certificate of registration under section 45-IA of the R.B.I. Act, 1934, to hold or accept deposit from public.
3.	a) Rs.1 lakh rupees or higher than that in cash, or b) Rs.10 lakh by other modes against bills raised through one or more credit cards provided to that person, in one financial year.	A co-operative bank or banking company to which Banking Regulation Act, 1949 applies (including any bank or banking institution referred to in section 51 of that Act) or any other company or institution issuing credit card.
4	Receipt from any person of an amount aggregating to ten lakh rupees or more in a financial year for acquiring bonds or debentures issued by the company	A company or institution issuing bonds or debentures.
5.	Receipt from any person of an amount aggregating to ten lakh rupees or more in a financial year for acquiring shares (including share application money) issued by the	A company issuing shares.

	company.	
6.	Buy back of shares from any person (other than the shares bought in the open market) for an amount or value aggregating to ten lakh rupees or more in a financial year.	A company listed on a recognised stock exchange purchasing its own securities under section 68 of the Companies Act, 2013 (18 of 2013).
7	Receipt from any person of an amt. aggregating to Rs. Ten lacs or more year in financial year of acquiring one or more schemes of Mutual Fund	A trustee of mutual fund or such other person managing the affairs of the Mutual Fund as may be duly authorized by trustees in this behalf.
8	Receipt from any person for sale of foreign currency including any credit of such currency to foreign exchange card or expense in such currency through a debit or credit card or through issue of travellers cheque or draft of an amount aggregating to ten lakh rupees or more during a financial year.	Authorised person 11 as referred to in clause (c) of section 2 of the Foreign Exchange Management Act, 1999 (42 of 1999).
9	Sale or purchase of immovable property by an individual for an amount of Rs.30 lakh or more or valued by the stamp valuation authority at thirty lakh rupees or more.	Inspector-General appointed under section 3 of the Registration Act, 1908 or Registrar or Sub-Registrar appointed under section 6 of that Act.
10	Receipt of cash payment that exceeds Rs.2 lakh for sale, by an individual, of services or goods of any nature (other than those specified at Sl. Nos. 1 to 10 of this rule, if any.)	Any person who is liable for audit under section 44AB of Income tax Act.
11	Cash deposit during the period 09/11/2016 to 31/12/2016 aggregating to a)Rs.12,50,000 or more, in one or more current account of a person, or b)Rs.2,50,000 or more, in one or more account of a person, other than a current account.	1. A co-operative or banking company to which Banking Regulation Act, 1949 is applicable 2. Postmaster General as referred to in the clause (j) of section 2 of the Indian Post Office Act of 1898.

When Reporting person files Annual Information Return in form 61A online, the same will be automatically reflected in **Annual Information Statement (AIS)** of PAN holder of these transactions. In such case, that PAN holder will have no other way than to show these transactions in his return of Income. **Some Other Measures** Some other measures resorted by Modi Govt. are as follows:

1. Abolishing Dividend Distribution Tax.

Every company distributing dividend was deducting Dividend Distribution Tax @ 10% upfront and recipient of dividend used to get dividend tax free. However, the Govt. noticed that those who are investing in shares are all tax payers and most of them

falls in 20% or 30% bracket whereas we are getting 10% tax by way of DDT. Therefore, DDT was abolished and every company distributing dividend were made to file TDS return and deduct TDS @ 10% on dividend distributed above Rs.5,000. But all dividend, whether above or below Rs.5,000 has to be reported in TDS return. This helped the Income tax Dept. (ITD in short) to know the dividend income of an individual as it gets reflected in Annual Information Statement (AIS in short) and return filer were made to pay tax on dividend without any exemption, which is 20% or 30% of dividend.

2. Reporting all interest by Bank: Banks were deducting TDS @ 10% on interest on Time Deposit if interest exceed Rs.10,000. If a person files Form 10G, no TDS was

deducted. In such case, banks were showing only those interest against which TDS were deducted and Return filers were also showing only these income on which TDS is deducted as reflected in 26AS. This helped in evading tax. Govt. compelled all banks to report all interest (even though it is less than Rs.10,000 or no TDS is deducted) including interest on Saving Bank account. This helped govt. to notice all types of interest of the person. Some of them, who did not show saving interest for F.Y. 2020-21, got notice from ITD in the last month of Assessment Year for under reporting their income. The limit for deduction of TDS was increased from Rs.10,000 to Rs.40,000 so that small depositors are not subject to TDS. Though TDS is not deducted, interest from all schemes by all banks were reported and it is reflected in AIS of PAN holder.

3. **Lapse of Exemption & Deduction:**

Govt. amended provision of Income tax Act so as to bring in timely compliance in return filing. Those who filed return beyond statutory due date, will lose deduction of Income available under Chapter VI-A of the Income tax Act and exemption U/S. 10, 10A, 10B, 11.

4. **Govt's investment in Information Technology:**

The information Technology helped a lot for the Govt. to detect the revenue which is not reported in the Income tax return of a person. All financial transactions covered by Rule 114B, 114E and otherwise got reported and it is reflected in AIS of the PAN holder, who has to report them in his return of income. The transactions may happen in any part of India, in any bank a/c., stock exchange etc. but it got reported immediately through Information technology.

5. **Completion of Assessment.**

The completion of Assessment Scrutiny was reduced from 2 years to 1 year from the end of Assessment year. It speeded up the task entrusted to Income tax Officer to complete the Assessment within given time and Govt. got the revenue in time.

6. **Faceless Assessment:** Govt. created **National Faceless Assessment Centre** at Delhi. From Financial Year 2018-19, all assessment were faceless. Assesseees were getting notice from NFAC (National

Faceless Assessment Centre), which were directed to any I.T.O. in India and not the jurisdictional I.T.O. Therefore, there were no personal contact between assessee and I.T.O. Submission by the Assessee was online and scrutiny of the submission were made by any I.T.O. located in any part of India. As there was no personal contact, there was no question of bribe. Submission was made to NFAC and orders were uploaded on NFAC which were mailed to the assesseees.

Conclusion:

The government attributed it to more stringent technology-based enforcement and compliance, including implementing the **Annual Information Statement (AIS)** from F.Y. 2020-21. What Govt. invested in Information Technology one time, Govt. got the revenue more than 10 times every year. It has immensely helped the Govt. in revenue collection.

Earlier and now also the selection for scrutiny is 2 to 3% only based on CASS (Computer Assisted Scrutiny Selection). However, by generating AIS, it become nearly 100% because, every return filer came to know that Govt. knows his income and therefore, most of the assesseees reported everything that is reported in AIS. Those who did not report, and if there is wide variation in returned income and income disclosed in AIS, he will get notice from Income tax Dept.

Widening of tax base has helped in reduction of tax evasion, reducing income tax rates, compliance with the Income tax laws, boosting public expenditure for economic growth like education, infrastructure, healthcare, social services etc. resulting in increase in GDP and increase in Per capita Income. The GOI took the help of Technology like Computer Assisted Scrutiny Selection (CASS), Non-filers monitoring system (NMS), Income tax business application (ITBA) to find out and take strict action against tax evaders. The investigation Arm of Income tax Dept. could easily find out non-filers despite having huge income and those who violate Income tax law. THE WAY AHEAD: With the use of Information Technology, widening of tax base, creation of AIS, more persons are coming up to file return of income, complying with the law and show income reported in AIS, online filing of return 24 x7 helps assessee to file return any time from

anywhere. This increases the Direct Tax Revenue of the Govt. of India. However, the return forms should be made more simpler, system should be user friendly, downloading of AIS and payment of tax must be easy. Number of banks from where tax can be paid should increase. Recently GOI has reduced number of banks from 22 (i.e. PSU banks + some Pvt. Sector banks) to 3 which are SBI, HDFC and Punjab & Sindh Bank. Govt. cannot expect that everybody has account with any of these banks. All PSU banks and Pvt. Sector banks like Axis Bank, HDFC Bank, ICICI Bank etc. should be allowed to accept tax. This will improve collection mechanism.

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Charting the Pandemic Map in Creative Writing: Portrayal of Pandemics in Selected Fictional Works

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DOI- 10.5281/zenodo.7740509

Abstract:

A Pandemic is a global epidemic or disease outbreak. These pandemics are mass murderers since time immemorial as History shows. Diseases like Plague, Smallpox, Influenza and Cholera have ruined families, destroyed towns and left the generations scarred and scared. *Since the relationship between Literature and society is axiomatic, it not only throws a mirror to nature but also before men and manners of the age, to the society of the times.* Then how will Pandemic fail to appear in the Literature of the times? Nay, whenever such calamities occurred on the earth, the creativity of the then time writers had unvarnishedly caught the crisis of the time. The beginning of 2020 witnessed this havoc firstly in Wuhan Hubei province of China and from there grabbed its 'global networking' through Europe and many other parts of the world; I.e Covid- 19 shook the whole world through community transmission, lockdown, quarantine phase, death tallies, Work from Home with salary cut, job loss leading to more hunger and financial crunch. The survivors got to know the gravity of situation resulting in the resurgence of interest in the earlier Pandemic Writing as "it provides us deepest and insightful record of events during Pandemics and tries to provide consolation in times of need" (Wagar:27) since nothing in life is permanent and *this tide will also pass* is the hopeful tinge above all adversity.

Key words: Pandemic, creativity, crisis

Introduction:

*"God scoffs at (smiles at) those he sees
denouncing the evils of which they are the
cause."*

Jean Baudrillard, *Cool Memories V*: 2000-2004

*"Hurdles have come, will come in future too.
The one who stands out hard will be the one
who will sail out fast."*

Harpreet Gaba (2020)- Pandemic Inspirational Quotes

As we all know, a Pandemic is a disease event in which there are more cases of a disease than expected spread over several Page 4 countries or continents, usually involving person- to- person transmission and affecting a large number of people. Theologically speaking, it occurs every hundred years when the earth finds it difficult to bear the burden of sins by people, leaving the land utterly barren, morally and spiritually. So, the deluge in the form of flood, earthquake Volcano, tsunami, tornado overtakes the earth to make an end of this elasticity and to cause a big turnover, thus a

balancing act, in keeping harmony with the words by Alfred Lord Tennyson in *Morte d' Arthur* (1809-1892):

*The old order changeth, yielding place to new,
And God fulfills himself in many ways,
Lest one good custom should corrupt the
world* 2

Whether it is Endemic or Pandemic, diseases both real and fictional have made a theme of literature since time immemorial. The current paper is hinging round *The Transmigration of Bodies* by Yuri Herrera (2013), *Station Eleven* by Emily Mandel (2014) and *Severance* by Ling Ma (2018)

Problem Statement:

Pandemic Writing irrespective of time, locale, milieu, language shows similar behavioural *glocal* pattern in the form of fear, consternation, irrationality, selfishness and the last but not the least, refuge in Almighty 's abode through prayer to seek solace.

Objectives:

1. To make the readers realize that Pandemic is an equanimous for that devours population from top to grass root level.
2. To sensitise the audience about the physical as well as emotional aspects of Pandemic impact that *in every Pandemic the people die at times not from plague but rather get plagued by death.*
3. To identify the similarities and dissimilarities in the literary output of writers belonging to different nationalities being a *glocal* phenomenon.
4. To throw a flood of light on the meanest as well as humane side of situation.

Benefits of the Study :

1) Theoretical Benefits:

The research paper will definitely furnish valuable insights for future generations that the difficulties in the form of calamities, pandemic descend on earth to strengthen our moral as well as spiritual muscles. To optimize the readers with the thought there is a light at the end of every tunnel. So *if winter is there, will spring be far behind?*

2) Practical Benefits:

To inculcate eco- sensibility in the minds of audience with a pantheistic tinge that the nature is not to be vanquished being a supreme force permeating the activities of the Universe. The research paper will work in the direction of emboldening the survivors by withdrawing them from the *escapist shackle of comfort zone* and make them welcome a *new normal* set up with a constructive lens.

Research Method:

1) Type of the Research:

In this Study, the writer resorts to **Descriptive- Qualitative** method.

2) Type of Data Required for the Study:

Primary Data:

The primary data source of the study are the novels *The Transmigration of Bodies* by Yuri Herrera (2013), *Station Eleven*(2014) by Emily Mandel and *Severance* (2018) by Ling Ma hinging round historical or fictional pandemics, irrespective of languages, locale or nationalities.

Secondary Data:

The Secondary sources of data comprise the background information of writers in

keeping with 'Pandemic or Endemic light' and various other socio- economical, cultural forces to have shaped the literary outputs the then time.

3) Techniques of Data Collection:

In this case, the researcher has used two techniques of collecting data:

1. Observation: This step is used to make the research work more penetrative, by reaching the depth of the matter which involves actual reading of the texts.
2. Library Research: This involves reading Newspapers, Magazines, Interviews of the writers, book reviews etc. focused on the Pandemic creativity.

4) Technique of Data Analysis:

The Research Paper is Descriptive and Qualitative and so the Portrayal of Pandemic milieu is co- related with the behavioral Pattern amidst consternation, panic and their later compromising with the situation to survive.

Literature Review:

For chronological convenience, one had better commence with the '*Transmigration of Bodies*' (2013) by Yuri Herrera. Being a post-apocalyptic *noir* fiction, the novel hinges round an underworld fixer who tries to arrange a peaceful exchange of bodies between two rival criminal gangs in a corrupt city that is in the midst of an epidemic, bearing identity somewhat to William Shakespeare's *Romeo and Juliet*, in the sense one encounters the feuding families of the Castros and Fonsecas similar to their English literary Predecessors, Capulets and Montagues, in a plague- ridden city. The major twist of the novel is not just a long standing grudge between two families but the consternation, panic as well as the atmosphere of deeper mistrust by the epidemic. The novel begins with the leading character, the Redeemer, a fixer who works primarily in the criminal underworld, Wales up with a hangover at his Apartment in the Big House. One of his neighbors, Three Times Blonde, asks him for credit for her phone. They go to her apartment to make the exchange and end up eating and having sex. Another resident of the apartment, an anemic student, hopes to share in their meal or at least have leftovers but they shun him. The next morning the Redeemer gets a call from Dolphin Fonseca, a Barrio Boss. Dolphin

wants him to find his son. Romeo, who has disappeared after visiting Lover's Lane, a street of Strip Clubs. The Redeemer learns from the bar tender Oscar that Romeo was taken by boys from the Castro family, another rich criminal household. He also learns from Dolphin's daughter, the Unruly that Dolphin has taken Baby Girl, Castro's daughter to an old house called Las Perica's. When the Redeemer goes to Las Perica's, he finds Baby Girl dead.

He calls a nurse, Vicky, to examine Baby Girl's body. She concludes that Baby Girl died from the plague, having gone several days without treatment. She also notes that the body has not been ravished after death. They go to meet the Mennonite, an old Friend and Fellow Fixer, who is working for the Castros to retrieve Baby Girl. The Mennonite tells him that Romeo is also dead. When the Redeemer asks Castro's sons about the matter, they say that Romeo, injured by a Van, had asked them to take him to their house, so he could rest for a few hours. However, he died shortly after they brought him to the house. After examining Romeo's body, Vicky concludes that their story is true. The Redeemer and the Mennonite go back to Lover's Lane to talk again to Oscar. They learn that Romeo was at the Strip Clubs in order to visit his boyfriend who worked at the Ladies' Club. When the Redeemer goes to Las Perica's to pick up Baby Girl's body, he finds out from the Unruly that Baby Girl was already coughing blood when she was picked up as hostage. The Redeemer puts Baby Girl's body in his apartment until it can be exchanged for Romeo's body. He is tempted into Three Times Blonde's Apartment to enjoy her Company but when he leaves, he is beaten by Three Times Blonde's boyfriend who has heard about her affair via the anemic student. Fortunately, a friend arrives and rescues the Redeemer.

The Mennonite calls the Redeemer to tell him that Las Perica's has burnt down. Meanwhile, the Redeemer goes to a lawyer named Gustavo and finds out that the Castro and Fonseca families are descended from the same father by different wives and that the two families have been fighting over legal possession of the ancestral house ever since

the father's death. The Redeemer returns home and the Fonsecas and Castros arrive to make the corpse exchange. There is no fight but words are exchanged over the burning of Las Pericas- each family blames the other. Both families leave, clearly distraught after seeing the dead Bodies of their family members. The Redeemer goes to Three Times Blonde but she leaves as soon as she notices that the weather is cleared. His landlady asks the Redeemer to try to free the anemic student who is in police custody and he affirms to her say.

As '*Goliyon ki Rasleela, Ram- Leela*' (2013) for Bollywood under Media Literature, '*Transmigration of Bodies*' is for Mexico. The novel is adapted to Pandemic setting despite being the reincarnation of William Shakespeare's '*Romeo and Juliet*'. At the end, aggrieved parties come together weeping for their lost children and not violence in keeping harmony with Friar Laurence in '*Romeo and Juliet*': '*their death bur(ies) their parent's strife.*'

Apart from *noir* underworld setting, the novel has not failed to catch plague *milieu*, in the sense, although the military has a strong presence (including regular street checkpoints), organized crime and violence are rampant. A plague, spread by insects and bodily fluids is ravaging the city, which has resulted in empty streets as most Citizens isolate themselves from the epidemic in their houses. So the streets of the city are deserted. The entire population is in a panic. During one scene in the novel, a peddler blowing bubbles is attacked when Citizens realize that the bubbles contain his saliva and therefore may be spreading the plague; sudden imposition of quarantine phase, lockdown restrictions had caused such breakdown that the whole society was flung into mistrust. The Redeemer's efforts to complete his job are complicated by the community transmission of the disease and the general atmosphere of paranoia throughout the city.

While '*The Transmigration of Bodies*' casts light on post- plague situation inspired by the 2009 *swine flu* pandemic in Mexico city and so falls in the category of post- apocalyptic genre, '*Station Eleven*' (2014) by the Canadian writer Emily St. John, throws a flood of light on the scenario before and after

a fictional *swine flu pandemic*, known as the '*Georgia Flu*', has devastated the world, killing most of the population, so aptly called as Apocalyptic as well as post- apocalyptic.

The novel commences with Jeevan watching Arthur Leander, the actor playing Lear, has a heart attack during the production of King Lear at the Elgin Theater in Toronto. Since he has begun training as a paramedic, Jeevan tries to resuscitate Arthur but is unsuccessful. In stead, Jeevan comforts one of the child actors in the production ,Kirsten. After leaving the play, Jeevan goes for a walk in the snow and receives a call from a friend who is a doctor in Toronto. He warns Jeevan to get out of the city as the mysterious *Georgia Flu* is spreading rapidly and will soon become a full- blown Pandemic. Jeevan loads up on supplies and goes to stay with his brother Frank. Many of the actors, actresses and others that had gathered to mourn Arthur's death die within the next three weeks. Twenty years later, Kirsten is part of a nomadic group of actors and musicians known as the ' Travelling Symphony'. Kirsten, who was eight at the time of the outbreak, can remember little of her life before Year Zero, but clings to a two- volume set of graphic novels given to her by Arthur before his death titled '*Station Eleven*'. The troupe operates on a two- year Cycle touring the Great Lakes Region, performing Shakespeare plays and classical music while Kirsten scavenges abandoned homes for props, costumes and traces of Arthur in tabloid Magazines.

The troupe intends to reunite with two members they left behind- the pregnant Charlie and her husband Jeremy at a small town. Upon arriving, they are disturbed to find that their friends are missing and the town is now under the control of the Prophet, who rapes the young girls that he claims as his 'wives'. The troupe quickly leaves and goes off- route to the Museum of Civilization, a settlement where they believe they might find their missing friends. En route, they discover a young stowaway who fled the town, as she was promised to the Prophet as another bride. Shortly after members of the troupe begin to disappear until finally the entire troupe is gone, leaving only Kirsten and her friend August. Frightened, they

continue on the Museum, hoping to be reunited with others.

Unbeknownst to Kirsten, '*Station Eleven*' is an unpublished passion project by Arthur's first wife, Miranda. Fourteen years before the collapse of Civilization, Miranda left an abusive relationship and married Arthur, a friend from her hometown in Coastal British Columbia who has since become famous. As Arthur's fame as an actor hits its peak, Miranda realised he was having an affair with the woman who would become his second wife, Elizabeth. The night that Miranda discovers the affair, she walks out of her home and asks a paparazzo outside if he has a cigarette. The paparazzo turns out to be Jeevan. Years later, when Jeevan is trying to reinvent himself as an entertainment journalist, Arthur gives him an exclusive interview: he is leaving Elizabeth and their young son ,Tyler, to be with another woman. Jeevan reflects on this while he and Frank are quarantining in Frank's apartment. After weeks, they realise that no one is coming to save them. Frank, who is paraplegic, dies by suicide to spare Jeevan from feeling responsible for him. Jeevan embarks on a journey South and after many years, finds a new settlement where he marries and in the course of time, turns out to be an established town doctor.

In year zero, one of Arthur's friends, Clark informs Elizabeth that Arthur is dead. Clark, Elizabeth and Tyler happen to be on the same flight from New York City to Toronto to attend Arthur's funeral until it is grounded at the Severn City Airport due to the Pandemic. The passengers, having nowhere to go, create a settlement in the Airport and Clark becomes the ' curator' of the Museum of Civilization, where he gathers artifacts such as iPhones and laptop computers. While most of the Airport survivors adapt to their new life, Elizabeth and Tyler embrace religious zealotry, believing that the Pandemic happened for a reason and spared those who were good. After two years, they leave with a religious cult.

When coming back to Present, it is getting viewed that Kirsten and August find a group of the Prophet 's men holding Sayid, a member of their troupe, hostage. They kill the men and free Sayid, who explains that their friend Dieter was killed while another

hostage escaped, warned the troupe and sent them on another road, explaining how they went missing. The trio leave for the Severn City Airport, but Kirsten is soon discovered by the Prophet. Just before he is about to kill her, he refers to the 'Undersea', a place from the *Station Eleven* comics. Kirsten quotes lines from *Station Eleven*, distracting the Prophet long enough that a younger sentry (having a crisis of faith) shoots and kills him, before taking his own life. The trio continues to the Museum of Civilization, where they are reunited with Charlie, Jeremy and the rest of the troupe. Clark, who has lived in the museum for twenty years, realizes who Kirsten is, her attachment to Arthur and that the Prophet was Tyler Leander. Clark takes Kirsten up to the control tower of the airport, where through a telescope he shows her there is a town to the South with electric lights, suggesting that Civilization is beginning to take root again.

Five weeks later, Kirsten leaves with the *Travelling Symphony* for the town to the South. She gives one copy of *Station Eleven* to Clark's Museum. He begins to read it and recognizes a scene that is borrowed from a dinner party which he, Arthur and Miranda once attended.

Close on the heels of '*Transmigration of Bodies*' and '*Station Eleven*', '*Severance*' (2018) too, foreshadows menace and mayhem in the wake of gloating over of Pandemic which had started devouring much of the population of the country. Being a partly apocalyptic as well as post- apocalyptic Science fiction, one comes across juxtaposition of past to Present here too in the wake of co- relation of incidences. Despite being a Science fiction, it explores themes of nostalgia, modern office Culture, monotony and intimate relationships. The narrative follows Candace Chen after societal collapse due to the Shen Fever Pandemic and in flashbacks to her earlier life. Candace and her parents emigrate from Fuzhou, China to Salt Lake city in her youth. In her twenties, Candace drifts through New York City, living on her inheritance from her parents following their deaths before getting an unfulfilling job at a publishing company called Spectra, overseeing the production of elaborate design variations of the Bible. In the early days of the Pandemic in

2011, Candace discovers that she is pregnant after splitting with her boyfriend, Jonathan. As businesses shut down as the Pandemic worsens, Candace accepts a lucrative contract with Spectra to be one of the few to continue to work in the office until a certain date because having a workplace Open is good for the Company's image. Having no loving family to be with in the US, Candace feels little drive to flee the city as most others do. Eventually she is the only employee left and is no longer contacted by her superiors. Per Jonathan's parting suggestion to revive her old pursuits in photography, she documents the final days of a deserted New York City's collapsing infrastructure on a blog called NY Ghost. When shocked by the realisation that she has fulfilled her work contract, Candace is one of the final survivors to escape the city in late 2011.

In the Present, a group of other immune survivors finds Candace near death in a New York taxi cab on the shoulder of a highway in Pennsylvania. The quasi-religious group, under the domineering leadership of Bob is traveling towards the Facility, which he promises to be safe. On the way there, they follow Bob's rituals to 'stalk' houses for supplies, killing the 'fevered' people inside. A member of the group who was seemingly healthy succumbs to Shen Fever while visiting her Childhood home, leading Candace to theorize that *nostalgia is somehow related to the mindless routines of the fevered*. The survivors arrive to find that the facility is an abandoned shopping mall in Suburban Illinois, which Bob co- owns and spent much of his youth in and begin to make a new home there. As punishment for rebellion and due to the discovery of Candace's pregnancy, Bob has her imprisoned. Candace begins to hallucinate the presence of her dead mother who helps her realize that her safety is only ensured until the birth of her baby. When Candace finds Bob in his nightly routine of walking around the mall, now fevered, she is able to steal his keys and escape. Candace takes car and heads for Chicago, planning for the future. Again one comes across people's *melioristic* attempts to survive and finding out a way during the slow apocalypse, so appears to be "a fierce debut from a writer with seemingly boundless imagination."³

Limitations:

The research paper has confined itself only to three novels belonging to 2010s, despite being the fact that *there had always been the Literature of Pandemics since there had always been Pandemics*.

Conclusion:

In the light of the above discussion, it is totally getting manifested that *everything happens with an intention*. So, this pandemic phase, as mentioned in these three novels, like Plague, Georgian Flu, Shen Fever has given new perspectives to people to live and survive. In Yuri Herrera's novel the fighting parties later repent over the lifelong feud with the death of their children and Emily Mantel's 'Station Eleven' is an ultimately hopeful novel focusing on the ways people survive by juxtaposing scenes of survivors of the epidemic, with the sudden end of the world while 'Severance' by Ling Ma foreshadows attempts by people to recover their normal health who were caught amidst

anxieties, old routines and nostalgia. So, all three novels make it a point that *Pandemics, too, can be a gateway to creativity*. But it all depends upto how one takes it in a melioristic manner. After all, wisdom is not a Station one arrives at but a manner of traveling.

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Assessment of Comprehensive Development Among Indian States

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DOI- 10.5281/zenodo.7740519

Abstract

The measurement of sustainable development is based on three pillars – society, economy, and environment. The paper explores the nexus between environmental sustainability, economic development, and social development of Indian states during 2011 – 2022. The states are selected on the basis of per capita income. A Comprehensive Development Index (CDI) is constructed by integrating Economic Development Index (EDI), Social Development Index (SDI), and Environmental Sustainability Index (ESI). There are various factors that have to be considered for developing the ESI. A particular variable, for example, air quality is not only dependent on CO₂ emissions alone. It is also dependent on various other factors as well. All the indicators are divided into different groups in such a way that the set represents the quality of the environment pertaining to that variable. As far as economic development is concerned, it cannot be assessed with a single variable. So more variables are incorporated for computing EDI. The SDI is also formulated by taking into consideration some variables that have an influence on social development. The indicators are normalized using a composite z-score technique. The scores of various economic variables, social variables, and environmental variables are ranked and CDI is developed by aggregating the ranks respectively.

Key Words: Comprehensive Development Index, Economic Development Index, Social Development Index, Environmental Sustainability Index, sustainable development

Introduction

Development can be considered as any process that creates progress, and growth or brings in a change that is beneficial for the economy. It is not completely an economic phenomenon but rather a multi-dimensional activity that reorganizes the entire system. For development to be sustainable we need to focus on all aspects of development. “Sustainable development is the development that meets the needs of the present without compromising the needs of the future generations to meet their own needs.” The concept encompasses economic development, social development, and environmental sustainability.

As a developing country, India is simultaneously assailable to climate change and is under pressure to simultaneously uplift the standard of living of the people. We have a limited supply of natural resources along with a depletion of existing resources. Besides, India is one of the most populous

countries in the world, which implies that we have to use resources more efficiently. Comprehensive development tries to bring together the incompatible trio of equity, efficiency, and sustainability.

Objectives of the Study

The objectives of the study are as follows:

1. To form the Comprehensive Development Index for the Indian states.
2. To examine the linkage between economic development, social development, and environmental sustainability.

Hypothesis

In relation to the study, the following hypothesis has been formulated:

Economic Development Index and Environmental Sustainability Index

H₀: The relationship between Economic Development Index (EDI) and Environmental Sustainability Index (ESI) is positive

H₁: The relationship between Economic Development Index (EDI) and Environmental Sustainability Index (ESI) is negative

Social Development Index and Environmental Sustainability Index

H₀: The relationship between Social Development Index (SDI) and Environmental Sustainability Index (ESI) is positive

H₁: The relationship between Social Development Index (SDI) and Environmental Sustainability Index (ESI) is negative.

Economic Development Index and Social Development Index

H₀: The relationship between Economic Development Index (EDI) and Social Development Index (SDI) is positive

H₁: The relationship between Economic Development Index (EDI) and Social Development Index (SDI) is negative

Literature Review

A complex relationship exists between economic development and environmental sustainability. Not always economic development will impede sustainability. There are some countries that control environmental degradation and manage natural resources efficiently in comparison with others. This is well applicable to developed, developing, and underdeveloped countries. Environmental sustainability is a complex aspect that includes a wide variety of indicators. Various studies incorporate the concept of the Environmental Sustainability Index (ESI) for assessing environmental sustainability. ESI is a composite index that includes a diverse set of socio-economic variables, and environmental and institutional indicators that represent and influence environmental sustainability. The relationship between environmental quality and per capita income has also been assessed with the ESI framework, which is more data-driven. Not all studies using ESI have the same conclusions. The study conducted by Sacchidananda Mukherjee and Vinish Kathuria, (2006) found that economic growth is at the expense of environmental quality. Whereas the findings of Ahmed Jafari Samimi *et.al.*, (2011) contradict the normal Kuznets curve. In their study, Swati Babu and Soumyendra Datta (2013) assessed environmental pressure by using Environment Degradation Index. They considered two models in their study, one model considered GDP as the explanatory variable and the other has taken development-based index as the explanatory variable. The relationship between

environmental degradation and economic development cannot be assessed fruitfully by using per capita income alone as an indicator. As a part of extending the analysis held in 2003 Jha and Murthy relate consumption to environmental degradation within a cross-country framework. A consumption-based HDI has been formulated and Global EKC based on consumption has been estimated. They came to the conclusion that certain kinds of developmental activities which are seen in high-consumption countries are responsible for global environmental degradation.

An inverse N-relationship between non-sustainability and modified human development Index for countries with higher and average per capita income has been obtained by a study conducted by Mohammad Hassan Fotros and Esmael Torkemani. The same study inferred an inverted U-shaped curve for countries with low per capita.

In order to assess the compatibility of economic growth with decreased environmental degradation, it is important to analyze the pattern of convergence. Octavio Fernández *et.al* (2018) evaluated international convergence in carbon dioxide per capita and per value added derived from national production and consumption-based inventories worldwide. They proposed a Bayesian structural model and tested the existence of group-specific convergence. The result of their study highlighted the incompatibility between emission targets and economic growth. Faster dispersal of new green technologies is required. As far as developed countries are concerned, faster convergence was not evident in their study.

A slower convergence rate for high-income countries relative to low-income countries was also evident in the study conducted by Bra'nnlund and Karimu (2017). They took global samples and each of the sub-samples for the study. They could identify that the rate of convergence in the global sample does not vary with capital whereas, in the high-income countries, it does.

The methodology following the club clustering approach has been applied to investigate the convergence of the per capita ecological footprints of European Union countries from 1961 to 2013. The results registered the presence of certain convergent clubs.

Indisputably, there is a growth in the use of natural resources over the past century. The main factor which is responsible for the increase in the use of natural resources is the higher demands from a rising population. But on the other hand, it also reflects the growth of the economy as well. Arrow et.al have evaluated the consumption levels in accordance with the present value criterion and sustainability criterion. They found out that the consumption's share of output is comparatively higher than the one prescribed by the present value criterion. They also found out that the nations failed to meet the sustainability criterion as well.

Dash et.al. (2011) came up with a comparative analysis of the environmental

achievements, challenges, and priorities of Indian states. They formulated an Environmental Quality Index (EQI) which indicates the state's environmental condition and the various strategies in place for the conservation of natural resources. The study could identify and establish the relationship between environmental pressures and their impacts on various aspects of sustainability.

Selection of Indicators

This study engenders the Comprehensive Development Index (CDI), which is an integration of the Economic Development Index (EDI), Social Development Index (SDI), and Environmental Sustainability Index (ESI).

Table 1. The indicators of sustainable development selected for the Comprehensive Development Index

z	Indicators	Symbol	Functional Relationship
Economic Development Index			
1	Gross State Domestic Product	GSDP	Positive
2	Per capita Availability of Power	PAP	Positive
3	Own Tax Revenue	OTR	Positive
4	Gross Capital Formation	GCF	Positive
5	Gross Fiscal Deficit	GFD	Negative
6	Social sector Expenditure	SSE	Positive
Social Development Index			
1	Literacy Rate	LR	Positive
2	Sex Ratio	SR	Positive
3	Urbanization	U	Positive
4	Infant Mortality Rate	IMR	Negative
5	Life Expectancy	LE	Positive
6	Female Work Participation Rate	FWPR	Positive
Environmental Sustainability Index			
1	Air Pollution	AP	Negative
2	Forest Cover	FC	Positive
3	Land Use	LU	Positive
4	Density of Population	DP	Negative

Economic Development Index

Gross State Domestic Product (GSDP) – This indicator explains the size of the economy. It helps to measure growth in the various sectors of the economy within the boundaries of the state.

Per capita Availability of Power (PAP) – The economic growth and per capita income depend on the availability of affordable and sustainable energy. It indicates the increase in economic activities of the economy.

Own Tax Revenue (OTR) - It indicates less dependency on the devolution of grants by the center. It includes the revenue earned by the states through sales tax, excise duties,

etc. Gross Capital Formation (GCF) – it indicates the level of investment or the accession of produced assets which leads to an increase in the total income of the economy Gross Fiscal Deficit (GFD) - it indicates a gap between revenue and expenditure Social sector Expenditure (SSE) - it creates positive externalities and helps in the upliftment and development of society.

Social Development Index

Literacy Rate (LR) - it leads to the enhancement of the country's human capital Sex Ratio (SR) - It indicates the relative survival of both females and males Urbanization (U) - is regarded as an

indicator of the availability of a better standard of living Infant Mortality Rate (IMR) - It is an indicator of maternal and infant health Life Expectancy (LE) - it is an indicator of the overall health of the community Female Work Participation Rate (FWPR) - It is an indicator of women's empowerment.

Environmental Sustainability Index

Air Pollution (AP) - it is an indicator of harmful substances in the air as a result of both the economic and social development Forest Cover (FC) - Change in forest area is an indicator of change in demand for land Land Use (LU) - it is an indicator of the socioeconomic priorities of a country. The use of land for commercial purposes increases when there is increased industrialization and modernization Density of Population (DP) - it indicates the extent of pressure on the ecosystem and the available resources.

Methodology

The indices are created for all the Indian states for a period from 2011-2021. The three dimensions of Comprehensive development are assessed with the inclusion of various indicators. The functional relationship of each indicator with the output may be positive or negative. Hence, for measuring on a common scale each of the indicators was normalized. If the indicator is positively associated with the output, then the normalization index for the corresponding indicator is estimated as

Table 1. EDI, ESI and SDI Ranks

States	Rank EDI	Rank ESI	Rank SDI
Andhra Pradesh	8	12	21
Arunachal Pradesh	24	2	17
Assam	20	13	24
Bihar	15	24	26
Chhattisgarh	13	9	22
Goa	19	7	2
Gujarat	2	20	18
Haryana	12	25	19
Himachal Pradesh	21	6	8
Jharkhand	17	22	20
Karnataka	5	15	12
Kerala	14	16	1
Madhya Pradesh	11	17	27
Maharashtra	1	21	10
Manipur	26	8	3
Meghalaya	22	3	16
Mizoram	28	1	6
Nagaland	27	4	4

$$NI = \frac{[(X)i, c, t - \text{Min}(X)i, c, t]}{[\text{Max}(X)i, c, t - \text{Min}(X)i, c, t]}$$

If the indicator is negatively associated with the output, then the normalization index for the corresponding indicator is estimated as

$$NI = \frac{[(X)i, c, t - \text{Max}(X)i, c, t]}{[\text{Min}(X)i, c, t - \text{Max}(X)i, c, t]}$$

After normalization of the indicators Principal Component Analysis (PCA) has been done and accordingly, weights have been assigned to the variables and the respective index scores have been computed. The Comprehensive Development Index is calculated by aggregating the scores of all the dimensions. $CDI = EDI + ESI + SDI$

Result

Table 1 depicts the ranks of the states with respect to EDI, ESI and SDI. It is evident that as far as economic indicators are concerned, Maharashtra, Gujarat, and Uttar Pradesh are the best performers and the worst performers include the northeastern states. The scenario totally changes when we examine the rankings of ESI. The best performers with respect to ESI are the northeastern states and the worst performers are Punjab, Uttar Pradesh, and West Bengal. As we take into consideration social development indicators, Kerala, Goa, and Manipur are the states with the best rankings. The states which lag behind are Uttar Pradesh, Madhya Pradesh, and Bihar.

Odisha	7	11	23
Punjab	18	28	14
Rajasthan	10	23	25
Sikkim	23	5	5
Tamil Nadu	4	18	9
Telangana	9	19	11
Tripura	25	10	7
Uttar Pradesh	3	27	28
Uttarakhand	16	14	13
West Bengal	6	26	15

State-wise average values and ranks of the Comprehensive Development Index are given in Table 2. The estimated values of the Comprehensive Development Index lie

between -1.24556 and 1.36339. This indicates that there is a wide disparity among the states in terms of developmental activities.

Table 2. Comprehensive Development Index for 2011-2021

States	EDI	ESI	SDI	CDI	Rank
Andhra Pradesh	0.19005	0.11818	-0.2583	0.049957	13
Arunachal Pradesh	-0.4767	0.44591	-0.1392	-0.17007	19
Assam	-0.1959	0.0939	-0.4324	-0.53434	22
Bihar	-0.0724	-0.6219	-0.5513	-1.24556	28
Chhattisgarh	-0.0176	0.21516	-0.3134	-0.11584	18
Goa	-0.1766	0.29021	0.71744	0.831042	4
Gujarat	0.74398	-0.1041	-0.1516	0.488309	6
Haryana	0.06955	-0.6411	-0.1929	-0.76443	25
Himachal Pradesh	-0.2866	0.32275	0.32036	0.356488	8
Jharkhand	-0.1637	-0.1324	-0.2511	-0.5472	23
Karnataka	0.55163	0.0695	0.07727	0.698398	5
Kerala	-0.0716	0.01826	0.89238	0.839039	2
Madhya Pradesh	0.12913	-0.0527	-0.6343	-0.55791	24
Maharashtra	1.35199	-0.1225	0.13389	1.363395	1
Manipur	-0.5755	0.25855	0.53054	0.213601	11
Meghalaya	-0.4145	0.43257	-0.1037	-0.08567	17
Mizoram	-0.6493	0.56583	0.41493	0.331442	9
Nagaland	-0.6355	0.40736	0.46451	0.23638	10
Odisha	0.20233	0.16459	-0.3621	0.004808	14
Punjab	-0.1707	-0.7102	0.00837	-0.87251	27
Rajasthan	0.13893	-0.1775	-0.4522	-0.49084	20
Sikkim	-0.4153	0.3618	0.43426	0.380794	7
Tamil Nadu	0.5775	-0.058	0.31805	0.837534	3
Telangana	0.14203	-0.0662	0.09279	0.168628	12
Tripura	-0.5536	0.18334	0.32231	-0.04795	15
Uttar Pradesh	0.71846	-0.6761	-0.8549	-0.81248	26
Uttarakhand	-0.1516	0.07475	0.01639	-0.06046	16
West Bengal	0.2115	-0.6599	-0.0462	-0.49455	21

As far as the economic Development Index is concerned, the best-performing states are

Maharashtra, Kerala, and Tamil Nadu. Uttar Pradesh, Punjab, and Bihar are the worst performers.

Table 3. The Correlation Between CDI, ED, ESI, and SDI

Indicators	CDI	EDI	ESI	SDI
CDI	1	0.238038	0.551022	0.709396
EDI	0.238038	1	-0.49034	-0.34176
ESI	0.551022	-0.49034	1	0.475864
SDI	0.709396	-0.34176	0.475864	1

The estimates show that the relationship between CDI with EDI, SDI, and ESI is positive but CDI and EDI have a very weak relationship. The estimates also indicate that if there has to be comprehensive development there should be development with regard to the economy and society along with environmental sustainability. There is a low negative correlation between ESI and EDI also between EDI and SDI so we are accepting the alternate hypothesis. A weak positive correlation exists between ESI and SDI. Thus, in this regard, we accept the null hypothesis and reject the alternate hypothesis

Conclusion

There has to be the right kind of policy intervention as far as development indicators are concerned. Social development indicators play a vital role in the overall development of the economy. Some states are lagging behind with respect to all indicators like Assam, Bihar, Haryana, Jharkhand, Madhya Pradesh, and Rajasthan. So the policies can be framed in such a way that it benefits all aspects of development.

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Energy of Strong Product of Multipartite Graphs

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DOI- 10.5281/zenodo.7740541

Abstract

Let G be a finite and simple graph. The energy, $E(G)$ of G is defined as the sum of the absolute values of the eigenvalues of G . In this article, we study the energy of strong products of multipartite graphs. Also we obtain examples of energy for these graphs.

Keywords: Energy, Graph Energy, Laplacian, Bipartite, Spectrum.

Mathematics Subject Classifications: 05C50, 05C69.

1. Introduction

Let G be any simple graph with n vertices and m edges. Let $\{\lambda_1, \lambda_2, \dots, \lambda_n\}$ be eigenvalues of the adjacency matrix $A(G)$ of graph G . Let $\{\lambda'_1, \lambda'_2, \dots, \lambda'_n\}$ be the eigenvalues of the Laplacian matrix $L(G) = D(G) - A(G)$ of G , where $D(G)$ is the diagonal matrix with degree of the vertex i as the i -th diagonal entry. It is well known that the smallest eigenvalue of Laplacian is 0.

Let $\{\lambda''_1, \lambda''_2, \dots, \lambda''_n\}$ be the eigenvalues of the signless Laplacian matrix $L^+(G) = D(G) + A(G)$ of G . Least eigenvalue of signless Laplacian of graph is 0 if and only if graph is bipartite and multiplicity of the eigenvalue 0 is equal to number of bipartite components. The matrices $A(G)$, $L(G)$ and $L^+(G)$ are real symmetric, positive semi-definite. Therefore

m_k edges, where $k = 1, 2$. We assume $V(G_1) = \{u_1, u_2, \dots, u_{n_1}\}$ and $V(G_2) = \{v_1, v_2, \dots, v_{n_2}\}$. Take r_k as regularity of graphs G_k with $k = 1, 2$, whenever required. Let $\{\lambda_1, \lambda_2, \dots, \lambda_{n_1}\}$, $\{\lambda'_1, \lambda'_2, \dots, \lambda'_{n_1}\}$, and $\{\lambda''_1, \lambda''_2, \dots, \lambda''_{n_1}\}$ be the eigenvalues of $A(G_1)$, $L(G_1)$, and $L^+(G_1)$ respectively. Let $\{\mu_1, \mu_2, \dots, \mu_{n_2}\}$, $\{\mu'_1, \mu'_2, \dots, \mu'_{n_2}\}$, and $\{\mu''_1, \mu''_2, \dots, \mu''_{n_2}\}$ be the eigenvalues of $A(G_2)$, $L(G_2)$, and $L^+(G_2)$ respectively.

Definition 2.1. Let G_k with $k = 1, 2$ be two simple graphs then,

- 1 The cartesian product $G_1 \boxtimes G_2$ of two graphs G_1 and G_2 is the graph with vertex set $V(G_1) \times V(G_2)$ in which two vertices (u, v) and (u', v') are adjacent if and only if $u = u'$ and $vv' \in E(G_2)$ or $v = v'$ and $uu' \in E(G_1)$.
- 2 The direct product $G_1 \times G_2$ of two graphs G_1 and G_2 is the graph with vertex set $V(G_1) \times V(G_2)$ in which two vertices (u, v) and (u', v') are adjacent if and only if $vv' \in E(G_2)$ or $uu' \in E(G_1)$.

their eigenvalues are non-negative real numbers.

Energy of graph G is defined as $\sum_{i=1}^n |\lambda_i|$, Laplacian energy of G is defined as $\sum_{i=1}^n |\lambda'_i - \frac{2m}{n}|$, and signless Laplacian energy of G is defined as $\sum_{i=1}^n |\lambda''_i - \frac{2m}{n}|$. For details see [4,5,6,7,8,9]

We obtain some results and examples based on the energy of multipartite graphs.

2. Preliminaries

This section contains results on a strong product of two graphs, Laplacian and signless Laplacian, needed in section 3. Readers may refer to [1, 2, 10] for basic notations and terminology.

We consider simple, finite and undirected graphs. Consider simple graphs G_k with n_k vertices and

- 3 The strong product $G_1 \otimes G_2$ of two graphs G_1 and G_2 is the graph with vertex set $V(G_1) \times V(G_2)$ and edge set $E(G_1 \boxtimes G_2) \cup E(G_1 \times G_2)$, i.e. (a, x) , (b, y) is an edge of $G_1 \otimes G_2$ if $a = b$ and $xy \in E(G_2)$ or $x = y$ and $ab \in E(G_1)$ or $xy \in E(G_2)$ and $ab \in E(G_1)$.

The adjacency matrices of cartesian product, direct product and strong product are given respectively as follows:

$$\begin{aligned} A(G_1 \boxtimes G_2) &= A(G_1) \otimes I_{n_2} + I_{n_1} \otimes A(G_2); \\ A(G_1 \times G_2) &= A(G_1)A(G_2); \\ A(G_1 \otimes G_2) &= A(G_1 \boxtimes G_2) + A(G_1 \times G_2) \end{aligned}$$

where \otimes is Kronecker product. If $\lambda_1 \geq \lambda_2 \geq \dots \geq \lambda_{n_1}$ are eigenvalues of $A(G_1)$, and $\mu_1 \geq \mu_2 \geq \dots \geq \mu_{n_2}$ are eigenvalues of $A(G_2)$ then eigenvalues of $A(G_1 \boxtimes G_2)$, $A(G_1 \times G_2)$ and $A(G_1 \otimes G_2)$ are $\lambda_i + \mu_j$, $\lambda_i \mu_j$ and $\lambda_i + \mu_j +$

$\lambda_i \mu_j =: \tau_{ij}$ respectively, where $i = 1, 2, \dots, n_1$ and $j = 1, 2, \dots, n_2$.

The Laplacian adjacency matrices of $G_1 \boxtimes G_2$, $G_1 \times G_2$ and $G_1 \otimes G_2$ are given respectively as follows:

$$\begin{aligned} L(G_1 \boxtimes G_2) &= L(G_1) \otimes I_{n_2} + I_{n_1} \otimes L(G_2); \\ L(G_1 \times G_2) &= D(G_1) \otimes L(G_2) + L(G_1) \otimes D(G_2) - L(G_1) \otimes L(G_2); \\ L(G_1 \otimes G_2) &= L(G_1 \boxtimes G_2) + L(G_1 \times G_2). \end{aligned}$$

If λ'_i and μ'_j are eigenvalues of $L(G_1)$ and $L(G_2)$ respectively, where $i = 1, 2, \dots, n_1; j = 1, 2, \dots, n_2$, then eigenvalues of $L(G_1 \boxtimes G_2)$, $L(G_1 \times G_2)$ and $L(G_1 \otimes G_2)$ are $\lambda'_i + \mu'_j$, $r_1 \mu'_j + r_2 \lambda'_i - \lambda'_i \mu'_j$ and $(1 + r_1) \mu'_j + (1 + r_2) \lambda'_i - \lambda'_i \mu'_j =: \tau'_{ij}$ respectively, where $i = 1, 2, \dots, n_1; j = 1, 2, \dots, n_2$ and r_1 and r_2 are regularity of graphs G_1 and G_2 respectively. If eigenvalues of $L^+(G_1)$ and $L^+(G_2)$ are λ''_i and μ''_j respectively, where $i = 1, 2, \dots, n_1; j = 1, 2, \dots, n_2$ then eigenvalues of signless Laplacian of $G_1 \boxtimes G_2$, $G_1 \times G_2$, and $G_1 \otimes G_2$ are

$\lambda''_i + \mu''_j$, $(\lambda''_i - r_1)(\mu''_j - r_2) + r_1 r_2$ and $(\lambda''_i - r_1)(\mu''_j - r_2) + r_1 r_2 + \lambda''_i + \mu''_j$ respectively, where $i = 1, 2, \dots, n_1; j = 1, 2, \dots, n_2$ and r_1 and r_2 are regularity of graphs G_1 and G_2 respectively.

Theorem 2.2. Let G be a graph with n vertices and m edges. Let λ_i and $\lambda'_i, i = 1, 2, \dots, n$ are eigenvalues of G and $L(G)$ respectively. Then relation between ordinary and Laplacian graph eigenvalues are as follows:

$$\begin{aligned} \sum_{i=1}^n \lambda_i &= 0; \quad \sum_{i=1}^n \lambda_i^2 = 2m, \\ \sum_{i=1}^n \lambda'_i &= 2m; \quad \sum_{i=1}^n \lambda_i'^2 = 2m + \sum_{i=1}^n d_i^2, \end{aligned}$$

where d_i is degree of vertex v_i of graph G .

Proof. See paper of I. Gutman and B. Zhou [8].

The following theorem can be found in [3].

Theorem 2.3. Let G be a graph with n vertices, m edges and let λ_1 be its largest eigenvalue. Then

$$\lambda_1 \geq \frac{2m}{n}$$

with equality if and only if G is a regular graph.

3. Energy of strong product of multipartite graphs

In this section, we study the energy of strong products of multipartite graphs.

Theorem 3.1. Let $K_2 m$ be complete bipartite graph then Laplacian spectrum of complete bipartite graph $K_2 m, m \geq 2, m \in \mathbb{N}$ is

$$\text{Spec}_L(K_2(m)) = \begin{pmatrix} 2m & m & 0 \\ 1 & 2(m-1) & 1 \end{pmatrix}$$

Theorem 3.2. Let $K_3 m$ be complete bipartite graph then Laplacian spectrum of complete bipartite graph $K_3 m, m \geq 2, m \in \mathbb{N}$ is

$$\text{Spec}_L(K_3(m)) = \begin{pmatrix} 3m & 2m & 0 \\ 2 & 3(m-1) & 1 \end{pmatrix}$$

Theorem 3.3. Let $G_1 = K_2(m)$ and $G_2 = K_3(m)$ be complete bipartite graphs then Laplacian spectrum of cartesian product of $K_2(m) \boxtimes K_3(m), m \geq 2, m \in \mathbb{N}$ is

$$\text{Spec}_L(K_2(m) \boxtimes K_3(m)) = \begin{pmatrix} 5m & 4m & 3m & 2m & m & 0 \\ 2 & 7(m-1) & 6(m-1)^2 + 2 & 3m-2 & 2(m-1) & 1 \end{pmatrix}$$

Proof. By using Equations 3.1 and 3.2, we get $\text{Spec}_L(K_2(m) \boxtimes K_3(m))$.

Theorem 3.4. Let $G_1 = K_2(m)$ and $G_2 = K_3(m), m \geq 2, m \in \mathbb{N}$ be complete bipartite graphs then energy of Laplacian spectrum of cartesian product of G_1 and G_2 is

$$E(K_2(m) \boxtimes K_3(m)) = 2m(9m^2 - 5).$$

Proof. Spectrum of $K_2(m) \boxtimes K_3(m)$, $m \geq 2, m \in \mathbb{N}$ is given by

$$\text{Spec}_L(K_2(m) \boxtimes K_3(m)) = \begin{pmatrix} 5m & 4m & 3m & 2m & m & 0 \\ 2 & 7(m-1) & 6(m-1)^2 + 2 & 3m-2 & 2(m-1) & 1 \end{pmatrix}$$

Laplacian Energy of graph $G = K_2(m) \boxtimes K_3(m)$ is sum of the absolute eigenvalues of G . Therefore

$$\begin{aligned} E_L(G) &= \sum_{i=1}^{n_1} \sum_{j=1}^{n_2} |\lambda'_i + \mu'_j| \\ &= 10m + 28m(m-1) + 18m(m-1)^2 + 6m + 6m^2 - 4m + 2m^2 - 2m \\ &= 18m^3 - 10m \\ &= 2m(9m^2 - 5) \end{aligned}$$

If $G_1 = P_2, G_2 = P_4$, then $G_1 \otimes G_2 = P_2 \otimes P_4$ as shown in the Figures 1a, 1b, and 1c. We have calculated the energy of these graphs in Table 1.

Table 1

Graph	Eigenvalue	Energy
G_1	$\{1, -1\}$	$E(G_1) = 2$
G_2	$\left\{\frac{1}{2}(\pm 1 \pm \sqrt{5})\right\}$	$E(G_2) = 5$
$G_1 \otimes G_2$	$\{\pm\sqrt{5}, -1, -1, -1, -1, 2 \pm \sqrt{5}\}$	$E(G_1 \otimes G_2) = 13$

From Table 1, it is clear that energy of $E(G_1 \otimes G_2) \neq E(G_1)E(G_2)$.

4. Concluding remark

In the present paper, we have extended the notion of energy of a graph for strong products of two multipartite graphs. We have also calculated some examples based on strong products.

Funding: Not applicable.

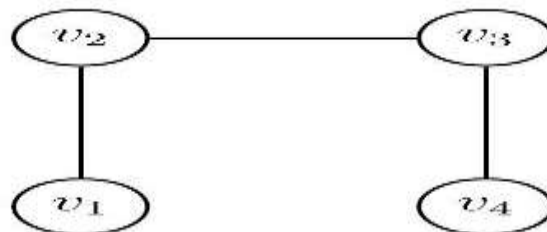
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Data Availability Statement: Not applicable.

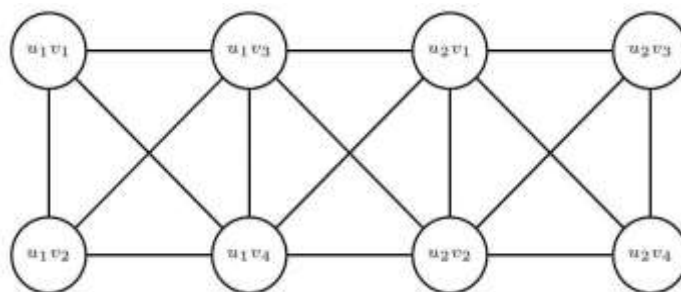
Conflicts of Interest: The author declares no conflict of interest.



(a) $G_1 = P_2$



(b) $G_2 = P_4$



(c) $G_1 \otimes G_2 = (P_2 \otimes P_4)$

Figure 1

5. Acknowledgements

I am greatly indebted to Dr. R. M. Pawale, Professor, Department of Mathematics, University of Mumbai for his valuable guidance, encouragement and support that he has bestowed upon me in my attempt to produce this paper.

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Financial Literacy: Significance in the treatment of HIV/TB among Migrants in Vasai Region

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DOI- 10.5281/zenodo.7740544

Abstract

In the world that we live in, it is highly imperative that we have a working knowledge of our finances, as financial literacy is one of the top priorities in terms of our personal growth and for the growth of our country. According to a global survey, India is home to almost 20% of the world's population; however, 76% of its adult population is not even aware of the basic financial concepts. However, unfortunately we as a nation are very poor with respect to financial literacy, when compared with the world. The changes in the economic conditions and healthcare delivery methods have shifted more healthcare costs to patients, resulting in greater financial responsibilities for the patients. As a result, it is important to understand the potential impact of financial literacy on the patient's healthcare behaviour. With the focus on delivering better health outcome at lower costs, factors that influence patient behaviour are important considerations for healthcare providers. Financial Strain is the single most important factor in making healthcare decisions for low-income individuals, who often forgo care in favour of basic needs such as food, clothing, shelter, education etc. Although researchers have tried to identify the influencing factors, issues that address financial literacy in low income groups of the migrant population from the Vasai region and its potential impact in making proper healthcare decisions, are still not dealt with. This article examines current issues relating to migrants and their health, focusing on HIV/AIDS & treatment of TB, discussing factors affecting the behaviour patterns and the decision making process of the patients, and it presents recommendations for closing the identified gaps in our current understanding.

Keywords: Socio Economic, Migrants, HIV/TB, Vasai Region,

Introduction

Maharashtra is the second most populous state and the third largest by area in India, with a current population of 11.42 Crores. Maharashtra State has remained on the forefront, in the area of health care delivery, with a well-knit rural and urban infrastructure and facilities. As per the Government of Maharashtra's 64th round of National

Sample Survey, the education level for migrants is of "primary or middle level" in both the rural and urban areas. Also, 74.5 per cent of the migrant population have education level of "below primary or lower middle". Only 0.3% of this population has migrated to the Vasai region, to seek better healthcare facilities. The vast majority however, has migrated from other states to the

Vasai region, only for better job opportunities and financial stability. This just shows that those who do not have the required basic education are also unable to take care of their health. Maharashtra is one of the earliest states of India which registered the first AIDS Case in the year 1986, in Mumbai. Vasai Region is a part of the Palghar District in Maharashtra state which has the highest prevalence of HIV/TB. In 2015 the prevalence of HIV in India was 0.26% and in 2017 was 0.22%, Adult HIV Prevalence is 0.25% in males and 0.19% in females, and as per NACO there were an estimated 21.40 lakh people living with HIV in India in 2017. Of the 7.47 Lakh People Living with HIV/TB in Maharashtra State there is a prevalence 0.28%, and in 2017 was 0.33%, which is a increase compared to 2015, but in Palghar District the prevalence was double of that of the state and the national prevalence, which is 0.64% in the year 2017-18. Especially in the Vasai region, for those tested for HIV/TB, the prevalence was reported as high as 2.16%. The reason for this high prevalence could be because of regional socio-economical conditions, behavioural aspects, migration issues, lack of financial awareness etc. all of these resulting in keeping the HIV status unknown, which leads to further complications for individuals, families and society as a whole.

As per the NACO report, Maharashtra comes under the “A” Category prevalent state, in the early and accurate diagnosis of Tuberculosis. Prompt and appropriate treatment is crucial in eradicating the TB epidemic. However, it is observed that poor financial planning among migrant patients is a major factor leading to the failure in this mission.

The lack of financial literacy is not a problem only in emerging or developing economies. Consumers in developed or advanced economies also fail to demonstrate a strong grasp of financial principles in order to understand and negotiate the financial landscape, manage financial risks effectively and avoid financial pitfalls. Despite the rapid scale up of antiretroviral therapy (ART), Tuberculosis (TB) remains the commonest opportunistic infection and the cause of death among HIV infected individuals, in resource limited settings, in countries like India. Incidence of TB in individuals on ART in private healthcare sectors in India is frequently studied; however there is no data about the prevalence among the migrant population. After the passing of the Affordable Care Act (ACA) in 2010 in India, there was a significant change in the scenario, and new trends began to emerge. Traditional roles and responsibilities and authorities of various healthcare stakeholders were now tested or altered as a result of some clauses in this act. However the Low-income individual is often reluctant or too embarrassed to discuss their financial hardships and constraints with the concerned caregivers. As a result, physicians and caregivers frequently misinterpret that choice as noncompliance with medical care. The Financial strain can cause nonadherence to the physicians recommendations, that appear to reflect a patient's lack of engagement in care, and therefore he voluntarily stops his treatment.

Significance / Scope of the study

Understanding Financial Literacy: Significance in the treatment of HIV/TB among Migrants in Vasai Region.

Objective

1. To understand the extent of financial literacy in the Region for those affected with HIV/Aids and Tuberculosis.
2. Finding out the Problems faced by migrants due to the lack of Financial Literacy.

II Methodology

The Research Methodology for this study consists of 1) Data required 2) Source of Data

1. Data required: This study is empirical in nature as it depends on the collection of data. The researcher collects such information showing educational Data, family profile, health profile & economical status of the family.
2. Source of Data: Data collection using primary sources such as questionnaires and Interviews and Secondary sources like research papers on related topics, books and the internet.
3. This research was conducted with a sample size of 100 people, living with HIV/TB, from low-income migrant families, with participants in the age group of 35 years to 50 years in the Vasai region. Furthermore, analytic algorithms were developed to help healthcare teams recognize, when the individual is unable to adhere to medical recommendations due to the presence of financial stress and other unfulfilled needs.

III Analysis of the Study

Research focusing on “Financial Literacy: Significance in the treatment of HIV/TB among Migrants in Vasai Region” through the questionnaires and interview schedules, made the analysis and interpretation of this data possible. Vasai Region is known for its high prevalence of HIV/Aids and TB. From the study it was noticed that low education and inadequate financial

literacy, is one of the major causes resulting in lesser opportunities of Income generation for this population. Only 12% of the people living with HIV/AIDS/TB have a higher education, with the remaining 88% of the population being less literate, which results in lesser opportunities of earning a decent income. It is observed that most people in this group earn less than Rs.10,000 a month, with more than 5 people living in the family, which is one of the major reasons why those affected are facing difficulties in day to day survival. They are always in the midst of a financial crisis. It is observed that 78% people living with HIV/AIDS are, since the last five years facing problems, their poor health leading to more expenses in the clinical management of their illness, along with the family facing economic crises. From this study, it was noticed that only 19 % of the migrant population are planning their finances for their future treatment. Only 18% of the people living with HIV/AIDS/TB have completed their secondary education, which gives us a fair idea about the lack of financial literacy in HIV & TB infected patients, with 80% of them stating that financial literacy was not important to them. 86% of this migrant population is facing a financial crisis in continuing their treatment. Almost 95% of them stated that they were able to treat their HIV/TB illness due to the availability of governmental and non-governmental schemes, but were unable to financially take care of other associated illnesses, as there was a substantial cost involved. Most of these patients, almost 90% of them, found it difficult to take care of their nutritional support, the lack of which resulted in lower immunity and contacting other contagious diseases. 90% of this migrant population are single males

taking care of their families back in their home states, sending back more than 75% of their earnings, thus facing a major financial crunch in supporting their own treatment here. Furthermore the presence of the family being present makes a huge impact in the patient making the decision to complete their treatment. Also 90% of the patients during their counselling stated that they were not made aware of the financial implications and the planning that would be required in the course of their treatment.

Conclusion

Financial Planning & Health Emergency Preparedness

90% of the patients during their counselling stated that they were not made aware of the financial implications and the planning that would be required in the course of their treatment. In the process of their counselling, only the medical issues of the patient are discussed and taken care of. It has to be emphasised that counsellors and caregivers in this area of work, make the patients aware about the best ways they can plan the finances during their treatment. Furthermore, focusing on the future helps the patients make sound financial plans, which will be crucial in the decision-making process during treatment. Migrant patients suffering from HIV/TB that come from the lower income group are often hesitant or embarrassed to discuss their financial hardships and constraints with the concerned caregivers. This should not be misunderstood as a lack of participation for treatment, but should be addressed with due care in explaining the options that could be offered in terms of creating a safe and supportive environment for income earning opportunities. The concerned caregivers should be sufficiently

equipped with different options to suit the different need of these affected individuals.

Financial Stress Takes a Toll on Health

Financial stress can lead not just to poor physical health, but also lead to mental health issues. Ongoing stress about finances has been linked to migraines, heart disease, diabetes, sleep issues, and also mental health issues like anxiety and depression among this migrant population. If left untreated, these conditions leading to lower immunity, causing correlated life-threatening diseases, which can plunge those affected with HIV/AIDS/TB, even further into debt.

Thus there is a urgent need for a inclusive and comprehensive financial literacy campaign to be introduced, not just for the migrant workers and the financially stressed, but also for the caregivers in the community, so that effective strategies could be planned, devised and implemented for the success in the treatment process of this migrant population in the Vasai region who are suffering from HIV/TB.

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From Vulnerability to Prosperity: A Path to Sustainable Tribal Development through Education, Employment, Health, and Family Welfare

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DOI- 10.5281/zenodo.7740556

Abstract

Tribal communities are groups of people who live in a specific region, are largely self-sufficient, and separated from national society. They make up around 4% of the world population and about 8.6% of India's population. They are recognized as distinct groups with similar lifestyles but varying cultures, customs, traditions, languages, and beliefs. In India, Scheduled Tribes are communities designated as such by the President and recognized by the Indian Constitution. They occupy 15% of India and are at various stages of social, economic, and educational development. The criteria for designation as a Scheduled Tribe include indications of primitive traits, distinctive culture, geographical isolation, shyness of contact, and backwardness. The goal of sustainable development is to balance economic growth, social well-being, and environmental protection in a way that is economically, socially, and environmentally sustainable over the long term. The challenge of ensuring sustainable development for tribal communities is to understand and address their priorities while respecting their cultural identity. The tribal population in India faces numerous problems, including land rights and displacement, poverty and economic marginalization, and health and education disparities.

Keywords - Sustainable Development, Scheduled Tribes, Literacy, Employment, Health & Welfare, Schemes, Policies,

Introduction

A tribe is a group of people who live in a specific region, depend on the land for their livelihood, are largely self-sufficient and separate from national society. There are around 200 million tribal people in the world, making up 4% of the global population. They are found in many parts of the world and are often among the poorest. In India, around 8.6% of the population is tribal, with a significant concentration in the states of Madhya Pradesh, Chhattisgarh, Jharkhand, Bihar and Orissa. Tribal people play a crucial role in shaping India's cultural heritage and occupy a significant part of the country's history. They live in different ecological and climatic regions and make up a significant portion of India's population. The unique culture and traditions of each tribal community add to the diversity of Indian culture. The sustainable development of the tribal population is a challenge and requires

specific strategies. According to the Indian Constitution, there are currently 697 notified tribal groups, with more than half concentrated in the states of Madhya Pradesh, Chhattisgarh, Maharashtra, Orissa, Jharkhand and Gujarat. However, no community has been designated as a tribal group in Haryana, Punjab, Delhi, Pondicherry and Chandigarh.

Tribal communities are considered to be the original inhabitants of the earth and are recognized as distinct groups within a society that share similar lifestyles, but with varying cultures, customs, traditions, languages, and beliefs. They are also referred to as 'Adivasi', meaning the first inhabitants of the land. The term 'tribe' originated during the Greek city-state era and the early formation of the Roman Empire, deriving from the Latin word 'Tribus' meaning 'a group of people forming a community with a common ancestry' (Lal 2019: 2).

1.1 Scheduled Tribes –

According to Article 366 (25) of the Indian Constitution, Scheduled Tribes are communities that have been designated as such by the President through a public notification or a subsequent amendment to the Constitution by Parliament. This designation is made in accordance with Article 342 of the Constitution.

The criteria followed for specification of a community as a Scheduled Tribe are:

1. Indications of primitive traits,
2. Distinctive culture,
3. Geographical isolation,
4. Shyness of contact with the community at large, and
5. Backwardness.

1.2 Sustainable Development –

Sustainable development is a concept that refers to a process of economic and social development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs. It involves balancing economic growth, social well-being, and environmental protection in a way that is economically, socially, and environmentally sustainable over the long term. This means considering the impact of development activities on natural resources, social equity, and future economic prospects. The goal of sustainable development is to create a better quality of life for all, now and in the future.

The concept of sustainable development has acquired the central theme of every tribal development. The best explanation to sustainable development was given by the World Commission for Environment and Development (The Brundland Commission) in its 1987 report, *'Our common future'*, as 'the ability to meet the needs of the present without compromising the ability of the future generation to meet their own needs' (Oraon, 2012). The goal of sustainable development is to achieve economic growth, social equity, and environmental protection in a balanced and harmonious manner. This approach seeks to conserve and enhance natural resources while embracing innovative and responsible technologies. The objective is to meet the needs of present generations without compromising the ability of future generations to meet their own needs. The challenge in ensuring the sustainable development of tribal communities is to understand and address their priorities

and concerns while respecting their cultural identity. This is increasingly important as the shrinking economic base of tribal communities due to deforestation and commercial exploitation of forests exacerbates their vulnerability. Industrial and economic development, such as large-scale power projects, mines, and dams, often result in the displacement and impoverishment of tribal communities. Therefore, it is crucial to adopt a development approach that takes into account the unique needs and perspectives of tribal communities.

The tribal population faces numerous problems and issues, including:

1. Land rights and displacement
2. Poverty and economic marginalization
3. Health disparities
4. Education disparities

ii. Literature Review

(Priya, Dec. 2019) India, comprising 8.6% tribal population, has the potential to provide sustainable solutions to many social challenges through proper recognition, adoption and mainstreaming of indigenous knowledge. Improvement in the income, women and child health and education of these communities would also significantly improve national indicators. (Kohli, 1997) The book provides a comprehensive examination of the challenges and opportunities for sustainable development in these regions. The authors explore the unique cultural, social, and economic characteristics of tribal and backward areas and explore innovative approaches, including community-based participatory models, to address their development needs.

(Loomis, 2000) This paper makes the case that these grassroots initiatives drew on leftover stocks of social and cultural capital for their inspiration and offer helpful insights into issues with conceptualizing and operationalizing 'sustainable development.'. (Patil, 2020) Tribal Ashram schools are ineffective due to gaps in the implementation of the tribal education program in India. Authors taken initiatives to advance the educational status of India's tribal population are presented in detail. Academics and professionals from various fields, including social work, education, and administration, have contributed to the book. (Mehta, 1991) examines in detail the operation of the constitutional protection/safeguard provided in the Indian Constitution to the Scheduled Tribes and

assesses the effectiveness of those protections in achieving the objective underlying the concept of compensatory discrimination.

Objectives Of Study

1. Assess literacy among STs and determine factors causing disparities in literacy rates between STs and the general population.
2. Analyses occupational patterns and worker participation among STs, identify challenges in securing employment.
3. Study impact of urbanization/industrialization on tribal economy, livelihood strategies, and tribal communities.
4. Identify gaps in health/family welfare services for STs, evaluate government efforts to improve access.
5. Propose comprehensive approach to sustainable tribal development addressing challenges in literacy, employment, health, and family welfare.

Hypotheses

1. Literacy disparities between STs and the general population can be attributed to various factors, including lack of infrastructure, low attendance in schools, and poor quality of education.
2. The depletion of natural resources, rapid urbanization and industrialization, and migration to cities have had a significant impact on the tribal economy and livelihood strategies, leading to challenges in securing employment.
3. Health and family welfare services for STs still have significant gaps, despite government efforts to improve access.
4. To promote sustainable tribal development in India, it is important to take into account the unique cultural, social, and economic circumstances of each tribal community, and to adapt policies accordingly.

Research Methodology

Conventional Anthropological tools and techniques of data collection were used while the Participant Observation Method was the guiding factor throughout the study. A census schedule was administered in the study to collect data and other demographic details. Data related to their agricultural lands, income and expenditure also were collected. Interview method was used to extract data on development programmes and their impact on their economy and social

life. Data related to development programmes were procured from the Office of the Registrar General, Census India, different reports from The National Tribal Policy Ministry of Tribal Affairs, Ministry of Rural Development, Ministry of Tribal affairs - Govt. of India. A few interviews were conducted with the Education Officers, The School Head-Master, Medical doctors and officials concerning departments. Field work was conducted. The research conducted in a participatory manner, ensuring the active involvement of the tribal communities and ensuring that their perspectives are taken into account. The findings of the research used to develop a comprehensive approach to sustainable tribal development that addresses the challenges faced by the tribes in accessing literacy, employment, health, and family welfare.

Analysis and Discussion

Literacy -

The Indian government passed the 86th Amendment Act in 2002 to make education a fundamental right for children ages 6-14, and to improve its education policy. To ensure success, the government set clear standards and sustained funding. The Mid-Day Meal scheme was revised to provide additional support and nearly 10.88 crore children benefited from it in 2004-05. Residential upper-primary schools were established for girls, including those from tribal communities, in educationally underdeveloped areas. The Rashtriya Madhyamik Shiksha Abhiyan¹, a national mission for secondary education, was launched in 2009 with the goal of improving access, quality, and equity in secondary education by 2017 and achieving universal retention by 2020.

Many schools still lack minimum facilities, and tribal children continue to face barriers to education, such as low attendance and poor infrastructure. The quality of education also needs improvement, as the literacy rate for Scheduled Tribes remains lower than the national average. The parliamentary committee highlighted that while the overall literacy gap has decreased, there is still a significant disparity between the literacy rate of Scheduled Tribes and the general population,

¹ It is a centrally sponsored scheme of the Ministry of Human Resource Development, Government of India, for the development of secondary education in public schools throughout India. It was launched in March 2009.

especially in states with a large tribal population in remote areas. As per Census figures, literacy rate for STs in India improved from 47.1% in 2001 to 59% in 2011. Among ST males, literacy rate increased from 59.2% to 68.5% and among ST females, literacy rate increased from 34.8% to 49.4% during the same period. Literacy rate for the total population has increased from 64.8% in 2001 to 73% in 2011. There is a gap of about 14 percentage points in literacy rate of STs as compared to the all India literacy rate. Literacy Rates based on Census 1961 onwards are given below in **Table 1.1**

Table 1.1 : Literacy Rates among STs and ALL

Year	All			Scheduled Tribes		
	Persons	Males	Females	Persons	Males	Females
1961	28.30	40.40	15.35	8.53	13.83	3.16
1971	34.45	45.96	21.97	11.30	17.63	4.85
1981	43.57	56.38	29.76	16.35	24.52	8.04
1991	52.21	64.13	39.29	29.60	40.65	18.19
2001	64.84	75.26	53.67	47.10	59.17	34.76
2011	73.00	80.90	64.60	59.00	68.50	49.40

(Source: Census 2011, Office of the Registrar General, India)

Employment -

Traditionally, tribal communities in India followed an economy that was in harmony with nature and utilized indigenous technologies. While some tribes have adopted a way of life similar to their non-tribal neighbours, others continue to live with -

1. forest-based livelihoods,
2. pre-agriculture technology,
3. stagnant or declining populations,
4. low literacy rates, and
5. a subsistence level economy.

However, over the years, the tribal economy and livelihood strategies have undergone significant changes. The depletion of natural resources, which the tribes were heavily dependent on, has contributed to these changes. Post-independence, rapid urbanization and industrialization have separated the tribes from their traditional resource base and prompted them to seek alternative livelihood options. Some tribes have become reliant on urban markets due to an increase in population, limited access to food, and loss of their natural habitats. As a result, many tribes people have migrated to cities in search of employment and income, exposing them to exploitation and marginalization in unfamiliar urban

environments. Those who remained in their original habitats have diversified their occupations to sustain themselves.

The table on occupational data reveals that, among total workers, 59.8% of the tribals belong to rural areas as compared to 50% of SCs and 48.9% of the all India population. The corresponding percentage data derived from Census 2011 is lower in all cases in this category. In the urban areas, among total workers 42.6% were STs as compared to 41% of SCs and 39.9% of all population. Census of 2001 is lower in all the cases in this category too. Comparing the worker participation rates as obtained from census 2001 and 2011 data it was observed that 43.5% of STs males were main workers compared to 23.9% ST females. Among the marginal workers, 9.7% were ST males whereas 20.9% were ST females. Overall, among 53.2% were male and 44.8% were female workers. All the above parameters for Census 2011 reveal significantly higher percentage both for male and female workers.

Table 1.2: Comparing the worker participation rates

	STs		All		Gap	
	2001	2011	2001	2011		
Total workers						
Male	53.2	55.6	51.7	68.9	1.5	- 13.3
Female	44.8	44.4	25.6	31.1	19.2	13.3
Main workers						
Male	43.5	63.9	45.1	75.4	-1.6	- 11.5
Female	23.9	36.1	14.7	24.6	9.2	11.5
Marginal workers						
Male	9.7	40.2	6.6	49.2	3.1	- 9.0
Female	20.9	59.8	11	50.1	9.9	9.7

(Source: RGI, census of India 2001, 2011)

Health and Family Welfare Programmes

The Scheduled Tribes constitute 8.6% of India's total population, as per the 2011 Census. Over the decade between 2001 and 2011, the tribal population grew annually by 2.1%, although some states experienced negative growth, such as Nagaland and

Andaman & Nikobar Islands. The annual growth rate was highest in Sikkim (6.2%), Bihar (5.7%), and Himachal Pradesh (4.7%). However, due to the lack of a comprehensive civil registration system in the country, it is challenging to obtain accurate and up-to-date estimates of fertility and mortality. While there is some state-level data on fertility and mortality, no such data is available for the Scheduled Tribes, making it difficult to implement targeted planning and programs. The absence of a reliable data source also hinders the ability to monitor and evaluate the impact of programs aimed at improving the lives of Scheduled Tribes.

The public health care infrastructure in tribal areas is similar to that in rural areas, with a lower population ratio. For example, at the village/hamlet level, there is usually one ASHA² and Anganwadi per 1000 population in the rural area, while in tribal areas these facilities are often only available for every 300 to 500 people. The same disparity is evident in the provision of health sub-centres (one per 3000 populations in tribal areas compared to one per 5000 populations in rural areas) and Primary Health Centres (one per 20,000 in tribal areas compared to one per 30,000 in rural areas). The majority of the Scheduled Tribe population depends on the public health system as private providers are not interested in working in these areas. This highlights the importance of improving the existing public health system.

The infant and child mortality rates in the Scheduled Tribes have improved, but at a slower pace than in the total population, resulting in these rates being approximately one-third higher among the Scheduled Tribes. The 2001 Census of India estimated the Infant Mortality Rate among the Scheduled Tribes at 88 per 1000 live births, compared to the all-India estimate of 68 (including Scheduled Tribes), indicating a 30% higher rate among the Scheduled Tribes.

Unfortunately, comprehensive data on the national prevalence and incidence of various diseases among the Scheduled Tribes is virtually non-existent. The Indian Council of Medical Research collects some data on

certain diseases in certain states and among some tribes, but otherwise, conclusions on the health of Scheduled Tribes are based on qualitative impressions from stakeholders and doctors/NGOs working in tribal-dominated areas.

The diseases prevalent in tribal areas can be broadly classified into following categories:

Tribal areas often face a high burden of disease due to a combination of factors such as poverty, lack of access to healthcare, poor living conditions, and limited access to safe water and sanitation. Some of the common diseases found in tribal areas include:

1. Malaria
2. Tuberculosis
3. Diarrheal diseases
4. Nutritional deficiencies (e.g. iron-deficiency anaemia)
5. Respiratory infections (e.g. pneumonia)
6. Neglected tropical diseases (e.g. dengue, filariasis³)
7. Reproductive and child health issues (e.g. maternal and neonatal deaths)
8. Non-communicable diseases (e.g. diabetes, cardiovascular disease)

Suggestions

Agricultural training and labour-intensive processing industries are crucial for tribal areas. To achieve this, promote organic farming, eco-forestry, and micro-watershed development. Address water availability and provide tribals with access to credit and marketing facilities. Monitor social justice by the National Commission for Scheduled Tribes. Address the declining participation of Scheduled Tribes in MGNREGS⁴ by a special agency. Education should provide children with understanding of their environment and skills to earn a livelihood. Address gender gap by greater gender focus and social mobilization with adequate infrastructure. The curriculum should be tailored to the socio-cultural, tribal, and linguistic context.

³ *Filariasis* is a tropical infectious disease caused by filarial parasites which are transmitted to humans through the bites of infected mosquitoes.

⁴ Mahatma Gandhi National Rural Employment Guarantee Scheme - An employment guarantee scheme in rural India.

² An Accredited Social Health Activist is a community health worker employed by the Ministry of Health and Family Welfare as a part of India's National Rural Health Mission.

Strengthen vocational education and establish residential schools closer to tribal settlements. Participation is key in any policy or program for tribal people. Health care programs should consider social determinants of health. Schools should be primary health knowledge centres, with special attention to women, children, elderly, and disabled. Reliable data and 1% of the budget should be allocated for the Scheduled Tribe population.

Conclusion

In conclusion, India passed the 86th Amendment Act in 2002 to improve its education policy and make education a fundamental right for children aged 6-14. The Mid-Day Meal scheme and Residential upper-primary schools for girls in underdeveloped areas were established to support education. Despite progress, many schools still lack minimum facilities, and there is still a significant disparity in literacy rates between Scheduled Tribes and the general population. The tribal economy has undergone significant changes over the years, leading to urban migration and loss of traditional livelihoods. Among workers, 59.8% of tribals were in rural areas and 42.6% in urban areas. The worker participation rates show an increase in both male and female ST workers from 2001 to 2011, with 53.2% being male and 44.8% being female workers in 2001, increasing to 55.6% and 44.4% respectively in 2011.

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An Analytical Note on Sustainability of Alternative fuel with Special Ref. To Hydrogen

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International Conference on 17th February 2023 organized by St. Gonsalo Garcia College

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DOI- 10.5281/zenodo.7740564

Introduction---

One of the major requirements for sustaining human progress is an adequate source of energy. The current largest sources of energy are the combustion of coal, oil and natural gas. They will last quite a while but will probably run out or become harmful in tens to hundreds of years. Solar energy will also work but is not much developed yet except for special applications because of its high cost. This high cost as a main source, e.g. for central station electricity, is likely to continue, and nuclear energy is likely to remain cheaper. A major advantage of nuclear energy (and also of solar energy) is that it doesn't put carbon dioxide (CO₂) into the atmosphere. How much of an advantage depends on how bad the CO₂ problem turns out to be. This research paper discusses energy as a part of a more general discussion of why human material progress is sustainable and should be sustained. Energy is just one of the questions considered.

Role of Government in India--

The fact that Mumbai's air is worse than Delhi is a matter of concern, and so is the global climate change problem. Therefore, for the fight against economic change in India, a fund of 16 thousand crore rupees green bonds has been sold by the Government. The sale of bonds is managed by the Reserve Bank. Banks, financial institutions, and general public also issued bonds, which means that everyone can invest in them. Those who invest in bonds get interest in a fixed form and after a fixed period of time. The sale of this bond has started from January 25. 16000 crore rupees raised from this fund. This was necessary because climate change is affecting many things including agriculture, food and clean drinking water supply. The World Bank report has also given this warning and emphasized on preparedness. In order to avoid shortage of funds in such a situation, the finance minister had announced this restriction in the budget of 2022-23 last year. As the government owns the capital, there is complete assurance about the safety of the money. The five and ten year green bonds maturing from 2018 to 2033 are being guaranteed duty at the rate of 7.38% and 7.35% respectively. Percent bonds will be reserved for retail personal investments. Compared to the rest of the world and Asian

countries, India is a very late entrant in raising funds through green bonds. Greenium is the price advantage received by the government when issuing green bonds in auctions compared to auctions of ordinary sovereign bonds available in the market. From the above discussed policy of government it is clear that there is urgent need of fuel sustainability and also sustainability of ecology. Environmental damage and increasing cost of petrol and diesel necessitates the search for alternative energy sources.

Various source of energy and their uses-

Objectives--

1. To know the various alternative source of energy.
2. To study sustainability of alternative fuel.
3. To analyse whether Hydrogen can be used as an alternative source of energy.

Ethylene

Ethylene is produced from a variety of hydrocarbon sources, usually in conjunction with other unsaturated hydrocarbons, notably propylene. In USA in recent year ethylene has been made mostly from its saturated analog, ethane, obtained from natural gas, which is almost pure methane. Many of the natural gases in USA contain usable quantities of higher hydrocarbons, such as ethane and propane. Most European

ethylene has been obtained by steam reforming of naphtha, a mixture of hydrocarbons obtained from distillation of crude oil but not usable as petrol. Vaporized naphtha is mixed with about half its own weight of steam and passed through coil tubes in furnace which heats the reaction zone to about 900 degrees Celsius. When the gas mixture emerges from the furnace it is cooled in a heat exchanger, which generates steam for use in the process. If oil supplies get scarce and become more expensive in future, it is possible that the chemical industry and automobile industry may depend once more on coal as coal reserves worldwide greatly exceed known oil reserves. The 21st century call best chemical industry food probably start with the conversion of coal and steam to synthesis gas a mixture of carbon monoxide and hydrogen. This could be reform to methanol which could become the major zeolite catalysts, the major source of automobile fuel. As oil sources become scarcer, the production of petrol and unsaturated hydrocarbons for the chemical industry from methanol by zeolites may become increasingly important. The development of petrochemicals industry has taken place almost exclusively since World War II when polythene manufacture started in the 1930 century ethylene was made by dehydration of ethanol (C_2H_5OH). Today ethanol for industrial uses is made largely from ethylene. However if oil and natural gas supplies do run out, it would be possible to produce ethylene again from ethanol made by fermentation from carbohydrate containing raw materials.

Electricity

It is a duplicity to use electricity instead of petrol and diesel to avoid pollution and to generate that electricity by burning highly polluting coal.

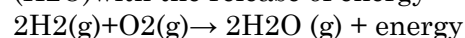
Lithium, a basic component of electric vehicle batteries, is in limited supply in the world, and countries and companies such as Tesla are competing for ownership of it. Lithium was available at a price of 500 dollars per ton for 2019, now its price has increased to ten times that is five thousand dollars per ton, and the demand for lithium is likely to increase 100 times in the next ten years. Also, we have a shortage of the much needed metal, Copper. In the year 2030, 200

gigawatts of electricity will be required only for automobiles and to achieve this goal, the demand for batteries will increase and accordingly the demand for copper, lithium, manganese, cobalt will also increase. Views of owner of Suzuki that were expressed in the Loksatta newspaper say that instead of relying on electric batteries, hydrogen should be taken as an alternative solution. It is not appropriate to put so much emphasis on electric cars because in future electric cars will be expensive and there will be no possibility of reduction in their price.

Hence, use of electrical vehicles will be not effective to reduce pollution. Burning of highly polluting coal for generating electricity will continue affecting the environment

Hydrogen

It is necessary to search for alternative energy sources. So, considering the use of **green hydrogen** as a fuel, the central government has made a provision of Rs. 20,000. Green or environmentally friendly hydrogen is hydrogen separated from water by boiling water fusion process i.e. running an engine on the steam produced by boiling water. But it is not a carrier of energy so it is necessary to convert hydrogen into electricity. Hydrogen is the lightest element and it is rarely found in its pure form in the atmosphere. Hydrogen in the flame of pure hydrogen burning in air, the hydrogen (H_2) reacts with oxygen (O_2) to form water (H_2O) with the release of energy



In atmospheric air rather than pure oxygen, hydrogen combustion may yield a small amount of nitrogen oxides with the water vapor. The energy released allows hydrogen to be used as a fuel. In an electrochemical cell, that energy can be used with relatively high efficiency. Even if the energy is used to produce heat, thermodynamics place limits on the thermal efficiency of the process.

Hydrogen is usually considered to be an energy carrier, like electricity, as it must be produced from a primary energy source such as solar energy, biomass, electrical energy (e.g. in the form of solar PV or via wind turbines), or hydrocarbons such as natural gas or coal. Conventional hydrogen production using natural gas induces

significant environmental impacts; as with the use of any hydrocarbon, carbon dioxide is emitted. At the same time, the addition of 20% hydrogen (an optimal share that does not affect gas pipes and appliances) to natural gas can reduce CO₂ emissions from heating and cooking. Hydrogen is locked up in enormous quantities in water, hydrocarbons, and other organic matter.

One of the challenges of using hydrogen as a fuel comes from being able to extract hydrogen efficiently from these compounds. Currently, steam reforming, which combines high-temperature steam with natural gas, accounts for the majority of the hydrogen produced. This method of hydrogen production occurs at 700–1100°C, and has an efficiency of 60–75%. Hydrogen can also be produced from water through electrolysis, which is less carbon-intensive if the electricity used to drive the reaction does not come from fossil-fuel power plants but rather from renewable or nuclear energy sources. The efficiency of water electrolysis is about 70–80%, with a goal of 82–86% efficiency by 2030 using proton exchange membrane (PEM) electrolyzers. Other methods for producing hydrogen for fuel are also currently being tested. Renewable liquid reforming is the process of taking liquid fuels, like ethanol, and reacting with high-temperature steam to produce hydrogen near the point of end use. In the presence of a catalyst, hydrogen, carbon monoxide and carbon dioxide are produced. The resulting carbon monoxide is reacted at high-temperatures with steam to produce more carbon dioxide and hydrogen in a "water-gas shift reaction." Then the hydrogen is separated and purified.

Another method is using starch-rich feedstocks to ferment to produce hydrogen. This is known as dark fermentation and uses anaerobic bacteria primarily to ferment mainly carbohydrates into hydrogen. Other processes are photoheterotrophic processes. In this process, a prokaryotic microorganism called pure non-sulphur bacteria (PNS) or green algae reacts with light to produce hydrogen, via a pathway of photosynthesis. Unlike dark fermentation, these processes use enzymes like hydrogenase and nitrogenase for generation of molecular hydrogen. Currently, the breakdown of

hydrogen gas production is mainly coming from fossil fuels. In fact, 96% of hydrogen is produced directly from fossil fuels, the majority of which coming from natural gas (48%). Only 4% of hydrogen is produced indirectly from fossil fuels by electrolysis with no breakdown in green hydrogen.

Green hydrogen is any hydrogen that is produced from renewable energy. This includes electrolysis with electricity coming from green sources such as solar, wind, and hydroelectric power.

Blue hydrogen is hydrogen that is produced from natural gas in advanced processes which emit greenhouse gas emissions.

Grey hydrogen is produced from steam methane reforming, or steam reforming, which has a higher greenhouse gas emission total than blue hydrogen.

Finally, **brown hydrogen** is produced from coal in Coal Classification which has one of the highest greenhouse gas emissions per ton of hydrogen produced. Thermochemical water splitting is the newest source of green hydrogen production beyond hydrolysis. Using chlorine and sulphur, in the presence of a nuclear reactor, sunlight can be focused above a solar thermochemical hydrogen (STCH) reactor to produce hydrogen. Once produced, hydrogen can be used in much the same way as natural gas – it can be delivered to fuel cells to generate electricity and heat, used in a combined cycle gas turbine to produce larger quantities of centrally produced electricity or burned to run a combustion engine; all methods producing no carbon or methane emissions. In each case hydrogen is combined with oxygen to form water. This is also one of its most important advantages as hydrogen fuel is environmentally friendly. The heat in a hydrogen flame is a radiant emission from the newly formed water molecules. The water molecules are in an excited state on the initial formation and then transition to a ground state; the transition releasing thermal radiation. When burning in air, the temperature is roughly 2000 °C (the same as natural gas).

Historically, carbon compounds have been the most practical carriers of energy, as hydrogen and carbon combined are more volumetrically dense, although hydrogen itself has three times the specific energy

(energy per unit mass) as methane or gasoline. The reason that steam–methane reforming has traditionally been favoured over electrolysis is that whereas methane reforming directly uses natural gas as a source of energy, electrolysis requires electrical energy for this. When the cost of producing electrical energy (via wind turbines and solar PV) falls below the cost of natural gas, electrolysis will become cheaper than SMR. Before natural gas became generally available, in some cases **tonnage hydrogen** was produced for industry by water electrolysis, although not for use as a fuel. In a plant located at Risdon, Tasmania, Australia, designed to produce 60,963 tonne per annum of ammonium sulphate fertilizer, ammonia was synthesised by reacting nitrogen and hydrogen. The nitrogen was obtained by distilling liquid air and the hydrogen was made by electrolysis of water. The design hydrogen production rate was 2,790 tonne per annum and the design ammonia production rate was 15,714 tonne per annum. Production commenced in late 1956 and the plant ran until 1986. Mercury arc rectifiers were used. Some ammonia production continued until 1993. The electricity for electrolysis was provided by hydro-electric power stations.

Uses of Hydrogen—

Hydrogen fuel can provide motive power for liquid propellant rocket, cars, trucks, trains, boats and airplanes. Portable fuel cell applications or stationary fuel cell applications, which can power an electric motor. Hydrogen is considered as the primary sustainable source of renewable energy and is "highly required for advanced energy conversion systems." Hydrogen fuel can also be used to power stationary power generation plants, or to provide an alternative to natural gas for heating

Problems of Hydrogen Fuel-

The problems of using hydrogen fuel in cars arise from hydrogen being difficult to store in either a high pressure tank or a cryogenic tank. Alternative storage media such as within complex metal hydrides are in development. In general, batteries are more suitable for vehicles the size of cars or smaller, but hydrogen may be better for larger vehicles such as heavy trucks, because hydrogen energy storage offers greater range

and quicker refuelling time.

Although hydrogen is the lightest element and thus has a slightly higher propensity to leak from older natural gas pipes such as those made from iron, leakage from plastic (polyethylene PE100) pipes is expected to be very low at about 0.001%.

Conclusion

Environmental damage and increasing cost of petrol and diesel necessitates the search for alternative energy sources. It is an urgent need to encourage for the eco-friendly energy. The introduction of 20 per cent Ethanol blend was launched when the '**India Energy Week**' was celebrated in Bangalore on how to speed up the elimination of greenhouse gases in nature. Come with petrol and diesel.

Everyone has realized how dangerous it is to depend on carbon emitting fuels, hence the need for alternative eco-friendly fuels. Electric vehicles, increased use of solar energy fuels, wind energy etc. Efforts are being made to obtain energy in many directions such as the development of natural energy sources. Electric cars will double our coal consumption by 2040, and if we continue to depend on coal that much, it's both environmentally and economically dangerous.

The country needs to decide on an **energy policy** which should cover all sectors from coal to nuclear power. It's pros and cons investment should be studied. Coal needs to be imported for vital needs like manufacturing. An increase in coal imports is inevitable for electric vehicles. Indigenous coal is not considered suitable for power generation as it contains a large amount of ash and therefore has a relatively low flash point. Of course, import of coal and burning of coal will serve the environment friendly purpose? Hence awareness and training programmes for the use of eco friendly fuel is need of the hour.

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“A Descriptive Study of Indian Railways as a Campaigner of Environment Sustainability”

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DOI- 10.5281/zenodo.7740575

Abstract:

The Indian Railway (IR) has set an ambitious goal of transforming itself as a Green Railways by the year 2030. It plans to achieve the status of “Zero Carbon emitter” in the near future. Indian Railways has started efforts towards creating an environment-friendly atmosphere through their constructive works in the various fields. The current study is about the evaluation of environment enrichment activities undertaken by IR in past three years i.e. 2017-18, 2018-19 and 2019-20. The areas covered are solar energy, wind energy, electrification, afforestation, Waste management, Bio- fuel, and water conservation. The role of environmental enrichment is recognized in the form of consecutive annual awards conferred by the National Energy Conservation Awards (NECA) and Greenco certificates granted to railway stations.

Keywords: Indian Railways, environment sustainability, green railways

Introduction:

Dashadashaksamo putraha dashaputrasamo drumaha

Having a son is equal to having a life of a century, having a tree is like having 10 sons. Indian culture is based upon nature's wellbeing for human's wellbeing. Under any circumstances, there should be no environmental loss. Even in exceptional circumstances, the demolition of trees should be indemnified. As per the beliefs in Indian tradition, the woods used for cremation should be replenished by planting the same number of saplings by the deceased family to maintain environmental balance. These rules are not only applicable for individuals but also for corporates. How can the Indian Railway be an exception? Indian Railway is the biggest transporter in the country. Indian Railways (IR) is one of the world's largest rail networks, spread over 67,415 route Km. IR is the lifeline of the country carrying nearly 23 million passengers every day making it the largest passenger carrying system in the world. It is also the 4th largest freight

transporter in the world moving 1,225 million tonnes of freight annually. It traverses the length and breadth of the country. The railway transport is far more energy efficient as compared to road transport. Railways are 6 times more energy efficient as compared to road, 4 times more economical in land use, and 6 times more cost effective vis-à-vis road in construction costs for comparable levels of traffic. As the country's lifeline, the national transporter, in January 2015, set up the Environment Directorate in the Railway Board, to coordinate all environment management initiatives across the Indian Railways¹. The significant symbol of tracks on the country's map is very easy to read and understand the importance and existence of Indian Railway. It can't be exaggerated if it is compared with the blood veins in the human body. An Indian railway is a way of public transportation whether rich or poor. Efforts are steadily

¹ Indian Railways Environmental Sustainability Annual Report 2019-20

being made to make railway operation environment-friendly.

20. The basic aim is to do sustainable development with the environment enrichment activities. Some of the steps taken in that direction have been highlighted in this article.

Auxiliary Power Unit (APU) –

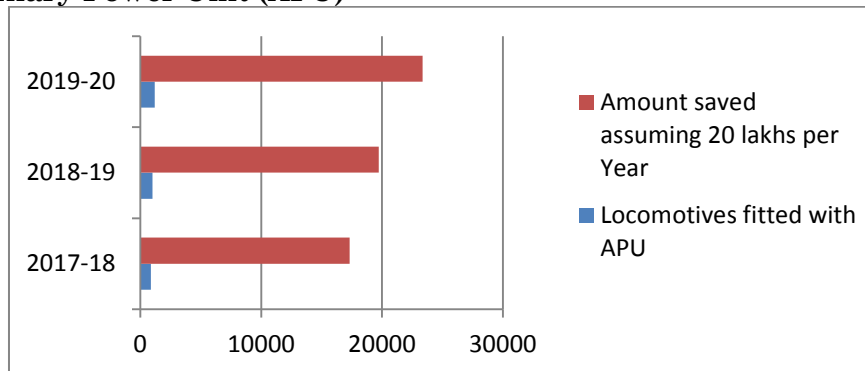
APU is a self-contained system which can substitute the main engine when it is in rest mode of more than 10 minutes. The main engine is started only when the locomotive is

Table 1: Auxiliary Power Unit (APU)

Year	Locomotives fitted with APU	Amount saved assuming 20 lakhs per Year per engine
2019-20	1167	23340 lakhs
2018-19	986	19720 lakhs
2017-18	865	17300 lakhs

(Source: Compiled from Indian Railways Annual reports)

Graph: 1 Auxiliary Power Unit (APU)



(Source: Compiled from Indian Railways Annual reports)

1) Conversion of Diesel Locomotives into Electric Locomotives:

The IR is planning to convert its 200 diesel locomotive into electric locomotives as per its 2018-19 report. The cost of conversion is Rs 2 crores per locomotive. The conversion move is part of the Railways plan of a total shift to electric traction, thereby reducing its fossil

fuel consumption by about 2.83 billion litres per annum.

actually required for movement or traction. The Indian railways have started using the APUs and have reduced diesel consumption from 25 litres to 3 litres per engine. There is an expected savings of Rs 20 lakhs per year on account of a reduction in fuel consumption.

2) Electrification of IR:

Indian Railways has electrified 45,881 Route kilometers (RKM) which is about 71% of the total Broad-Gauge network of Indian Railways (64,689 RKM, including Konkan Railway) by March 31, 2021. It is planned to electrify all routes of Indian Railways by 2024. The coverage of electrification of rail

tracks has risen from 1,176 kilometers in 2014-15 to 4,378 kilometers in 2019-20. Indian Railways has fixed a target of Among the modes of rail transport, electric traction is the most energy efficient; every 100 route kilometers electrified section results in saving of annual consumption of more than four million liters of diesel oil, which saves Rs. 2500 Crores worth foreign exchange annually².

3) Common Rail Electronic Direct

Injection (CREDI) :

Research Development Standard Organisation (RDSO), the research wing of Indian Railways has developed a Common Rail Electronic Direct Fuel Injection (CREDI) system for its fleet of diesel locomotives. It will lead to fuel savings to the tune of 3 to 4 percent and reduces emissions by 20-30%. The CREDI system will lead to a savings of Rs. 500-600 crore annually. The railways have fitted this technology in 80 out of 180 units diesel locomotives.

4) BIO - Diesel –

IR has built bio-diesel plants at Raipur and Chennai. Each plant is estimated to cost around Rs 30 crore, producing 30 tons bio-diesel per day, which means more than 9,000 tons a year. It is produced from waste oil, fatty acid, and non-edible vegetable oil. Bio-diesel is blended with High-Speed Diesel (HSD) oil for running locomotives. 76 locations on all Zonal Railways have started using the blended oil. The use of bio-diesel results in a reduction of Greenhouse Gases emissions, earning of carbon credits & saving of foreign exchange. Bio-diesel is also expected to be 5-10 % cheaper than High-Speed Diesel.

5) Compressed Natural Gas (CNG) and Liquid Natural Gas (LNG):

CNG and LNG is not only cheaper but also environment-friendly, Indian Railways began the use of CNG as a fuel in Diesel Electric Multiple Units (DEMU) in September 2014 Indian Railways, through its Indian Railway

electrification of 7,000 RKM for the year 2020-21.

Organisation for Alternate Fuels (IROAF), has planned for conversion of 100 Diesel Power Cars (DPCs) to run on Compressed Natural Gas (CNG). The annual energy bill of IR is around Rs 30,000 crore. The use of CNG and LNG will save Rs 41,000 crore in energy bills over the next 10 years. The use of CNG has led to a saving cost of 6% of the fuel cost for the railways.

6) LED (Light Emitting Diode):

The Indian Railways has become a major Railway across the world to have 100% LED lighting at all its stations. All railway installations including offices, maintenance depots, etc. have also been provided with 100% LED luminaries and all Residential quarters have also been provided with 100% LED lights. New coaches from Production Units are manufactured with LED light fittings.

Railway Infrastructure installed with LED	Units of Electricity Saved p.a.	Annual Savings in Rs.
All railway installations including offices, maintenance depots etc.	240 Million Units of electricity per annum	Rs. 180 crores reduction in annual electricity bill of IR.
Rail Bhawan	7.5 lakhs units in terms of Kilo watt hours (KWH) of electricity per year	Anticipated saving of Rs. 63 lakhs annually.

2

https://core.indianrailways.gov.in/view_section.jsp?lang=0&id=0,294,302,538

Table 2: Savings through LED installation**7) BIO Toilet:**

As a part of Green train corridors, Indian Railways has started replacing traditional toilets with bio-toilets in all its coaches. It is done to prevent open discharge of human waste on Railway Tracks from trains. Twenty six sections on Indian Railways have been declared as Green Train Corridors, as all trains passing to these Sections are fitted with 100% Bio toilets. The data for the last three years have been provided.

Table 3: Green Initiatives through Bio-Toilet data

Year	No. of Bio Toilets	No. of Coaches
2017-18	1,26,700	34,800
2018-19	2,00,000	55,000
2019-20	2,44,000	69,000

(Source Compiled from Indian Railway's Annual reports)

8) Water Body Conservation and Afforestation:

The IR has revived and restored 54 Water bodies and 44 no. of nonfunctional water bodies have been rejuvenated. At present, 1,591 water bodies are functional on Indian Railways.

At present, an area of 41,417 hectares of Railway land is under afforestation. The Ministry of Railways has finalized a model agreement with the Ministry of Environment, Forests and Climate Change in January 2016 for the plantation of trees on Railway land along with the railway track and station yards. Railways are also eliminating the use of wooden sleepers and replacing it with steel channel sleepers and composite Sleepers made of a polymer matrix. Railways are making all efforts to convert the land available with them into green land by planting more and more trees. The IR land is also licensed to railway employees belonging to Group 'C' and 'D' categories under the 'Grow More Food' scheme, for growing vegetables, crops, etc.

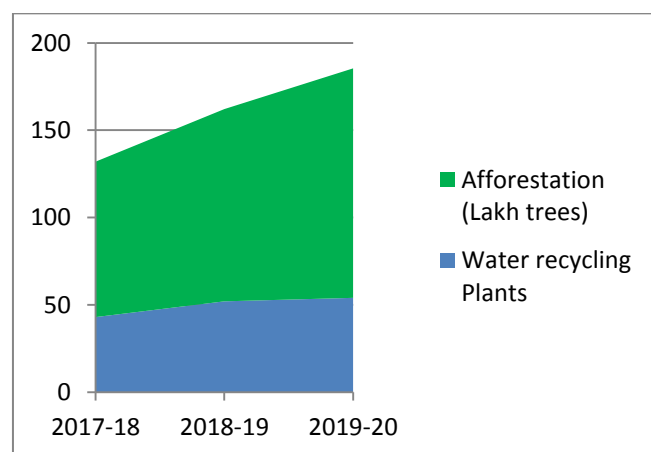
(Source Compiled from Indian Railway's Annual reports)

The cumulative data for Water recycling Plants and Afforestation of the last three years have been provided.

Table 4 : Water Recycling plants and Afforestation data

Year	Water recycling Plants	Afforestation
2017-18	43	89 lakh trees
2018-19	52	110.09 lakh trees.
2019-20	54	131.41 lakh trees

(Source Compiled from Indian Railway's Annual reports)

Graph 02: Water Recycling plants and Afforestation data

(Source Compiled from Indian Railways Annual reports)

9) Solar Plants and Wind Energy:

The Indian Railways also wants to utilize solar energy for meeting its traction power requirement and become a complete 'green mode of transportation. The emphasis on IR is towards the development of solar power mainly through Public-Private Partnership (PPP) model, wherein Railway will provide its space to the developer free of cost and the developer will install the solar plants. Railway will sign a Power Purchase Agreement (PPA) with the developer

identified through successful open bidding for the long term (25 years).

The following action plan has been prepared:

1. There are about 51,000 hectares of Railway land which has the potential of installing 20 gigawatt(GW) land based solar plants.
2. Two pilot projects had already been successfully commissioned. 2 Meagawatt peak (MWp) Solar Plant at Diwana near Panipat in Northern Railway. Successfully commissioned in Sept, 2020. 1.7 MWp Solar Plant at Bina through BHEL, feeding solar power directly to 25kilovolt(kV) alternating current traction system. Successfully commissioned in July, 2020.
3. To further, proliferate these pilot projects on a larger scale, initially, solar power projects of 3 GW are being planned in 3 phases as under:-
 - a. Phase- I: 1.6 GW capacity in railway plots for Open access States under developer model.
 - b. Phase- II: 400 MW capacity in railway plots for nonopen access States under ownership model (captive use).
 - c. Phase- III: 1 GW capacity in railway plots along the tracks under developer model for open access States.
4. Grid-connected/Off- Grid solar panel to be provided at Divisional headquarters, Zonal headquarters, maintenance depots, sheds, and workshops.
5. Solar and Wind Hybrid power systems at stations, in addition to the existing power supply to harness the wind and solar energy to the fullest.
6. Solar-based water heating system at all Railway stations, Rest houses, running rooms, hospitals, base-kitchens & other Railway premises.
7. Use of solar cooker in Railways Institutes, Training Schools, Rest houses, Running Rooms, Base Kitchen and other Railway premises.
8. Indian Railway is contemplating setting up Grid- connected solar power installations of about 1000 MW by providing Solar PV modules as a part of Green Energy initiatives by 2020.

9. In a unique initiative, for the first time, one 16 KW solar platform shelter has been provided at Sahibabad Railway Station on Northern Railway. Solar platform shelters will serve the dual purpose of not only providing shelter to passengers from rain & sun heat but also provide green energy.
10. 100% Green Powered station • Indian Railways' go green and save electricity initiative has proved to be immensely beneficial. •
 - a. Malwal Railway station of Northern Railway under Firozpur Division is the first Green Powered station commissioned in India (Jan.,'11).
 - b. Asangaon Railway station of Central Railway under Mumbai Division has been the second 100% Green Powered station powered with windmill & solar panels (March, '18).
 - c. On similar lines, Guwahati Railway station in the Northeast has become the first Railway station in the Northeast to run completely on solar power (May, '18).

11. Cumulative data of Wind energy is represented in Table 05:

Table 5 : Wind Energy Production:

State	WIND ENERGY Production
Tamil Nadu	10.5 MW (for non-Traction) and 10.5 MW (for Traction) capacity
Rajastha n	26 MW (for traction) capacity
Maharas htra	6 MW (for non-traction) and 50.4 MW (for traction) capacity
Tamilna du (Tirunel veli)	10.5 MW capacity wind-mill

(Source Compiled from Indian Railways Annual Reports)

Conclusions: It is a well-known fact that IR connects the nation through its rail network for mobility, economic developments and also helps in cultural exchange throughout the country. IR is also now emerging as a Green Energy Ambassador and cultivating the culture of environmental sustainability. It

has received recognition for its Green initiatives from National Energy Conservation Awards (NECA) awards and GreenCo Certificate

Table 6 : National Energy Conservation Awards (NECA)

Year	No of Awards from NECA
2020	13
2019	14
2018	17
2017	27

The participation in the GreenCo rating process has helped the Indian railways manufacturing units and workshops in achieving approximately Rs 10 crores per year of saving. 52 workshops and 16 railway stations have received Confederation of Indian Industry (CII's) GreenCo Rating certificates. GreenCo Rating System facilitates companies in improving their overall green **performance**.

IR has taken steps for environmental sustainability by streamlining its initiatives with regards to environmental management, energy efficiency, renewable and alternate sources of energy, Water Conservation, and Afforestation

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Linguistic Diversity and the Challenge of Building Sustainable Knowledge Society in Maharashtra

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DOI- 10.5281/zenodo.7740582

Abstract:

In today's knowledge-driven world sustainable value and competitive advantages flow from the most precious resource – "Knowledge". There is a global race for knowledge and knowledge workers. A country's ability to produce new knowledge and put it to creative use decides its growth, development and prosperity. The Internet has made knowledge more liberated and accessible. Some barriers create "knowledge disparity" putting people at a serious economic disadvantage. These factors are linguistic diversity, income disparity, disparity in stages of development, modernity, level of education, etc. This paper studies the linguistic diversity, its place and role in building a knowledge society in India. India is a land of extraordinary linguistic diversity and regional languages with various dialects are repositories of traditional knowledge and ancient wisdom. Many languages are dying in India as inevitably happening all over the world resulting in loss of vital knowledge. We need a standard language which can serve as the official unifying language for governance and conducting business, and sociocultural activities. Language is a highly charged inflammatory issue in India as language is a source of culture and identity. We live in a global village. The forces of globalisation have erased the barriers to political boundaries, capital, human resource, knowledge and innovation. Social sciences need to focus on building a productive sustainable knowledge society in India by leveraging the creative strength of the linguistic diversity in India. This conceptual and perceptual paper takes the overview of the grand vision of Knowledge Society Maharashtra and critically studies the linguistic diversity in Maharashtra, and the challenge of building the "Knowledge Society". It proposes linguistic solutions for making Marathi a "Knowledge language" and an instrument of development.

Key words: Linguistic Diversity, Knowledge society, Knowledge language,

Introduction:

Ancient India was known as the land of knowledge and India has always been a knowledge society. The very meaning of the word "Bharat" reveals this. "Bha (Baa) means Knowledge and rat (rta) the one engrossed unto" - thus "The one engrossed unto knowledge is Bharat." Ancient universities like Nalanda and Takshshila were known all over the world as fountain heads of knowledge. While many contemporary civilisations were in barbaric state ancient India had reached to the summit of thought, and had profound knowledge of spirituality and metaphysics. Today we are discovering treasures of knowledge and wisdom in Ayurveda, Yog and spiritual wellbeing with the vision of oneness of humanity "Vasudhaiv Kutumbakam" (the whole world is our family). Our ancient sages had realised that truth is

one but sages reveal it in many ways (*ekma sata\ ivapa\ bahuda vadntaI*) and we have the prayer in the Rig Veda *Aa naao Bad'a: k'tavaao yantau ivaSvata:* (Let noble thoughts come to us from all sides.)". Our approach was "vaado vaado jaayatao ta<va baaoQa: (It is only through the articulation of diverse opinions that truth will finally emerge). Knowledge was held as the destiny of mankind and the purpose of life was to attain knowledge of things both material and spiritual. In every civilisation we see the quest for higher knowledge. Societies which managed to produce knowledge and put it to productive use could not only survive but thrive. The story of human civilisation is the story of quest for knowledge. India has been a great story of knowledge. No wonder today we aspire to become a knowledge society thereby playing a glorious role in consonance

with our great heritage of our eternal quest for knowledge. Mankind in today's post-industrial society is driven by knowledge. In today's knowledge-based economy knowledge is the most critical resource for development and growth leading to prosperity. Indeed, today's knowledge is tomorrow's wealth. Today's globalised knowledge-economy demands sustainable knowledge creation, knowledge diffusion, knowledge sharing, accessibility to knowledge, ability to put knowledge to use, competitive management of knowledge resources, presence of knowledge workers. Due to rapidly advancing disruptive technologies like the internet, artificial intelligence, metaverse and others the traditional barriers of times, space and distance are knocked out. A country's economic values, competitive and comparative advantages flow from its ability to manage knowledge creatively. Innovations are driven by creative use of knowledge. There is a race for knowledge and knowledge workers. Knowledge sharing is a complex language-based activity. Language impacts how individuals think, cognise and perceive the world around them, communicate and relate with others. Deriving knowledge out of information is profoundly a cognitive language-based activity. Language is critical to knowledge initiatives and efforts. Language is the primary resource in generation, management and usage of knowledge. Since ancient times we have been fortunate to have highly evolved and developed languages to develop the necessary cognitive infrastructure for our quest for knowledge. When language is strong knowledge becomes easy. Language is a key repositor and transmitter of knowledge. Sanskrit, with its highly evolved linguistic features could deliver our ancient knowledge and wisdom such as spirituality, ayurveda, Yog and human wellbeing. When language is poor people remain intellectually poor. With higher language human brain is wired better for deeper cognition, creativity and higher knowledge. Inadequate language is incapable of higher knowledge. Edward Sapir and Benjamin Sapir Whorf (1929) hypothesis says that the structure of a language determines a native speaker's perception and categorization of experience; and the

particular language one speaks influences the way one thinks about reality. The semantic structure of a language shapes or limits the ways in which a speaker forms conceptions of the world. It implies that our cognition and understanding of the world is conditioned and limited by our language. Knowledge is in a way experiential and if the language is not developed structurally with deeper syntax and semantics then the speakers of that language will have limited knowledge capability and low level of intellectual development and growth. In a knowledge society people are life-long learners – creators and consumers of knowledge. Since the advent of industrial age, the pace of knowledge creation dramatically increased. More and more knowledge is created with human ingenuity but at the same time knowledge also depreciates and becomes obsolete. In today's era of internet and artificial intelligence, every seven years over fifty percent knowledge becomes outdated and defunct. That means people must keep learning to be relevant, creative and capable of knowledge creation and use. The famed futurist Alwyn Toffler rightly said that now intelligent is the one who would learn, unlearn and relearn. We cannot work and win with yesterday's knowledge. Great Management Guru Peter Drucker coined the term "Knowledge Worker." And today we realise that knowledge was and is the chief resource. Critical knowledge is a strategic resource. For example, using the knowledge of horizontal drilling and hydraulic fracturing America once an oil importer is on the verge of becoming leading oil exporter thereby changing the whole geoeconomics and geopolitics. Today we see the rise of "start Ups" who are becoming unicorns notching up billions of dollars turnover. A team of young knowledge worker can redefine economy, business and trade and transform local to global relations and impact decisively how we humans live. Open AI's chatbot Chat GPT is an emerging example. Until yesterday Google was great but experts tell us that Chat GPT will knock down and out Google in next two years and will threaten many jobs making even professionals like teachers redundant. All these transformations in human history

are driven by the corresponding evolution of languages. Language is critical to human survival, making him a knowledge creature and making human society a knowledge society. The author of this paper has been studying how intimately language and knowledge are connected and they impact each other. Language conceives culture and civilisation and carries them to the next generations. Language is a carrier of knowledge. This paper's key theme is to explore how linguistic diversity facilitates or obstructs the rise of knowledge society. The case study of "Knowledge Society Maharashtra" is taken as Maharashtra has over 140 million native speakers who conduct their life in Marathi and its varied dialects.

Language makes collaborations possible for acquisition and utilisation of knowledge. Linguistic competence of a society is critically important for building a knowledge society. When there is huge linguistic diversity command standard language becomes a challenge in itself. Without standard language (now onwards also referred to as the "*Praman Bhasha*") there could be inevitable linguistic chaos and anarchy. Communication, governance, administration and over all development will be hampered. This will obstruct the knowledge potential of the society. In every state in India there are regional variations in languages and every language has numerous dialects. Crores of people conduct their life in these dialects. Linguistically we can say that every dialect is a complete language in itself. In this Vasai taluka where this conference is held, there is a huge diversity of dialects. It is said that at every twelve miles language changes in India. In fact, almost every day all languages undergo changes. Just think of how many new words are added because of mobile phones and the internet. Civilisation continually creates its own language. Sadly, the linguistic potential of dialects is not recognised in India and these are belittled. Millions of people use standard language only for reading or official work. In Maharashtra there are over 28 major dialects of Marathi such as Varhadi, Ahirani, Baglani Ahirani, Adivasi Tadwibhil boli, Aagari, Samvedi Kadodi, Malvani, Konkani, Koli, Zadoboli, Zadipatti, Chitpavani, Dakhani-

Bagwani, rdeshi, Powari, Khandeshi, Nagari, amongst others. Now there are efforts and initiatives to create literature in these dialects. There are many e-magazines such as "*Zhunzhurka* e-magazine in Powari boli. But though people speak in matruboli (the mother dialect which is like their distinct mother tongue); they do not write in it. Due to lack of reading and writing habits in the matruboli, writing and reading as not habitual becomes difficult in them. There are strong contentious views that there is nothing pure or impure in any language or dialect. These dialects are interconnecting and intersecting and impacting each other. As never before, there are intermingling of people there is an increasing need for the standard language which is common to all and all-accepted as a socio-cultural code. People are migrating for better economic opportunity and survival leading to linguistic osmosis. People are proud of their dialects and they are even concerned about the existential threats to their dialects under the onslaught of Praman Bhasha Marathi and of course, the English language. Both rural and urban areas are embracing English as a medium of instruction and there is a craze for English medium schools which are mushrooming all over Maharashtra. It has become a new cottage industry. English medium education is considered as the passport to modernity, success and social status. Historically the English language has been a liberating language, a sort of a melting pot that created a whole new people with modern identity liberating them from the clutches of traditional systems such as the caste system and giving them upward mobility and economic opportunities. Marathi was considered down market language and rising and expanding middle class opted for the English medium with rising material aspirations. As the language of science, technology, businesses, international trade and relations, new knowledge English became a dominant language. The key difference between learning the English language and learning in English medium was largely ignored. Studying in the English medium is seen like acquiring a whole new social status and class in the shortest possible way. There is a real concern now

about the fate of Marathi medium schools. Marathi medium schools are necessary for the Marathi language. No wonder, concerned speakers of dialects are too concerned about the fate of their bolbhasha (even before they are concerned about the Matrubhasha – the mother tongue in Praman Bhasha form). Once people migrate to the urban areas, they leave their dialect behind and their linguistic space shrinks and for economic and social reasons they have to embrace the standard language – the praman bhasha. Their children study in the aspirational English medium further disconnecting them not only from the Praman Marathi but their dialect. But it is a fact that people's dialect – their matruboli binds them together than the praman bhasha. Regional standard languages too are facing the onslaught of English as educated people speak and write Marathi that is infested with English words. This is considered as nothing strange or an aberration. Highly qualified people holding positions of power, prestige and responsibilities tend to speak and write Marathi that has numerous English words though there are substitute Marathi words are available. And this is where the Paribhasha comes into picture. Indeed, it is difficult to find right Marathi words with right shade of meaning for many English terms. And the paribhashik words which are coined by the experts are complex, difficult and mostly unheard of. People prefer to use the English terms for ease and habit. For example, cheque, Demand Draft (DD), Chalan.

The need for knowledge language in linguistically diverse societies

The world of any language is spread over three forms – the dialect – Boli Bhasha which is local to its origin, it is free flowing, mellifluous and emotional with limited geographical dominance. While the Pramanbhasha is bookish, grammar based and follows conventions with less emotionality and more tuned towards intellectual thinking. Then we have the Paribhasha which is definition-based. This is rigid, complex and difficult to understand. It is basically related to various knowledge subjects and there is a conscious effort to define various terms to standardise the

expression of the meaning and to make difficult subject comprehensible, the goal that is not always achieved. This differs from the language of creative literature. It is rightly said that science is for those who know, literature is for those who understand. When we think of common folks we need to focus on comprehension and not on the form. Enrichment of language is more necessary and significant than the purity of language. To make any language a knowledge language (*Dyanbhasha* there should be concerted efforts to bring various knowledge texts into it. Translations can help in this effort. The objective is to make Marathi language of the economy. Marathi needs to become the language of trade and commerce and this can happen when its speakers take to trade and commerce. This will change the perception of Marathi as a down market language. People need to have confidence in the language to make a living and prosper economically. We must remember that every Rajbhasha is an instrument of development. It should be deployed and utilised so. This certainly requires that there is a cognitive mindset shift in the bureaucracy. Language should not be a barrier between the people and the government. Given the present state of rigid prashasanik Marathi, that is the administrative Marathi one can say that people find it difficult to both receive it and produce it. Masses cannot communicate effortlessly in this rigid, difficult Paribhashil Marathi. Even government finds it difficult to reach out to people and communicate. Dominance of language is a key issue here. For millions of people even Praman Marathi is like a foreign language as they use it only when they have to read and write it. Children in the rural areas are being taught in their dialects and then taken to the standard Marathi grammar, vocabulary and pronunciation, etc. Their life is conducted in their dialect and governed by it. These dialects are very rich with life, vibrancy and traditions of their own and can claim to be independent languages. And in this diverse linguistic background when we adopt paribhasik prashasanik language then the democratic governance becomes difficult. We cannot let the government of the people and for the people to be difficult to understand

due to difficult language. This creates a distance between “*WE, the People*” and the government of the people and for the people and by the people. Today every language itself is undergoing changes due to over pervading technological changes. See the way mobile phones, internet have changed the vocabulary of all languages. Thankfully, now the Supreme Court has taken initiatives to make judgements available in Marathi. People would need to know the justice delivered by the courts of law. Judgements are delivered in English and this is indeed an irony for WE, the People of India. Language should not be a barrier in bringing people close to the government as this can have serious developmental consequences. People may feel alienated. Even people who read for MA in Marathi too find it difficult to understand the prashasanik language and write an application. The very goal of the Constitution of India to build the India of the dreams of the founding fathers can be jeopardised due to the linguistic conundrum. And this certainly affects the rise of the language as the language of knowledge to make the society a knowledge society.

The linguistic landscape in Maharashtra is compounded by rising dominance of the English language which is creating a sort of caste system like perceptual superiority and inferiority in the people. The rise of Rajbhasha Marathi itself has been through many transitions. Let us take a peep into the history of the evolution of Praman Bhasha Marathi as the Rajbhasha. Marathi as a language underwent many changes and transitions assimilating new traditions. We can identify phases of the evolution of the Marathi language as that of the times of the Yadavas then that of the period of the Bahamanis and then the Mahanubhavas and then the times of Chatrapati Shivaji Maharaj and then the times of the Peshwas and then came the advent of the British rule and then the struggle for independence and then post-independence till date of internet, mobile phones and the latest Chat GPT. The Marathi during Shiv Chatrapati was laden with Farsi words to such an extent that Marathi was literally invaded by the Farsi language. The small trickle of Farsi words became a mighty flood in the governance

such that the proportion of Marathi words was reduced to just 14.4% during 1627. Chatrapati Shivaji Maharaj took initiative to compile and compose the Rajbhasha Kosh with the goal of bringing the government close to people. This was the first ever prashan kosh in Marathi. Due to such systematic efforts, by the year 1677 the proportion of Marathi words drastically increased to mammoth 62.2%. soon two streams of Marathi emerged – the literary Marathi and the Rajbhasha Marathi. During the British period as the language of governance was English the British rulers had no direct contact with the people even for the matter of governance. Various English and Farsi words were accepted lousily as substitutes. During this period the paribhasha emerged on the anvil of Sanskrit. Though the direct contact and impact of English remained limited Marathi expanded in the areas of operations, functions and scope. With the spread of education, telecommunication and growing mobility of the masses Marathi expanded in its myriad roles and like the English language Marathi too became the milk of the tigress. The rise of nationalism also added new dimensions to the transformations in Marathi.

After independence, the Government of Maharashtra proclaimed Marathi as the language of state’s administration but its situation is not encouraging. The late great writer Shirwadkar, a Dyanpith winner lamented that though Marathi is the Rajbhasha (the language of administration), it is standing at the gates of the Mantralaya in rags. We must not forget the fact that the challenge of development is also a linguistic challenge and Marathi has to become an instrument of development, growth and progress and this is an enduring developmental challenge. We have the bright example of Israel that made Hebrew the stage language. Countries like Japan made their languages not only the language of governance but the knowledge languages and ably built knowledge societies.

What are the key challenges facing the Marathi language today to become the launching pad for making Maharashtra a knowledge society? History has shown that those social systems which changed and

adapted to the forces of change survived and thrived. A language too is a social system and must change and take upon new roles to sustain the life of its speakers. One key goal has to be to develop and adapt Praman Bhasha in the face of the huge diversity of dialects and their dominance. Many social thinkers allege that insistence on the Praman Bhasha is like imposing the Sanskritised language. It is not the language of the masses. Grammar should not be over emphasised. Many revoting sections of the intellectuals demand that let English dominate. Many of them feel that English has been historically a liberating and rapidly empowering language and should be embraced. This is illogical as training all masses in the foreign language English is not at all necessary and is in vain. Even if tomorrow everyone in Maharashtra became well versed in English how will it bring the much-desired prosperity? Will it boost agricultural productivity? Any weakening of Marathi will gravely jeopardise the opportunities of the masses to prepare for the knowledge age of today. Praman Marathi Bhasha is the ladder. Mother Marathi is one of the greatest strengths and source of power they have. Given the diversity of dialects there is an absolute need of a Praman bhasha Marathi. Lack of a common knowledge language can seriously impair people's ability to create, share knowledge and put it to use. This issue is not specifically related to multilingual societies but within a regional language that has many dialects. For administration, education and training only Praman Bhasha can serve the purpose of knowledge language. When we talk about any language as the standard Praman Bhasha we imply that the linguistic aspects of the language such as phonology, morphology, syntax and semantics are commonly accepted as permanent features. This language is to be taught in the accepted format. People need to develop language confidence to perceive and make Marathi their knowledge language. When language is lost everything is lost. With conscious, concerted and continuous efforts Marathi needs to be empowered and made more and more resourceful. The ability to learn and derive knowledge depends on one's language

competence. Confidence in one's own language is vital in today's knowledge driven globalised world.

There are efforts such as the work on developing various paribhasha koshas for various knowledge domains. There are many organisations such as the Directorate, Marathi (Marathi Bhasha Sanchalanalaya), Marathi Bhasha Vibhag, are working to make Marathi an empowered knowledge language. Bhasha Sanchalanalaya has published 30 paribhasha kosh (dictionaries of definitions of terms) with over 4, 00,000 terms. One of the key challenges is the vocabulary development. We need to find and create new words with the right shade of meaning for English words. This is a challenging task. Even if these words are finalised these should be used with conscious efforts to regularise them in actual usage. Indeed some words may sound difficult but we must have the collective will to adopt and adapt them and make part of our lexicon. We must keep in mind the linguistic fact that any word whether it is easy or difficult or easy to use or difficult to use is not the inherent quality or feature of that word and does not depend upon that word. It is not dependent even on the grasping power of the common man. It solely depends upon the common will, insistence and uncompromising spirit of the users of the language. Once the his Praman Bhasha comes to be used increasingly such words will be effortlessly used in due course of time and soon these would be just another words. People will get used to them soon. We have so easily assimilated many difficult English technical words in our common usage such as recharge, fraud, sensitive. coverage area amongst others. In the same way if we collectively persist the seemingly difficult paribahshik words too will be accepted and used widely. Of course, there are confusing words when it comes to the right shade of meaning when there are synonymous words. Which word h@k or AiQakar? Aqa- or iva<a; Apamaana or Avamaana or {pamad-?

One should be able to create correct meaning with right shade . One example of this complexity could be as given below:

1. Ability - samaqa-taa .
2. Capability - Sa@tataa

3. Capacity - saamaqya-
4. Competence - Xamataa
5. Expertise - taj&ataa
6. Eligibility - paa~ataa
7. Qualification - Ah-taa
8. Authority - &aanaaiQakar
9. Fitness - yaaogyataa
10. Efficiency - kaya-kuSalataa

Such lexical issues related to semantics could be resolved with persistent and steadfast efforts. Such technicalities should not obstruct the development of Praman Bhasha to become a potent feature of the Marathi language which has to become the knowledge language in order to propel our society into knowledge society.

Conclusion:

Language is a key common resource that can create the common good and serve one and all. Linguistic disparity can be a stumbling block in the development of knowledge language for the masses. People too need to change and adapt their linguistic affairs. Without ignoring one their dialect they can embrace Praman Bhasha which is absolutely vital to avoid linguistic chaos and anarchy and develop a common social system of a common language to create, share and access knowledge and utilise it creatively for better living and life. The Knowledge Society could be realised by developing the Mother Marathi as the knowledge language. This merits all our urgent attention. At last, empowering the language of the masses means truly empowering them. To this end, we need a strong and persistent language policy.

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“Skill based training for rural youth and farmers to reduce rural educated unemployment in Palghar district”

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DOI- 10.5281/zenodo.7740588

Abstract:

India is a country of 1.4 billion people, where 67% of the Indian population lives in rural areas. Post-independence conditions of the rural India were really challenging. Government of India had implemented various programs to uplift the condition and we are succeeded up to certain extend, but because of population growth and lack in the implementation of the program still there is scope to increase the performance especially for the rural youth and farmers as they are struggling for earning and livelihood. It is because failure of education systems and agriculture related policies.

I think there is need to adopt some different course of action for the rural educated youth and farmers. This paper attempts to analyse the situation of the educated youth and farmers in Palghar district and suggest remedial measures reduce rural educated unemployment which is extremely necessary for the development of rural area.

Key Words: Skill based training, educated unemployment.

Introduction:

Today literacy rate as well as percentage of higher educated population is increased but compared to that there are no employment opportunities to that extend. Rural educated youths are migrating towards urban area for job, thousands of graduate and post graduates are standing in row for the interview, which is conducted for the post of sweepers and watchman. It is a terrifying situation. India has a large number of unemployed people. In present situation this is the biggest issue from the point of view of political and social causes, so the government of India is well aware of it and has started working on new national education policy.

Unemployment among literate people is much higher than illiterates. Educated unemployed among youth leads to frustration, as well as the crimes in society. There is a huge gap between what students study and what they actually prerequisite for a job. It means what we preach and what are in practices. Agriculture graduates and diploma holders also in search of job though many of them have agriculture family background.

Present curricula or courses does not have system to train students for the jobs or

proper careers guidance service for students so they having some difficulties to look what type of jobs they can easily tackle and where to look for it.

Objectives Of The Study:

1. To analyse the relevance of the training and skills in creation of job opportunities in rural area.
2. To focus on issues of educated unemployed folk and farmers in the district.
3. To suggest remedial measures on educated unemployment and farmers in the district.

Hypothesis:

1. Skill based training will help to reduce the unemployment in rural youth.
2. Today graduates from the agriculture sector are not ready to take up agriculture as a profession.
3. For the Sustainable Rural Development Skill based training is necessary for farmers and rural youth.

Concept:

1. Educated unemployment: this type of unemployment, a youth after matriculation, graduation, or sometimes post-graduation could not be able to find any job for them.

2. Skill based training: it focuses on how to do something specific and results in a learned skill that can be put to immediate use. Skill based training is a career-orientated method of teaching, it is workplace skills.

Research Methodology:

Study Area: On 1 August 2014, Palghar became the 36th district of Maharashtra. Its history is alternate with its old district Thane. The district is located in the Konkan division of the state of Maharashtra, on Latitude and longitude 19.6967° N, 72.7699° E. Palghar district has a total of 8 talukas, Mokhada, Talasari, Vasai, Vikramgad, Palghar, Dahanu and Wada, consisting of around 29,90,116 total population. Out of which 37.39% population is Scheduled Tribes as per the 2011 census.



Literature Review:

According to the report, Rural Agricultural Commission, Indian Agriculturalists are unemployed for about 6 months in a year. In rural areas, apart from the unemployed of the people, since months there are landless people who are unemployed. This number is about 10 to 50 cores. All these things go to prove that there is a good deal of unemployment in the rural areas. Largest marginalized people live in rural areas. They are the smallholder farmers, fishermen, pastoralists, Indigenous peoples and forest dependent communities. Every day they rely on minimal resources to survive. (Rural Agricultural Commission)

Data Collection: In exploring the research topic material collected basically from the primary sources, interacting with local people in different talukas. Secondary data gathered through the books, reference, papers, District census hand books and web encyclopaedia.

Sampling Technique:

1. **Sampling Unit:** Sampling unit is limited to the Palghar district of Maharashtra.
2. **Sample Size:** 50 respondents from the different taluka in Palghar district.
3. **Sampling Design:** Simple random sampling is adopted on the ground of availability.

Skill based training for rural youth and farmers.

India is failing in the field of education which is one of the parameter to judge the efficiency and quality of masses. It is because specifically the out-dated curriculum, lack of basic infrastructure in the institutions, and old methodology of teaching are some of the reasons behind the poor standard of the education institutes. The students are not getting the training as per the required standards of world need. Recent studies show that unemployment among graduates and postgraduates is more than that of matriculates. This shows how much the education system gets diluted, thus one needs to improve the quality of the education systems, present government also agreed as new education policy is going to implement by the central government.

Present study is mostly confined to Palghar districts, the northern and eastern eight talukas, which resemble very much to other part of the state of Maharashtra and India for his suggestions to improve the employability of the educated unemployed as well to handle the future situations of educated unemployment.

Implementation Of Skill Development Program From At Least Std- Viii.

Initiation of skill development program along with various business-service sectors from at least class V in all language schools.

Special Training For Educated Unemployed Youth.

To divide the students into the respective fields by taking into account the abilities and preferences of the students with a view to determining the career direction of the students. If this happens, it will result in the development of the students and that field

Career Direction According To Students' Abilities And Choices From School Level.

Division of students according to ability and interest in various academic and non-academic activities from school level (Art, sports, social service, national service, nature love, politics etc.)

Efficient Use Of Organizations Doing Research, Training & Extension Work.

By making full utilization of the efficiency of various governments, semi-government organizations engaged in research, training, and extension work related to various sectors, to train educated unemployed youth to make them employable. For example Krishi Vigyan Kendra, Universities, District Employment Centre, District Industrial Centres etc.

Strategy for educated unemployed youth who are concern with the agriculture sector in rural areas.

It is imperative that the farmers in the rural areas and the next generation of the farming community think about their future. More than 80% of households in rural areas are

Skill Based Training to Rural Youth / Farmers

dependent on agriculture and agriculture-related businesses. Farming families are also educating their children with the expectation of good jobs (white collar jobs), but due to the very busy ratio of jobs and job seekers, well-educated agricultural graduates and graduates with knowledge of agriculture are still unemployed in the confusion of job or profession. Therefore, the following strategies are important to ensure that the rural youth who belong to farming families and who are reluctant to engage in agricultural business will get the means of employment in the rural areas.

Skill based training to rural youth, those who are willing to start or those who are fail as farmer, even these kinds of new generation who have agriculture family background. All the rural educated unemployed local masses need to turn in the following rural agriculture, agriculture related business.

Table No. 1

Agriculture Sector	Horticulture Sector	Agro related activities/ Processing sectors
Organic farming	Nursery management	Livestock Insurance
Seed production	Orchard management	Clean milk production
agro service centres	Mushroom production	Piggery and management
Grading & marketing	Floriculture	Duck & rabbits farming
Production of bio-fertilizers	Irrigation system	fodder management
Vermi-composting	Grading of fruits & vegetables	Poultry farming and management
Soil testing	Cold chain management	Ornamental fish farming
Management of storage	Transportation	Cattle and management
Training of agro-technology	packaging of fruits & vegetables	Goat farming and management
Repair of farm tools	Production of medicinal & aromatic plants	Integrated dairy development
Pest management in crops	Processing medicinal & aromatic plants	Fish farming
Installation of agro-produce processing machinery.	Marketing of fruits & vegetables	Fish preservation
Training on oilseed production	Organic production of fruits & vegetables	Animal manure collection & distribution
Agro-tourism	Grafting of Plants	Eco-Tourism

Conlusion:

Making rural youth employable and to improve the condition of farmers families is great challenge to the central as well as state

government. The government of India has already started working on new national education policy, in which more weightage is given to learning outcomes, school

infrastructure, and digital learning to prepare rural India for 21st-century education. But it is necessary to make concerted and honest efforts of all the above factors for the success of the efforts of the government.

Limitations:

All above strategic suggestions will come to reality if the local participation and administrative support goes hand in hand.

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An Analysis of Risk and Returns of Gold Mutual Fund Schemes

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DOI- 10.5281/zenodo.7740595

Abstract:

The overall size of the Indian MF Industry has grown from Rs.7.60 trillion as on 31st December 2012 to Rs.39.89 trillion as on 31st December 2022, more than 5 fold increase in a span of 10 years. A Gold ETF is an exchange-traded fund (ETF) that aims to track the domestic physical gold price. They are passive investment instruments that are based on gold prices and invest in gold bullion. The objective of the study is to evaluate the overall performance of top 5 Gold ETFs Mutual Fund schemes from the year 2018 to 2022. It is concluded that the mean returns of SBI Gold ETFs Fund is the highest at 13.19%. It has emerged that the standard deviation of ICICI Pru Gold ETFs Fund is the best at 12.34%. The Beta value of Nippon India Gold ETFs and HDFC Gold ETFs are 0.92 which is better than that of SBI Gold ETFs which is 0.94. The Sharpe ratios of all Gold ETFs are in a similar range from 0.56 to 0.57. The Treynor ratio of SBI Gold ETFs is the best at 7.69%. Nippon India Gold ETFs. The investor has to consider various risk and returns parameters before investing in mutual funds.

Key Words: Risk, returns, commodity funds, Gold ETFs funds, mutual funds

Introduction:

The Mutual fund industry started in India in 1964 with the launch of Unit trust of India (UTI). The Public sector was allowed in 1987 and private sector in 1993 and foreign companies were allowed by the year 2003. The industry was regulated by Reserve bank of India until 1992. After 1992 Securities and exchange board of India (SEBI) was formed and nominated as the regulator of the securities market including the Mutual fund Industry. There are 44 Asset Management Companies registered under SEBI issuing mutual fund schemes in India today. The AMC's have formed an umbrella association called Association of Mutual Funds in India (AMFI).

As of today the overall size of the Indian MF Industry has grown from Rs.7.60 trillion as on 31st December 2012 to Rs.39.89 trillion as on 31st December 2022, more than 5 fold increase in a span of 10 years. The MF Industry's AUM has grown from Rs. 21.27 trillion as on December 31, 2017 to Rs.39.89 trillion as on December 31, 2022, around 2 fold increase in a span of 5 years.

The no. of investor folios has gone up from 6.65 crore folios as on 31-Dec-2017 to 14.11 crore as on 31-Dec-2022, more than 2 fold increase in a span of 5 years.

On an average 12.44 lakh new folios are added every month in the last 5 years since December 2017.

Concept of Mutual Fund:

1. Mutual funds –

A mutual fund is a fund established in the form of a trust to raise money from the public or a section of the public through the sale of units under one or more schemes for investing in securities.

2. Gold ETFs- A Gold ETF is an exchange-traded fund (ETF) that aims to track the domestic physical gold price. They are passive investment instruments that are based on gold prices and invest in gold bullion. In short, Gold ETFs are units representing physical gold which may be in paper or dematerialised form. One Gold ETF unit is equal to 1 gram of gold and is backed by physical gold of very high purity. Gold ETFs combine the

flexibility of stock investment and the simplicity of gold investments.

3. **Average returns –**

It is the mean of the annual returns of 5 years from 2018 to 2022.

Formula:

Average returns=Total returns of 5 years /No of Years

4. **Benchmark Returns –**

It is the returns provided by the domestic gold market.

5. **Category returns-**

It is the mean returns of all the funds in the category.

6. **Beta –**

It is the measure of the stock volatility in comparison with the market returns or benchmark returns. The Benchmark returns are considered as having beta value of 1.

7. **Standard Deviation-**

It is the degree of deviation from the mean returns or average returns. Higher standard deviation means more deviation or volatility in returns and Lower standard deviation means less deviation or volatility in returns.

8. **Sharpe Ratio-**

It is the excess returns earned over the risk-free rate of return per unit of the risk taken as per standard deviation. It was developed by Nobel laureate William Sharpe in 1964. It is known as risk to volatility ratio.

Formula

Sharpe Ratio = (Portfolio Returns-Risk free rate of returns)/Standard Deviation.

9. **Treynor Ratio-**

It is the excess returns earned over the risk-free rate of return per unit of the risk taken as per beta value. It was developed by Jack Treynor in 1964. It is known as reward to volatility ratio.

Formula

Treynor Ratio = (Portfolio Returns-Risk free rate of returns)/Beta

Literature Review:

(Eswara, 2015)The study was related to performance of Gold ETFs in relation to spot Gold prices and Nifty. The study found that there is an inverse relationship of gold ETFs to Nifty. It meant that with the decrease in Nifty the gold ETFs performed better.

(Raj, 2021)The researcher analysed the performance of select Gold ETFs traded in National stock exchange (NSE) for a two year period from 2018 to 2020. They used Treynor Performance Index, the Sharpe Performance Index, and the Jensen Performance Index along with the alpha, beta, and standard deviations ratios. The analyses showed that all Gold ETFs performed better on various parameters of the study.

(Mukesh Kumar Mukul, 2012)The researcher attempted to analyse the performance of Gold ETFs in comparison with diversified equity funds and market portfolio. The time period of the study was from January 2010 to august 2011. It concluded that gold ETF has given comparative good return in vis a vis diversified equity fund during the study period.

(Jayanthi, 2013)The author found that Gold ETFs are becoming popular in India during 2013 vis a vis physical gold. The Gold ETFs suffer with the problem of liquidity and the returns do not reflect the movement of the price of physical gold. The author concludes that Gold ETFs can be used as hedge instruments. against global market scenario.

Problem Of The Study:

Every investor knows this tag line that Mutual fund investments are subject to market risk. The researcher in this paper wants to analyse the funds which invest in physical gold. Such funds are called as Gold Exchange traded funds. The present study is undertaken to analyse the risk and returns provided by Gold ETFs mutual fund schemes to its Investors.

Objective Of The Study

1. To evaluate the overall performance of top 5 Gold ETFs Mutual Fund schemes from the year 2018 to 2022.
2. To analyse the risk element in of top 5 Gold ETFs Mutual Fund schemes from the year 2018 to 2022.
3. To analyse the returns provided by the of top 5 Gold ETFs Mutual Fund schemes from the year 2018 to 2022

Research Methodology

1. The fund to be analysed from Main Category –Commodity funds and Subcategory-Gold ETFs Fund.
2. The data of 5 years from 2018 to 2022 is being analysed.

- The top 5 Schemes are chosen based on their Asset under management as on 1st February 2023.

The funds chosen for the study are as follows

- Nippon India Gold ETFs
- HDFC Gold ETFs
- ICICI PRU Gold ETFs
- SBI Gold ETFS
- Kotak Gold ETFs
- The analysis is done by using the Risk Ratios of Beta and Standard Deviation and Returns Ratio like Sharpe Ratio and Treynor Ratio
- In order to accomplish the required objectives of the study Graphs and Tables have been used for visual presentation of the data.

Significance Of Study:

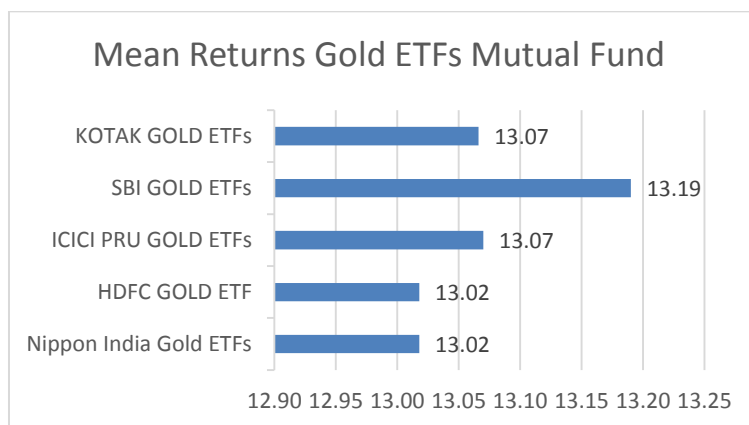
- The study is useful for the investors who wish to invest in Gold ETFs mutual fund schemes.
- The paper will help in understanding of the risk and returns ratio needed to analyse the mutual fund schemes.

Limitations Of The Study

- The study is confined to Mutual funds investment.
- The study is confined to Commodity Funds and Gold ETFs Mutual fund Investment schemes.
- The study is limited to 5-year period from 2018 to 2022.
- The parameters chosen are only indicative and the investors should use their discretion before investing in any scheme.

Analysis Of Data:

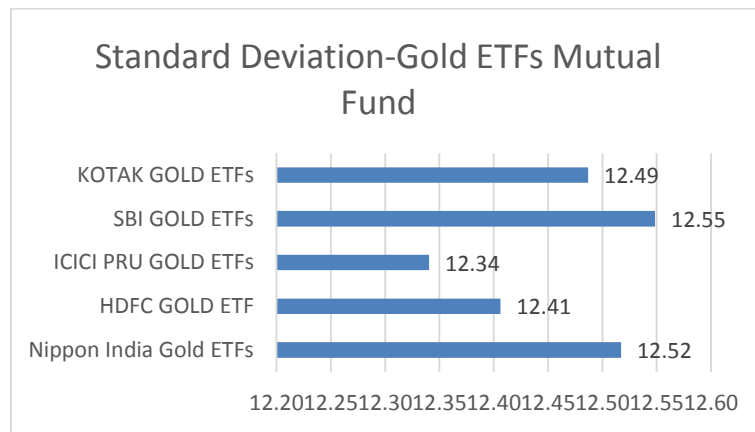
Figure 1: Mean returns of Gold ETFs Mutual Fund Schemes.



Conclusion: As per Graph 1, the higher the returns it is better. It is concluded that the mean returns of SBI Gold ETFs Fund is the

highest at 13.19% and that of HDFC Gold and Nippon India Gold ETFs is lowest at 13.02%.

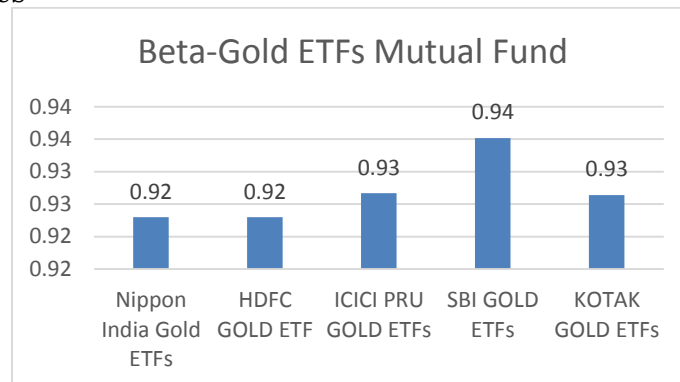
Figure 2: Standard Deviation-Gold ETFs Mutual Fund Schemes



Conclusion: The rule is lower the standard deviation it is better. As per Graph 2, it has emerged that the standard deviation of ICICI Pru Gold ETFs Fund is the best at 12.34%

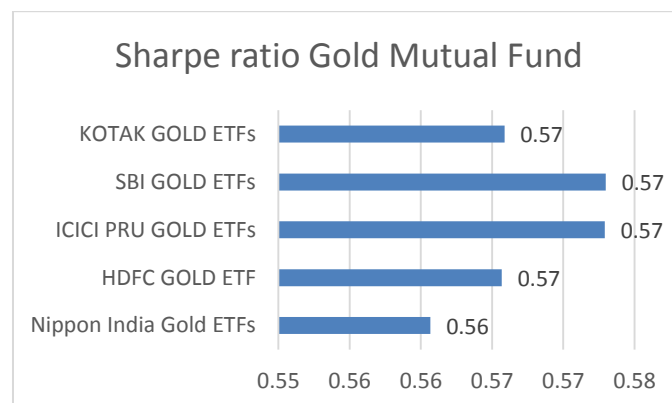
and that of SBI Gold ETFs Fund is the worst at 12.55%. It is better to invest in less volatile fund.

Figure 3 -Beta Values



Conclusion: The Beta values less than 1 or close to 1 are better. The Beta value of more than 1 is risky funds. As per Figure 3 the

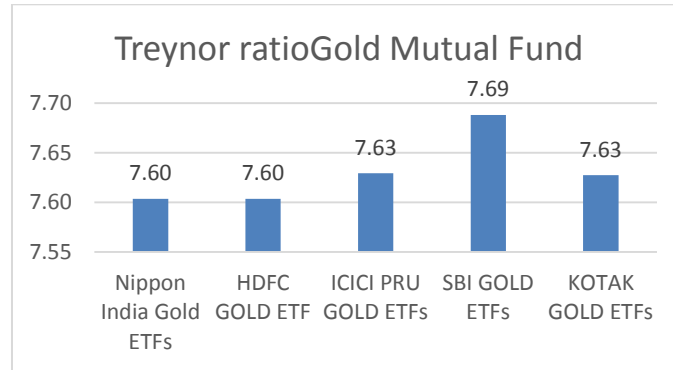
Beta value of Nippon India Gold ETFs and HDFC Gold ETFs are 0.92 which is better than that of SBI Gold ETFs which is 0.94.



Conclusion: The Higher the value of Sharpe ratio the better the fund is for investment. As per figure 4, the Sharpe ratio of all Gold ETFs are in a similar range from 0.56 to 0.57

.The investor can buy any Gold ETFs it will have the same returns as per Sharpe ratio. Statistically speaking preference can be given to SBI Gold ETFs and ICICI Pru ETFs.

Figure 5-Treynor Ratio



Conclusion: Higher the Treynor Ratio better is the mutual fund scheme for investment. As per figure 5, the Treynor ratio of SBI Gold ETFs is the best at 7.69%. Nippon India Gold ETFs and HDFC Gold ETFs is the worst at 7.60%.

Conclusion:

It is concluded that the mean returns of SBI Gold ETFs Fund is the highest at 13.19% and that of HDFC Gold and Nippon India Gold ETFs is lowest at 13.02%.. It has emerged that the standard deviation of ICICI Pru Gold ETFs Fund is the best at 12.34% and that of SBI Gold ETFs Fund is the worst at 12.55%. The Beta value of Nippon India Gold ETFs and HDFC Gold ETFs are 0.92 which is better than that of SBI Gold ETFs which is 0.94. The Sharpe ratio of all Gold ETFs are in a similar range from 0.56 to 0.57. The Treynor ratio of SBI Gold ETFs is the best at 7.69%. Nippon India Gold ETFs and HDFC Gold ETFs is the worst at 7.60%. SBI Gold ETFs has a balanced risk and returns portfolio as per the risk and returns ratios calculated by the study. It is necessary for every individual to analyse the risk and returns parameters before investing

in mutual funds. Sharpe and Treynor ratio help in measuring the returns, Beta and Standard deviation help in analysing the risk of the fund.

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Transition from Knowledge Economy to Knowledge Society.

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DOI- 10.5281/zenodo.7740610

Abstract :

The phases of Capitalist economy and Industrial Economy, moving towards waves of Knowledge Economy. The now emerging form of society represents a “knowledge” society because the constitutive mechanism or the identity of modern society increasingly is driven by “knowledge.” Knowledge is an infinite resource. It tends to spread. It works as input as well as output. For centuries, ‘knowledgeable people’ did not work and ‘working people’ were not considered ‘knowledgeable’ or ‘worthy of social respect’. ‘Knowledge’ that was earlier confined to drawing rooms, coffee houses, court-rooms, libraries, and universities, now made waves in shop-floors, factories, places of work, design studios, research and development facilities and corporate offices. In the last few years, importance of knowledge is recognized in economic development as it plays catalyst role in making country more dynamic. We need to go beyond the Knowledge Economy to create the Knowledge Society. People would be both producers and consumers of knowledge, just as we currently produce and consume goods and services. Knowledge is essential to our daily life as well as our work life.

Key words: Knowledge Economy, Knowledge Society, development

Introduction:

Today Knowledge is both input and output. Knowledge is the main engine of wealth creation. The Concise Oxford Dictionary defined knowledge as “information and skills acquired through experiences or education, the sum of what is known, true justified belief as opposed to opinion. Awareness and familiarity gained by experiences” (Pearsall, Judy., (1999), p.727).

The Reitz (2016) explained the knowledge as the “information that has been comprehended and evaluated in the light of experience and incorporated into the knower’s intellectual understanding of the subject” (Reitz, Joan M. 2016).

Knowledge is the treasure, when we apply it and practice it. In the current knowledge driven era India has already developed a profile to the Indian knowledge society which includes spiritual, social, cultural, intellectual and philosophical knowledge. The skill of learning to learn is one of the most important tools to help people acquire formal and informal education. One marker of a knowledge society is continuous

innovation that demands lifelong learning, knowledge development, and knowledge sharing. The institution of education will need to become responsive to changing demands.

Research Methodology

The study is based on the secondary data collected from various articles, books, research papers, websites.

Objectives of the paper

1. To know the trends and patterns of knowledge economy and knowledge society.
2. To study the directions of the economy and society.

“A modern society needs both the ‘great man’ who can create new knowledge and the ‘journeyman’ who can convert new knowledge into everyday action”. –Peter Drucker (1969). According to this, first step to create Knowledge Society or Economy, one has to build character of a person. Individual. Character Building is a very big process.

In the beginning of development process, the importance was given to knowledge economy, but now thinkers, economists and innovators

in the world, are giving importance to the knowledge society.

Economy and Society are interrelated any measure that expands consumers choices, reduction in cost of production, expansion of business creative activities, rising employment and income levels and so on would constitute a benefit to society. When these benefits are increasing it is directly affecting the standard of living of the people, in the society. Here interest lies in those initiatives that would benefit society directly for instance any movement in the social sector activities such as governance, education, health care or any impact on masses, especially those who are poor, deprived, disempowered, disadvantaged could be considered as direct benefits to society. Such benefits would largely imply important and it can benefit society in various ways some benefits maybe direct, some may be indirect for example growth of specification or productivity of industries. A knowledge economy is that which uses knowledge to enhance its growth and competitiveness. The pillars of knowledge economy are 1. innovation system, 2. education system, 3. communication and information system, 4. business and institutional surrounding. Knowledge is now regarded as a factor of production along with land, labour, capital and entrepreneurship, due to the advancement of information and data Technology. Information is used as raw material for knowledge economy just as iron is a raw material for machinery

One of the first social scientists to employ the term “knowledgeable society” is Robert E. Lane (1966). He justifies the use of this concept by pointing to the growing societal relevance of scientific knowledge Society is a term to describe societies which are economically and culturally characterised by a high degree of dependency on their potentials to create scientific and technological knowledge. The Knowledge Society would take this concept several steps further. Knowledge societies must build on four pillars: freedom of expression; universal access to information and knowledge; respect for cultural and linguistic diversity; and quality education for all. Knowledge societies must build on four pillars: freedom of

expression; universal access to information and knowledge; respect for cultural and linguistic diversity; and quality education for all. It's time to move forward from the Knowledge Economy to the Knowledge Society. Now that the best jobs require high levels of education and training, we need to make sure that lifelong learning is accessible and appreciated, not only because it enriches our economies but because it ennobles our lives

The Indian knowledge society will have four key drivers namely a) societal transformation for a just and equitable Society b) wealth generation c) protection of the traditional form of knowledge, d) the difference between an IT driven society and the knowledge tribal society. This can happen not only in research labs but can be promoted with the help of people's participation and contribution in building traditional knowledge systematically.

The 21st century is regarded as the knowledge-based society, where the awareness of scientific knowledge is regarded as an indicator of socioeconomic development. Processed data leads to information and information leads to knowledge. In simple words, raw data when processed and some attached value is derived from the processed data becomes the information and when this information is passed to others it becomes knowledge.

1. Data (texts, numerals, images, etc.)
2. Information (filtered and processed data within a relevant context)
3. Knowledge: (systematically processed information)

India has developed a vision and strategies to address its transition to the knowledge economy. What has gone wrong with the Knowledge Economy, and how can the Knowledge Society make it right? The economic value of knowledge is most difficult to establish. First, to succeed in the Knowledge Economy, you must make a significant investment in the right kind of education. Over 40 years, the costs of higher education have increased by 13 to 24-fold. Degrees in engineering and science return more than degrees in social sciences, arts and humanities. Second, the knowledge economy generates fewer jobs than the old industrial

economy. For example, one of the most valuable companies as measured by market capitalization is Apple, with about 100,000 employees worldwide. In contrast, General Motors, which regularly topped the Fortune 500 list from the 1950s through the 1980s, directly employed over 850,000 people worldwide at its peak in 1979. In the downside of technological change, the low-skill service economy is also growing, with Wal-Mart and MacDonald's among the world's largest employers, and automation and artificial intelligence may eliminate even more jobs.

Therefore, we need to go beyond the Knowledge Economy to create the Knowledge Society. While knowledge is the main engine of wealth creation, the Knowledge Society would take this concept several steps further. People would be both producers and consumers of knowledge, just as we currently produce and consume goods and services. Knowledge would be essential to our leisure and civic life as well as our work.

A human society in which knowledge should bring justice, solidarity, democracy, peace. A society in which knowledge be a force for changing society a society which should provide Universal and equitable Education would encourage young people to become independent, lifelong learners, and higher education would transform itself into the lifelong learning sector. Colleges and Universities would make greater use of technology, creating flexible learning opportunities across an adult lifetime, thereby making higher education more affordable and accessible.

Like a high-tech startup, the Knowledge Society would establish new, open economic models that would reward learning and creativity. Knowledge Society is a term to describe societies which are economically and culturally characterised by a high degree of dependency on their potentials to create scientific and technological knowledge. Knowledge societies must build on four pillars: freedom of expression; universal access to information and knowledge; respect for cultural and linguistic diversity; and quality education for all. In 2000, the Indian Prime Minister Dr Manmohan Singh, laid down a vision for developing India as a

Knowledge society. According to him, "a knowledge society will enable us to leapfrog in finding new and innovative ways to meet the challenges of building a just and equitable social order and seek urgent solutions."

He gave a five-point Agenda.

1. 1.Strengthening education for developing a learning society.
2. 2.Broadcasting Global networking.
3. 3 Encouraging vibrant government - industry academic interaction in policy making and implementation.
4. 4.Leveraging existing competencies in IT Telecom, drug, design, financial services and Enterprise wide management.
5. 5.Building economic and business strategic alliances on capabilities and opportunities.

According to Indian planning Commission Report, education is the foundation for the knowledge driven economy. It examines issues related to connectivity, governance and use of information technology to reduce the digital divide. As part of a strategy to become a knowledge driven economy, it recommends of four- tiered approach for increasing employment in the new economy that includes:

1. Creating structures for Biotechnology promotion and application.
2. Promoting knowledge based services Industries service industries in which India has competitive strengths such as software and information technology.
3. Packaging and marketing traditional knowledge especially in medicine like Ayurveda, Unani.
4. Improving capacity building in three mutually supportive areas human resource development, research and development capabilities and the application of Technologies flowing from innovations.

India has a well-developed financial sector, well developed private sector, having macroeconomics stability. India has a number of strengths to transfer itself to a knowledge-based economy. India has a good base of skilled human capital especially in Science and Technology. Indians are experts in use of English language Indian market is diversified and having well developed

financial sector India is short after destination for services in global production change from Call Centres, financial accounting, database production to International firms, research and development labs etc India has a huge reservoir of creativity in traditional knowledge and local entrepreneurship India has passed a series of land on Intellectual Property Rights introducing a patent Regime that makes it WTO complaint.

Concluding Remarks:

The main findings of the present study can be summarised as follows, the economic factors alone may not be sufficient to explain the development of human capital but the social factors are along with political and cultural factors also responsible for development of human capital. Unless the development of human capital takes place, economy or society cannot move into either knowledge economy or knowledge society. It will be beneficiary for India to fully utilize its human resources by making investment and focusing to increase its productivity, in order to generate spread effects as done by China. India has opportunities and challenges in order to create an effective knowledge economy. She must make proper arrangements to grow more competitiveness and increase more welfare to create Knowledge society. This process means understanding the strengths and weaknesses of the country to develop appropriate policies and device mechanism to monitor progress of the knowledge economy and knowledge society.

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“A Study on Factors Influencing Work Culture and Online Teaching Methodology With Reference To Teachers Teaching In Mumbai”

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DOI- 10.5281/zenodo.7740623

Abstract

With the growth of e-learning, where instruction is delivered remotely and through digital platforms, the educational system has experienced considerable changes. Despite becoming widespread in all developed nations, online teaching was a novel work culture in India. In the Indian educational sector, online instruction was a unique idea. To engage with students, the educational sector is being forced by a number of circumstances to move totally online. The current study concentrated on numerous difficulties educators have encountered as a result of technology usage. The researcher offered future thoughts on online teaching at various educational institutions along with the necessary conclusions based on the study's findings.

Keywords: Work culture, Online teaching, Teachers.

1. Introduction

In one poll, it was found that 36% of teachers had no training at all, while more than 50% of them received instruction from the government or their institutions on how to run online classes. However, more than half of American workers (75 million) have jobs and duties that can be carried out, at least in part, from home, according to data cited by Newswire (2020). Remote employment, in our opinion, will endure for a very long time. Online teaching is a new work culture in the educational system that requires a lot of commitment as well as a different method of teaching. Teachers were not particularly tech savvy and were not comfortable with the culture of online work. There were no other ways to give education in India, thus it took some time for instructors to get used to this new work culture. Online education is a useful replacement for traditional classroom training. When students interact with their teachers and peers, they learn more effectively. Students talk about their online course material. Students are generally becoming accustomed to internet studying. Online education has altered the working environment and presented many difficulties for the teachers, particularly for those in the middle years who were not tech-savvy. For

instructors, implementing modern technologies in the classroom posed serious difficulties. In addition, they had to deal with the difficulty of teaching their students using technology. Online teaching and learning technologies are currently being investigated and evaluated for the first time ever. Social media, virtual learning environments, Telegram, Messenger, What's App, and We Chat are some of these tools. One benefit of online training is that teachers have more freedom because they can employ a range of technology tools and adapt to different learning preferences. Students who might not actively participate in typical classroom settings might benefit from online programmes, and instructors who teach online have access to a multitude of technology to make lessons more exciting and engaging. The format's adaptability and usefulness are valued by both online learners and online instructors. They can instruct or interact with their students from the comfort of their own homes; they are not required to be in a specific location at a specific time. There are several benefits and benefits for the future of online education. Most colleges can invite guest lecturers without having to worry about the logistics of travel to connect with students. One of the main benefits of

online education is the possibility of inviting a professor who teaches abroad to speak to students on a variety of topics. Before the pandemic, this would have been unimaginable. This idea was discovered when students were compelled to stay at home during a pandemic but were driven to learn something important for their long-term growth and development. The vast majority of industries have shifted to conducting business online during the closure. Like many other industries, education systems have adopted internet purchases. Thus, the adventure of online education started in India. The teachers initially found adopting online learning to be problematic. From the viewpoint of teachers, the researcher will concentrate on the multiple potential for online instruction. The current study concentrated on numerous difficulties educators have encountered as a result of technology use. The researcher offered future perspectives on online teaching at various educational institutions based on the study's findings, along with the necessary conclusions.

1.1 Challenges faced by teachers in online teaching:

In the wake of the COVID-19 pandemic, the education sector was among the hardest hit, with many schools closing their doors. In this challenging time, the educational resources available online have become vital. Especially in the realm of online education, the past two years have seen a meteoric rise in investment in EdTech tools, leading to significant technological breakthroughs. There are several upsides to taking classes online, including the ability to learn from anywhere with an internet connection, saving money, saving time, and having more options available to you. Even yet, that doesn't make it perfect in every way. Sixty percent of students who just shifted to an online learning environment said they were finding it monotonous and difficult to stay motivated to pay attention in class, according to a recent survey. 77% of 800 college students in a different research favoured in-person over online means of instruction. These numbers demonstrate the importance of isolating specific issues plaguing the online education industry.

1. Motivation factor

Online education was supposed to be the cutting edge of exciting new ways to teach today's and tomorrow's students. But the

results indicate just the opposite. Students have stopped using the learning portal since it provides a never-ending source of reading material, tests, and routine assignments and multiple-choice questions (MCQs). Students report feeling unmotivated in online classes because of the lack of teacher-student connection. The necessity for students to interact with one another in person is another factor that is absent from the online learning model. Educators have a responsibility to engage their pupils with relevant material.

2. Infrastructure a barrier

Though traditional classroom necessities such as desks, seats, and chalkboards are unnecessary for online education, a basic set of facilities is still required. A computer, appropriate software, consistent electricity, and fast internet access are all in great demand. If a country cannot finance this type of infrastructure, affluent countries make it available to the public through public libraries. However, in developing nations like Bangladesh, Pakistan, India, and others, only a tiny fraction of the population has access to such sophisticated infrastructure.

3. Technology and Digitalization

While many members of the younger generation have mastered the art of computer use, this does not necessarily translate to a command of digital literacy. Online learning platforms make it difficult to acquire proficiency in a wide range of software programmes. In addition to teaching appropriate online communication skills, educators must also inform students of their legal and ethical responsibilities and rights in the context of distance education. Teachers and students alike have been plagued by these sites' chronic technological difficulties. Learning is continually disrupted by the need for constant technical assistance with these issues.

4. No face-to-face communication

People's innate need to connect with and learn about one another provided the foundation for the growth of the internet. However, a virtual interaction just cannot be the same as a real-world one from a psychological standpoint. There are situations where learning with an instructor and other students in the same room creates an atmosphere that cannot be replicated online. The physical model helps maintain order because students can't just turn off their phones and nod asleep. Teachers are

better able to work one-on-one with their students in traditional classroom settings.

6. Less online learning and EdTech choices for children with exceptional needs

When it comes to students, those with special needs are the ones who have been completely overlooked by the development of online learning. Instruction for bright students should be more individualised and practical. There is still a need for a teacher or other expert to help students with their work, no matter how advanced the available technology may be. Because of these issues, students with special needs have historically lagged behind their typical peers academically.

7. Course Content and Design

It was expected that making the shift to online education and other innovative pedagogical practises would result in a more up-to-date structure and content for the courses. Unfortunately, this has not happened. Even after moving their courses to the web, many universities are still using antiquated pedagogical practises and course materials. Student attitudes about higher education are changing as a result of the decision by major tech firms like Google and Tesla to not require a degree for entry-level positions. You may find higher-quality content on these topics online for free or at a much lower price at sites like YouTube, Google, Skillshare, Udemy, and others. The flexibility of the educational system is enhanced by the options provided by these platforms, which allow users to choose their own topics of study. Because of this, traditional methods of education should be rethought.

9. Many interruptions and a lack of discipline

Online enrollment has plummeted as a result of repeated failures to load, inadequate bandwidth, and boring courses. Most students complain that they lack the interest to complete an online course and express their dissatisfaction with online learning. Teachers and students alike lose interest when instruction fails to hold anyone's attention. When educators are not held to the same standards when instructing online, students often receive a subpar education. Increased distractions have arisen as a result of students' free access to electronic devices like computers and smartphones in the classroom.

2. Review Of Literature

1. **Arkorful, V.; Abaidoo, N. and Healy, S.; Block, M.; Judge, J. 2014**, The increased adaptability and learning opportunities made possible by online education—including quick access to subject-matter experts, exposure to different classroom settings, a plethora of course options, and participation in online student communities—have led to the widespread acceptance of this mode of instruction. There are a number of issues that can arise when attempting to learn something new using an online medium.
2. **DQ Institute, 2019**, At a time of epidemic proportions, when students must rely only on the internet for their education, teachers on the brink of cyber peril might convert their pupils' digital talents into educational chances for future companies through digital intelligence.
3. **Sintema, 2020**, Reduced interaction time and less opportunity for students to confer with teachers likely had a negative impact on their ability to acquire and comprehend new material, and this could be reflected in their grades.
4. **Petrie, 2020**, Both teachers' and students' familiarity with and comfort using ICT will play a role in the development of effective pedagogy for online learning. Educational course, training, and skill development programmes have been developed using unified communication and collaboration platforms like Microsoft Teams, Google Classroom, Canvas, and Blackboard.
5. **Unesco (Unicef) India Case Study October 2021**, Among the most important concerns is the safety of students' personal information as governments increasingly use technology to enhance or even replace traditional classroom instruction. Teachers' skills are crucial for closing the digital achievement gap. As such, they need to be briefed, advised, and prepared. You can't take charge of this procedure without being immersed in a conducive environment.

3. Statement of the Problem

As with anything else, things may and will change. Each of us must learn to embrace transformation and go with the current. Resisting change can stunt development and growth. The study's overarching goal is to comprehend how the

Gender	Frequency	Percent
Male	126	70.0
Female	54	30.0
Age	Frequency	Percent
Less than 25	39	21.7
26-40	20	11.1
41-55	58	32.2
Above 55	63	35.0
Education	Frequency	Percent
Graduate	32	17.8
Post Graduate	148	82.2

7.Data Analysis And Interpretation On the base of the hypotheses further conclusion is withdrawn:

advent of online learning has altered traditional classroom practises and how this shift in turn has affected educators' perspectives on societal shifts in the workplace. The research has looked on the long-term viability of online education. It's true that taking classes online opens up a world of opportunities, but it's also brought with it some significant challenges

4. Objectives of the Study

1. To study different challenges teachers faced due to online teaching.
2. To study significant difference in effect of change in work culture due to online teaching.
3. To study the efforts taken by teachers to cope up with online teaching.

a) Sample Size

The sample size of teachers is 200 from various colleges in Mumbai. The teachers will be contacted via questionnaire and interview method for the study. The study will cover various colleges in Mumbai, and teachers will be considered as respondents for the study.

b) Method of Data Collection

The current study incorporated both primary and secondary data. Based on the type of respondents, the following major data collection methodologies used. Primary data was gathered through questionnaires and interviews. As secondary data sources, books, journals, magazines, papers, and websites will be utilized.

5. Research Methodology Of The Study

a) Sample Size

The sample size of teachers is 200 from various colleges in Mumbai. The teachers will be contacted via questionnaire and interview

method for the study. The study will cover various colleges in Mumbai, and teachers will be considered as respondents for the study.

b) Method of Data Collection

The current study incorporated both primary and secondary data. Based on the type of respondents, the following major data collection methodologies used. Primary data was gathered

through questionnaires and interviews. As secondary data sources, books, journals, magazines,

papers, and websites will be utilized.

6. Hypotheses of The Study

1. Online teaching methodology affects positively on the changes in the work culture of teachers.
2. The age factors of teachers are significantly correlated in the work culture due to online teaching methodology.
3. Teachers working with private institutions show positive relation with respect to the work culture during online teaching method.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Online teaching has changed the work culture	Between Groups	1.48	1	1.48	1.01	.31
	Within Groups	262.26	178	1.47		
	Total	263.75	179			
It's simple to incorporate online resources into the classroom.	Between Groups	.83	1	.830	.51	.47
	Within Groups	284.48	178	1.598		
	Total	285.31	179			
Taking classes online can be a rewarding and enjoyable experience	Between Groups	.04	1	.047	.03	.84
	Within Groups	218.14	177	1.232		
	Total	218.19	178			
Teachers at universities today have to be flexible and creative in their teaching approaches.	Between Groups	.07	1	.076	.05	.82
	Within Groups	262.91	178	1.477		
	Total	262.99	179			
Online education is more exciting and interesting	Between Groups	.04	1	.045	.05	.81
	Within Groups	150.28	178	.844		
	Total	150.32	179			
Adoption of new technology in the classroom was a significant challenge for teachers	Between Groups	.86	1	.860	1.12	.29
	Within Groups	135.69	178	.762		
	Total	136.55	179			

Observation: The above table shows the frequency distribution of demographic analysis collected for the research. In gender males are higher with 70% in rate as compare to the females with 30%. In Age demographics above 55 category respondents are higher with 35% as compared to other age groups. In education post graduate teachers are higher with 82.2% as compare to graduate teachers.

Inference: Therefore the teacher's respondents were maximum males of above 55 years and they all were post graduate.

Observation: From the above table of ANOVA shows the different questions were

asked to the respondents on Online teaching methodology and work culture and as per the analysis it can be seen that all the significant values are higher than .05 P value, which states that here we select the null hypothesis that there is no significant difference in gender's perception for online teaching methodology affects positively on the changes in the work culture of teachers.

Inference: Male and female teachers both were agreed that online teaching methodology affects positively on the changes in the work culture by which they learned so many new things.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
Online courses are pleasure to conduct	Between Groups	2.11	1	2.11	1.15	.08
	Within Groups	90.83	178	.51		
	Total	92.95	179			
The online study material is also easily accessible, allowing students to access the content wherever and whenever they need it	Between Groups	.00	1	.00	.01	.90
	Within Groups	111.90	178	.62		
	Total	111.91	179			
In spite of the pandemic, teachers continue to deliver engaging and instructive lessons.	Between Groups	2.46	1	2.46	2.06	.15
	Within Groups	211.86	17	1.19		
	Total	214.32	17			
Teachers do a good job of distilling the core concepts of the course material into online lessons	Between Groups	2.63	1	2.63	1.92	.16
	Within Groups	244.36	17	1.37		
	Total	247.00	17			
Teachers like the medium since it can be used in a variety of ways and is very convenient	Between Groups	1.259	1	1.259	.988	.32
	Within Groups	226.719	178	1.274		
	Total	227.978	179			

Observation: As the table presents that the significant values are higher than .05 P Value which signifies that null hypothesis is accepted that there is no significant difference in teachers perception that working with private institutions show

positive relation with respect to the work culture during online teaching method.

Inference: Thus it represents private institutions teachers are also satisfied with the online work culture and accepts the changes with time and requirement.

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Easy availability of teachers for providing online education	Equal variances assumed	3.39	.06	-1.26	100	.02	-.37	.29	-.96	.21
	Equal variances not assumed			-1.41	99.98	.02	-.37	.26	-.89	.15
Accept the online work culture	Equal variances assumed	1.37	.24	.06	100	.04	.01	.18	-.35	.38
	Equal variances not assumed			.06	94.18	.04	.01	.17	-.33	.36

The potential of online education is immense	Equal variances assumed	.15	.69	-.78	100	.04	-.10	.13	-.38	.16
	Equal variances not assumed			-.78	81.26	.03	-.10	.13	-.38	.16
Online teaching presents unique challenges, due to its lack of face-to-face interaction	Equal variances assumed	.30	.58	.02	100	.02	.00	.11	-.22	.23
	Equal variances not assumed			.02	76.69	.03	.00	.11	-.23	.23
Online teaching has several disadvantages	Equal variances assumed	1.70	.19	-.71	100	.04	-.14	.20	-.56	.26
	Equal variances not assumed			-.75	94.4	.04	-.148	.19	-.54	.24
Contact with students is difficult in online teaching	Equal variances assumed	.43	.511	.29	100	.01	.074	.25	-.42	.57
	Equal variances not assumed			.29	75.96	.02	.074	.25	-.43	.58

Observation: According to the above analysis it can be seen that all the significant values are lesser than p value .05 which means that here we accept the alternate hypothesis that there is significant difference in the overall quality of performance of teachers has improved as a result of online teaching, which has aided in the creation of a harmonious work culture.

Inference: Thus teachers respond that online teaching can be some time ineffective, difficult, lack of student interaction and other varied challenges. So as per their view point online education is not easy to accept.

Key Findings

1. The teachers respondents were maximum males of above 55 years and they all were post graduate.
2. Male and female teachers both were agreed that online teaching methodology affects positively on the changes in the work culture by which they learned so many new things.
3. Thus it represents private institutions teachers are also satisfied with the online work culture and accept the changes with time and requirement.

4. Teachers respond that online teaching can be some time ineffective, difficult, lack of student interaction and other varied challenges. So as per their view point online education is not easy to accept.

8. Scope Of The Study

The researcher would conduct research among teachers at colleges in Mumbai. Teachers' online teaching experiences will be evaluated based on their personal experiences.

9. Significance Of The Study

The online teaching method has been a significant change in India's educational system. Although this method is popular throughout the developed world, it has got importance in India during the pandemic. The way of education has changed. Teachers encounter a variety of challenges when it comes to teaching students, including a lack of reliable internet connectivity. The study will mainly focus on change in work culture due to online teaching methodology with reference to teachers in Mumbai. The study will elaborate findings after careful analysis using primary and secondary data. The findings of the study will be useful in future

research. The study will aid in comprehending the value of online teaching and work culture with its future prospects. The findings could aid the colleges in future enhancements to online teaching methods as well as the formulation of improved educational policy. As a result, the current study will open up more avenues for future research.

10. Limitations Of The Study

1. The study was conducted in Mumbai. The research was conducted using a random sampling method.
2. An accurate picture of the changed work culture as a result of online teaching methods could not be constructed without a more extensive investigation of the individual situations at different locations and universities.
2. It is expected that online education will continue in the future. As a result, many additional technology and instructional technique advances may be overlooked in this research.
3. Teachers' current perceptions or mindsets about online instruction may change in the future as technology advances and competition increases.

Conclusion

There is never a problem without a solution. There are numerous issues with the existing Edu Tech system in the online learning sector in addition to those on the list above. Nevertheless, despite the segment's youth, it has made enormous strides forward. The system is quickly evolving and changing, and it will soon become standard in the education sector. Numerous advantages of online learning include increased accessibility and lower costs for education. Since the new generation of students wants more choice in their education, the era of rigid topic selections and predetermined curricula is ended.

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Role of Ecocriticism in Sustainable Development

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DOI- 10.5281/zenodo.7740630

Abstract -Ecocriticism focuses on the crucial issues of environmental degradation through the forum of literature. For ecocriticism Nature and culture are inclusive terms. It is committed to make the world less unjust in terms of human culture and nature binary. Ecological literacy (also referred to as Eco literacy) is the ability to understand the natural systems that make life on earth possible. To understand ecocriticism means understanding the principles of organization of ecological communities (i.e., ecosystems) and using those principles for creating sustainable human communities.

Keywords- Ecocriticism, Ecological literacy, Sustainable human communities, Environmental degradation

Ecocriticism was inaugurated in the year 1980s as a result of environment revolution that had begun around 1960s after the publication of Rachel Carson's Silent Spring. Ecocriticism focuses on the relationship between human beings and nature, and how human beings affecting nature and vice versa. Ecocriticism has impacted in various other disciplines as well hence it is evolving as an umbrella term. It is an earth-centred approach, it intersected environment and culture and calling for relationship between natural scientists, writers, literary critics, anthropologists, historians, and many more.

The term Ecocriticism was first used by William Rueckert. In 1978, Rueckert published an essay titled Literature and Ecology: An Experiment in Ecocriticism. Rueckert made an important suggestion to apply ecology and ecological concepts to the study of literature. Ecologically minded individuals and scholars have been publishing ongoing works of Eco theory and criticism since the outbreak of environmentalism in the late 1960s and 1970s. However, there was no organized movement or school to study the environmental aspect of literature. They were brought together and categorized under different subject headings: Human Ecology, Regionalism, American Studies, Pastoralism, etc. Raymond Williams Marxist British critic, wrote a seminal critique of pastoral literature in 1973, named The Country and the City.

He gave more attention on a Green Socialism. Joseph Meeker's another early ecocritical text called The Comedy of Survival which was published in 1974. He presented different opinion that environmental calamity is caused primarily by a cultural tradition in West of separation of Nature from Culture. The predicament dominates Environmental philosophy and Ecocriticism and. Ecocriticism examined representation of nature in literary genres. Early efforts made by the ecocritics were disunited. It was in 1990 that Ecocriticism was crystallized into a coherent and organized movement in the United States of America.

Ecocriticism in a broader perspective, guides us to inspect the world around us and critiquing the society and its mannerisms in the treatment of nature. The theory of ecocriticism helps in analysing any text with an eye on nature portrayal by the author and the ecocritical within the text. Through this, various questions can be answered like What is the role of nature represented in the text? How is the setting of the text related to the environment? Ecologists have tried to motivate people to be sympathetic and respectful for mother- nature. This theory has motivated writers to motivate people against the time when the outcome of human actions would be damaging the planet's basic life support system. The awareness about ecocriticism brings in us a desire to

contribute to environmental restoration, not only as a hobby but also as a representative of literature. Ecocritics encourage everyone to think seriously about the aesthetic and ethical dilemmas posed by the environmental crisis and about how literature and language transfer values with intense implications on ecology.

Ecoliteracy is important for every individual to improve the ecology of public awareness (Desfandi & Maryani, 2017). Monaghan and Curthorse (2008) in their work emphasize that Eco literacy measures a person's ecological knowledge and ability and willingness to apply this knowledge to a sustainable lifestyle. Balgopal & Wallace in 2009 says that Ecoliteracy leads to an individual's understanding of ecological concepts and their place in an ecosystem. Barnes, in the year 2013 focuses on increasing our understanding of the earth's natural and human systems. Although it is defined in various ways by experts, Eco literacy has the goal of building an intelligent community necessary for sustainable development. As per Barnes, 2013 it is needed to increase Eco literacy is of fundamental importance in today's world. Ecocriticism is the learning of the relationship of the non-human and the human. It studies the human life in the context of nature. Ecocriticism supports indigenous ways of life as potential models for a harmonious existence on the earth. It explores human life in the scenario of globalization, privatization, and liberalization. Environmental crisis poses severe threats to the values, political, economic, and cultural life of the people in various nations of the world. Ecocriticism inaugurated in the 1990 has historical background. From ancient times various people have been expressing concerns about the natural world. Ecocriticism takes a strong ethical stand. It has a commitment to the natural world as an important thing rather than as an object of study only. It is the very young school of Literary Movement or criticism. Ecocriticism explores how to use the stored energy of literature into effective political action for solving the contemporary problems in today's world.

The environment nurtures, uplifts our senses and sustains our existence. Wendell Berry explores the political and moral implications of degrading and neglecting place in the novels such as the Memory of Old Jack (1976). In the United States the

environmental literature includes fiction, poetry and drama that scrutinize the relationship between the natural environment and the humans. The awareness of the ethical component of literature is an important principle of the new ecological Ecocriticism or literary criticism. The writers such as Terry Williams Tempest, Berry Lopez, Robert Michael Pyle, Rick Bass, Scott Russell Sanders, Wendell Barry, Gary Snyder and other environmental writers have achieved aesthetic brilliance and also an understanding of human society's relationship with planet. As we have approached the 21st century it has become clear that the model of free economy, Privatization and Globalization, Liberalization, does not work. The problems of environmental degradation, domestic inequality, and poverty, have begun to threaten the very existence of the nation and society. They are threatening the quality of human life and security of nation. The world needs to have an alternative and different approach. The appropriate approach is of Sustainable Development. The development pattern should create social equality rather than inequality in society.

The pattern of development should always aim at the improvement of the quality of life. The Environmental degradations affect the quality of life. If healthy environment is denied to people then they are victimized by various types of diseases and the future generations feel insecure and threat. Economic development pattern is responsible for the present problems. The problems are endemic not incidental. We need to reassess and rethink what we mean by social and economic progress. We should introduce fundamental changes in the economic and social development to achieve genuine sustainable development.

Ecocriticism is an avowedly political mode of study it enables us to analyse and criticize and study the world in which we live. Culture is something lived, part and parcel of one's everyday existence in our life. The authentic culture that we follow must be natural. Radical changes have taken place in the study of literature during the last decades of the twentieth century. The human beings throughout their presence have done a lot of damage to the nature and ultimately even to themselves. The harmony of humanity and nature enhances the quality and standard of life. It is closely related to philosophy,

history, psychology, art history, and ethics. Ecocriticism is a political mode of analysis of literature, as the comparison with Marxism and feminism. It draws much from the environmentally oriented developments in philosophy and political theory and philosophy. It is coming together of environment and social concerns.

Ecoliteracy focuses on understanding the principles of organisation of ecosystems and their potential application to understanding how to build a sustainable human society. Ecocriticism puts together the sciences of systems and ecology in drawing together elements required to develop learning processes toward a deep appreciation of nature and our role in it.

Systems thinking is the recognition of the world as an integrated whole rather than a collection of individual elements. Within systems thinking, basic principles of organization become more important than the analysis of various components of the system in isolation. Ecological literacy and systems thinking implies a recognition of the manner in which all phenomenon are part of networks that define the way that element functions. Systems thinking is necessary to understand complex interdependence of ecological systems, social systems and other systems on all levels.

Ecocriticism gets its motivation and encouragement from the three major American writers whose works celebrate nature as a life force, and the wilderness as manifested in America. This writers are Ralph Waldo Emerson (1803-1882), Margaret Fuller (1810- 1850), and Henry David Thoreau (1817-1862). They belonged to the group of New England writers, poets, essayists, novelists and philosophers they are collectively known as the transcendentalists, which was the first major literary movement in America to achieve 'cultural independence' from the European models. R. W. Emerson had enjoyed the influence of nature in his first reflective prose narrative *Nature*. The writer here celebrates a non-traditional approach to nature which is well known as 'transcendentalism' (a theory that propounds that 'the divine' or 'god' pervades nature). Emerson suggests that reality can be best perceived by studying nature. Fuller's *Summer on the Lake* During 1843 is a Transcendental travelogue that encounters the American

landscape at large on whole, it is based on the Great Lakes region. Fuller in this work differentiates the utilitarian motives of the settlers and spiritual aesthetic aims of tourists. Famous writer Henry David Thoreau who is consider to be the father of Ecocriticism. Thoreau's *Walden* is an autobiographical personal account of his two-year stay in a hut on the shore of Walden Pond, two miles away from his home town, called Concord. It is a classic account of dropping out of modern life and seeking to renew the self by a 'return to nature'. His book has claimed a strong effect on the attitudes of its readers which alters from ego-consciousness to eco-consciousness. Robert Frost a major American poet has made use of w lakes, woods, stars, birds, horses, etc. His poems are simple on the surface but if we probe deep under the surface, we find that nature shows the universal truth of human life. His famous poem *Stopping by the woods on a snowy evening* deal with the perennial beauty of nature, and the obligations of impermanent human life. Ecocriticism is less developed in the UK than in the United Nations. Whereas the American writing celebrates nature, the British ecrcritics seek to warn us of the environmental threats emanating from governmental works, commercial, industrial, and neo-colonial forces. Jonathan Bate's work called *The Song of the Earth* argues that colonialism and deforestation have generally gone together. His *Romantic Ecology* reevaluates the poetry of famous Romantic poet William Wordsworth in the context of pastoral tradition in English. Here Bate explores the politics of poetry and argues that Wordsworth is the earliest of ecrcritics.

Ecocriticism advocates sustainable development for a better future of mankind in general. All organisms have their right to survive in their own way. The plants, the animals, the women, the marginal, the tribal - all have their role to play to keep up the earth's basic life support system. Limited use of resources will ensure the safe and secured future of the generations to come. "The most common measure to solve environmental crisis is sustainable development" (Frederick 128). This categorically means the required use of natural resources without endangering the whole environment and the well-being of all human beings (*Essays in Ecocriticism* 36). Environmental Justice the phrase used by ecrcritics suggests that Ecocriticism

underlines environmental justice as man's voracious urge to conquer nature is somewhat misleading. We humans used to believe ourselves to be superior to the other life forms that inhabit the biosphere but now we realize that nature is not a subordinate but a co-inhabitant of this earth ecosystem. We humans should change our self-destructive motives. If humans try to destroy nature, they will be paid back by their own coins. Our global crisis is not because how ecosystems function. It is because how our ethical or not our systems function. Getting through the crisis requires understanding our impact on nature. It requires understanding those ethical systems and using that understanding to reform them.

Conclusion

Ecocriticism which was synonymous with the British Romantic literature and the American nature writings has now gained its momentum with worldwide eco-literature. Ecocriticism has changed its colour from local to global perspectives in view of the present ecological crisis around the globe. The humans have only one earth to live in and we are at the brink of our forthcoming destruction unless we are careful of the blue planet. If we want to hear the song of the earth, we should change our anthropocentric vision without any delay. The world literature abounds in ecological perspectives. Environment that is an inseparable part of human culture is paramount in all major important writings. An ecological insight may lead them into several new and different perspectives even an Indian philosophical writing is not an exception to this. From the ancient India to the present cyber age, Indian literature is filled with environmental concern and problems. Even the Traditional Indian writing in English, the classic works of regional literature coming in English translation have their representation of nature. Indian traditional writing make us learn how we may lead a happy life in close harmony with nature. These environmental literary works beautifully deal with human nature relationship and interconnection- that is the key note of ecoliterature. The important message is to keep nature in her pristine beauty; let not destroy what we cannot create. The more essential ecocritical writings will come into focus, the more man will learn to behave with nature in a proper way keeping in tune with the present environmental crisis.

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Decadal Expenditure on Education and Attainments in Educational Indicators in India.

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DOI- 10.5281/zenodo.7740649

Abstract: In the 21st century the improvement in the quality of human life has become the well-recognized objective and challenge of all economic activities. The education is a fundamental aspect of quality of human life. Education and trainings enhance the person's skills, efficiency and productivity and helps to build a capable workforce that contributes to faster economic growth. Many economists have proved through their empirical studies that, public expenditure on education leads to accelerate the human development of the country. The government has a primary duty to provide easy access of quality education to its citizens. Therefore, the government of India has given importance to improvements in school education since the first five-year plans. The improvements in education sector can be examined through the improvement in education related indicators. In this context, an attempt made to analyze the recent trends of decadal public expenditure on education sector and its impact on attainments in educational indicators in Indian state.

Keywords: Public expenditure on social sector, Education, Human Development, Educational Attainments.

Introduction: The education plays a very important role in overall development of human beings. Education and training enhance the person's skills, efficiency, and productivity and helps to build a capable workforce that contributes to faster economic growth. Therefore, education is considered as a key for economic and social sector development in any nation and expenditure on education has observed as an investment in an economic issue that recognized more in recent years. Many economists like Schultz (1961), Swaroop (1996), Lee and Barro (1997), Gupta, and others (2004) have proved through different empirical studies, that improvements in educational indicators helps to increase the educational attainments levels and leads to human development. In the Indian constitution, education has received the utmost importance and it is considered a fundamental right for all citizens of the country. The government is taking continuously efforts and launched different schemes like Mid-day Meal Scheme (1995) Sarva Shiksha Abhiyan (2001), Right to Education Act (2009), Beti Bachao Beti Padhao (2015) for enhancing enrolment, and

literacy rate and reduces the dropout ratio of children and spread education among the deprived people. India has made elementary education free and compulsory for all children between 6 to 14 ages by enacting the RTE Act in 2009 that has made possible to raise the gross enrolment ratio (GER) up to 115% in 2017. However, the dropout ratio (DOR) could not reduce up to satisfactory level, it was still about 10% of primary school cohort in 2016.

Database:

In this study, the secondary data is used as per the requirement of the study. We have taken data from various institutions and government publications. Among them, major sources are RBI, Human Development Report 2022, Educational Statistics at A Glance 2018, annual reports of the Ministry of Human Resource Development of India, Government of India and economic surveys of India.

Methodology:

We have analyzed the decadal expenditure on education and attainments in educational indicators in selected Indian states. We used the simple statistical tools like percentage,

average and maximum and minimum, growth rate and correlation to analyze the recent trends and comparison of improvements in educational indicators. In this study analysis method of Goswami (2015) has been used to evaluated the relative decadal per capita expenditure on education and health incurred by the states and their improvements in education and health related indicators.

India's Educational and Human Development Attainments Compare to Other Nations:

India's attainment in education related indicators is dismal compare to many other nations even it lagged behind than some neighboring countries like Sri Lanka and Bangladesh. The table 1 represents that India's performance in Mean years of schooling was 6.7 years which is very less

than Switzerland (16.5). Moreover, Bangladesh' performance is better than India in terms both expected years of schooling and mean years of schooling. The dismal performance in terms of education is reflected in the human development index (HDI) value and ranking in the Human Development Report 2022. The HDI value of India was 0.633 and ranked at 132nd out of 189 countries in the world. The HDI value and rank of India is significantly lower than Sri Lanka and China even lower than that of Bangladesh. India's GNI per capita income is significantly lower than Sri Lanka and China, however Bangladesh has lower GNI per capita income than India. Despite the lower income Bangladesh has performed better than India in both educational and human development attainments.

Table 1: Educational and Human Development Attainments:

Countries	Expected Years of Schooling 2021	Mean Years of schooling 2021	DOR 2007-2016	GNI Per Capita (2017 PPP \$) 2021	HDI Value 2021	Rank 2021
Switzerland	16.5	13.9	0.4	66933	0.962	01
Sri Lanka	14.1	10.8	1.6	12578	0.782	73
China	14.2	7.6	--	17504	0.768	79
India	11.9	6.7	9.8	6590	0.633	132
Bangladesh	12.4	7.4	33.8	5472	0.661	129

Source: Human Development Report 2019, 2022, UNDP.

Decadal Per Capita Expenditure on Education and Relative Improvement in Gross Enrolment Ratio During 2005-06 to 2115-16:

The present scattered diagram shows the per capita expenditure on education¹ and relative improvements in gross enrolment ratio (GER) at elementary level in the selected states of India for the period of 2006 to 2016. From the figure we observed that Bihar, Jharkhand and Uttar Pradesh have shown notable improvements in gross enrolment ratio with relatively lower level of decadal

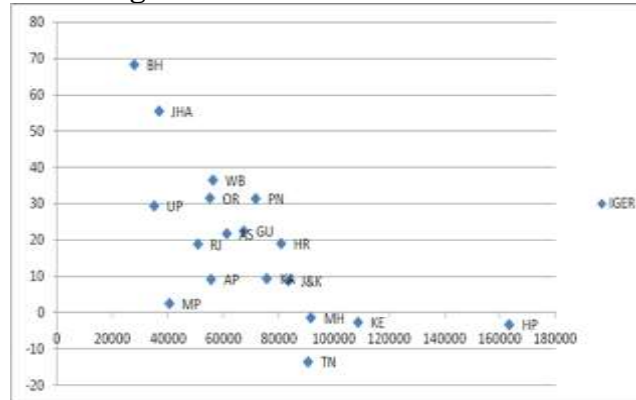
expenditure on education. It implies that these three states have incurred expenditure efficiently that resulted in notable improvement from very poor enrolment ratio in 2006. However, Himachal Pradesh, Kerala, Maharashtra, have reported negative improvement. It indicates that the initial additional increment in expenditure may lead GER ratio beyond 100 to enrol the children who could not complete their upper primary education at given specific age. Thereafter GER will supposed to reach to 100 with further increment in expenditure on education. Once the GER reaches at its higher level, the scope becomes shorter for further improvement in GER. Hence the GER increases at decreasing rate with additional per capita expenditure on education in these states. The states with lower GER would experience higher rate of increase in GER with addition public expenditure on education and vice versa. The states have experienced the inverted U-shaped link between decadal per capita expenditure on education and progress in

¹ The decadal expenditure on education incurred by a state is divided by the average of the sizes of population below the age of 14 in 2001 and 2011 in the state in order to find out the decadal per capita expenditure on education. The population below the age of 14 years has been considered because all the indicators of educational attainment under consideration correspond to the age group of 0-14.

gross enrolment ratio. Therefore, the states who have achieved the higher level of GER should maintain higher level of expenditure

and deploy it effectively to sustain the 100 GER for forever.

Figure 1: Decadal Per Capita Expenditure on Education and Relative Improvement in Gross Enrollment Ratio During 2005-06 to 2015-16.

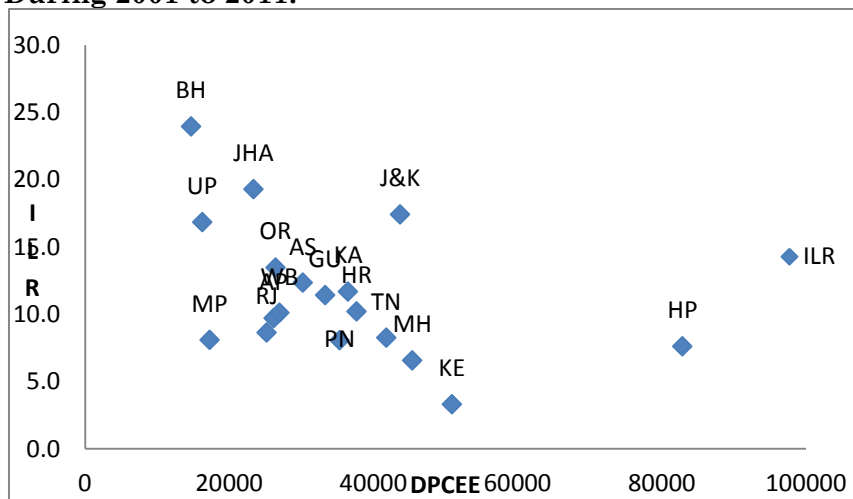


Decadal Per Capita Expenditure on Education and Improvement in Literacy Rate:

The state wise data on literacy rate is available up to the census year 2011, so we have evaluated the per capita expenditure on education and relative performance of literacy rate in the selected states during 2001 to 2011. The figure 2 shows that the decadal per capita expenditure on education was lower in Bihar, Jharkhand and Uttar Pradesh than other states. However, these three states have performed well in improvement in literacy rate during the given decade. It implies that these three states have incurred the expenditure on education very efficiently than other state, so that the states literacy level increased significantly. On the other hand, some states like Himachal Pradesh, Kerala and

Maharashtra have faced the poor performance in improvement in literacy rate even though their decadal per capita expenditure on education was higher than other states. It indicates that once a state achieves the certain higher level of literacy rate the literacy rate increases at decreasing rate with additional increments in expenditure on education. Therefore, the relationship between per capita expenditure on education and improvement in literacy rate experiences inverted U shape. At the same time some states like Madhya Pradesh, Rajasthan West Bengal and Andhra Pradesh were spending lower per capita expenditure on education and these states improvement in literacy rate was also lower. Such states need increase per capita expenditure on education and spend it in effective way.

Figure 2: Decadal Per Capita Expenditure on Education and Relative Improvement in Literacy Rate During 2001 to 2011.

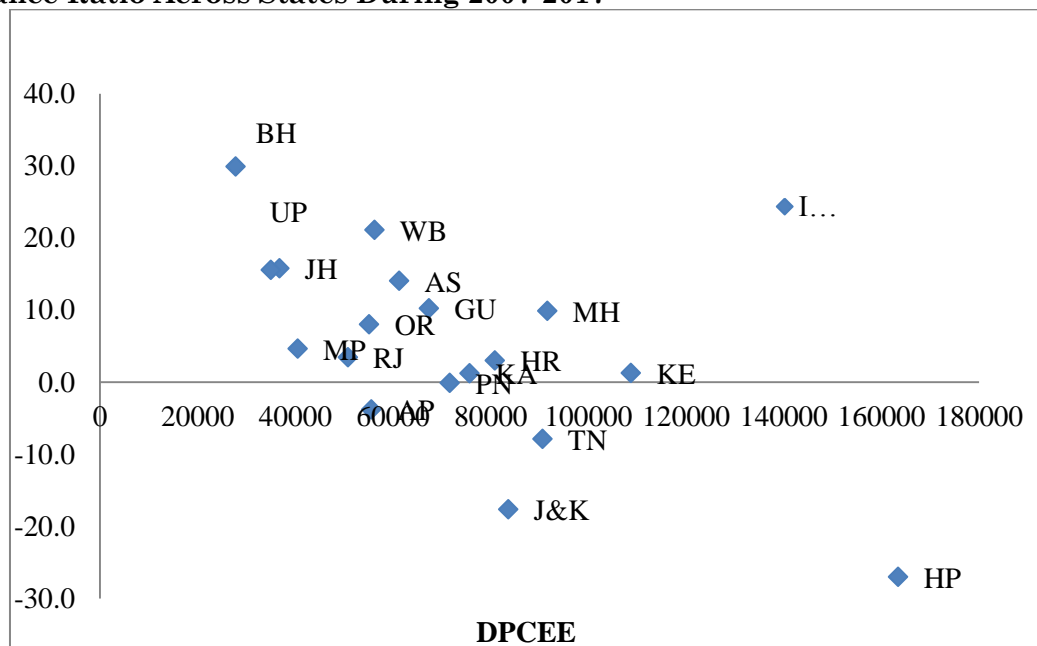


Decadal Per Capita Expenditure on Education and Improvement in Attendance Ratio:

The figure 3 implies that improvement in attendance ratio in backward states like Bihar, West Bengal, Jharkhand and Uttar Pradesh was higher at given lower levels of decadal per capita expenditure on education. However, these states can face a challenge of sustain the higher attendance rate in future with lower levels of expenditure on education. The case of states like Himachal Pradesh, Jammu & Kashmir and Tamil Nadu who are showing rather negative improvements is different, because their attendance rates were already above or near to one hundred in 2007. The Andhra

Pradesh's case is noticeable because despite of lower attendance rate in 2007 it faced the negative improvement. While many other states have improved their attendance rates significantly with even lower levels of expenditure than Andhra Pradesh. It means the Andhra Pradesh state was not deploying funds properly. So that it requires special attention on proper deployment of the education expenditure. The states like Kerala, Karnataka, and Haryana have showed the marginal improvements as these states attendance rates were at higher levels. It implies that once state riches at higher level of attendance rate then, further improvements become difficult task for the states.

Figure 3.3: Decadal Per Capita Expenditure on Education and Improvement in the Attendance Ratio Across States During 2007-2017



Conclusion:

The education is a fundamental aspect of quality of human life. Therefore in this study an attempt is made to analyse the recent trends of decadal public expenditure on education sector and its impact on attainments in educational indicators in Indian state. This study has confirmed that improvements in education sector is relatively lower than developed and even many developing countries. There are interstate disparities in educational performance in Indian states. However, some backward states are performing well in

attainments in educational indicators. Bihar, Jharkhand and Uttar Pradesh have shown notable improvements in gross enrolment ratio (GER) with relatively lower level of decadal expenditure on education. On the other hand, some states like Madhya Pradesh, West Bengal, Rajasthan have shown lower attainments in educational indicators with lower expenditure. So, these states should increase the expenditure on education and deploy it efficiently. However, Himachal Pradesh, Kerala, Maharashtra, have reported negative improvements with relatively more decadal per capita

expenditure on education. The most of the states have experienced the inverted U-shaped link between decadal per capita expenditure on education and attainments in educational indicators.

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Reference Management Tool - Mendeley: An Overview

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DOI- 10.5281/zenodo.7740658

Abstract

The above paper focused on reference management tools. Citations are playing a more important role in the research community. Citation indicates the core source and creates authenticity of the manuscript. Nowadays many online reference management tools are available for researchers. It is available as a free and paid version. This paper highlighted the Mendeley: Reference Management Tool only. It will be a road map for new Mendeley beginner users. This paper gives an overview of Mendeley Reference Management in all segments and parameters. The paper highlighted the Mendeley: Reference Manager for Desktop, Mendeley: Web Importer, Mendeley: Cite for Microsoft Word and Mendeley: Web

Keywords: Mendeley | Reference Management Tool | Web Importer | Open Source |

Introduction:

In the age of Information Technology, many researchers referred online information for their research. At the graduation and post-graduation levels, students need to submit projects to concerned institutes or universities. Similarly, with Higher Education after post-graduation, students need to refer to a larger amount of published research related to their topics through based on the various parameters. The most challenging task in front of researchers is to store information on various topics in one place. Hence, researchers need to follow online reference management tools such as Mendeley, Zotero, Endnote etc, for their research enhancement. It will definitely help researchers to store documents related to their research areas. It will be a time-consuming process for researchers. In the context of research, the researcher needs to understand a historical research area's background of interest. Many documents should be referred to by researchers from various online paid & free databases and offline databases of resources. As well as, researchers went through various offline resources from different places. In the 21st century, researchers need to save their prestigious time. Therefore, at the initial stage researchers take training or understand the importance of reference management tools in their research. One of

the best reference management tools should be adopted by researchers. Many researchers found problems related to references and bibliographies management. The aim of the paper is to summarize features of Mendeley Reference Management Tool.

References and Bibliographies:

Any type of research starts with the identification of a problem as the first step. Afterward, researchers should finalize the topic of research. The main stage of any research literature searches for the finalized research topic. Researchers can highlight in-text citation and references at the end of the research report. There are many style manuals available for researchers for referencing and citation such as MLA, APA, Harvard and more. Presently, many online tools are available for reference and citation management. It will be free and paid.

Review of related Literature:

Reference Management is the most important part of the research. Many researchers conducted a study based on Mendeley with various parameters. (Fenner et al., 2014) discussed seven reference management tools for researchers. They highlighted the usability and features of reference management tools based on the various parameters. (Pathy et al., 2017) conducted a comparative study on Mendeley and Zotero Reference Management. It is found that both tools are impressive and

useful for the academic community for research. (Reis, M. A. F., et al., 2022) described experience of workshop on Mendeley among undergraduate courses students at the Universidade do Contestado, Brazil. This study evaluated the effectiveness of Mendeley in improving students' knowledge management skills, including their ability to organize and access information, collaborate with peers, and cite sources correctly.

Methodology:

The present paper is limited to Mendeley: Reference Management. The present paper is highlighting an overview and evaluation of Mendeley: Reference Management. The researcher used Windows-11 Operating System and Microsoft Office-2021 for the present research.

Mendeley: Reference Management Tool:

Mendeley is an online reference management tool for referencing and bibliography. This is the most popular tool among researchers and the research academic community. (Mendeley - Wikipedia, n.d.) Mendeley was discovered in 2007 by a London Ph.D. researcher students **Paul Foeckler, Victor Henning, Jan Reichelt** at the beginning. In 2013, Elsevier publishing company took over Mendeley: Reference Management Tool. Any user can register for free registration from Mendel's site. It provides free 2GB storage for any type of document or data. The students and researchers can take advantage

of online reference management through various stages.

Mendeley Segments: (Elsevier, n.d.)

The below four Mendeley segments are correlated for research report writing. The below segments are core parts of Mendeley. The Mendeley divides into four segments as follow:

1. Mendeley: Reference Manager for Desktop
2. Mendeley: Web Importer
3. Mendeley: Cite for Microsoft Word
4. Mendeley: Web

The above four segments are correlated with each other for good referencing in the research report writing.

1. Mendeley Reference Manager for desktop should be installed in any Operating System. It provides an installation desktop package for Windows, MacOS and Linux. This package should download and install any suitable operating system. It gives various features for researchers such as collections, Public and Private groups, adding new sources, annotations, a Notebook, search for online articles and more features. Mendeley imports data from another database or search engine. Users can import data in various file formats such as BibTex, Endnote XML and RIS. Researchers can import direct data through DOI or PMID numbers. Users can update their personal profile of Mendeley.

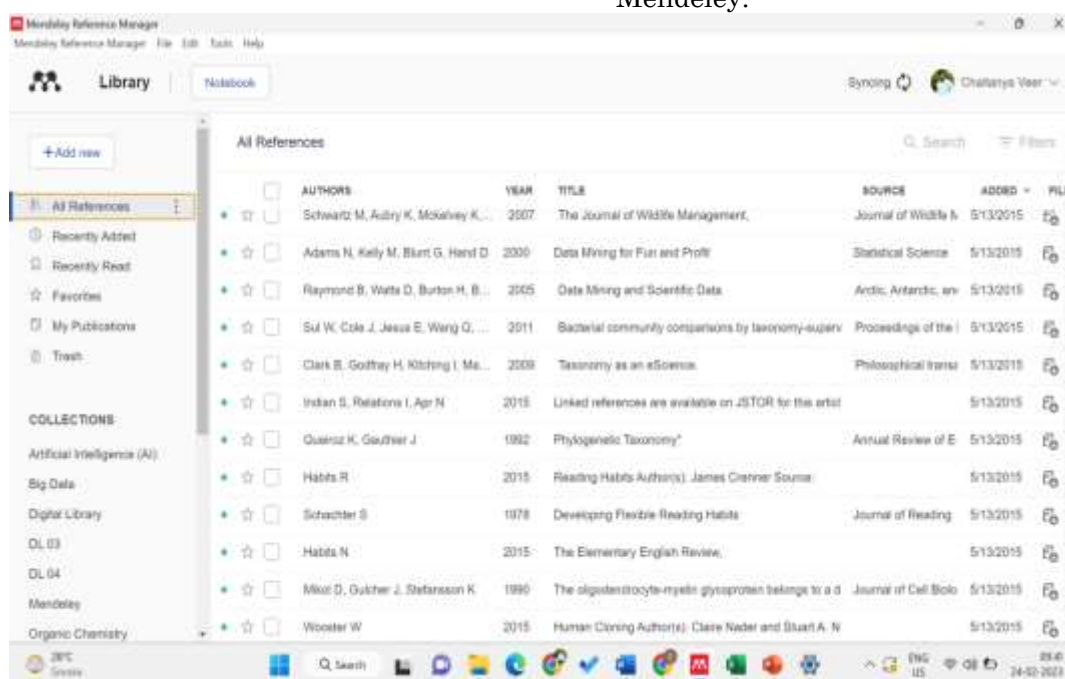


Fig.1 : Mendeley Reference Manager for desktop Interface

Mendeley: Web Importer is the plug-in for web browsers. It helps to import research information with files to Mendeley Library. It is available at various browsers such as Google Chrome, Mozilla Firefox etc. It imports direct PDF files into the Mendeley library. The below

fig. 2 indicates that, researchers can explore research articles on google scholar and simultaneously import documents into Mendeley Library. It will definitely help to save the time of readers.

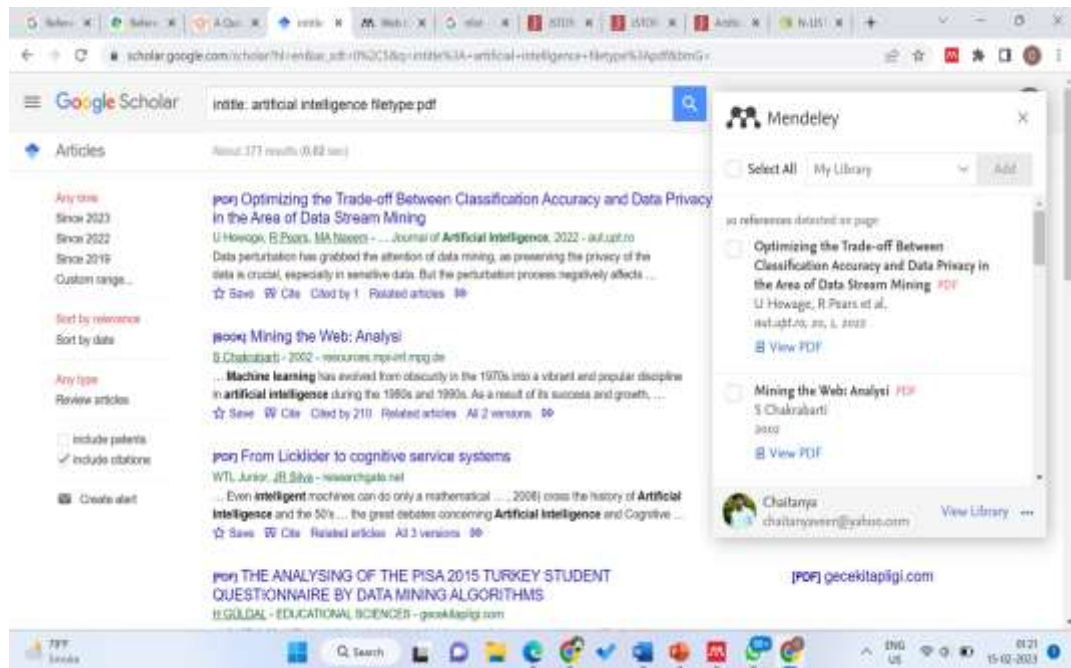


Fig.2: Mendeley Web Importer via Google Scholar

2. **Mendeley: Cite for Microsoft Word-** Mendeley provides an add-in for Microsoft word. It should get it from the Mendeley website. Mendeley cite provides the facility to add in-text citations and references. Users can set preferable referencing styles. As per requirement,

users can define separate reference styles. The below fig.3 describes about Mendeley Cite features within Microsoft Word. It also indicates that, the Mendeley Desktop library can be accessible with Microsoft word.

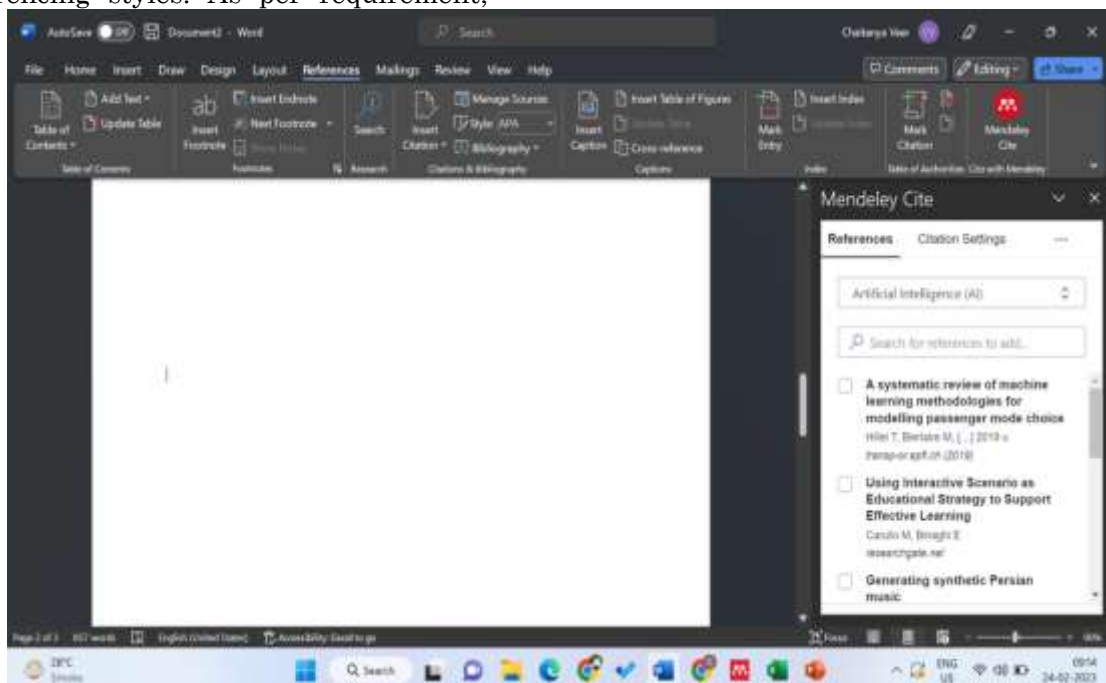
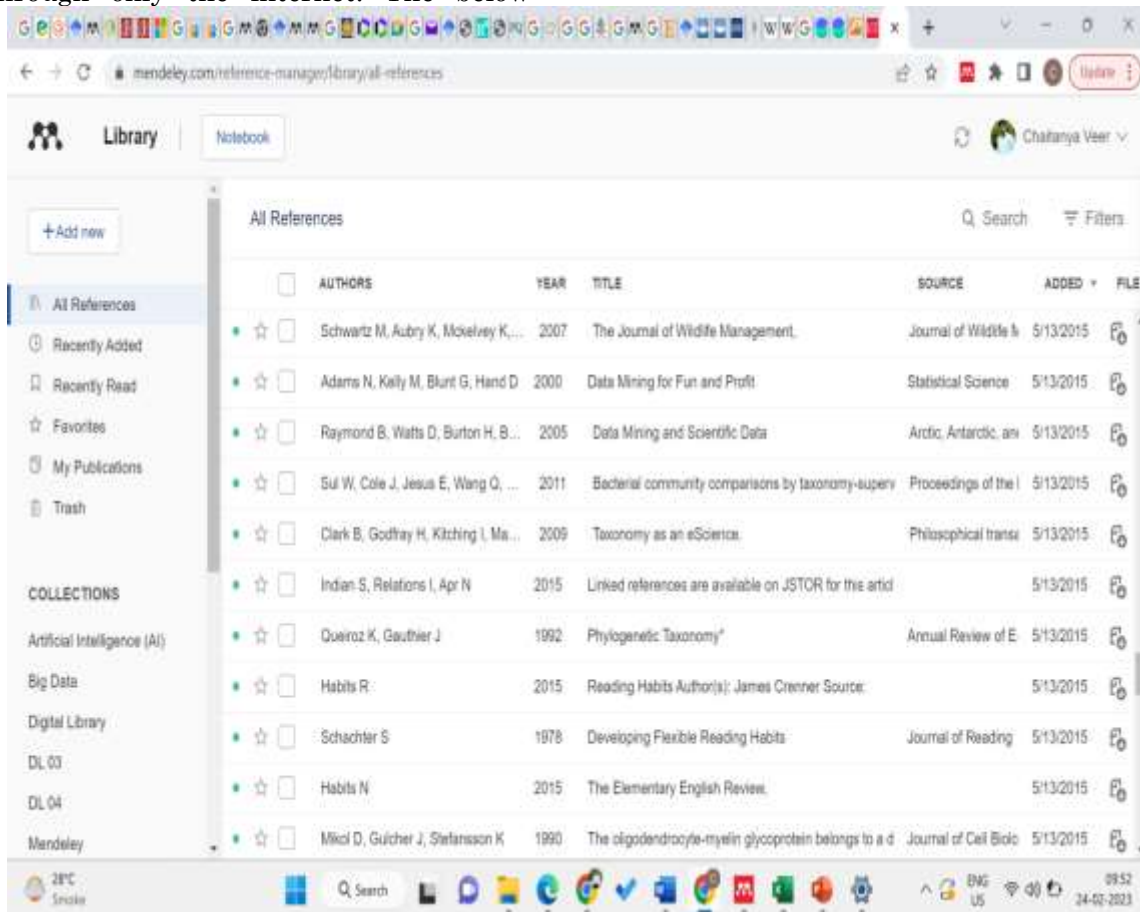


Fig. 3 Mendeley Cite Plug-In for Microsoft Word

3. Mendeley: Web- It provides a user's reference management library through <https://www.mendeley.com>. Users can access their Mendeley desktop library through only the internet. The below

Fig.4 indicates the personal library which is already installed on the computer or laptop.

**Fig.4 Mendeley Web Interface Screenshot**

Conclusion:

The above paper highlighted Mendeley Reference Management Tool with various features. The researcher described, the practical approach toward the research community. Mendeley: Reference Management is an effective tool for researchers' daily storing referencing, citation and bibliographies. Mendeley is the best tool for organizing and storing research information in one place and it is accessible at any time. The best part of Mendeley is open-source software (OSS). It provides 2 GB of free storage to users. Mendeley enhanced the research network with collaboration and provided the facility to import references from other databases or search engines or other reference management software. Researchers should be adopted at the beginning of any type of research. It will definitely save the time of

researchers for report writing. It is easy to use with all devices with synchronizing features. This tool can become game changer in the development of research academic community.

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Development Of Infrastructure Facilities Under The Pesa Act In The Palghar District

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DOI- 10.5281/zenodo.7740668

Abstract:

The government of India continuously implemented, developed, and made policies for the betterment of the tribal people. The basic objective of the intervention in the form of a tribal sub-plan was to improve the standard of living of the tribal people. Development is the process of progress; social development, cultural development, educational development as well as financial development are aspects of progress. The development process should be applicable at the Village level, Taluka level, District level, State level, and Central level. Hence, the government amended the policy and formed the PESA Act for the development of tribal people. The PESA Act is also a strong weapon for the development of tribal communities. In this particular research, researchers are going to discuss infrastructure development, a part of social development under the PESA Act, in the Palghar District. 'Palghar District' is counted as the 36th District, which is called 'Aadivasi Bahul Jilha', selected by researchers. Because researchers want to focus more after the formation of the new Palghar district on the particular topics which are helpful to find the impact of the PESA Act on the social developmental process of rural tribes. This study might be useful for changes or clues, removing clauses and make better policy to for a better future for the tribal.

Key Words: Tribal, Infrastructure development, Palghar District, PESA Act.

Introduction:

The socio-economic structure in tribal communities is totally different from that of the non-tribal groups of people. The term "tribe" was first used by British Census Officers in the late 18th Century. The terms Scheduled Tribe and Scheduled Caste were later used in the Indian Constitution. In 2014, the state government gave approval to the split of the Thane District. The total area includes 5,344 square kilometers. It includes largely rural tribal people. The total population of this area is approximately 30 lakhs as per the 2011 Census. This district includes eight tribal-dominated Talukas, such as Mokhada, Jawahar, Talasari, Vikramgad, Wada, Dahanu, Palghar, and Vasai. This district has one Municipal Corporation, like Vasai-Virar City Municipal Corporation (VVCMC), and three Municipal Councils, such as Dahanu. Palghar and Jawahar are governing bodies for the district corporation.

In the Palghar district region, the overall climate is equitable with high rainfall days and very few days of extreme temperatures. In this region, road and rail modes of transport are available. It interlinks with cities. Mumbai-Ahmedabad National Highway No. 8 passes through the Eastern boundary of the region. This region has developed very fast in recent years.

1.1 Infrastructure Facility Development:

Infrastructure development plays an important and crucial role in the provision and development of basic facilities at the grassroots level of the rural economy, which is essential for rapid economic development, and plays a primary role in poverty alleviation as well as the promotion of livelihood opportunities. Adequate infrastructural facilities are essential in the village to achieve and sustain sustainable development, which will help them integrate with the national economy and activity. The advancement of self-sufficient infrastructure

is one way of prioritizing results based on the localization of development goals, thus ensuring local economic development and social justice. There is a need to focus more on making the Village panchayats a self-sufficient infrastructural village panchayat by creating a comprehensive and comprehensive village panchayats Development Plan at the Village panchayats level. And this approach to localization of development goals is very relevant "The sustainable development concept of an infrastructure self-sufficient village panchayats aims to provide catalytic support at the village level, deliver better services and create an enabling environment at the village panchayats level for poor development planning.

The following public services are called Social infrastructural facilities:

1. Village panchayats Bhavan
2. Drinking Water Facility
3. Sanitary Facility
4. Public Street Lights
5. Primary and Secondary School building & repairing
6. Anganwadi Centre
7. Health Sub-Centre
8. Livestock Aid Centre
9. Roads

1.2 Pesa Act:

Means the Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996. PESA was enacted on 24 December 1996. PESA is an Act to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to the Scheduled Areas. In terms of section 2 of this Act, "Scheduled Areas" means the Scheduled Areas as referred to in clause (1) of article 244 of the Constitution. To promote local self-governance in rural India, the 73rd constitutional amendment was made in 1992.

1. Through this amendment, a three-tier Panchayati Raj Institution was made into a law.
 - a) However, its application to the scheduled and tribal areas under Article 243(M) was restricted.
2. existence. After the Bhuria Committee recommendations in 1995, Panchayat Extension to Scheduled Areas (PESA) Act 1996, came into existence to ensure tribal self-rule for people living in scheduled areas of India.

3. The PESA confers absolute powers to the Gram Sabha, whereas the state legislature is given an advisory role to ensure the proper functioning of Panchayats and Gram Sabhas.
 - a) The power delegated to Gram Sabha cannot be curtailed by a higher level, and there shall be independence throughout.
4. The PESA is considered to be the backbone of tribal legislation in India.
5. PESA recognizes the traditional system of the decision-making process and stands for the peoples' self-governance.

1.3 Importance of the Study:

Till 30th July 2014 Jawhar, Mokhada, Talasari, Vasai, Vikramgad, Palghar, Dahanu, and Wada were a part of 8 out of 15 talukas of Thane District. On 1st August 2014. The Thane District was divided and a newly formed 36th "Palghar District" came into existence. Palghar District was declared as a socially backward and weaker section area. Before the formation of Palghar District, Thane district was a big geographical area. The district place was in Thane itself. Even for basic communication, people had to travel from rural areas to the Thane district. Although there was a District officer situated in Jawhar yet for some important matters it was mandatory to travel to the district. The main aim of this study is to recognize the development of infrastructural facilities of the Adivasi community of 8 talukas of the Palghar district. This Research consists of health clinics, hospitals, level of schooling, food facilities, basic needs including electricity, water, roads, medical facilities, Sanitary facilities, Anganwadi, village panchayats offices, Tahsildar offices and like administrative and non-administrative areas of work.

This research and the end result or outcome of this study will enable us to get an insight into the social infrastructure development under the PESA Act. taken place amongst the Adivasi community in the Palghar district. The government will be able to record the development taken place after the Palghar district formation. This will help in identifying the role played by PESA Act. and the administration towards the development program. The research includes infrastructural development data over the 8 talukas of Palghar district from the Year 2015-16 to the Year 2019-20.

2. Objectives of the Study:

The main objective of this study is to analyze the development of infrastructural facilities in the Palghar District. For this purpose, researchers selected 8 talukas from the study area. However, the specific objectives of this study are such as:

1. To examine the position of infrastructure facility development status in the study area from 2015-16 to 2019-20.
2. To suggest measures for improvement in infrastructure facility development work.

3. Scope Of The Study:

Table No.1: Taluka wise Village Panchayats and PESA Village Panchayat Details in Palghar District:

Sr. No	Taluka	No. of Total Village panchayats	Out of PESA Village panchayats	PESA Revenue Villages	Out of PESA Revenue Villages Declared
1	Vasai	31	19	32	48
2	Palghar	133	87	150	58
3	Dahanu	85	85	174	103
4	Talasari	21	21	41	73
5	Wada	84	84	168	167
6	Vikramgad	42	42	93	83
7	Jawhar	50	50	108	71
8	Mokhada	27	27	56	56
	TOTAL	473	415	822	659

(Source: Zillha Parishad Palghar, Village panchayats Department, PESA Division)

Table No.2: The year 2015-16 to the Year 2019-20- PESA United Received Funds, Expenditure and Balance Fund details in Palghar District (Rs.in Crore)

No. of total PESA Village panchayats	F.Y.	Total received Fund	Out of total expenditure	Additional Fund	Fund utilization percent	Remark
415	2015-16	37.18	35.86	1.33	96.43%	100 percent of the said funds have been spent and the remaining additional funds at the government level has been returned.
	2016-17	47.66	47.45	0.21	99.55%	
	2017-18	47.52	47.52	-	100%	
	2018-19	59.36	59.36	-	100%	
	2019-20	35.62	35.62	-	100%	
Total		227.34	225.82	1.54	99.19%	

Table No.3: The year 2015-16 to the Year 2019-20- PESA 5% Untied Fund Physical work Sanction, Completed and Work not Started details in Palghar District (Rs.in Crore)

No. of total PESA Village panchayats	F.Y.	No. of total Selected Work	Out of total expenditure	Work not Started	Fund utilization percent	Remark
415	2015-16	5706	4758	948	83.39%	As per the funds received, the said works have been completed and rest of the works are going on due to lack of funds.
	2016-17	6092	4123	1969	67.68%	
	2017-18	4540	4141	399	91.21%	
	2018-19	4596	4596	0	100%	
	2019-20	5164	5164	0	100%	
TOTAL		26098	22782	3316	87.29%	

4. Profile of the Study Area:

The present research work will undertake in 8 taluka's and No. of 415 PESA Village Panchayat out of total no. of 473 Village Panchayat in Palghar District. Palghar District is a district in the state of Maharashtra in the Konkan Division. Till 30th July 2014, Palghar is part of the Thane district. When a new Palghar District was carved out of the Thane district. In the total area of Palghar District, 1008 villages and 3818 Sub-Villages are included, out of 822 villages as revenue Villages, out of 659

declared as PESA Revenue Villages. The researcher will be able to cover this study area within the time limit and available resources.

5. Period of Study

The Study covers a period of 5 years from 2015-16 to 2019-20. The period seems to be the core period for many important happenings after the establishment of the new 36th Palghar District. So this period is considered to be the right period for analyzing and studying the role, problems, and importance of the infrastructural development for Palghar District.

Table No.4: The year 2015-16 to the Year 2019-20- PESA 5% Untied Fund Uses for Basic Infrastructure physical work in Palghar district

Year	District	No. of PESA Village Panchayat	Infrastructural Facility Development			
			No. of Sanction / Selected Work	No. of Complete/Incomplete Work	No. of Pending works	Percentage of work
2015-16	Palghar	415	2007	1769	238	88.14
2016-17			1704	1450	254	85.09
2017-18			1532	1403	129	91.57
2018-19			1588	1588	0	100.00
2019-20			1906	1906	0	100.00
TOTAL		415	8737	8116	621	92.96

(Source: Zillha Parishad Palghar, Village panchayats Department, PESA Division)

Table No.5: The year 2015-16 to the Year 2019-20- PESA 5% Untied Fund uses for Basic Infrastructure work expenditure in Palghar district Rs.in Crore

Year	No.of PESA Village Panchayat	PESA 5% Untied Fund	Out of Sanction for Infrastructure Facility	Utilization of Funds for Other Work, (FRA and PESA Act. work Education, Health and Sanitation, Forest and Water Conservation, and wildlife Tourism)	Balance Fund out of Total Sanction	% For Infrastr ucture Facility (4/3*100)	% For Other Develo pment Facility (5/3*100)
1	2	3	4	5	6	7	8
2015-16	415	37.18	15.20	20.66	1.32	40.88%	55.54%
2016-17		47.66	22.20	25.25	0.21	46.57%	52.97%
2017-18		47.52	21.84	25.68	0.00	45.95%	54.04%
2018-19		59.36	27.61	31.75	0.00	46.51%	53.49%
2019-20		35.62	12.13	23.49	0.00	33.12%	65.94%
TOTAL		227.34	98.98	126.83	1.53	42.60%	56.39%

(Source: Zillha Parishad Palghar, Village panchayats Department, PESA Division)

7. Nature and Method Of Data Collection:

The researcher has used only secondary data for this study. For obtaining the required data, the researcher visited at Palghar Zillaha Parishad office, Village panchayats Department and collected their reports about information on year-wise infrastructural development progress and financial statements.

8. Techniques for Analysis of Data:

After secondary data collection, this data has been processed and analyzed for making suggestions and conclusions on this basis. In this study researcher used simple statistical tools such as averages, frequencies, percentages, etc. The collected data are processed and presented in the form of simple tables, and cross tables. As well as diagrams are used for analysis and interpretation purposes. Through this analysis, the researcher find out the availability of infrastructural facilities in the selected study area.

9. Limitations of the Study:

The time period of study is 2014-15 to 2019-20. This study is a sample study. So 100 % accuracy and transparency cannot be accepted. The data was collected from Zillha Parishad Palghar Office regarding their infrastructural facility availability. Palghar District has a huge area of 1008 villages. But researcher concentrated only on those

villages which are included under the PESA Act.

10. Important Findings Of The Study:

Following are some of the important findings of the study-

1. Out of the total village panchayats in Palghar district, 415 village panchayats have been declared as PESA village panchayats. In other words, on average 87.29 percent of village panchayats, the administration goes under PESA Act.
2. 80 percent above villages declared as PESA Villages out of total revenue villages.
3. In the Palghar district from the financial year 2015-16 to 2019-20, Five percent of the total sanctioned Untied fund has been fully utilized of selected works. Also on average, more than 80 percent of sanctioned works have been settled/disposed of in the study period and implementation is seen to be effective.
4. In the Year 2015-2016: The balance fund of Rs.13278414/- has been returned to Government.
5. In the Year 2016-2017: The balance fund of Rs.2147928.15/- has been returned to Government.
6. In the Year 2017-2018 to the Year 2019-2020: No Balance fund. It appears that the entire amount provided by the

government has been spent by the concerned department.

7. In the Year 2015-2016 to the Year 2019-20: PESA 5% Untied sanctioned Fund utilization ratio is 99.19%. and as well as which is a sanction or selected work completed ratio is 87.29%. It is indicated good implementation of funds in Palghar District.
8. In the Year 2015-2016 to the Year 2019-20: No. of 26098 total selected work under PESA 5% Untied fund out of No. of 8737 work have been selected for Infrastructure development and no. of 8116 work had been completed. The work completion average ratio is 92.96%. It is indicated 33 percent of work is selected for Infrastructure development.

In the Year 2015-2016 to the Year 2019-20: out of the total sanctioned under PESA 5 percent Untied fund amounting to Rs.227.34 lakh, only Rs.98.98 Lakh has been spent for the selected work of Infrastructure facilities. The average percentage of its total sanctioned funds is 42.60 percent. and other than aspects (i.e. (FRA and PESA Act. work Education, Health and Sanitation, Forest and Water Conservation and wildlife tourism) provision made of Rs.126.83 (i.e.,56.39%). This means the government is specially focused on Infrastructural facility development.

9. In the Years 2015-16 to the Year 2019-20, more than an average of 40 percent of the total sanctioned amount of PESA 5 percent Untied Fund has been spent only for the selected works of infrastructure facilities, and other than that, more than an average 55 percent of the amount has been spent for all the selected works. From this, it appears that the development work of entire facilities has been effectively implemented by the government during the study period.

Conclusion:

The participation of the tribals in local governance and development which was unheard of in the tribal Palghar district is gradually being experienced after the introduction of the PESA act. Many tribals and Adivasis have shown their interest in participating election process, attending various meetings, expressing viewpoints, and mobilization of various schemes under the PESA act. Along with the PESA act other

supplementary factors like improvement of literacy, infrastructure development, and improved communication facilities are responsible for tribal development. The level of participation of tribals is largely associated with the level of economic development both at the household and local level except for minor variations.

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Financial Analysis of Arnala Shetkari Vividh Karyakari Sahakari Society Limited, Maharashtra, India From 2015-16 to 2020-21

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Abstract:

Arnala Shetkari Vividh Karyakari Sahakari Society Limited, Arnala is a co-operative society. The objective of the society is to provide platform to farmers for their holistic development. It provides with farming resources and sells the farm produce also. The objective of the study is to analyse the financial performance of fertilizer, seeds, pesticides and miscellaneous articles department for a period of 6 years from 2015-16 to 2020-21. With the help of Tables and Graphs the data is represented as a part of visual data analysis of the society. It is concluded that the society due to its social commitments is earning adequate or minimum profit to sustain itself and its working. It is concluded that the society is a welfare entity which caters to the needs of the farmers and tries to maintain a balance between commercial and social aspects of the community.

Introduction

Arnala Shetkari Vividh Karyakari Sahakari Society Limited, Arnala is a co-operative society. Its working area is Arnala village and nearby villages of Arnala. This society was established on 21st Jan 1949 with the initiatives taken by farmers and social workers of Arnala village. Objective of the society is to provide platform to farmers for their holistic development. It provides with farming resources and sells the farm produce also. Farming is a main profession of people and most of the farmers are small farm holders. Therefore, they faced many difficulties regarding financial support, use of new technology, marketing etc. In that situation society provided loan facility, organized various camps for using new technology in farming, health awareness camps, training programmers for advanced farming etc. Today society has 1350 members and capital of the society is Rs. 574000. Society got 'A' grade certificate in auditing every year. Arnala co-operative society has played major role in today's developed situation of Arnala and nearby villages. The researcher wants to study is to analyse the profit and loss statement of the general business and rationing business and understand the profitability of the society

over a period of 5 years from 2009-10 to 2013-14

Literature Review (Smitha Nair, Jan 2007).

The authors have studied the business side of the cooperative business and concluded that there is a need to create an economically viable and technically sound and professionally managed cooperative fisheries business. The authors have used gross profit ratio, net profit ratio, efficiency ratio and operating ratio to analyse the data. The conclusion of the study was the unsatisfactory gross profit and operating ratio and satisfactory net profit and efficiency ratio. (Anil Bhat, June 2016) As per the authors the primary credit societies are increasing at slow pace in comparison to the growth of other cooperative societies. The author concludes that the farmer's attitude is positive towards the growth of cooperative society. The Fruit grower's cooperative marketing societies are getting popularity among the fruit growers. The government is also planning to convert or link the self help group with cooperative societies.

(Virendra Kumar, 2015) As per the authors Cooperatives are an additional support for source of livelihood for villagers. The author suggest to provide flexibility. In rules and

regulations for the growth of cooperative societies. The growth of cooperatives helps in getting livelihood for the farmers and the downtrodden. It is a step for the economic development of the village unit.

(Matyja, 2018) The purpose of the research paper was to provide the analytical problems faced while calculating profitability of the agricultural cooperatives..The author concluded that the profitability of the agricultural cooperatives are decreasing every year and it does not depend on the production,size and quality of land.The profitability depends on management quality and organisational issues.

Objectives of the Study

1. To analyse the overall financial performance of Arnala Shetkari Vivid Karyakari Sahakari Society Limited.

2. To analyse the financial performance of fertilizer, Seeds, Pesticides and Miscellaneous articles division of Arnala Shetkari Vivid Karyakari Sahakari Society Limited.

Research Methodology.

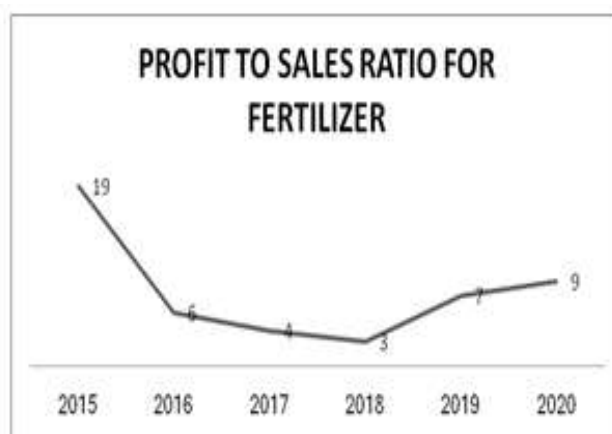
The study is based on secondary data analysis of data of 6 years from 2015-16 to 2020-21.The data of Purchase and Sales, from Fertilizer,Seeds,Pesticides and Miscellaneous articles division are considered from 6 years..Profit is calculated for the 6 years and represented with the help of table and graphs.

Analysis of Data

Graph 1: Analysis of Fertilizer Department

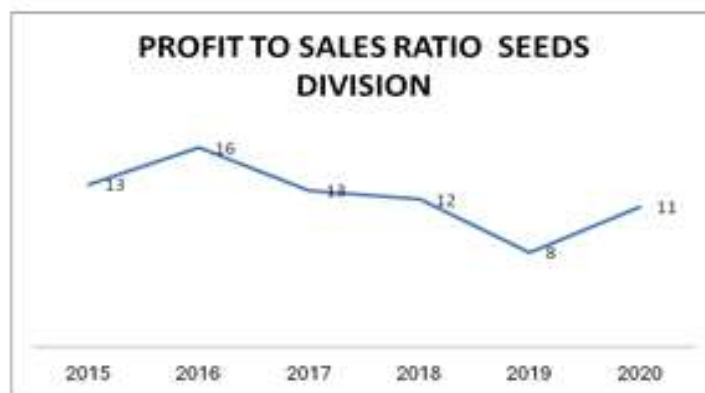


Graph 2: Analysis of Profit to sales ratio of Fertilizer Department



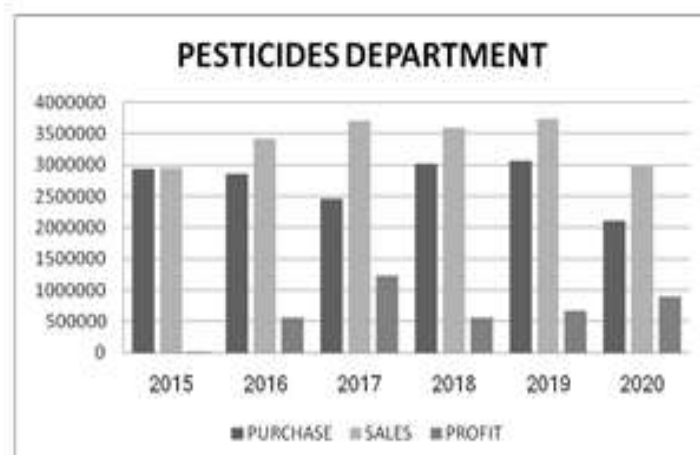
As per Graph 1 and Graph 2 there is decrease in the purchase, sales and profits of the fertilizer department. The highest profit was

in the year 2015 and lowest in 2018. The profits are consistent in 2019 and 2020..

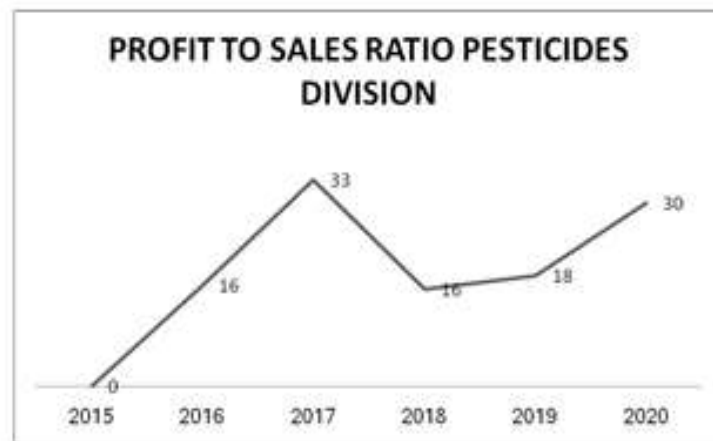
Graph 3: Analysis of Seeds Department**Graph 4: Analysis of Profit to sales ratio of Seeds Department**

As per Graph 3 and Graph 4 there is decrease in the purchase, sales and profits of the seeds department. The highest profit was

in the year 2016 and lowest in 2019. The seeds division profits have decreased during the last two years.

Graph 5: Analysis of Pesticides Department

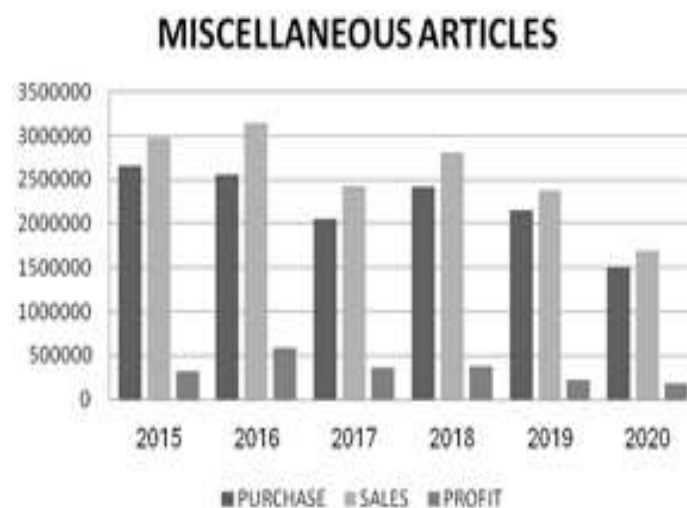
Graph 6: Analysis of Profit to sales ratio of Pesticides Department



Graph 7: Analysis of Miscellaneous Department



Graph 8: Analysis of Profit to sales ratio of Miscellaneous Department



As per Graph 7 and 8 there is decrease in the purchase, sales and profits of the seeds department. The highest profit was in the year 2016 and lowest in 2019. The seeds

division profits have decreased during the last two years.

Conclusion:

The Arnala Shetkari Vivid Karyakari Sanstha has shown a decreasing profit

trend in the past few years from 2015-16 to 2020-21. The profitability levels are found to be very low. There needs to be an increase in profit to stay in business. The pesticides division is showing an uptrend in profit and the remaining division are showing a trend of decreasing profits. The profitability has been maintained by the institution despite the Covid lockdown period. Being a cooperative society the financial profitability shows that it is a society welfare entity which caters to the needs of the farmers and tries to maintain a balance between commercial and social aspects of the community which it is serving.

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Sustainable development And Higher Education In India.

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Abstract:-The role of research and higher education in promoting sustainable development is crucial for any country. Sustainable development policies emphasize the importance of education in creating awareness about environmental protection among students, researchers, teachers, and local communities. This paper provides an overview of the significance of research and higher education in sustainable development and the current status of the higher education system in the country. Additionally, the paper outlines the various national and state funding agencies that support research and development programs in the country. Overall, the paper highlights the importance of investing in sustainable development based research and education to ensure the long-term prosperity and well-being of a nation.

Keywords: sustainable development, research, Higher education, India

Introduction :-Sustainable development is an essential aspect of any society, requiring a combination of human intelligence, decision-making skills, planning and management abilities, imagination, entrepreneurship, and environmentally-safe development and production practices. While sustainable development has primarily focused on environmental concerns, it has expanded to encompass almost every human endeavor. Education for sustainable development is a crucial component in advancing this goal, with environmental education serving as the foundational education needed to study sustainable development. Research in education for sustainable development can provide a framework for supporting sustainable development principles that are based on values. In recent years, education for sustainable development has gained increasing recognition as a critical policy for every country, and international attention has been focused on sustainable development by policymakers and leaders across the world.

The Brundtland Report, also known as "Our Common Future," was published in 1987 by the World Commission on Environment and Development (WCED), which was established by the United Nations in 1983. The report popularized the concept of sustainable development and defined it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." The Rio Earth Summit, also known as the United Nations Conference on Environment and Development (UNCED), was held in Rio de Janeiro in 1992 and resulted in the adoption of the Rio Declaration on Environment and Development, which emphasized the role of education in promoting sustainable development.

Education for Sustainable Development (ESD) promotes a holistic approach to education that equips learners with knowledge, skills, and values to participate in creating a sustainable future.

ESD integrates environmental, economic, and social aspects of sustainable development into the curriculum and encourages critical thinking, problem-solving, and collaboration. ESD aims to empower learners to contribute to sustainable development in their communities by promoting lifelong learning and encouraging changes in behavior and lifestyle. It also emphasizes the importance of local and indigenous knowledge in creating sustainable solutions. The UN Decade of Education for Sustainable Development (2005-2014) was launched to promote and integrate ESD into all levels of education worldwide. The Decade aimed to encourage policymakers, educators, and learners to take action towards sustainability and to promote ESD as a fundamental element of quality education.

In conclusion, education for sustainable development is a critical component of building a sustainable future, as it equips individuals with the knowledge and skills to contribute to sustainable development in their communities. Its integration into education systems is essential to ensure that future generations have the necessary skills to address environmental, economic, and social challenges.

Challenges for Sustainable Development:- It is important to note that achieving sustainability in all of these areas is crucial for long-term sustainable development. Each of these types of sustainability is interrelated and interdependent. For example, economic sustainability cannot be achieved without considering social and environmental sustainability

as well. Similarly, cultural sustainability is essential for maintaining social sustainability, and so on. Therefore, any research or educational program aimed at promoting sustainable development must take into account all these aspects of sustainability and ensure a holistic approach.

Objectives of Higher Education Regarding Sustainable Development:- Indeed higher education institutions play a critical role in promoting sustainability and addressing the complex challenges that come with it. Research programmes in higher education should be oriented towards sustainability and should seek to develop innovative solutions for problems related to the environment, economy, and society. Interdisciplinary research is particularly important, as sustainability is a multifaceted concept that requires knowledge and expertise from different fields. Higher education institutions should also aim to incorporate sustainability into their teaching and learning activities, in order to equip students with the knowledge and skills needed to become agents of change for a sustainable future. Through research and education, higher education institutions can contribute to a more sustainable world and help create a brighter future for generations to come. Higher education institutes should focus on the following objectives to play an important role in sustainable development:

1. Recognizing and following excellent case studies.
2. Building a clear vision of teaching and research.
3. Educating decision makers and students about the hazardous aspects of current development.
4. Disseminating knowledge of alternative paths of sustainable development.

The main aim of education for sustainable development, according to the UN, is to cover economic, sociocultural, and ecological aspects with a global perspective. It is challenging to integrate the various aspects of sustainable development into higher education syllabus in the light of value-based interpretation. However, following relevant professional practices and incorporating ecological, economic, social, and cultural elements of sustainable development into research and teaching of higher education professionals can simplify this task.

The role of higher education for sustainable development is crucial in achieving a sustainable future. The objectives you listed are important in ensuring that higher education institutes contribute to sustainable development. In addition, integrating sustainable development into higher education curricula is important in preparing students for a sustainable future. This can involve incorporating sustainability into courses across disciplines, developing new courses specifically focused on

sustainable development, and providing opportunities for hands-on learning experiences such as sustainability-focused research projects or community service projects.

Furthermore, it is important to not only educate students about the hazards of current development practices, but also to empower them to become agents of change in their communities and beyond. This can involve providing students with the knowledge, skills, and values needed to promote sustainable development in their future careers and personal lives. Overall, higher education institutes have a crucial role to play in promoting sustainable development, and it is important to continue to focus on integrating sustainability into teaching, research, and professional practices.

Strategies to be Adopted for Sustainable Development in Higher Education:- To promote education for Sustainable Development in higher education, it is important to adopt some key strategies, which can be described as follows:

1. Conducting surveys and analyzing the responses of the participants to gauge their understanding of sustainable development.
2. Establishing national coordination and supporting networks to ensure that sustainable development is integrated into higher education policies and practices across the country.
3. Disseminating the outcomes of case studies and policies related to sustainable development to raise awareness among students, teachers, and decision-makers.
4. Building the capacity of teaching professionals and students by providing training and educational resources that emphasize the principles and practices of sustainable development.
5. Identifying leadership and recognizing the good work of professionals who have made significant contributions to education for sustainable development. This can encourage others to follow their example and promote sustainable development in higher education.

Higher Education for Sustainable Development

who can lead the sustainable development agenda in various sectors. Collaboration among different educational institutions, industries, and communities is also essential to create a holistic approach towards sustainable development. This will require a shift in mindset and values towards sustainability, which can be achieved through awareness campaigns, curriculum development, and policy changes. In summary, education for sustainable development in higher education institutes can play a crucial role in creating a sustainable future by producing informed and responsible graduates who can contribute towards the development of a sustainable society.

It has been 20 years since the Earth Summit was held in Rio de Janeiro in 1992 to address sustainable development issues. In 2012, Rio+20 was also organized for the same purpose. India has made progress in increasing literacy rates, which now stand at 82.14% for men and 65.46% for women according to the 2011 Census. The National Environment Policy of 2006 reflects India's commitment to clean development activities. Implementation of policies with financial provisions is a key aspect of the Five Year Plan. However, challenges such as deteriorating environmental quality, climate change, and depletion of natural resources continue to emerge. India is committed to achieving global development goals as a part of the United Nations, having signed the United Nations Framework Convention on Climate Change and acceded to the Kyoto Protocol in 2002. India has also signed the Convention on Biological Diversity and has been selected as the host for the Asian Regional Action Programme on "Agroforestry and Soil Conservation" by the United Nations Convention to Combat Desertification. Higher educational institutes in India are playing a major role in achieving sustainable development goals. To further progress in this direction, novel approaches for environmental regulation and principles for sustainable development should be adopted, considering the critical institutional role in this area. Decentralized approaches and new tools are needed for sustainable development, with a crucial role for higher educational institutes. Many faculties in India work under 4 regulatory bodies, including UGC, AICTE, Distance Education Council, and Council of Architecture, which are also dedicated to promoting sustainable development through higher education.

University Grants Commission (UGC)

The University Grants Commission established itself in 1953 to co-ordinate and maintain the standard of University education. UGC also initiated the Faculty Recharge programme to augment research and teaching resources of Universities, promote entrepreneurship and knowledge-based enterprises. The mandate of UGC includes determining and maintaining teaching, examination, and research in Universities, serving as a link between union and state governments and institutes of higher education, and advising the central or state government to improve higher education in the country.

Open Universities and Distance Education System

In 1982, the establishment of Dr. B.R. Ambedkar Open University, Hyderabad marked the beginning of the distance education system in India. During the academic year of 2009-2010, a total of 1,679,398 students were enrolled in various open universities across the country. Additionally, 2,107,012 students

were enrolled in various Distance Education Institutions (DEIs) in dual mode Universities during the same academic year. These universities offer various courses, including Environmental Sciences, which contribute to the concept of sustainability. Furthermore, IGNOU, New Delhi, and several state open universities have initiated research programs in various disciplines.

Financial Assistance for Research and Higher Education

The Indian higher education system ranks 3rd in the world, but its full economic potential has not been realized due to a mismatch between the skill base and market needs. The establishment of NAAC promotes awareness and generates positive signals for upgrading the quality of educational institutes, colleges, and universities in India. Education is the backbone of a country, and higher education comprises graduate, post-graduate, and doctoral programs as well as technical, medical, engineering, and other commercial degrees and diplomas. Higher education has a crucial role to play in creating sustainable societies and developing leadership in the education system for sustainable development. Universities and colleges can promote the green concept by reducing their environmental footprint and promoting waste minimization through the 3 R concept of reduce, reuse, and recycle, among other initiatives.

Conclusion

In conclusion, both the central and state governments in India have implemented numerous scientific programs to promote research and higher education standards. Environmental protection has become an essential part of the national curriculum, and policies on environmental education have been developed. While education departments and universities are expanding their efforts to promote sustainable development education, non-governmental organizations (NGOs) can also play a critical role in this regard. Additionally, distance learning can be utilized to strengthen education for sustainable development in higher education institutions throughout the country.

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An Analytical Study of Online Reviews of Product and Shopping Behaviour with Special Reference to Woodland Shoes

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DOI- 10.5281/zenodo.7740720

Abstract:

Shopping is a complex process. There are number of factors which impacted on shopping decision of consumers. Out of several factors, online reviews of the products have significantly impacted on the process of decision making. Extensive coverage of internet facilities and availability of data at single click have considerably changed the process of decision making regarding the products. Study aims to know the system of online review of products and its impact on shopping behavior of the prospective consumers. Present study has collected thirty-three responses with the help of a close ended questionnaire. Study found that there is a positive correlation between online reviews of the products and decision making process of the consumers.

Key words: Consumer, Review, woodland, Shopping, leather and decision

Introduction:

Woodland is the leading manufacturing company which deals in the number of segments of leather products. In the late 1950's Aero group was founded a company which dealt in the outdoor segment of leather shoes. Due to political turmoil and disintegration of erstwhile USSR in the independent units, company made changes in the business activities. To make export easier in the South Asian countries especially in India, the company launched Woodland as a new brand. Woodland is mostly famous in the segment of leather shoes. It caters to consumer needs pertaining to the leather products via online and offline mode of business. Although dedicated outlets of the company are available at retail markets; but the shopping malls are the center of attraction of the consumers. With the help of the traditional as well as modern advertising and marketing techniques company reaches to the consumers with the set of new products. Shopping is the total of all the activities which impacted the decision making process of the consumers. Shopping decision involves multiple factors, which collectively mold the decision of the prospective consumers. Factors such as income, age, sex, family, location, likes and opinions of others helps or rather sometimes make the consumer decision process complex regarding shopping of a particular products.

Growing number of users of broadband services and mobile handsets have changed the whole process of marketing. Nowadays e-commerce websites such as Amazon, Flipkart, Snapdeal, TataCliq and social networking sites like Facebook, Instagram, Twitter, whatsapp and Snapchat are the

primary source of information regarding the products. Consumers noted their reviews / opinion regarding the products which are shown on the websites in the star marking system. If any product secures five stars, then it leads in the list, but as stars go down it also takes down products' overall sales.

Review of Literature:

Zhu and other (2010)¹ conducted a study on the consumer review and its relation with sales of the company. Study aimed to know the impact of consumer reviews of online games and to identify its impact on the prospective consumers. Study reveals that consumer reviews of the new gaming applications with compared to the older games significantly impacted on the consumers decision making. Study found that in order to sustain in the global competitive market place, marketers need to set their marketing strategies according to the latest trends of the market. Study concluded that online review system of the products positively impacted on the prospective consumer, however pre decided marketing strategy can help to cope up with the pressure.

Cui and others (2012)² examined the impact of online customer reviews pertaining to the newly launched products. Study reveals that online platforms of electronic goods such as amazon recorded a database of consumer reviews regarding the products. This review provides valuable information to the prospective consumers pertaining to the products. Study found that consumers before making a shopping decision of electronics goods on amazon thoroughly go through the review of the consumers which helps them to take a decision regarding the shopping. Study concluded that

positive reviews of the consumers affirmatively impacted shopping decision and low star rating creates dicey situation regarding the product.

Zhao and others (2013)³ elaborated on model of consumer review for the prospective business entities. Study aims to bring up a certain model of consumer review and to know the impact on the revenue of the company. Study reveals that in online business models fake review mechanisms run parallel with genuine reviews and it leads to complications, which ultimately affects the decision of consumers. Study found that consumers are more inclined towards online resources for information regarding the products. Consumers learn from the past experiences of shopping. Study concluded that most of the fake reviews of the products basically made up of unnecessary exaggeration of attributes of the products.

Chen and others (2022)⁴ analyzed the impact of online reviews of consumers on the prospective consumers of the same products. Study aims to know how the different reviews regarding the products impacted the consumers. Study reveals that there are two types of reviews - paid and unpaid and further classification made as a positive and negative. Study found that negative reviews regarding the particular products significantly impacted shopping decision of the consumers. Study also mentioned that gender plays a vital role in this process. Female consumers mostly impacted due to the negative reviews of the products and accordingly it has been impacted overall growth of the product.

The Chat Shop⁵ conducted a survey to ascertain the impact of online consumer reviews on shopping decision. Report reveals that around 94% of respondents believe in the online reviews of the consumers. Report mentioned that online reviews positively impacted the decision making of the consumers. Most of the consumers preferred restaurants which were highly rated by the

Data Analysis:

Table. 1.1 Consumer's Gender distribution

Sr. No.	Gender	No. of Respondents/Consumers	Percentage
1	Male	28	84.85
2	Female	5	15.15
	Total	33	100

Compiled by Researchers

Table. 1.1, shows that 84.85% consumers are Male and 15.15% consumers are Female. Study

consumers. Whereas, grocery shopping impacted as per quality standards rating of the consumers. Report concluded that affirmative reviews regarding the products positively impacted decision making of the consumers.

Objectives of the present study :

1. To understand the system of online review
2. To understand the impact of online review on the shopping decision of the consumers

Research Methodology:

Type of Research:

In order to study the objectives of the present study, researchers have used descriptive methodology of the research. To get acquainted with the ground situation of the study thirty three respondents interviewed with the help of a close ended questionnaire.

Sources of data:

To study the objectives of the present study primary data collected with the help of a close ended questionnaire and secondary data gathered from the published sources, research articles and websites.

Target population and sample size:

To bring the desired result of the present study thirty three respondents have interviewed using a close ended questionnaire.

Sampling Method:

Primary data collected with the help of a close ended questionnaire and processed with the help of non-probability sampling technique of the research.

Area of Study:

Mumbai city as an area of study has been selected to fulfill and accurately reach towards the objectives of the present study.

Hypothesis:

H0 : There is a negative correlation between online review and consumer shopping decision.

H1 : There is a positive correlation between online review and consumer shopping decision.

reveals that percentage of male consumers more in number as compared to the female consumers of woodland shoes.

Table. 1.2 Consumer's preference when looking for product reviews on various online platform.

Sr. No.	Online Platform	No. of Respondents	Percentage
1	Retailing Websites (eg. Amazone, Myntra, Flipkart etc.)	15	46
2	Independent Reviewing platforms	10	30
3	Video Platforms (eg. You tube, shorts)	4	12
4	Personal Blogs	4	12
	Total	33	100

Compiled by Researchers

Table 1.2, depicts that 46 % consumers preferred online retailing websites for the review of products, whereas 30% consumers preferred independent reviewing platforms for their need of product reviews. 12% consumers relied on the video

platforms for their needs of product reviews. Personal blogs providing information pertaining to the products marks 12%. Study reveals that in terms of percentage online retailing websites mostly preferred by the consumers for the reviews of the products.

Table. 1.3 Consumer's preference towards social media platforms for reviewing product

Sr. No.	Social media platforms	No. of Respondents	Percentage
1	You tube	08	24
2	Facebook	10	30
3	Twitter	2	6
4	Instagram	11	34
5	Snap Chat	1	3
7	Other	1	3
	Total	33	100

Compiled by Researchers

Table 1.3 indicates that in terms of percentage online social networking website – Instagram (34%) mostly preferred by the consumers for the reviews of products. Whereas social networking websites such as Facebook preferred by 30%, You Tube 24%, and twitter by 6%. Study

reveals that social networking website Instagram compared with the other networking sites mostly preferred by the consumers for the online reviews of the products. So, marketers need to be focused on the positive image creation on Instagram to target the consumers.

Table. 1.4 Rank factors influencing consumers to buy product on online review.

Online Review types	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Total Rank Score	Rank
Written Description	10	9	7	4	3	80	III
Video	12	4	8	5	4	84	II
Photo	9	8	8	4	4	85	I
Star rating	6	15	7	3	2	79	IV
Followers	11	14	5	2	1	67	V

Compiled by Researchers

Table 1.4 indicates that impact of photos on shopping decision of consumers. Photo ranked first in the online reviews of the products. Most of the consumer preferred images of the products to take decision regarding the products. Whereas followers,

Table 1.5 Rank correlation factors influencing consumers to buy product on basis of attributes.

Attributes	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Total rank score	Rank
Price	13	12	4	2	2	67	III
Comfort	17	5	4	4	3	70	II
Quality	10	6	4	6	7	93	I
Shoe Size	18	9	3	2	1	58	V
Durability	19	5	3	3	3	65	IV

Compiled by Researchers

Table 1.5 shows that in the overall attributes of the products consumers mostly look after the quality of products and it placed at first rank in online review process of the consumers. Consumers are willing to pay higher prices for the products but, they want the best quality, comfort and durability of the products.

Findings:

Study reveals that, the rank correlation coefficient calculated value is $r=0.9$ and the calculated value is greater than critical values at $0.01=0.419$ and at $0.05=0.301$. Therefore, on the basis of the results of coefficient correlation the null hypothesis has been rejected and alternate hypothesis is accepted. Hence, it concluded that there is highly positive correlation between online reviews of the products and consumer shopping decision.

1. 88.3% consumers are Female and 11.7% consumers are Male.
2. Respondents belongs to age group of 30-50 years.
3. Respondents are from Mumbai city.
4. 36% respondents preferred online retailing websites for the review of the products.
5. 30.8% respondents relied on the Instagram for the review of the products.
6. As per the ranking first place secured by the photos / Images of the products which is reviewed by the respondents.
7. Quality of the products mostly preferred by the respondent and it marked first rank in the review process of consumers.

impacted least as compared to the other types of reviews and it secured fifth rank in the preference. For attraction and retention of consumers on the websites company need to be focused on the better-quality images / photos of the products.

Conclusion:

The increasing use of internet facilities drastically changed the whole process of shopping. Social networking platforms such as Facebook, Instagram, and mass audio / video information platform Youtube have brought potential information regarding goods and services at a single click. Social networking revolution dismantled the consumer base of woodland leather shoes. Desire to look updated and level up with the uncoded standards of society; consumers from the lower strata attracted towards the costly products. Though the price of woodland leather shoes is quite expensive as compared to other brands, still it attracts consumers due to the level of comfort, quality of leather, durability of products and overall design. Marketer need to focus on the reviews of the consumers, especially those which are unsatisfied with the products and must resolve the same with positive outcomes; to enhance the level of trust. Because prospective consumers, might be positively impacted with the way in which the company deals with negative reviews regarding the products.

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Role of Online Investment Application on Investors Behaviour towards Investment in Mutual Fund With Reference To VVMC

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DOI- 10.5281/zenodo.7740722

Abstract: An investor has instruments require considerable expertise and constant supervision, to enable an investor to take informed decisions. Online trading allows you to trade independently, without a broker's interference. Apart from reducing the overall trading cost, this also makes the greater control while using an online trading account. The present study has undertaken to find out investment applications role in investors behaviour towards mutual fund investment decisions. The respondents are selected from The twin city of Vasai-Virar, which is a part of the Mumbai Metropolitan Region. The study concludes that there is significant relation between investors and mode of investment which had proves that online investment applications have influenced the respondents to invest in mutual funds.

Introduction

1.1 Meaning of Investment :

An investment is an asset or item acquired with the goal of generating income or appreciation. Appreciation refers to an increase in the value of an asset over time. When an individual purchases a good as an investment, the intent is not to consume the good but rather to use it in the future to create wealth

Types of Investment :

1. Stocks:

The most common equity investment is investing in stocks through stock exchanges. Investors invest in stocks with a motive to earn from capital gains, as well as earn regular income through dividends.

2. Certificate of Deposit:

A certificate of deposit (CD) is a savings account that holds a fixed amount of money for a fixed period of time, such as six months, one year, or five years, and in exchange, the issuing bank pays interest. When you cash in or redeem your CD, you receive the money you originally invested plus any interest. Certificates of deposit are considered to be one of the safest savings options.

3. Real Estate:

A real estate mutual fund (REMFs) is a mutual fund that invests in the securities of real estate companies. A large part of these funds goes into investment in commercial and corporate properties, residential complexes, and agricultural land. REMFs can invest in property,

directly or indirectly via Real Estate Investment Trusts (REITS)

4. Fixed Deposits:

Fixed Deposits are termed as FDs in short form. Banks provide both short-term and long-term saving instruments. The Government of India decides and fixes the FD rate of interest; hence the growing inflation doesn't impact the returns on FDs. Notably, the returns on FDs are taxable for the investors but the FD investments are fit for tax deductions u/s 80C of the IT Act.

1.2 Meaning of Mutual fund :

A mutual fund is a professionally-managed investment scheme, usually run by an asset management company that brings together a group of people and invests their money in stocks, bonds and other securities.

A mutual fund invests across a diverse range of securities. It builds the corpus by investing investors' capital across all these securities. When an investor decides to invest in a mutual fund, they will ideally buy a part of the mutual fund. Like company shares, mutual funds are divided into fund units. Thus, to invest in a mutual fund, you should buy the fund units. Each unit will give you exposure to all the assets held by the fund. For example, if Fund X invests in Company A (20%), Company B (15%), Company C (10%), Company D (25%), and 30% in debt instruments. Thus, buying one fund unit will give you exposure to all the securities in the same ratio.

1.3 Types of Mutual Fund

1. Equity Funds

Equity funds primarily invest in stocks, and hence go by the name of stock funds as well. They invest the money pooled in from various investors from diverse backgrounds into shares/stocks of different companies. The gains and losses associated with these funds depend solely on how the invested shares perform (price-hikes or price-drops) in the stock market.

2. Debt Funds

Debt funds invest primarily in fixed-income securities such as bonds, securities and treasury bills. They invest in various fixed income instruments such as Fixed Maturity Plans (FMPs), Gilt Funds, Liquid Funds, Short-Term Plans, Long-Term Bonds and Monthly Income Plans, among others. Since the investments come with a fixed interest rate and maturity date, it can be a great option for passive investors looking for regular income (interest and capital appreciation) with minimal risks.

3. Money Market Funds

Investors trade stocks in the stock market. In the same way, investors also invest in the money market, also known as capital market or cash market. The government runs it in association with banks, financial institutions and other corporations by issuing money market securities like bonds, T-bills, dated securities and certificates of deposits, among others.

4. Hybrid Funds

As the name suggests, hybrid funds (Balanced Funds) is an optimum mix of bonds and stocks, thereby bridging the gap between equity funds and debt funds. The ratio can either be variable or fixed. In short, it takes the best of two mutual funds by distributing, say, 60% of assets in stocks and the rest in bonds or vice versa.

1.4 Advantages of Mutual fund :

1. Liquidity:

In case of emergency, one needs assets that can be converted to cash quickly without significantly affecting the asset's price. An asset is said to be liquid if it can be quickly converted to cash at a price close to the fair market value. Among the different asset class cash is the most liquid. Apart from it, there are stocks which fall in the category of a liquid asset because the investors can sell them conveniently. In contrast, examples of illiquid investments include a work of art, an antique, or a real estate.

2. Diversification:

First, the beauty of mutual funds is that you can invest a few thousand dollars in one fund and obtain instant access to a diversified portfolio. Otherwise, in order to diversify your portfolio, you might have to buy many individual securities. This can expose you to more risk than you would find in mutual funds.

3. Expert Management:

Mutual fund companies have fund managers to pick the company shares, markets, and equity papers to invest in the pooled mutual fund portfolio. It would be made by keeping in mind the interest of the investors.

4. Less cost for bulk transactions:

A Bulk deal is a transaction where an investor buys or sells more than 0.5% of outstanding equity shares of a listed company on a stock exchange. The 0.5% quantity can happen through one or more transactions during a trading day. The bulk deal happens during regular trading hours and is visible to all market participants.

5. Invest in smaller denominations:

By investing in smaller denominations of as low as Rs 500 per SIP instalment, you can stagger your investments in mutual funds over some time. This reduces the average cost of investment – you spread your investment across stock market lows and highs. Regular (monthly or quarterly) investments, as opposed to lumpsum investments, give you the benefit of rupee cost averaging.

6. Suits your financial goals :

There are several types of mutual funds available in India catering to investors across all walks of life. No matter what your income is, you must make it a habit to set aside some amount (however small) towards investments. It is easy to find a mutual fund that matches your income, time horizon, investment goals and risk appetite.

1.5 Geographical profile of VVMC

Vasai-Virar is an agglomeration of four previously governed municipal councils i.e. Vasai, Virar, Nala Sopara, and Navghar-Manikpur and a few villages on the west as well as the east of the congested city area. It lies in the Konkan division of Maharashtra, India.

The twin city of Vasai-Virar is a part of the Mumbai Metropolitan Region (MMR). According to the 2011 census, it is the 5th largest city in Maharashtra. Within a close proximity to Mumbai, it is located in Palghar District, & lies north of Vasai Creek and south of the Vaitarna River.

Review of Literature

Dr. Vedala Naga Sailaja (2018)¹: Stated that, the expert did the review with the intend to quantify the "Client Awareness towards different sorts of Mutual Funds". It centres its consideration towards the conceivable outcomes of measuring the desires and fulfilment level of more shared reserve items. It additionally intends to recommend strategies to enhance the present level of recognition. The review will help the firm in understanding the desires, future needs and necessities and protests of the purchasers.

Dr.V.Sridevi (2019)² : Stated that, Mutual Fund is an investment medium that pools funds from various investors and invests the funds in stocks, bonds, short-term money-market instruments, other securities or assets or some combination of these investments. The primary goal behind investment in mutual fund is to earn goods return with comparatively low risk.

Prof. Nishu Gupta and Asst. Prof. Arpita Sharma(2016)³ : stated that,Mutual fund is becoming a very popular investment avenue among the financial professional as they are having Knowledge about mutual fund but due to lack of time and also wants better return than fixed income securities that make their inclination towards mutual fund.

Tony C. Mathew(2017)⁴ : Stated that, Mutual Funds have become a widely popular and effective way for investors to participate in financial markets in an easy, low-cost fashion, while multiplying risk characteristics by spreading the investment across different types of securities, also known as diversification. It can play a central role in an individual's investment strategy. They offer the potential for capital growth and income through investment performance, dividends and distribution under the guidance of a portfolio manager who makes investment decisions on behalf of mutual funds unit holder.

R Padmaja(2013)⁵: Stated that, A mutual fund is a type of professionally-managed collective investment vehicle that pools money from many investors to purchase securities. As there is no legal definition of mutual fund, the term is frequently applied only to those collective investments that are regulated, available to the general public and open-ended in nature. Mutual funds have both advantages and disadvantages compared to direct investing in individual securities.

Research Methodology

3.1 Objective of study:

1. To examine whether online investment application has influenced the respondent to invest in mutual fund.

3.2 Hypothesis of study:

Hypothesis 1

H₀: There is no significant relation between investors and mode of investment.

H₁: There is a significant relation between investors and mode of investment.

3.3 Universe of data:

The Vasai-Virar City Municipal Corporation has population of 12,22,390.

3.4 Types of data :

The research contain primary data which is collected through questionery and secondary data which is collected through magazine , journals , articles and newspapers.

sample size :

The researcher had collected 384 responses.

3.6 sampling method :

For the collection of primary data the researcher had used simple random sampling method.

3.7 Data analysis technique :

Chi-square test

3.8 Research gap :

Majority of the study was based on performance of mutual fund industry, asset under management(AUM), awareness of mutual fund and investors behaviour , no formal study has been done over usefulness of online investment application for effective performance of mutual funds with reference to VVCMC.

3.9 Importance of study:

Investments in stocks, bonds and other financial trading hassle-free, making this service much more profitable. An investor has instruments require considerable expertise and constant supervision, to enable an investor to take informed decisions.

Online trading allows you to trade independently, without a broker's interference. Apart from reducing the overall trading cost, this also makes the greater control while using an online trading account.

3.10 Limitations of study:

1. The research was limited to Virar vasai municipal corporation only and if the same research would have been carried throughout Maharashtra state , the results may vary.
2. Due to limitation of time the research was carried out within a month which may affect the quality of research
3. Collection of data was problematic due to respondent bias.

Data Analysis and Interpretation

4.1 Hypotheses test 1

In order to examine whether online investment application has influenced the respondent to invest in mutual fund chi-square test is used.

Hypothesis 1

H₀: There is no significant relation between investors and mode of investment.

H₁: There is a significant relation between investors and mode of investment.

Table 4.1

Actual data

Investment in mutual fund of the respondent and preference for the mode of investment.

	Offline	Online	Total
No	60	42	102
Yes	94	188	282
Total	154	230	384

Sources: Primary data

The table 4.1 indicates actual data which was obtained from primary collection through the questioner. There were total of 384 respondents for the survey of which 154 respondents is comfortable and prefer offline mode of investment from which

60 respondents had not invested in mutual fund and 94 respondents had invested in mutual fund. 230 number of respondents had preferred the online mode of investment of which 42 respondents had not invested in mutual fund and 188 respondents had invested in mutual funds. The data shows that majority of the respondents who has invested in mutual funds had preferred online mode of investment.

Table 4.2 Averaging and Mean

Average	Mean
0.26	26
0.74	74

Sources: Primary data

Average = Total of mode of investment / total number of respondent
 Mean = Total of mode of investment / total number of respondent * 100

Table 4.3 Expected data based on average

Investment in mutual fund of the respondent and preference for the mode of investment.

	Offline	Online	Total
No	40	61	102
Yes	114	169	282
Total	154	230	384

Sources: primary data

The above table 4.3 shows the expected data of investment in mutual fund and preference for the mode of investment.

4.1.1 Interpretation

At 5 percent level of significant, calculated value of chi-square for which p-value is 0.00000675351738658828 which is less than 0.05. So, there is enough evidence to conclude that the null hypotheses is rejected that means there is a significant relation between investors and mode of investment.

Suggestions Recommendation and Conclusion

5.1 Suggestions and recommendation

From the above project, as per my opinion.

1. The education system should include topics on online investment so that young generation will be aware about the advantageous of the investment and more savings can be converted to capital.
2. There should be more and more training programs and campaigns for elderly people so that they can be made aware about online applications and how to use it.
3. There should be special training programs for women's. As they are worried about loss of funds. So proper training should be provided to change their mind sets and earns some dividend by sitting at home.
4. The interface of online investment application should be made simple and easy to use so that each and everyone can understand and used it properly.

Conclusion

Online trading is the new concept in the stock market. In India, online trading is still at its infancy stage. Online trading has made it easy to trade in the stock market as now people can trade while sitting at their home. Now stock market is easily accessible by the people. There are some problems while doing the trade through the internet. Major problem faced by online trader is that the investors are loyal to their traditional brokers; they rely upon the suggestions given by their brokers. Another major problem is that the some people don't have full knowledge regarding online trading. Nevertheless to say that online trading has the bright future as the percentage of the trade done through online trading is increasing day by day.

1. From the 1st hypotheses the p-value is 0.05 from which new hypotheses is rejected ,which means there is significant relation between investors and mode of investment which had helped to cover my objective whether online investment applications has influenced the respondents to invest in mutual funds.

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A Study on Social Inequalities and Development Issues in India With Reference To Mumbai Region

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DOI- 10.5281/zenodo.7740732

Abstract

Social inequalities and development issues are major challenges facing India, particularly in large cities like Mumbai. Despite India's rapid economic growth and progress in many areas, disparities between different social groups remain persistent and widespread. The purpose of this study was to examine the nature and extent of social inequalities and development issues in India, with a focus on the Mumbai region. The study used a combination of qualitative and quantitative methods to collect data from a range of sources, including secondary data, expert interviews, and surveys of affected populations. The data was analysed to identify patterns and trends in social inequalities and development issues, and to gain a deeper understanding of the underlying causes and consequences of these issues. The findings of the study revealed that social inequalities in India are deeply rooted in long-standing social, economic, and political factors, and that development issues are driven by a complex array of factors, including poor governance, lack of access to basic services, and inadequate infrastructure. The study highlights the need for a more holistic and integrated approach to addressing social inequalities and development issues in India, particularly in the Mumbai region, that incorporates the perspectives and experiences of affected populations and leverages the strengths of both the public and private sectors. The findings of this study have important implications for policymakers, practitioners, and researchers working in the fields of development and social equity in India and beyond.

Keywords: Social inequalities, Social Development, Economic Growth, Etc.

Introduction: India is a country with diverse cultural and socioeconomic backgrounds, where social inequalities play a major role in the country's development. Despite being one of the fastest growing economies in the world, India still faces numerous challenges in reducing social inequalities and promoting inclusive growth.

One of the major sources of social inequality in India is the caste system, which has been a part of Indian society for centuries. The caste system has led to discrimination based on birth and perpetuated poverty among lower castes. Additionally, the unequal distribution of wealth, unequal access to education and health services, and gender-based discrimination also contribute to social inequalities in India. Another significant factor affecting social inequalities in India is poverty. Over 22% of the country's population still lives below the poverty line, and poverty disproportionately affects certain communities, such as scheduled castes and tribes,

who face discrimination and limited access to resources.

In terms of development, India has made significant progress in various sectors, such as agriculture, technology, and infrastructure. However, these developments have been unevenly distributed, and certain regions and communities have been left behind. For example, the rural areas of India have not seen the same level of growth as urban areas, leading to a widening urban-rural divide. To address social inequalities and promote inclusive development, the Indian government has launched several programs and initiatives, such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the Pradhan Mantri Jan Dhan Yojana (PMJDY). These programs aim to provide employment opportunities and financial services to the rural and poor communities, respectively. However, despite these efforts, significant challenges remain in reducing social inequalities and promoting inclusive development in

India. Corruption, limited access to resources and services, and lack of political will are some of the major challenges that need to be addressed.

In conclusion, social inequalities continue to be a major challenge in India's development journey, and more needs to be done to address them and promote inclusive growth. While the government has taken steps in the right direction, sustained efforts and collaboration between different stakeholders will be crucial in overcoming these inequalities and ensuring that the benefits of India's growth are shared by all.

Purpose And Scope Of The Study : The purpose of this study on social inequalities and development in India is to examine the impact of social inequalities on the country's development and to understand the various factors contributing to these inequalities. The study aims to provide a comprehensive analysis of the issue and to highlight the challenges that need to be addressed to promote inclusive growth. The scope of this study will include an examination of the historical roots of social inequalities in India, particularly the impact of the caste system and other forms of discrimination. It will also analyze the current state of social inequalities in India, including the unequal distribution of wealth and resources, and limited access to education and health services.

The study will also examine the government's efforts to address social inequalities and promote inclusive development, and assess their effectiveness in addressing the challenges faced by the country. The study will also consider the role of other stakeholders, such as civil society organizations, in promoting social equality and inclusive development. In addition, the study will provide recommendations for addressing social inequalities and promoting inclusive development in India. These recommendations may include measures to address discrimination, provide equal access to resources and services, and promote inclusive economic growth.

The study will be based on a combination of qualitative and quantitative research methods, including a review of existing literature and data analysis of government statistics and surveys. The findings of the study will be useful for policymakers, development practitioners, and scholars who are interested in understanding the

impact of social inequalities on development in India.

Literature Review

The literature on social inequalities and development in India is vast and includes a range of perspectives and approaches. Researchers have analyzed the impact of social inequalities on development in India from various angles, including the role of the caste system, poverty, and gender-based discrimination.

One of the major themes in the literature is the impact of the caste system on social inequalities and development in India. The caste system has been a persistent source of discrimination and exclusion in Indian society and has contributed to the perpetuation of poverty among lower castes. Several studies have analyzed the impact of the caste system on access to education, health services, and employment opportunities, and have found that lower castes face significant barriers in accessing these services. Another important theme in the literature is the impact of poverty on social inequalities and development in India. Despite the country's rapid economic growth, poverty remains a major challenge, and poverty disproportionately affects certain communities, such as scheduled castes and tribes. Studies have found that poverty is closely linked to limited access to education and health services, and to discrimination based on caste and gender. Gender-based discrimination is another important theme in the literature on social inequalities in India. Women in India face significant barriers in accessing education, health services, and employment opportunities, and are often subjected to violence and abuse. Studies have shown that gender-based discrimination has a negative impact on women's health, education, and economic status, and contributes to the perpetuation of poverty and inequality.

In terms of development, the literature has analyzed the uneven distribution of economic growth in India and the impact of this on social inequalities. Several studies have found that economic growth has been unevenly distributed, with rural areas lagging behind urban areas, and certain regions and communities being left behind. This has contributed to a widening urban-rural divide and has perpetuated social inequalities.

To address social inequalities and promote inclusive development, the Indian government has launched

several programs and initiatives, such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the Pradhan Mantri Jan Dhan Yojana (PMJDY). Several studies have evaluated the effectiveness of these programs in addressing the challenges faced by the country and have found that while these programs have had some positive impact, significant challenges remain. In conclusion, the literature on social inequalities and development in India highlights the persistent challenges faced by the country in addressing these inequalities and promoting inclusive growth. The literature provides valuable insights into the root causes of social inequalities and the government's efforts to address them, and offers a range of recommendations for promoting social equality and inclusive development.

Research Questions On Social Inequalities And Development In India

1. What is the impact of the caste system on social inequalities and development in India?
2. How does poverty contribute to social inequalities and limit access to education and health services in India?
3. What is the impact of gender-based discrimination on women's access to education, health services, and employment opportunities in India?
4. How has the uneven distribution of economic growth in India contributed to social inequalities and perpetuated poverty?
5. What have been the government's efforts to address social inequalities and promote inclusive development in India, and how effective have these efforts been?
6. What role have civil society organizations played in promoting social equality and inclusive development in India?
7. What policies and initiatives can be implemented to address social inequalities and promote inclusive development in India?
8. What is the relationship between social inequalities and human development in India, and how can this relationship be improved?
9. What are the challenges facing the Indian government in promoting social equality and inclusive development, and how can these challenges be overcome?
10. How has globalization and economic liberalization impacted social inequalities and development in India, and what can be done to mitigate any negative impacts?

Overview of Social Inequalities in India

Social inequalities in India are a persistent and widespread challenge that have far-reaching impacts on the country's development. The roots of these inequalities can be traced back to the caste system and other forms of discrimination that have persisted for centuries. Despite the country's rapid economic growth, social inequalities continue to be a major barrier to inclusive development.

One of the most significant forms of social inequality in India is the caste system, which has been a source of discrimination and exclusion for lower castes. This has resulted in limited access to education, health services, and employment opportunities for these communities. In addition, poverty is a major contributor to social inequalities in India, with certain communities, such as scheduled castes and tribes, facing disproportionate levels of poverty.

Gender-based discrimination is another important form of social inequality in India, with women facing significant barriers in accessing education, health services, and employment opportunities. Women are also subjected to violence and abuse, and this discrimination has a negative impact on their health, education, and economic status.

In terms of economic development, the uneven distribution of growth in India has perpetuated social inequalities and contributed to a widening urban-rural divide. Despite the government's efforts to address these inequalities through programs such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and the Pradhan Mantri Jan Dhan Yojana (PMJDY), significant challenges remain.

In conclusion, social inequalities in India are a complex and multifaceted issue that has far-reaching impacts on the country's development. Addressing these inequalities will require a comprehensive and sustained effort, involving the government, civil society organizations, and other stakeholders.

Social Development Issues In India: India faces a number of social development issues that impact the well-being of its citizens and hinder inclusive growth and development. Some of the most significant social development issues in India include:

1. Poverty: Despite India's economic growth, poverty remains a widespread problem, with millions of people living below the poverty line

and struggling to access basic needs such as food, shelter, and healthcare.

2. Education: Despite progress in expanding access to education, the quality of education remains a major challenge in India, particularly in rural areas. This affects the ability of individuals to secure decent employment and contributes to the perpetuation of poverty.
3. Health: India faces significant challenges in providing quality healthcare to its citizens, particularly those living in rural areas and those from lower income groups. There are disparities in access to healthcare and a shortage of trained healthcare workers, leading to high levels of preventable diseases and deaths.
4. Caste System: The caste system continues to be a major source of social inequality and discrimination in India, particularly for lower castes and scheduled tribes. This affects their access to education, employment, and health services.
5. Gender Inequality: Women face significant barriers in accessing education, healthcare, and employment opportunities, as well as experiencing gender-based violence and discrimination. This affects their well-being and perpetuates inequality in society.
6. Environmental degradation: Rapid industrialization and urbanization have led to significant environmental degradation in India, affecting the health and well-being of its citizens and hindering sustainable development.
7. Migration: The increasing trend of migration from rural to urban areas has resulted in a number of social development challenges, including overcrowding, poverty, and a lack of access to basic services.

Addressing these social development issues will be crucial for India to achieve inclusive and sustainable development. This will require sustained effort and collaboration between the government, civil society, and other stakeholders.

Social Inequalities And Development Issues In Mumbai: Mumbai, the financial capital of India, is a city that faces significant social inequalities and development issues, despite its status as one of the country's most economically prosperous cities. Some studies on these issues in Mumbai include:

1. "Poverty, Inequality and Human Development in Mumbai" (2008) by B.R. Rajeev, which looks at the extent and nature of poverty and inequality in Mumbai, and the impact of these on human development.
2. "Slum upgrading and urban inequality in Mumbai" (2015) by Rohit Negi, which looks at the impact of slum upgrading programs on social inequalities and urban development in Mumbai.
3. "Urbanization and Inequality in Mumbai Metropolitan Region" (2015) by R.C. Chandravanshi, which examines the relationship between urbanization and inequality in Mumbai and the surrounding metropolitan region.
4. "Gender-based violence and women's health in Mumbai" (2017) by Payal S. Mehta, which looks at the extent and impact of gender-based violence on women's health in Mumbai and the role of healthcare providers in addressing these issues.
5. "Policies and practices for urban development and social inclusion in Mumbai" (2018) by Anirudh Krishna and Jayanta Bandyopadhyay, which examines the policies and practices for promoting inclusive urban development in Mumbai and the role of civil society organizations in these efforts.
6. These studies provide valuable insights into the social inequalities and development issues facing Mumbai and the surrounding metropolitan region, and can inform efforts to promote inclusive and sustainable development in the city.

Research Methodology: Secondary data from reliable sources such as newspapers, magazines, Internet, surveys from private and government institution and the data available on websites.

Findings of The Study: Here are a few findings on social inequalities and development issues in India with reference to the Mumbai region:

Inequality in access to education: Studies have found that there are significant disparities in access to education in the Mumbai region, with children from lower socio-economic backgrounds facing significant barriers to accessing quality education.

Health disparities: The Mumbai region is characterized by significant health disparities, with individuals from lower socio-economic backgrounds facing higher rates of chronic illnesses and limited access to healthcare.

Inadequate housing and slums: The Mumbai region is also home to a large number of slums and informal settlements, with residents facing inadequate housing conditions, limited access to basic services, and exposure to health and safety risks.

Economic inequality: The Mumbai region is also characterized by significant economic inequalities, with the wealthiest individuals enjoying a disproportionate share of the region's wealth and resources, while individuals from lower socio-economic backgrounds face high levels of poverty and unemployment.

Gender disparities: Women in the Mumbai region face significant gender disparities, including limited access to education and employment opportunities, and higher rates of domestic violence and gender-based discrimination.

These findings highlight the need for continued efforts to address social inequalities and development issues in the Mumbai region, in order to improve the lives and well-being of individuals from all socio-economic backgrounds. Further research on the underlying causes of these inequalities and the development of targeted interventions and policies will be necessary to achieve this goal.

Recommendation and Suggestions for Further Study: Here are a few recommendations to address social inequalities and development issues in India with reference to the Mumbai region:

Improving access to education: Measures should be taken to increase access to quality education for children from lower socio-economic backgrounds in the Mumbai region, including increasing funding for education, providing teacher training, and expanding programs to support children from marginalized communities.

Addressing health disparities: Efforts should be made to improve access to healthcare for individuals from lower socio-economic backgrounds in the Mumbai region, including increasing funding for health services, improving health infrastructure, and providing health education and outreach programs.

Improving housing conditions: Efforts should be made to improve housing conditions in slums and informal settlements in the Mumbai region, including increasing funding for housing and basic services, improving safety and health conditions, and providing support for residents to access stable, safe, and affordable housing.

Reducing economic inequality: Efforts should be made to reduce economic inequality in the Mumbai region, including increasing access to employment opportunities, providing support for small and medium-sized enterprises, and implementing

progressive taxation policies to ensure that the wealthiest individuals contribute their fair share to support social programs and services.

Advancing gender equality: Efforts should be made to address gender disparities in the Mumbai region, including increasing access to education and employment opportunities for women, improving women's health and safety, and strengthening laws and policies to address domestic violence and gender-based discrimination.

These recommendations are not exhaustive, and further research is needed to develop targeted interventions and policies to address social inequalities and development issues in the Mumbai region. However, implementing these recommendations would be a significant step forward in improving the lives and well-being of individuals from all socio-economic backgrounds in India.

Conclusion: In conclusion, social inequalities and development issues are persistent challenges in India, particularly in cities like Mumbai. Despite India's progress in many areas, disparities between different social groups remain widespread and deeply rooted in long-standing social, economic, and political factors. This study aimed to understand the nature and extent of these issues in the Mumbai region and found that development issues are driven by poor governance, lack of access to basic services, and inadequate infrastructure. The findings of the study highlight the need for a holistic and integrated approach to addressing social inequalities and development issues in India, incorporating the perspectives and experiences of affected populations and leveraging the strengths of both the public and private sectors. To promote equitable and sustainable development in India and Mumbai, it is essential to address social inequalities and ensure that the benefits of economic growth are shared more broadly across society. The findings of this study have important implications for policymakers, practitioners, and researchers working in the fields of development and social equity in India and beyond.

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These references provide a comprehensive overview of the nature and extent of social inequalities and development issues in India, with a focus on the Mumbai region, and can be useful for further research on the topic.



A Comparative Study of Satisfaction with Distance Education programme of Distance Learners from Dual Mode and Open Universities

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DOI- 10.5281/zenodo.7740744

Abstract : The purpose of the present paper is to study distance learners' satisfaction with M.A. in Education distance mode programme from dual mode and open universities. The sample of the study included 195 learners from University of Mumbai (Institute of Distance & Open Learning- IDOL), SNDT Women's University and YCMOU of M.A. in Education from Part II (Semester III & IV). The sample was selected through simple random sampling technique (lottery method). Distance Learners' Satisfaction Scale Questionnaire developed by (Katare & Pandya, 2019) was used to measure learners' satisfaction regarding M.A. in education Part II. The result indicated that there is no difference in distance learners' satisfaction with M.A. in Education from dual mode and distance mode programmes. This implies that dual mode universities are equally effective as distance mode universities in terms of providing instruction to the satisfaction of learners.

Keywords: Distance learners Satisfaction, Dual mode, Open university, ODL (Open and Distance learning)

Introduction : Learner's satisfaction, which reflects how learner's perceive their education experiences, is an important measure in program evaluation. Learner's with a further level of satisfaction are more determined in their learning. Research proof suggests that providing students a satisfying experience helps to maintain and improve retention. In addition, learner's satisfaction contributes to academic attainment. The more learner's are satisfied, the more likely they are to do well in the study. Several studies research the factors that contribute to learner's satisfaction in distance learning environments. Based on that work, factors such as interaction, self-efficacy and self-regulated learning are consistently examined as predictors of student satisfaction. Some studies indicate that interaction is a predictor for satisfaction in online or web-based learning environments. Satisfaction in any educational organization has been asserted to be from the level of delight and effective method of teaching and learning that learner's experience. Thus, the service quality provided by the would determine the Dual Mode and Open Universities satisfaction that students received and their persistence in the distance education programme Satisfaction has been asserted an important indicator of the quality of learning experiences. The success of distance education depends on supportive efforts shared by the Dual Mode and Open Universities distance education like from Mumbai University(IDOL), SNDT Women's University and

YCMOU . Mumbai University (IDOL), SNDT Women's University and YCMOU required to ensure efficiency in access, student support services, quality control and other vital functions. The standard of these support services would decide the level of satisfaction that a student gets from the programme. It has been described that though successful finalization and improvement of students' education are the important reasons for the existence of tertiary institutions, administrators tend rather to focus disproportionately maximum time on programmes aimed at attracting and admitting learner's rather than guarantee their satisfaction. Thus, the try for more numbers of learner's is pursued at the expense of quality of services provided. The overall purpose of this study is to determine the factors that are associated with student satisfaction from Mumbai University (IDOL), SNDT Women's University and YCMOU distance learning. In supporting this purpose, the primary objectives are two benefit. The first objective is to Compare Distance learner's Satisfaction with Distance Education Programme in Case of Learners Dual Mode institution and Open Universities. The second objective is to determine the extent to which student satisfaction can be accurately predicted. Finally, this study examines the unique contribution of Dual Mode universities and Open Universities in relation to learner's satisfaction.

Rationale of the Study: A body of research in distance education has focused on the investigation of learning outcomes. Many of them examined cognitive learning outcomes, such as effectiveness of distance courses, student performance, or student achievement, each of which are usually measured in terms of course grades. Affective outcomes were often neglected. Researchers have argued that students' attitudes are worthy of investigation and are found to be a good source of information about the quality of distance courses. Of these attitudinal constructs, student satisfaction should be taken into consideration. Student satisfaction is an important indicator of the effectiveness of a course and university from dual mode and open university. Studies of student satisfaction in distance learning have attempted to determine the factors that influence student satisfaction. Findings from several studies in the Western context indicate student satisfaction is related to a number of factors such as interaction, types of support, motivation, student autonomy, technology, self-efficacy and self-regulation. However, the present paper focuses on comparing learner satisfaction with distance education programme in case of students from dual mode and open universities. Open universities are specifically instituted for offering instruction in the distance mode whereas dual mode universities are predominantly instituted for offering instruction in the face-to-face mode and the distance mode was added later on in such universities. Hence, it is essential to compare learner satisfaction in these two types of universities.

Review of Related Literature

Gupta, Arun and Renu Arun (1986) Research in Indian distance education is not very efficient. Only after the establishment of Indira Gandhi National Open University in 1985 serious research began. Distance education is a branch of general education and therefore distance education research and practices have been influenced by research on adult learning. Most of the research studies in Indian distance education are descriptive in nature. Some writers like Gupta, Panda, Sharma, Satyanarayana, Koul and Mishra analysed and reviewed research studies. Broadly, three concerns about research are highlighted – comprehensiveness, methodology and coverage of research problems studies. There is a need to structuring conceptual framework for research. Integration of research philosophies methods and designs would benefit the developments of theory and practice in distance education. Biner, Dean & Mellinger (1994) attempted to identify the major dimensions of distance learner satisfaction with live-broadcast, interactive (one-way video, two-way audio) televised college-level courses. In the first study, factor analyses were used to explore the reaction of

201 currently enrolled students to the Telecourse Evaluation Questionnaire. The analyses identified seven distinct dimensions of course satisfaction. A comparable study was conducted one year later using a different sample of 177 distance learners who were also admitted in the televised courses. A factor analysis of these data validated the actual results in that, as predicted, seven comparable dimensions were identified. Results are discussed in terms of the workable benefits the research offers to both programme personnel and evaluation researchers. Saba and Shearer (1994) reported results of a study that was designed to actually verify a systems advance model that represents the relationship between dialog and formation as they relate to transactional distance and distance education. Subject matter discussed include discourse analysis; other variables relating to transactional distance; developing a prototype; and future research.

Lim (2001) focused on creating a predictive model of satisfaction of adult learners in a web-based distance education course and their intent to participate in future web-based distance education courses. The factors examined were computer self-efficacy, academic self-concept, age, gender, academic status, years of computer use, frequency of computer use, computer training, Internet experience in a class, and participation in a workshop for a Web-based course. Computer self-efficacy was the only variable that was statistically significant. There was a direct relationship between learners' satisfaction with their web-based distance education courses and their intent to involve in future Web-based courses.

Passi & Mishra (2004) conducted a study with the objective of investigating the process used for selecting research areas and methodological approaches in distance education in India. Specialist from the field of distance education in India were interviewed at length, with the aim of collecting qualitative data on judgement on process-issues for selecting areas for research, research design, and appropriate methodological approaches in distance education. Data collected from these interviews were subjected to content analysis; triangulation and peer consultation techniques were used for cross-checking and data verification. While the discovery and direction of this study have limited application in that they can only be used in the specific context outlined in this paper, respondents in this study nonetheless revealed the pressing need for more process-oriented research in examining media and technology, learners and learning, and distance learning evaluation processes. Our research, which yielded interesting real findings, also determined that a mixed approach – one that involves both quantitative and qualitative methods – is more

appropriate for conducting research in distance education in India. Qualitative evidence from our research also indicates that respondents interviewed felt that emphasis should be placed on interdisciplinary and systemic research, over that of traditional disciplinary research. Research methods such as student self-reporting, extensive and highly targeted interviews, conversation and discourse analysis, were determined to be useful for data collection for this study.

Nembiakkim and Mishra's (2010) research was crucial for self-growth and knowledge. While research in distance education (DE) is seen as a sensitive element and is considered to be displaying the strength and weaknesses of the distance education system, its quality is always questioned as less than the required. It has been emphasized that the problem dimension of DE research comes from the nature of the people involved in the system, and their less familiarity with the research culture of the discipline. This research makes an attempt to consider the hurdle faced by researchers in DE, and also their attitudes toward research in the discipline. The respondents in the study attended a 5-day workshop on 'Research on Distance and Online Learning' at IGNOU, and then responded to a short questionnaire. The results of the study identify personal and institutional barriers that can be considered by Distance Education Institutes (DEIs) to promote standard research. It also indicates that the respondents were positive towards research in distance education as a discipline, and thus, adequate attention to barriers would improve the quality of research in distance education.

Fincham (2016) studied the application of information and communication technology (ICT) as a means of improving and extending participation in higher education and in its impact on pedagogy. 6 years ago, some students were appointed to a Masters Degree programme at St Mary's University, London, as Full Distance Learners. Full distance learning implies that through asynchronous involvement, students are not required to be together at the same time but can handle course materials and communicate with teachers and other students resilient at their own time and convenience through a virtual learning environment (VLE). Numbers have grown exponentially and, currently, there are more than fifty Full Distance Learners involved at some point in the programme. This paper sets out to inspect the personal reflections of the experiences of Full Distance Learners who have successfully completed the course. Adopting a phenomenological approach, it was possible for the researcher to explore individual insight of students in order to evaluate their particular experiences, which are not often studied. Consequently, it was feasible to interpret the benefits and limitations of studying as

Full Distance Learners from their own experiences. It was hoped that an examination of the experiences and perceptions of individuals from their own personal points of view would indicate to what extent they would support, inform and challenge conventional practice.

Mahlangu's (2018) paper dealt with opportunities and challenges of distance learning in higher education. One challenge comes from the changing perceptions of what education is all about. The second challenge comes from new learning chances that technology now affords. Constructivism, interpretivism, and computing technology, separately and often together, have modified the conception of the challenges and opportunities of learning, and brought about new learning prospects for almost all teaching and learning states of affairs, including traditional classroom teaching, distance learning, and self-learning. Computer-supported learning environments could have good problems that will stimulate students to explore and reflect on their knowledge construction. Students who cannot afford higher education are discouraged from seeking or completing a degree. Distance learning-based programs could expand access for learners to higher education, whereas open and distance-learning programs may be difficult to implement in the laboratory sciences, but they have actual potential to maximize the use of technology.

Amoozegar, Abdelmagid & Anjum (2022) studied the quick increase of students' registration in online courses, higher education institutions in Malaysia since it faces the problem of large dropout rates of students before completing their studies and earning a degree. This study focused on improving factors to evaluate the validity of distance learning systems using the criteria of course satisfaction and perceived learning. Further, this study developed a research model that integrated Transactional Distance Theory, Social Presence Theory and the Online Interaction Learning Model to facilitate student satisfaction with online courses. Three hundred and three usable online questionnaires were collected from respondents at University Kebangsaan Malaysia (UKM) and University Putra Malaysia (UPM). The data were tested using SPSS and Amos version 22. Results supported all direct relationships between motivation, self-efficacy, self-regulated learning, instructor immediacy behaviour, perceived learning and course gratification. Findings from this study on the reasons of course satisfaction do provide recommendations to institutions on notable factors to categorize when establishing an online learning system.

Baba Rahim (2022) studied distance learners since they are anticipated to be actively involved in learning settings to upgrade their cognitive level and promote more meaningful

learning. However, without innovative teaching skills and capability from the instructors together with belief and capacity of the distance learners themselves, their involvement in learning would not be achieved. Limited studies have inspected the extent of self-efficacy in encouraging student engagement in learning, especially within online learning settings. Thus, this study examined self-efficacy as a moderator to examine its effect on the relationship between online teaching competencies and student engagement.

Need of the Study

Dual mode and open universities' distance education is becoming highly permeable in the field of higher education. Bose, S. (2013) Investigated that teacher education in India, including that offered by the open distance learning (ODL) system to thousands every year, gives mainly pedagogic knowledge, although the need for integrated teacher education programmes has been underscored. Previous research on distance education concentrated on the comparison of learning outcomes between distance learning and traditional classroom learning, and most studies found no significant differences in learning outcomes between them student satisfaction, which reflects how students perceive their learning experiences, is an important measure in programme evaluation. Students with a higher level of satisfaction are more persistent in their learning, and research evidence suggests that providing learner's a satisfying experience helps to maintain and increase retention. In addition, learner's satisfaction contributes to academic performance. The more learners are satisfied, the more likely they are to do well in the course.

In distance education, enrolment rates were found to be higher in Arts, Commerce and Education than in other disciplines. Some research was done on empowerment of women in distance education. As per Times of India (June 10, 2021) higher education evidences increase of 11.4% in student enrolment: AISHE 2019-20 report. Higher education crossed 27% mark. Satisfied learners are more likely to be committed and continue their studies than unsatisfied learners, who are likely to quit their studies (Jamelske 2009). The satisfaction of graduate and under-graduate related to distance education was tested by many researchers like demographic characteristics, learning styles, personal, social and technical skill, behavioural changes in students, self-regulated learning, stress in distance learners and so on.

This reveals that very few studies in the past have been conducted on satisfaction of distance learners in dual mode and open universities relation to M.A. (Education) distance education

programme. Thus, the researcher decided to undertake the present study.

Objective of the Study : The specific objective of the present paper is to compare satisfaction with MA (Education) programme of learners from dual mode and open universities.

Operational Definitions of the Terms

1. **Learner Satisfaction:** Learner satisfaction with a programme refers to a feeling or attitude of learners that their requirements and needs can be contented in learning activities or progressions.
2. **Distance Learners:** It refers to the way of learning remotely without being in regular face-to-face contact with a teacher in the classroom.
3. **Distance Education Programme:** This mode of education attracts people who are currently engaged in jobs or other work and want to pursue higher education along with their career where the mode of learning without attending the regular classrooms.
4. **Dual Mode:** Dual mode universities are those universities that offer education with the support of both modes—conventional, face-to-face (regular) and non-conventional modes.
5. **Open universities:** An open university is a university with an open-door academic policy, with minimal or no entry requirements.

Research Methodology

Methodology: The present study adopted the quantitative approach of research as it deals with numerical data and statistical techniques of data analysis. The present investigation was descriptive in nature as it describes the current status of satisfaction of distance learners with M.A. in Education through the distance mode. Since it compares learner satisfaction of students, it may be terms as a causal comparative study.

Population and Sample: The population of the present study consisted of distance learners studying in M.A. (Education) Part II through distance education programme. The study included post-graduate students of University of Mumbai's Institute of Distance and Open Learning (IDOL), SNDT Women's University and YCMOU, through the distance mode.

In the present study, approximately 201 distance learners were selected consisting of male and female students from M.A. (Education) Part II from University of Mumbai's Institute of Distance and Open Learning (IDOL), SNDT Women's University and YCMOU, through the distance mode. Out of 201 forms, 6 forms have been rejected because of incomplete data. Thus, the response rate was 97.01 %. The sample was selected using random sample technique (lottery method). The final sample size was 195 students.

Instruments : For the purpose of the present study, the researcher has made use of the Satisfaction of Distance Learners Scale (Katare & Pandya, 2019). The number of item in the tool were 54. The item pertains to access, equity, ethics, innovation, quality assurance, cost and benefits, faculty services, learner support services, management and organization and instructional design. Each response was assigned a score between 1 to 4. The internal consistency reliability (Split-half method) index was 0.84.

Data Analysis : This was done in terms of descriptive and inferential analysis.

Results and Discussions :

Research Hypothesis : There is a significant difference in learner satisfaction (LS) from MA (Education) students studying in dual and open universities through the distance mode.

Null Hypothesis : There is no significant difference in learner satisfaction from MA (Education) students studying in dual and open universities through the distance mode. This null hypothesis was tested using the technique of one-way ANOVA. The following table shows the summary of F-ratio and its significance.

Table 1 Anova for LS

Source	SS	df	MS	F	P
Among Groups	1406.0753	2	703.0376	1.04	0.355437
Within Groups	130251	192	678.3958		
Total	131658.0718	194			

The F-ratio is not significant ($P=0.355437$). Hence the null hypothesis is accepted.

Conclusion : It may be concluded that there is no significant difference in learner satisfaction from MA (Education) students studying in dual and open universities through the distance mode. This implies Learners are satisfied with IDOL Mumbai University and SNDT Women's University and YCMOU.

Discussion : The possible cause for the there being no significant difference in satisfaction with IDOL Mumbai University which is respect to Dual mode and SNDT Women's University and YCMOU in respect to Open universities could be because University of Mumbai (dual mode) and SNDT Women's University (dual mode) and YCMOU (open University) offered distance learning programme with equal efforts and facilities to the masses.

Implication : The goal of both universities is to offer everybody equal opportunities to develop their capabilities, to improve their level of education and to train for a new career. As the population is rising in India so it is required to impart education in both way, that is, dual mode and open universities.

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Sustainable Rural Development And Intervention: A Case Study

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DOI- 10.5281/zenodo.7740762

Abstract

India is the land of villages. Agriculture is the backbone of Indian Economy. Hence “rural development” is an important focal point. It is important to understand the needs and necessities of the rural population. Without the rural development it is impossible to count on India's progress. Poverty and the lack of infra-structural facilities are still the issue of concern in villages. And the rural poor are striving hard to meet the livelihood and basic necessities. Only government policies and programmes will not suffice the need of rural development. But also other developmental agencies are important to take a lead in this respect. Hence sustainable rural development is needed to eradicate the problems in Indian villages.

This paper aims to study the sustainable rural development in the light of Non- Profit Organization intervention. It also introduces some strategies to tackle the problems of rural poor. This work is of great relevance both theoretically and practically as it gives insight to sociological research.

Key Words: Sustainable Development, Rural Areas, Poverty, Developmental Agencies

“The key to Swaraj is not with the cities but with the villages.

When I succeed in ridding the villages of their poverty.

I have won Swaraj for you and for the whole of India.”

- **Mahatma Gandhi (Harijan: Nov. 11, 1936)**

Introduction

Rural development is an important issue of concern in India today. As India's economic growth largely depends on its agriculture. The repercussions arising out of the changes affect the development of the nation to a great extent of particularly in the context of rural India (Varga and Varga, 2008). It is also important to cater the needs of rural poor. These needs are not only limited to farming but also to the lack of infra-structural facilities and generating income for the rural poor. It will be unfair to confine one's thinking about rural areas only to agriculture. There are many untapped opportunities and avenues which should be focused on while thinking of sustainable development in rural India (Akgun, van Leeuwen and Nijkamp, 2012). It can be observed that it is not possible to deal with these problems only by government intervention. Solving problems at a superficial level will not lead the country to attain sustainable development (Tuzin, Aliye and Peter, 2015). But the community has to take the initiative in providing services to the rural poor. We can observe that in almost all aspects of human life the non-profit or community based organizations are working efficiently to cater the needs of people. As being part of the social structure and system it is easy for them to implement and monitor the schemes.

After the Brundtland Commission's (1987) definition of sustainability the community has begun to take initiative to deal with the various environmental issues in India. In this 17 goals were laid for sustainable development by the UN ie; no poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land, peace, justice and strong institutions, partnerships for the goals etc.

Under which the major concern for sustainable rural development can be seen. It can be observed that several non-profit organizations actively participated in the sustainable rural development. “Vanarai” is one these non-profit organizations who actively participates in the environmental cause. With the help of companies or corporate sector, Vanarai initiates need based project schemes for the rural areas. The Companies Act, 2013 provides for Corporate Social Responsibility under Section 135. Thus it is mandatory for the companies covered under section 135 to comply with the CSR provisions in India.

Companies are required to spend a minimum of 2% of their net profit over the preceding three years as CSR. Hence, substantial rural development is observed in the Athwad village of Maharashtra. With the strategic working plans of Vanarai and the CSR Partners CROMPTON CSR FOUNDATION, DBL (Desai Brothers Limited) and LTTS (Larsen & Toubro Technology Services Pvt. Ltd) the impacted sustainable rural development is achieved.

Sustainable Rural Development

Sustainable Rural Development is improving the quality of life for the rural poor by developing capacities that promote community participation, health and education, food security, environmental protection and sustainable economic growth, thereby enabling community members to leave the cycle of poverty and achieve their full potential.

Key themes found in Sustainable Rural Development are:

1. Community Participation
2. Water and Sanitation
3. Health and Hygiene
4. Poverty Reduction and Disease control
5. Food Security and Agriculture
6. Greater survival prospects for mothers and their infants
7. Education and equal opportunities for women

8. Conservation and protection of natural resources and the environment
9. Economic growth and infrastructure development
10. Science and Technology policy and administration

Objectives of Paper:

Given above background, the present paper aims to highlight, the following objectives:

1. Understanding the inter-relationship between Rural Community and Sustainable Development.
2. To explore the Alternative Community Services for Sustainable Rural Development.
3. To recognize the role of Non-Profit Organization in providing services for the Development of Rural Community ie; Vanarai an NGO.

“Vanarai”People’s Movement For Green India, (Pune) – In Brief

VANARAI People’s Movement for Green India, Pune was registered under the Charitable Trust Act on 10th July 1986. Honorable Founder Late Padma Vibhushan Dr. Mohan Dharia contemplated to start a non-profit organization with the motto to avoid the destruction of our ecosystem, environment and water.

Vision and Mission: Creating Sustainable Rural Development Since 1986

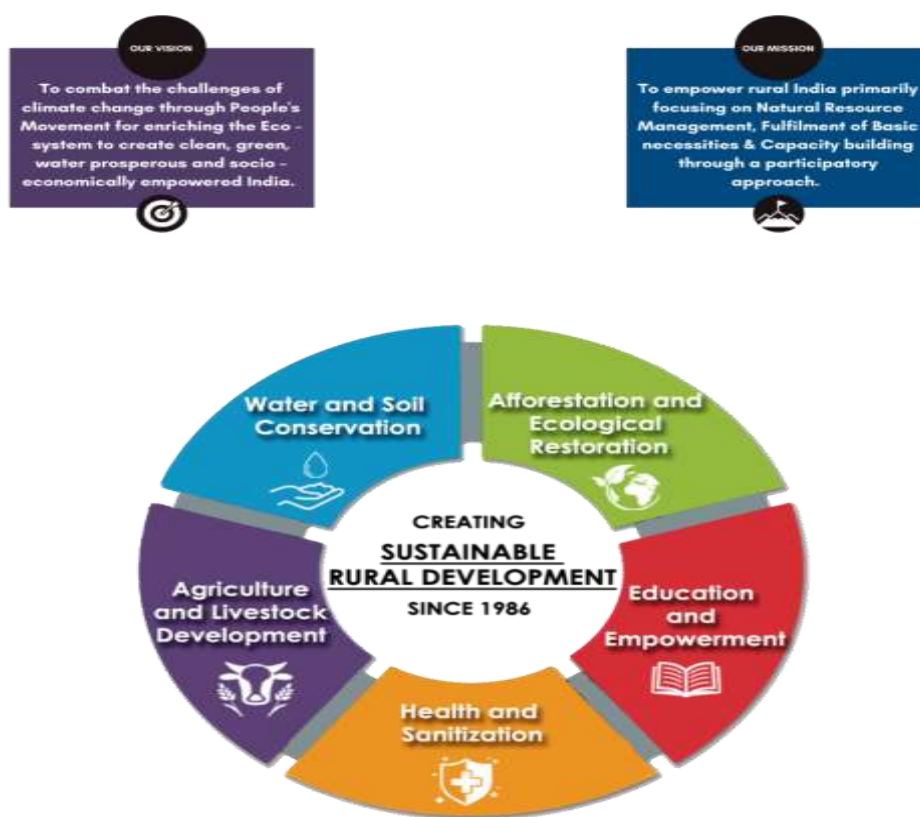


Diagram No. 1 Vision and Mission of Vanarai

Case Study Of Athwad Village, Nagar Taluka, Ahmednagar District, Maharashtra Background

Particulars	Athwad Village
No. of Households	320
Total Population	1513
Total Village area	751 Ha.

Table No. 1.1 Demographic Data of Athwad Village (As per Vanarai Records 2018-19)

Initially Vanarai, received a letter from Athwad village Grampanchayat in the year 2018-19. Where they requested assistance from Vanarai on improving various aspects which were lagging from the point of community development and Natural resources.

After receiving the letter, Vanarai officials visited the village and validated the problems. Also added and adjusted as per priority for creating Sustainable Village/Rural Development. Following problems were identified in Athwad Village:

1. Lack of water resources, especially for agriculture in post winter.

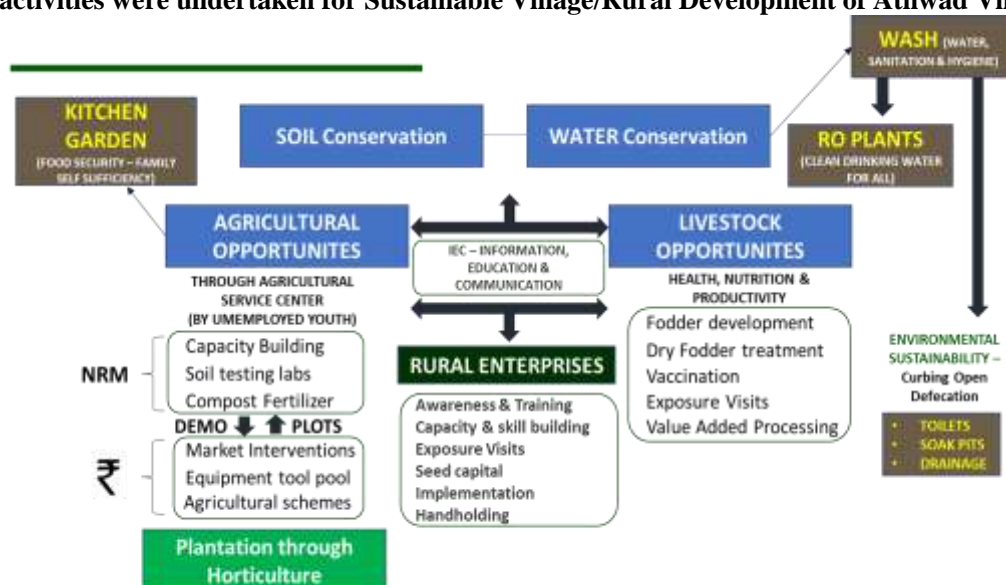
2. Agricultural Lands undergoing degradation.
3. Unsafe drinking water.
4. Lack of livelihood opportunities.
5. Sub-optimal health and productivity of livestock.
6. Lack of participation and opportunities for youth.
7. Scope for Women empowerment.
8. Partial open defecation.

Taking into consideration the above problems, a Phase-Wise plan was designed for addressing these problems.

PHASES	FOCUS AREAS	YEAR
PHASE 1	SOIL & WATER CONSERVATION	2019 – 2021
PHASE 2	WASH + LIVELIHOOD (AGRICULTURAL OPPORTUNITIES, LIVESTOCK, SHG'S & RURAL ENTERPRISES)	2021 – 2023
PHASE 3	ECOLOGY + ADDITIONAL SOURCES OF INCOME + INFRASTRUCTURAL DEVELOPMENT	2021 – 2023

Table No. 1.2 Phase-Wise Plan

Following activities were undertaken for Sustainable Village/Rural Development of Athwad Village:

**Diagram No. 2 Phase-Wise Action Plan**

The above detailed action plan was prepared; and a holistic proposal was drafted by Vanarai officials. It was important to pitch this proposal to Potential CSR partners based on their geographic and thematic alignment.

1. For which, Phase I – Soil and Water Conservation was pitched to CROMPTON CSR FOUNDATION, which was accepted by them.
2. Similarly DBL (Desai Brothers Limited) who are dedicated towards curbing open defecation

and improving rural infrastructure, picked up construction of toilets.

3. The remainder of the project (Phase II and III) was taken up by LTTS (Larsen & Toubro Technology Services Pvt. Ltd)

The project is almost completed for all the III phases. Following are the details on activities and the impact that it garnered till date:

Activity	Description	Output	Impact
Soil and Water Conservation – Drainage Line Treatment	Desiltation – 1786 meters. Cement Nala bunds – 2 was constructed.	Storage capacity 10.3 Cr Litres was created.	<ul style="list-style-type: none"> • 123.5 acres of existing land benefitted. • 185.3 acres of new land • Approx 700 benefitted.
Agricultural Improvement – Demo Plots were undertaken.	73 demo plots (10 guntha each) were adopted.	18.25 acres of land for demonstrating agricultural improvement was seen.	73 farmers were selected, to enable them to scale it up for their entire land and land of other farmers.
Livestock – Core focus area	75 animals for improving health and productivity: animals were selected who were weak and who were less productive.	Improved health and Milk production by fodder treatment and seed support was observed.	Increased milk yield + SNF (Solids not fat) content for 20 dairy farmers were seen.
Livestock – Overall development	800 animals (all cattle from Athwad) was taken for vaccination especially for protecting against Lumpy disease and other vaccination as per requirement.	Prevented from Lumpy disease.	This region had majority villages where cattle suffered from lumpy. Due to Vanarai's proactive efforts not a single cattle suffered from Lumpy disease.
Nutritional Kitchen Bags	180 bags of backyard vertical kitchen bags were given to fulfill nutritional deficit.	90 families were given these bags to ensure fulfillment of their nutritional needs.	Chillies, Tomato, Lemon, Brinjal etc. were grown which helps in cutting down of Rs.300 expenses per month and gives the families organic food to eat – 2700 Rs saving per month.
Toilet Construction	18 Households were given new toilets.	These households were from socio-economically backward section of the villages and didn't have access to toilets.	Now whole of Athwad has become open defecation free village.
Digital Soil Testing Lab	Activated by mobilizing a community to empower youth.	Technical approach towards farming and soil conservation practices.	6 individuals have got a source of income from this and serve the farmers on taking decisions of choosing crops, fertilizers, and soil management.
Drinking Water Treatment Plant	Community based potable drinking water solution for the village.	Every month around 5000 litres of water is used for the villagers' drinking water needs.	55000 + litres of water used till now (in 11 months) from December 2021.
SHG (Self Help Group)	Dal Mill business for women of the village.	10-12 women can generate income from this venture.	Possibility to earn a profit of around 10,000 per month from April 2023.
Equipment Tool Pool	Supporting marginal and small farmers to reduce	2 people from tribal and landless family got	45 acres (70 hours of machinery work for cultivation ie; tractor

	input cost on agriculture.	employment.	etc) from 10 th Nov 2022 – saving 200rs per hour with the help of new technology – i.e. 14000rs savings can be done.
Cattle Feed Factory	For supporting village cattle with nutrition and for selling outside.	10-12 people are targeted to run this as a business.	Starting from Mid Feb. 23 up till Feb. 24

Table No. 1.3 Activities and Impact**Concluding Remarks**

Rural development is an important aspect for a country's economy. It consists various aspects of environment, technology, socio-economic, political, infrastructural facilities required in villages. The rural development can no more be considered as an intricacy. But it can be observed that sustainable rural development can be met with the intervention of both governmental and non-governmental organization. Through strategic working and planning their needs and necessities can be fulfilled. With the help of non-profit organization it is easy to impinge the depths of villages. Furthermore if we are looking for sustainable rural development such strategies revealed in this paper can be practiced in long run.

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The importance of Risk Management in SDLC

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DOI- 10.5281/zenodo.7740770

Abstract:

In challenge control, Risk management is the practice of figuring out, assessing, stopping, or mitigating mission risks that would have an effect on predicted consequences. The cause of risk management is to identify potential issues before they occur so that risk management may be deliberate and used as needed throughout the life cycle of a product or assignment to mitigate bad consequences at the achievement of goals. Risk management is the process of minimizing capability issues that would negatively effect the assignment agenda. "Risk" refers to any unexpected occasion that could affect the humans, methods, technology and sources involved within the task. In contrast to "troubles" which are certain to manifest, risks are viable occasions that you may not have the ability to tell whilst.

Introduction:

Hazard control activities are implemented to project management. The challenge management Institute (PMI) defines assignment hazard as "an unsure event or circumstance that, if it passed off, might have a advantageous or minimum impact at the sports that make certain the assignment is completed on time and on agenda. budget limits, and achieves its goals.

Hazard management consists of all activities associated with the identity, evaluation and training for foreseeable and unforeseeable risks in projects. risks may additionally consist of:

1. skilled employees leaving the project and new incoming staff.
2. modifications in organizational management.
3. a requirement has changed or turned into misunderstood.
4. Underestimation of time and resources required.
5. Technological exchange, environmental trade, commercial enterprise competition.
6. The threat control procedure: The risk management method entails the following sports:
7. Identification - apprehend all viable risks which could get up in the mission.
8. Class – type of acknowledged risks into excessive, medium, or low danger intensities primarily based on their likely impact on the project.
9. Management - analyze the probability of a chance occurring at one of a kind tiers. Plan to avoid or face risks. reduce their side results.

10. Surveillance – hold a close eye on potential dangers and their early signs.

additionally monitor the impact of movements taken to mitigate or keep away from them. dangers related to destiny occasions. it is able to or may not appear. an awful lot work has been achieved on danger mitigation and threat tracking, but the lifestyles cycle of an RMMM application for securing software program at some point of the design section has not but been decided. A chance is an unsure event with a probability of prevalence and a possibility of loss within the future. Threat is the expectation of loss or harm. In the course of threat evaluation, it's far essential to quantify the extent of uncertainty and the diploma of loss related to every risk [1].

Risk is a thing to be recognized before going via software safety. As can be visible within the figure, risks can be imposed on agenda, cloth, machine, era, personnel and fee. those forms of risks are considered and deliberate for earlier than software program improvement. comfy software is evolved while risks are identified early in the design section. Reactive danger occurs when some thing is going wrong after the software program has been deployed. safe software is a requirement of today's internet lifestyles, and software is safe if risks are recognized and managed early. figuring out, mitigating, and monitoring risks are key factors of cozy software. Risk management is the method of identifying and getting rid of dangers earlier than they damage the challenge. It identifies software program risks and plans to avoid them and decrease

their outcomes after they occur. not all risks can be avoided, but through danger control we will try and make sure that risks are minimized.

Chance control in the SDLC:

“danger is the opportunity of experiencing failure.

In software development tasks, failure describes a negative impact on the mission, that could take the form of reduced final mission nice, accelerated charges, delays in finishing touch, or an outright failure of the project. chance management is the identification, assessment and prioritization of dangers, observed by coordination and most economical use of resources to minimise, monitor and manage the likelihood and/or effect of unlucky events, or to maximise opportunities [2, 3]. risk management have to be executed at some stage in the software program improvement life Cycle (SDLC). hazard management sports include two important sports: danger assessment and risk reporting, and danger assessment activities encompass chance identity, chance analysis, and risk prioritization.

inside the proposed threat control framework, a lifecycle is proposed to identify and mitigate dangers in the software improvement section [5, 6]. discern 2 information the danger control lifecycle. From the discern, it is clear that danger control activities involve six phases:- requirements segment, evaluation segment, layout section, improvement segment, testing segment, maintenance segment.

A. Requirements segment

1. within the necessities segment of the SDLC, requirements are accumulated from customers. dangers can stand up at any stage of the SDLC, as well as within the requirements section; therefore, dangers are recognized and assessed here. two approaches take region in this phase:-
2. Asset identification:- An evaluation of the chance of positive disturbances going on and controls to lessen the company's exposure to these dangers. that is carried out at the side of the vulnerability assessment [8,10].
3. Threat identity: - This method is used to perceive threats at the required degree. chance evaluation methods are used to identify risks and manual subsequent design, coding, and checking out decisions. identifying safety threats is a prepared pastime that calls for some creativity, as many systems have particular necessities that introduce unique threats [7, 9].

B. Evaluation segment

To understand the nature of the chance reviews gathered in section 1, the developer must recognize the records area's features, actions, and plans required to mitigate the associated risks.

The objective of the evaluation section is to determine the probability and importance of loss for each item at threat.

C. Design section

at some point of the layout phase of development, safety and privacy necessities and expectations are cautiously reviewed to pick out protection issues and privacy risks. it's far effective to become aware of and deal with those problems and risks throughout the layout section. This process includes the subsequent steps.

1. Asset identification: - Browse belongings and talents. pick out all feasible protection threats for every protection provider on every feature.
2. Vulnerability identity: - safety evaluation or security vulnerability evaluation is a subset of the process referred to as company threat management. Vulnerabilities gift within the software surroundings or on account of interactions with other structures are recognized at some point of this step.
3. Danger evaluation:- as soon as a threat has been recognized, it need to be assessed primarily based on the potential severity of its effect and the chance of its incidence.
4. Those portions are both effortlessly measurable or not possible to understand from the occurrence. therefore, in the course of the assessment process, it's miles vital to make the most knowledgeable choice to properly prioritize risk management packages.
5. Danger reduction:- chance reduction is a application so one can lessen or cast off the best precedence risks. The mitigation plan consists of a description of movements that can be used to mitigate a crimson-rated threat and assigns a lead supervisor to that movement.
6. Check making plans and development: - if you want to prepare for the subsequent segment, a test plan and a improvement plan should be prepared and the related risks have to be recognized.

D. Improvement phase

the main goal of the development phase is to create the code and documentation for the components of the solution. The team keeps to become aware of all dangers in the course of the phase and deal with new dangers as they rise up. This procedure consists of 3 steps.

1. Code evaluation:- Code evaluation is an effective manner for the group to decide if the code conforms to local standards, and can even cause the detection of troubles before compilation, that can constitute a destiny chance [4].
2. Paired programming: - Paired programming reduces the risk of attrition [2]. facet-by using-facet pair programming techniques function

non-stop design and code critiques for the most efficient illness removal charges.

3. Unit testing and Static checking out: - using unit trying out and dynamic analysis, developers can affirm the safety functionality of additives and verify that countermeasures being developed mitigate formerly recognized protection risks thru risk modeling and source code evaluation.

E. Checking out section:

1. Dynamic Code trying out:- Dynamic code checking out is the evaluation of pc software by way of jogging packages within the actual or digital world.
2. The target software must be carried out with enough test input to provide interesting behavior.
3. Web utility testing: - Thorough testing of web structures before going live facilitates remedy issues earlier than liberating them to the public. internet utility protection, authorization, availability and other problems.
4. Vulnerability Scanning:- Vulnerability scanning is an vital technique to discover software safety dangers, inclusive of take a look at space scanning and flawless scanning. The testbed scan handles scans of community ports, strings, seller data, community information, and extra.
5. Take a look at chance behavior: - A hazard is a poor impact on a check. danger trying out therefore creates risks, and to perceive those dangers, we considered September of this yr.

F. Deployment segment:

at some stage in the deployment segment, the product is partly finished.

All dangers are identified for the duration of the lifecycle and the right test plan is now prepared at this degree.

- Periodic testing: - Periodic trying out refers to third-party checking out of ongoing software program manufacturing.
- Hazard management Plan: - There are just a few steps to developing a hazard management plan, along with developing a threat category desk, prioritizing risks, making ready and organizing the hazard desk, and finally ensuring that danger control sports are a continuous procedure at some point of the task.

Conclusion:

Risk management affords a dependent mechanism to provide visibility into threats to its meant achievement. by means of thinking about the ability effect of each chance detail, we are able to ensure that the maximum stringent dangers are managed first.

Without a formal technique, we cannot assure that our risk management movements are achieved correctly. consequently, this record ensures a proper lifecycle of the danger management plan, which

offers a step-by means of-step implementation of the risk control plan.

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Urban Solid Waste Management in Vasai Virar City of Maharashtra: Practices and Challenges

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Abstract:

Solid waste management is becoming a major challenge for the cities in developing countries. The urban areas are characterised by rapid economic growth and population explosion. The unplanned urban growth and lack of strict implementation of laws in the urban areas of the developing world, will increase quantity of solid waste. The informal sector in cities plays an important role in the management of urban solid waste. The present study examines the present status of municipal solid waste management system in city. The study reveals that, it is necessary to realize a campaign for the segregation of the waste at source. The infrastructure of the municipal corporation needs to be improved and finally the scavengers need to be more deeply involved in the policies associated with the urban solid waste management system adopted in the city.

Key words: Solid waste management, Vasai Virar, MSW, characteristics, composition of waste.

Introduction:

Mankind requires enough food, water and land for his survival. In the wards, urban area population is increasing day by day. The depletion of natural resources, improper waste management, resulting illness and death is consequently becoming the universal problems. Increasing urban population, industrial and technological development leads to overutilization of natural resources which directly or indirectly increase the amount of solid waste. Worldwide, increase in human population growth, industrialization, urbanization and economic growth, a trend of significant increase in Municipal Solid Waste (MSW) generation has been recorded (NEERI Report, 1996). The amount of urban solid waste generation, in terms of kg/capita/day, has increasing day to day with economic, scientific and technological development at world scale. The rapid industrial development, rate of migration of people from rural to urban is directly responsible for the rapid increase in urban population (Sharholy *et. al.*, 2007). Hence, the quantity of waste generated has been observed to increase annually in proportion to the rise in population and urbanization. The per capita generation of MSW has also increased enormously with changing human lifestyle and standard of living of people especially in urban areas. Increase in quantity of solid waste requires more land for its disposal and the issues related to disposal have become highly challenging (Idris *et.al.*, 2004). India, with a population of over 1.21 billion accounts for 17.5% of the world population (Census of India, 2011).

Urban population and solid waste:

The economic growth and demographic changes of Indian cities are posing serious challenges to urban local authorities. By the year 2020, Indian urban centres will witness a huge increase in their population. With the rapidly swelling urban population, the requirement for infrastructure and services increases manifold (World Bank, 2001). The increase in per capita income and the concomitant industrial and service activities has resulted in a proportionate increase in consumption and consequently, in the quantum and complexity of the composition of the solid waste generated. Solid waste collection and disposal is a service, which needs to be adequately provided to ensure an urban environment conducive to the health and well-being and improving the productivity of residents (Chavan and Zambare, 2014). Urban Solid Waste Management (USWM) is one of the major challenges faced by modern urban societies in almost all major cities of the world. The global burden of MSW amount to 1.3 billion metric tons in 1990, and is found to increase at about an annual rate of 2.7 % by the year 2010 (David and David, 1995).

Study Area:

Vasai-Virar city is situated at the latitude N 19° 47' and longitude E 72° 8'. The city has area of 298.08 km² and has average elevation of 11 above mean sea level. The city is governed by Vasai-Virar Municipal Corporation. The Vasai Virar city was formed in 2009, when it was joined administratively with Virar and other surrounding communities. The city is part of Palghar district located at the north

west corner of Mumbai. Vasai – Virar has great potential of urbanization and one of the fastest

growing centre of Maharashtra.



Source: Tree census, vvmc, 2016) Fig: 1. Vasai Virar City Map

Methodology:

The methodology is based on existing guidelines and has the following distinct features:

Collection of the data:

The data from Municipal Corporation and other reliable sources were studied and correlated with the present investigation. The research work includes the efforts for the exploration of possibilities of energy recovery potential of solid waste and assessment. The results were analyzed in light of different aspects including the impact of solid waste on ragpickers and workers and the surrounding area.

Results and Discussion:

Population:

As per provisional reports of Census India, population of Vasai Virar in 2011 is 1,222,390; of

which male and female are 648,172 and 574,218 respectively. The current estimate population of Vasai Virar city in 2023 is 1,685,000 (Census, 2011).

Solid waste generation in Vasai – Virar City:

The major quantity of the waste is generated from residential societies and collected through building-to-building collection on daily basis. At the source of waste, there is no segregation of the waste done at any level; Hence, it is collected in the mixed form of waste. The approximate solid waste generation of the city with a population of 17 lakhs, the average domestic solid waste generation rate is 0.45 kg / capita / day. The total quantity of municipal solid waste in city is 620 MT / day. Hospital waste generated is being collected separately and treated by private agency.

Sr. No.	Year	Population in Lakhs	Solid waste generation Per person (Kg)	Total waste generation (Projected in MT)
1	2001	7.02	0.45	310
2	2011	13.07	0.45	588
3	2021	22.23	0.45	1000
4	2031	33.33	0.45	1500
5	2041	41.67	0.45	1875

Source: CDP, Vasai Virar.

Table: 1 Estimated Municipal Waste generation in Vasai Virar Municipal Corporation

In city, door to door collection of solid waste and taken by (ghata gadi) small trucks & tractors. Collected waste is transferred to the collection centres and through the compactors the waste is transported to dumping sites.

Waste Generation:

Vasai Virar Municipal corporation has 89 wards. The existing solid waste management in Vasai Virar corporation area is scheduled Zone wise. Total waste generated in Vasai Virar city is 620MT/day. The domestic solid waste consists of mainly kitchen wastes, papers, plastics, glass, metals, rubber, used clothes, leftover food and vegetables etc.

Composition of Waste:

The availability of job and income of people is also influencing the quantity and quality of waste. The 4kg of mixed types of solid waste is collected from various locations by using grid method. The

collected waste is segregated into organic and inorganic category. In Vasai Virar city the organic waste is major component of MSW which accounts 67% of the total MSW generated in the city. The quantity of inorganic waste is only 33% of the total waste.

Sr. No.	Name of organic Component	Composition (%)	Name of inorganic Component	Composition (%)
1	Market waste	19.3	Metal	5.1
2	Food waste	13.5	Plastic	5.9
3	Plant leaves	16.6	Rubber and leather	1.5
4	Paper	3.4	Stone, Bricks, gravels	13.6
5	Cloths, bags	2.9	Glass	3.1
6	Miscellaneous	11.3	Miscellaneous	3.8
	Total	67%	Total	33%

Source: field work

Table No: 2 Composition (%) of organic and Inorganic waste stream in VVMC

Apart from the given quantity of solid waste, there is generation of inert waste from repair of houses, construction activities, silt generated out of cleaning of gutters and nallas. The quantity of inert waste varies, it is to be collected and transported to land fill sites.

3. Vehicles and transportation-

The solid waste collected from the residential areas, street sweeping, markets, commercial

establishments, etc form Vasai Virar city. The waste generated is collected daily with the vehicles like truck, dumper, tipper, Compactor, tempo, Tricycles, handcart and waste collection bins etc. The collection of waste is carried out by small vehicles known as “ghanta gaadis”. These vehicles are covered with tarpaulin sheets to avoid littering of the waste. The hospital waste is collection, transport and treatment has been carried out by private agency.

Sr. No.	Name of Vehicles used for waste collection	Total Number of vehicles
1	Compactor	65
2	Dumper	45
3	Tractor	20
4	Tipper	120
5	Mechanized Sweeping Machine	02
6	Tricycle	219
7	Handcart	208
8	Waste Collection bins (240 Lit.)	2500

Source: <https://vvcmc.in/solid-waste-management/>

Table No: 3 Type and total number of vehicles for transportation of waste Disposal and treatment:

At present solid waste from Virar is dumped at site of 10.6 Ha. Located at Chikhal Dongri, Virar West at 2km from the city. The solid waste from Nalasopara region is dumped at Gogate Salt Pan

Area of 2.5 Ha. 0.5 kms from Nalasopara. The solid waste from Navghar region is dumped at Navghar dumping site of 1Ha. 1km from Navghar and the solid waste from Vasai region is dumped at site of Gokhivire and Pachubander in Vasai.

Recommendations and Conclusion:

Vasai Virar is one of the leading urban centers in India. Uncontrolled Population growth, migration of people from nearby states and rapid economic development causes a significant increase in the quantity of urban solid waste. As a result, the renovation of municipal solid waste management practices is essential. The management and disposal of solid waste is not properly in a scientific way and it creates serious environmental problems. Segregation of waste at the source is the best practice of reduction of waste. Society participation is an essential part of urban solid waste management. In Vasai Virar city, composting setup is highly needed in zone wise manner. The solid waste composting plants should be installed in suitable locations of the city to reduce load on collection and transportation systems. This will simultaneously reduces the pressure on the dumping sites.

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**A Study On The Impact Of Financial Bill 2022 On Students'
Perception Regarding The Cryptocurrency**

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DOI- 10.5281/zenodo.7740786

Introduction:

If we attempt to define economics within the contemporary world, it boils right down to money. Each country has its own set of a monetary systems. This medium of exchange is used to define the worth of a currency. Currency is a medium of exchange. Previously, the barter system, during which items were swapped for other goods, was served because of the means of exchange. Then came the monetary period, during which coins were produced and exchanged for products. This aided within the estimation of products' worth. Following coins, there was a period of notes (paper money), and so on. However, we are now within the era of digitalization, and currency is now also available in digital form. Cryptocurrency is the name given to the present digital sort of assets.

People's ideas of money or currency have moved from coins to notes to the virtual currency with the development of the cryptocurrency concept. Cryptocurrency is now seen as a novel sort of transaction that does not require the use of middlemen or intermediaries. This carries the potential, but it saves time and money by eliminating an additional exchange fee. In 2016, the first cryptocurrency, Bitcoin, was created, and later on, additional forms of cryptocurrency arose. Cryptocurrency is referred to be the "future of money," and it is undeniable that these cryptocurrencies have acquired notoriety as the "future of money" by being accepted for transactions.

Recently a bill has been passed regarding the cryptocurrency in the Indian budget 2022. So, the purpose of this study is to find the perception of the college students about cryptocurrencies after the implementation of the Financial Bill 2022 regarding cryptocurrency.

Review Of Literature:

Jani, Shailak. (2018). *The Growth of Cryptocurrency in India: Its Challenges & Potential Impacts on Legislation*, has talked about the use of cryptocurrency in different counties and how this country is regarding the use of the cryptocurrency like are friendly, neutral, or hostile. Cryptocurrency offers a new, effective and attractive model of payment methods that can boost company's and operators' revenues.

Minhat, Marizah & Abdullah, Mazni & Dzolkarnaini, Nazam & Sharoja, Noor. (2022). *Cryptocurrency and Uncertainty*, has researched the risk & governance challenges faced by the cryptocurrency market. The

research was commissioned by the MAREF as a part of the Priority Research Programme.

Global, A. (2022, Jan 14). *Tax Concept* has examined the different ways to generate cryptocurrency and has analyzed the accounting procedure for disclosure of the tax purpose. The research is also done on the bill passed on cryptocurrency in India.

In 2021, more regulation issues were put out the stage. On 18 May 2021, China banned financial institutions and payment companies from providing services related to cryptocurrency transactions, which led to a sharp drop in the price of bitcoin (Reuters 2021)

In June 2021, El Salvador becomes the first country to accept Bitcoin as legal tender, bypassing a vote of 62 out of 84. It also mentioned that the bill will be passed as law in 90 days and the use of cryptocurrency is optional. The government will try to maintain the value of the cryptocurrency as per the exchange rate of the USD.

Objectives:

1. To study the perception of students on cryptocurrency after the Bill passed in budget 2022.
2. To understand the level of impact of cryptocurrency on the students.
3. To understand the students' perception regarding cryptocurrency usage.
4. To analyze the increase in cryptocurrency technology usage in the future.
5. To make students aware of cryptocurrency and its law & acceptance.

Hypothesis:

H₀: There is no significant change in the perception of the students regarding the cryptocurrency after the Bill passed in the Indian Budget 2022

H₁: There is a significant change in the perception of the students regarding the

cryptocurrency after the Bill passed in the Indian Budget 2022

Research Design And Methods / Research Methodology:

The research work includes primary and secondary data. It is survey-based research. Primary data collected through a questionnaire tool from 150 students from the Vasai region. Primary data is restricted to 150 students representing the Vasai region. The secondary data will be based on articles, books, and research papers written in this regard.

Future Scope:

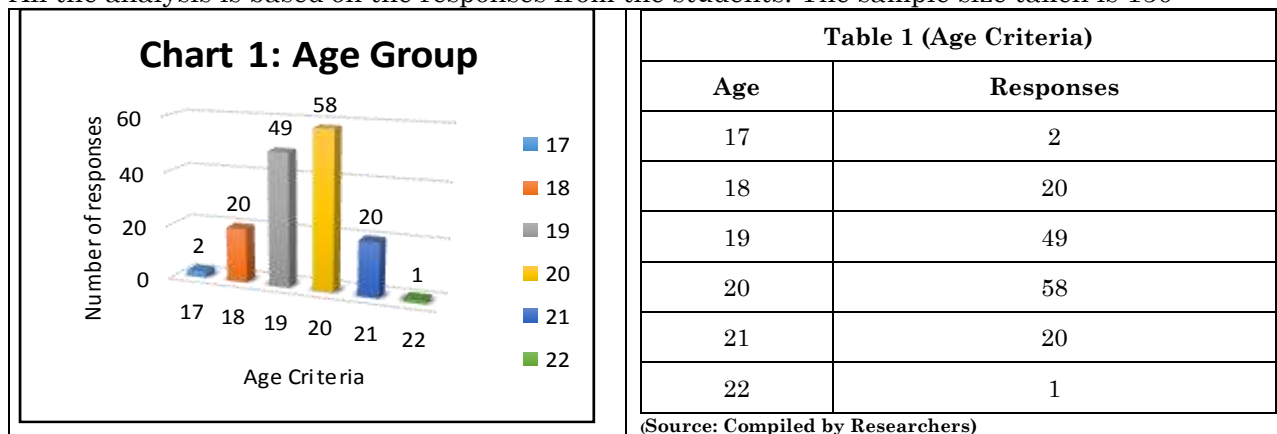
1. This research can be further conducted to understand the impact of cryptocurrency on every age group.
2. It can also be extended towards investors, working-class people, & accountants.
3. This research can also be extended to other regions of Maharashtra.

Limitations:

1. This research is limited to Vasai Region only.
2. This research is also limited to Generation Z students.
3. Only a limited number of students are taken for the survey

Data Analysis:

All the analysis is based on the responses from the students. The sample size taken is 150



1. Age Criteria

For the research Purpose, 150 students have selected for the responses and all of them were from the age between 17 to 22. Maximum responses were given by the

students who belong to the age group of 20, followed by 19 and so on.

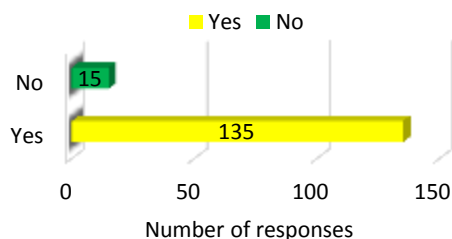
2. Have you heard about the cryptocurrency before?

Table 2: Crypto Awareness

Ever heard of Cryptocurrency like Bitcoin, Litecoin, etc.?	Responses	%
Yes	135	90%
No	15	10%

(Source: Compiled by Researchers)

Chart 2: Crypto Awareness



From Table 2 and chart 2 we can see that, the responses were mostly Yes and only 15 students out of 150 have not heard about

cryptocurrency. This shows that 90 % of students already knew or have heard about crypto before. Only 10% have not heard.

3. Are you interested in learning about crypto?

Chart 3: Learning about cryptocurrency

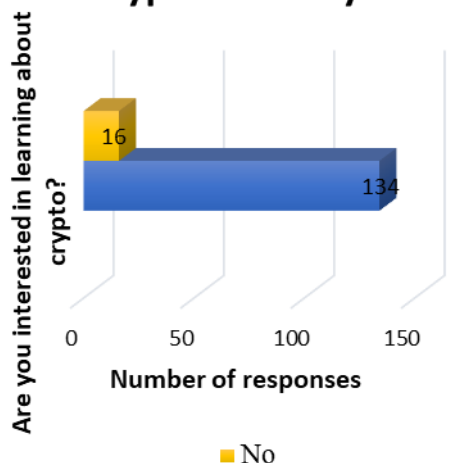


Table 3: Learning about cryptocurrency

Are you interested in learning about crypto?	Responses	%
Yes	134	89.33%
No	16	10.67%

(Source: Compiled by Researchers)

Question: Are you interested in learning about crypto?

From table 3 and chart 3 we can say that, at least 134 students have said yes and 16 have said no. So, it can be seen as more than 80% of the students are interested in learning about crypto.

4. What does crypto or digital currency mean as a currency in your opinion?

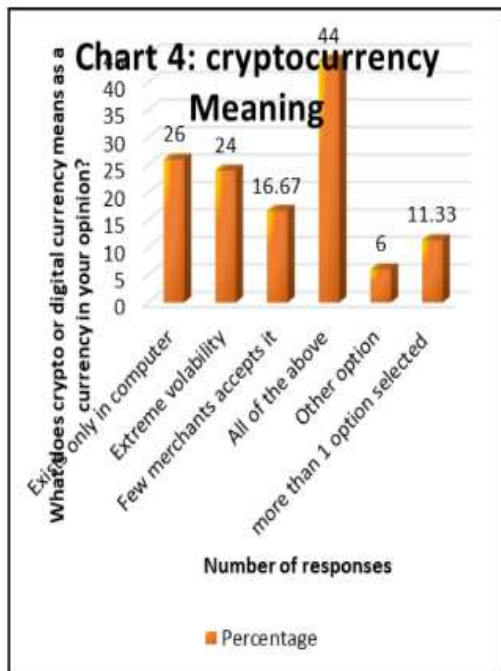


Table 4: Cryptocurrency meaning

What does crypto or digital currency mean as a currency in your opinion?	Responses	%
Exists only in computer	39	26
Extreme volatility	36	24
Few merchants accepts it	25	16.67
All of the above	66	44
Other option	9	6
more than 1 option selected	17	11.33

From Table 4 and chart 4, we can see that all of the above options have been selected the most. Since this question was based on Multiple option selection so the responses might differ from other questions. In other

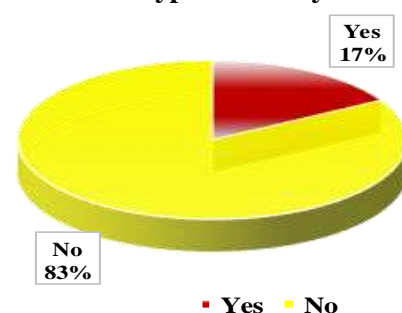
options, the responses vary vastly like a digital asset, secured by cryptography, etc. The above data also shows that about 11.33% of students have selected more than 1 option but not all of the above.

What would you like to learn about the crypto?

Table 5: How many students own cryptocurrency

Do you own any Cryptocurrency?	Responses	%
Yes	25	16.67
No	125	83.33

Chart 5: How many students own cryptocurrency



(Source: Compiled by Researchers)

From table 5 and chart 5, we can say that 25 students i.e. almost 17% of students so own cryptocurrency. More than 80% of the students do not own cryptocurrency. 25 students owning a cryptocurrency shows how much it is important to look forward towards

cryptocurrency, and it also shows that even if a small number owns it is not bad and will be the future of the currency or maybe a way of investment to earn money like investing in shares.

Do you own any cryptocurrency?

Chart 6: Students Interest in specific area of crypto

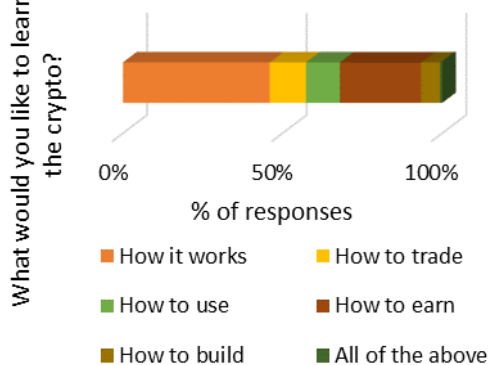


Table 6: Students Interest in specific area of crypto

What would you like to learn about the crypto?	Responses
How it works	69
How to trade	17
How to use	16
How to earn	38
How to build	9
All of the above	1

From table 6 and chart 6 we can say that, maximum number of the students are interested in learning about how does a crypto or its technology works. Since, it is a new technology most of the students are not

aware about and would like learn about it. Also students are eager to know to earn cryptocurrency. A student is least interested in knowing on the build their own cryptocurrency.

7. Cryptocurrency don't have any tangible form i.e. physical form, so do you think it should have any physical form like rupees?

CHART 7: PHYSICAL FORM OF THE CURRENCY

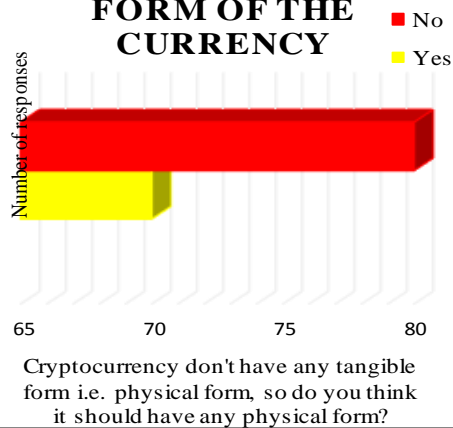


Table 7: Physical form of the currency

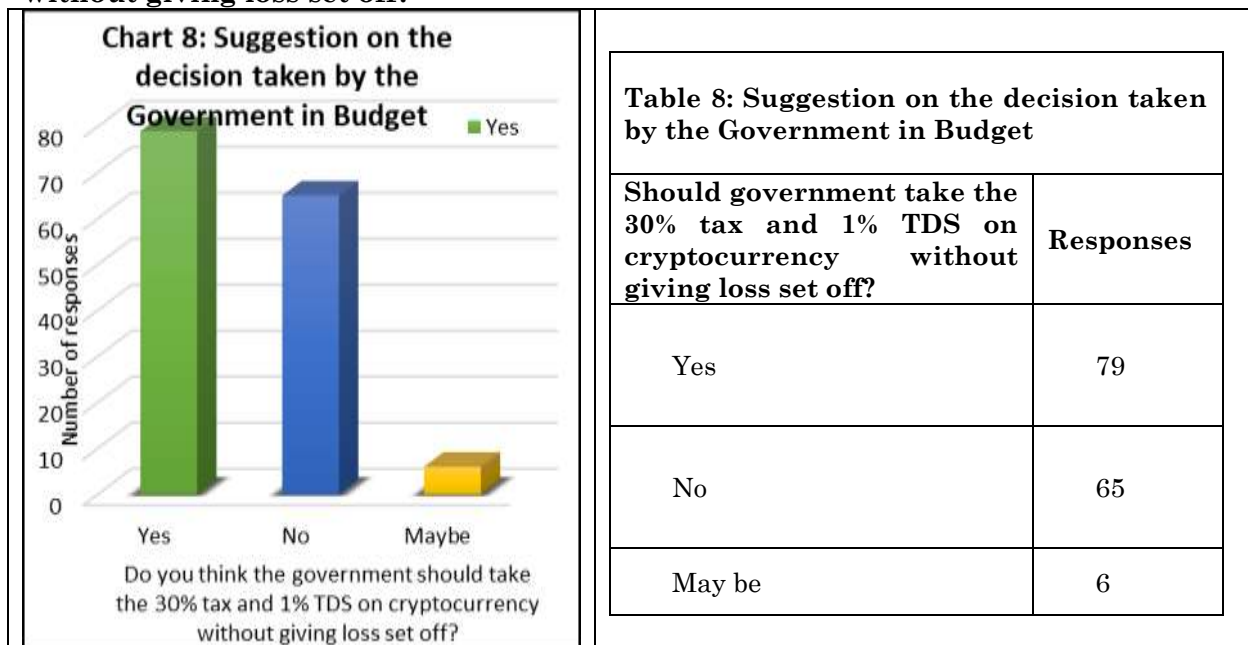
Do you think Cryptocurrency should have any physical form like Rupees?	Responses
Yes	70
No	80

(Source: Compiled by Researchers)

From the table 7 and chart 7 we can say that, 80 students are saying No, as they think that the value of the crypto will reduce if it is available in tangible form. 70 responses are also in favor of release of the cryptocurrency in the physical form as well.

This shows that majority of the students are in favor of the crypto currency as the virtual currency or as virtual asset. Today, majority of the Indian do investment in either stock market, secondary markets, gold or cryptocurrency.

Do you think the government should take the 30% tax and 1% TDS on cryptocurrency without giving loss set off?



(Source: Compiled by Researchers)

Chart 8 and table 8 shows the opinion of the respondent regarding the Bill 2022 on cryptocurrency. Most of them think that it is right that the gains should be taxed and most of them are saying as well that the gains should be taxed but at a less rate. 6 respondents are not sure that it is right or

wrong. This table and chart show that in Budget 2022 – 23, the bill main focus was on the area of tax. The government have decided that they will take tax of 30% on the profit made by the investor, but if any loss is their then no setoff will be given. Also 1% TDS is also taken.

9. In your opinion, should sovereigns or central banks create their own cryptocurrencies?

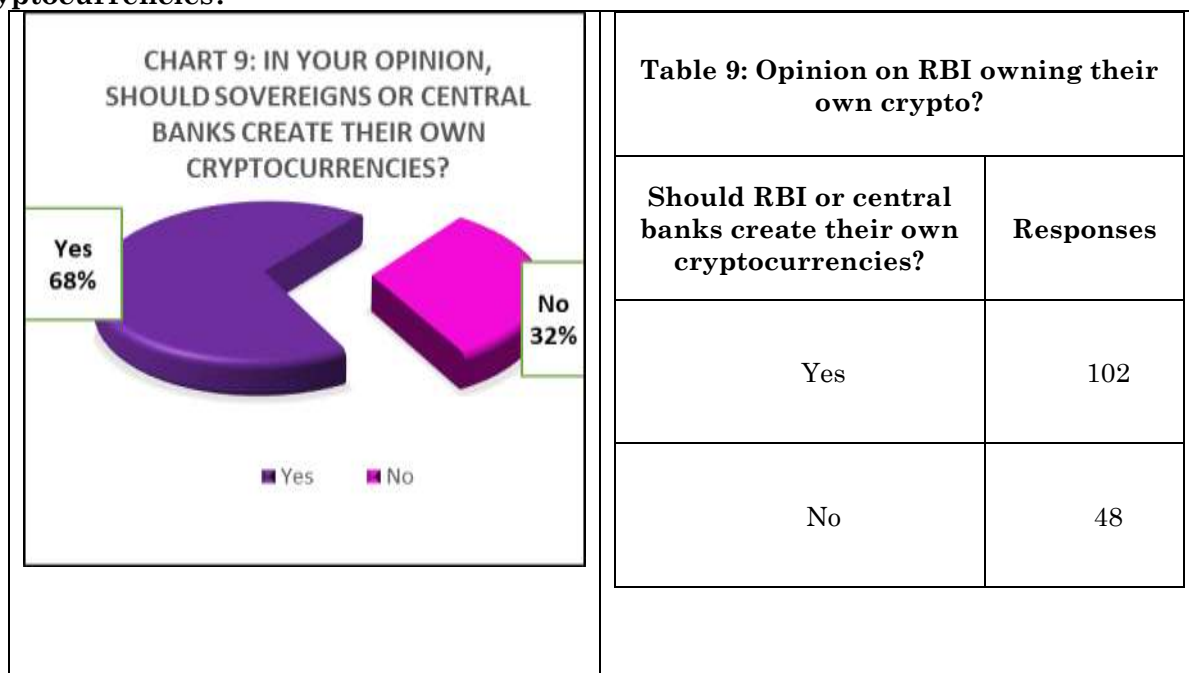


Table 9 & chart 9 shows that the opinion was asked on owing of cryptocurrency by the central government. The majority of the

response is Yes i.e. 68% almost 102 responses out of 150. 32% say no, that the government should not own any cryptocurrency. Because

once the government own any then it will be monitored and this is not the objective of the cryptocurrency.

I. Finding:

This research has helped a lot to find out the perception of the consumer on cryptocurrency.

1. Cryptocurrency is a popular topic among students.
2. Students lack understanding of how cryptocurrency works and how to use it.
3. Only 26 people out of 150 have cryptocurrencies.
4. Following the presentation of the bill in Budget 2022–23, there was a significant shift in student's attitude.
5. The budget for 2022–23 proposes a 30 percent capital gains tax and a 1% TDS with no loss set-off.
6. It is said that this bill was designed to discourage investors from investing in bitcoin.
7. It has been suggested that the government create tax brackets and lower the tax rate.

J. Suggestions:

There are a few ideas, which are as follows:

1. The study of the fundamentals of the cryptocurrency technology should be incorporated in the curriculum.
2. The students should be given cryptocurrency lectures.
3. The cryptocurrency should be made legal by the government.
4. Small businesses should have their own tax bracket who invests in cryptocurrency.
5. For the loss, the set – off should be delivered.
6. As soon as feasible, the government should produce its own cryptocurrency.
7. The tax should be cut to between 15% and 20%.
8. Students need to be more conscious of the present situation.
9. The investors should be given more informed about the new Bill that has been passed.

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परभणी जिल्ह्यातील शाश्वत विकास ध्येयांच्या सद्यस्थितीचा अभ्यास

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DOI-10.5281/zenodo.7740800

गोष्टवारा

१९९२ साली ब्राझील देशातील रिओ दि जानिरो येथे झालेल्या वसुंधरा परिषदे मध्ये शाश्वत विकासाची १७ ध्येय स्वीकारण्यात आली. ह्या परिषदेमध्ये १८५ देश सहभागी झाले होते. सर्व सदस्य राष्ट्रांनी घोषित केले, कि विकासाचा हक्क अश्या रीतीने सध्या व्हावा कि वर्तमानातील व भविष्यकालीन पिढ्यांच्या विकासात्मक आणि पर्यावरणीय गरजा समन्यायी पद्धतीने भागविल्या जाव्यात. हि परिषद शाश्वत विकासाच्या दृष्टीने महत्वाचे पाऊल मानले गेले. भारतामध्ये सुद्धा शाश्वत विकासाची १७ ध्येये हि गांभीर्याने घेतली गेली आहेत. व त्यांच्या अंमलबजावणीसाठी नियोजन आयोग असो अथवा २०१४ पासून नीती आयोगामार्फत विविध विकास कामे किंवा योजना इत्यादींची आराखडा किंवा अंमलबजावणी करत असताना शाश्वत विकासाच्या १७ ध्येयांना लक्ष्यात ठेवून करण्यात येतात

शाश्वत विकासाची १७ ध्येय पुढीलप्रमाणे.

ध्येय क्रमांक	ध्येय
1.	दारिद्र्य निर्मूलन
2.	भूक नष्ट करणे
3.	चांगले आरोग्य व सुस्थिती
4.	गुणवत्तेचे शिक्षण
5.	लिंग समानता
6.	स्वच्छ पेयजल व स्वच्छता
7.	परवडण्यायोग्य व स्वच्छ उर्जा
8.	चांगली कार्यस्थिती व आर्थिक वाढ
9.	उद्योग, नावाचार आणि पायाभूत संरचना
10.	विषमता कमी करणे
11.	शाश्वत शहरे व समुदाय
12.	जबाबदार उपभोग व उत्पादन
13.	हवामान कृती
14.	पाण्याखालील जीवन
15.	जमिनीवरील जीवन
16.	शांतता, न्याय व मजबूत संस्था
17.	लक्ष्यपुर्तीसाठी भागिदारी

शाश्वत विकासाच्या १७ ध्येयांचे रुपांतर हे ९ संकल्पनांमध्ये करण्यात आले असून संकल्पना क्रमांक ६ स्वयंपूर्ण पायाभूत सुविधा युक्त गाव ह्या संकल्पनेचा अभ्यास सदर प्रबंधात

केला गेला आहे. ग्रामीण विकासाच्या दृष्टीने पायाभूत सोयी सुविधा गाव पातळीवर मुभालक प्रमाणात असणे गरजेचे आहे व त्यामुळे भारतातील ७०% लोकसंख्येच्या म्हणजेच

ग्रामीण भागात राहणाऱ्या लोकांना पायाभूत सोयी सुविधांनी युक्त असे जीवन जगण्यासाठी मदत होईल. भारतातील ग्रामीण भागातील मोठ्या लोकसंख्येच्या पायाभूत सुविधांच्या गरजांची पूर्तता करण्याची जबाबदारी हि प्रत्येक ग्रामपंचायतीवर आहे. त्यामुळे गाव पातळीवर पायाभूत सोयी सुविधांच्या उपलब्धतेचा अभ्यास करणे महत्वाचे ठरते.

शाश्वत विकासाच्या १७ ध्येयांचे रुपांतर हे ९ संकल्पनांमध्ये

करण्यात आले आहे. त्या पुढीलप्रमाणे.

संकल्पना क्र.	संकल्पना
१.	गरिबी मुक्त आणि उपजीविका (रोजगार) वृद्धीस पोषक गाव
२.	आरोग्यदायी गाव
३.	बलस्त्रेही गाव
४.	जल समृद्ध गाव
५.	स्वच्छ आणि हरित गाव
६.	स्वयंपूर्ण पायाभूत सुविधा युक्त गाव
७.	सामाजिकदृष्ट्या सुरक्षित गाव
८.	सुशासन युक्त गाव
९.	लिंग समभाव पोषक गाव

पायाभूत सोयी सुविधा पुरवणे हे स्थानिक पातळीवर ग्रामपंचायतीचे काम आहे. पायाभूत सोयी सुविधांच्या पूर्ततेसाठी ग्राम पंचायतीचे स्वनिधेचे स्रोत मर्यादित असल्या कारणाने ग्राम पंचायतींना आर्थिक सहकार्य हे संबंधित जिल्हा परिषद, राज्य शासन किंवा केंद्र शासन करत असते. परंतु गाव पातळीवर पायाभूत सुविधांची अंमलबजावणी हि ग्रामपंचायत मार्फतच करण्यात येते. सदर प्रबंधात परभणी जिल्ह्यातील ९ तालुक्यांच्या प्रत्येकी ५ गावांचा म्हणजेच जिल्ह्यातील एकूण ४५ गावांच्या पायाभूत सोयी सुविधांच्या सद्य स्थितीचा अभ्यास करण्यात आला आहे. स्वयंपूर्ण पायाभूत सोयी सुविधांनी युक्त गावामध्ये १.नळाद्वारे पाणी, २.वीज जोडणी, ३.गावात पक्के रस्ते, ४.शेजारील गावांना जोणारे पक्के रस्ते, ५.प्राथमिक आरोग्य केंद्र, ६.ग्रामपंचायत इमारत, व इतर सोयी सुविधांचा अभ्यास करण्यात आला आहे. अभ्यास करत असताना परभणी जिल्ह्यातलं शासकीय कार्यालये, ग्राम पंचायत कार्यालये, आरोग्य केंद्र, ग्रामीण रुग्णालय, बाजारपेठा, इत्यादींना भेट देऊन सर्वेक्षण, निरीक्षण व नागरिकांशी झालेल्या प्रश्न उत्तराद्वारे माहितीचे संकलन करून विस्तृत स्वरूपात प्रबंधात मांडण्यात आली आहे.

प्रस्तावना

आंतरराष्ट्रीय विकास परिषदांमध्ये व कार्यक्रमांमध्ये शाश्वत विकास हि संकल्पना एक सर्वात महत्वाचा शब्द प्रयोग बनली आहे. शाश्वत विकास हि बहुआयामी संकल्पना असून

तिला चिरकालीन विकास असे सुद्धा संबोधले जाते. शाश्वत विकास हि संकल्पना घटत असलेल्या नैसर्गिक संसाधने व त्यामुळे मंदावणाऱ्या आर्थिक विकासाच्या काळजीतून निर्माण झालेली आहे. शाश्वत विकास हि संकल्पना नैसर्गिक संसाधनांचा अतिरिक्त वापर व त्यामुळे निर्माण होणाऱ्या दुष्परिणाम ह्यांच्या सोबत संबंधित आहे. आर्थिक विकासामध्ये नैसर्गिक संसाधनाची महत्वाची भूमिका असते व त्यामुळे मर्यादित असणारी नैसर्गिक संसाधने संपण्याचा धोका असतो असे झाल्यास भविष्यातील पिढ्यांची विकासाची गती मंद होण्याचा मोठा धोका असतो. त्याच बरोबर उत्पादन प्रक्रिये दरम्यान पर्यावरणीय हाणी सुध्दा मोठ्या प्रमाणात होते तसेच प्रदूषित वातावरणामुळे विकासाच्या गतीला खीळ बसण्याचा धोका असतो. म्हणजेच संसाधनांचा अविवेकी वापर करणारा व पर्यावरणाची हानी करणारा विकास हा अशाश्वत असतो.

शाश्वत विकास हा शब्द प्रयोग पहिल्यांदा जागतिक संवर्धन रणनीती १९८० मध्ये करण्यात आला आहे. १९८७ च्या ब्रन्डलंड आयोग अहवाल:- १९८३ साली स्थापन झालेल्या पर्यावरणीय आयोगाने OUR COMMON FUTURE या शीर्षकाखाली आपला अहवाल जाहीर केला. जगातील सर्वांचे भविष्य हे समान असेल असा त्याचा अर्थ आहे. १९८३ साली संयुक्त राष्ट्रांच्या आमसभेने जागतिक पर्यावरण आणि विकास आयोग स्थापन केला. या आयोगाच्या अध्यक्ष नॉर्वे च्या पंतप्रधान ग्रे हर्लें ब्रन्डलंड होत्या. ह्या आयोगाने १९८७ मध्ये OUR COMMON FUTURE या नावाने आपला अहवाल जाहीर केला. ह्या आहवालानुसार शाश्वत विकासाची व्याख्या पुढील प्रमाणे करण्यात आली आहे.

“शाश्वत विकास म्हणजे असा विकास जो भविष्यकालीन पिढ्यांची स्वतःच्या गरजा भागविण्याची क्षमता धोक्यात न आणता वर्तमानातील गरजा भागवू शकतो.”

अंतिमतः ब्रन्डलंड आयोगाच्या अहवालाच्या परिणामस्वरूप १९९२ साली ब्राझील या देशातील रियो दी जनेरिओ या शहरात संयुक्त राष्ट्र पर्यावरण व विकास या विषयावर जागतिक परिषद भरविण्यात आली होती. ह्याच परिषदेला ‘वसुंधरा परिषद’ म्हणून संबोधले जाते. या परिषदेत जगातील १९५ राष्ट्रांपैकी १८५ राष्ट्रे सहभागी झाली होती. ह्या परिषदेत घोषित करण्यात आले कि विकासाचा हक्क अश्या रीतीने सध्या व्हावा कि वर्तमानातील व भविष्यकालीन पिढ्यांच्या विकासात्मक आणि पर्यावरणीय गरजा समन्यायी पद्धतीने भागविल्या जाव्यात. हि परिषद शाश्वत विकासाच्या दृष्टीने महत्वाचे पाऊल मानले गेले. वसुंधरा परिषद १९९२ मध्ये शाश्वत विकास संकल्पना पूर्णतः उदयास आली.

शाश्वत विकासाची १७ ध्येय पुढीलप्रमाणे.



३. संशोधनाचे महत्व:-

मराठवाड्यातील शाश्वत विकासाच्या अंमलबजावणीच्या दृष्टीने परभणी जिल्ह्याचा अभ्यास महत्वाचा आहे. परभणी जिल्ह्यात ८०% लोकसंख्या हि ग्रामीण भागात राहते त्यामुळे शाश्वत विकासातील ग्रामीण विकासाच्या भूमिकेचा अभ्यास करणे महत्वाचे ठरते. परभणी जिल्ह्यात होणाऱ्या शाश्वत विकासाच्या अंमलबजावणीचा व मुख्यत्वे पायाभूत सुविधांचा प्रत्यक्ष व अप्रत्यक्षरित्या ग्रामीण विकासावर होताना दिसून येतो. संशोधनामध्ये परभणी जिल्ह्यातील गावांमध्ये पायाभूत सोयी सुविधांच्या उपलब्धतेचा अभ्यास करण्यात आला आहे. स्वयंपूर्ण गावाच्या दृष्टीने पायाभूत सोयींची उपलब्धता हि ग्रामीण विकासातील मैलाचा दगड मानली जाते.

ग्रामीण भागातील जनतेच्या सामाजिक आर्थिक विकासासाठी स्थानिक स्वराज्य संस्थांच्या शाश्वत विकासातील प्राधान्यक्रम निश्चित करण्यास मदत होईल. शाश्वत विकासातील प्राधान्य क्रम योग्य असल्यास ग्रामीण जनतेच्या सर्वांगीण विकासाचा चालना मिळेल. शाश्वत विकासातील ध्येय पायाभूत सोयी सुविधांच्या विकासाच्या सद्यस्थितीचा आढावा घेण्यात येईल.

४. संशोधनाची उद्दीष्टे खालील प्रमाणे आहेत.

१. परभणी जिल्ह्यातील शाश्वत विकासाच्या ध्येयांच्या अंमलबजावणी प्रक्रियेचा अभ्यास करणे.
२. परभणी जिल्ह्यातील गावांमध्ये उपलब्ध पायाभूत सोयी सुविधांच्या सद्यस्थितीचा आढावा घेणे.
३. परभणी जिल्ह्यामध्ये पायाभूत सोयीसुविधांच्या अंमलबजावणीमध्ये येणाऱ्या अडचणींचा शोध घेणे.

५. संशोधनाची व्याप्ती

महाराष्ट्र जिल्ह्यातील मराठवाडा विभागातील आठ जिल्ह्यांपैकी परभणी हा एक जिल्हा आहे. हा संपूर्ण मराठवाडा प्रदेश पूर्वी निजाम राज्याचा भाग होता. नंतर हैदराबाद राज्याचा एक भाग १९५६ मध्ये राज्यांचे पुनर्गठन झाल्यानंतर ते तत्कालीन मुंबई राज्याचा एक भाग बनला. आणि १९६० नंतर हा सध्याचा महाराष्ट्र राज्याचा एक भाग आहे. परभणी जिल्ह्याचे भौगोलिक स्थान १८.४५ आणि २०.१० उत्तर अक्षांश आणि ७६.१३ आणि ७७.३९ पूर्व रेखांश आहे. जिल्ह्याच्या उत्तरेस हिंगोली जिल्हा आहे. हिंगोली जिल्हा १ मे १९९९ साली परभणी जिल्ह्याचे विभाजन करून तयार केला गेला आहे. परभणी जिल्ह्याच्या पूर्वेस नांदेड, दक्षिणेला लातूर आणि पश्चिमेकडील बीड आणि जालना हे जिल्हे आहेत. राज्याची राजधानी मुंबई हि परभणी जिल्ह्याच्या पश्चिमेकडे ६०० km अंतरावर आहे. परभणी महाराष्ट्राच्या इतर प्रमुख शहरांना तसेच शेजारील तेलंगाणा व कर्नाटक ह्या राज्यांना रस्ते व लोहमार्गांनी जोडलेले आहे.

१. परभणी जिल्ह्याचे क्षेत्र: ६२५० वर्ग कि.मी.
२. परभणी जिल्ह्याची लोकसंख्या: १८,३६,०८६
३. तालुके: ९
४. गावे: ८५१

अ.क्र.	तालुका	गावांची संख्या
१	गंगाखेड	१०७
२	जिंतूर	१७२
३	मानवत	५५
४	पालम	८२
५	परभणी	१३१
६	पाथरी	५७
७	पूर्णा	९४
८	सेलू	९५
९	सोनपेठ	५८
एकूण गावे	परभणी जिल्हा	८५१

शाश्वत विकास हि एक गतिमान प्रक्रिया आहे. हि विकास प्रक्रिया मुख्यत्वे नैसर्गिक साधन संपत्तीचा ह्यास थांबविणे, शेतीची वृद्धी, पायाभूत सोयींचा विकास, आरोग्य सुविधांचा विकास, गुणवत्तापूर्ण शिक्षण तसेच संदेश वाहन सुविधांचा विकास, इत्यादी बाबींवर अवलंबून असते. गत काळात पंचवार्षिक योजनांमार्फत ग्रामीण विकासासाठी अनेक तरतुदी केलेल्या दिसत आहेत तसेच ७३ व ७४ व्या घटनादुरुस्तीमुळे स्थानिक स्वराज्य संस्थांच्या मार्फत वित्त निर्मिती व त्याचे नियोजन करण्याची स्वायत्तता मिळालेली दिसून येते. शाश्वत विकासाची अंमलबजावणी व शाश्वत विकासाच्या ध्येयांचा ग्रामीण विकासावर मोठा परिणाम पाहण्यास मिळतो त्यामुळे शाश्वत विकासातील पायाभूत सोयी सुविधांचे ध्येय हे ग्रामीण विकासाच्या गतीला चालना देणारे ध्येय निश्चितच आहे. म्हणून सदर प्रबंधात परभणी जिल्ह्यातील ग्रामीण भागातील पायाभूत सोयी सुविधांच्या सद्यस्थितीचा अभ्यास करण्यात आला आहे.

६. संशोधनाची रूपरेषा

प्राथमिक स्रोत:-

- १) प्राथमिक स्रोतांमध्ये मुख्यत्वे प्रश्नावलीचा समावेश होतो. त्यातून मिळालेल्या माहिती मधुन अनुमान व निष्कर्ष काढलेले आहेत. त्यावरून माहिती संकलन करून उद्दिष्टे व गृहीतके ह्यांची सत्यता, असत्यातांची पडताळणी करतात. तसेच मिळालेली माहिती हि आलेख नाकाशे तक्ते ह्या स्वरूपात मांडून तुलनात्मक परिस्थिती संशोधक दाखवणार आहे.
- २) परभणी जिल्ह्यातील ९ तालुक्यांपैकी निवडलेल्या गावांमध्ये प्रत्येकी ५ गावांमध्ये प्रत्यक्ष भेट देऊन प्राथमिक माहितीचे संकलन केले गेले आहे. त्यामध्ये निवडलेल्या गावांची ग्रामपंचायत प्रमुख (सरपंच), ग्रामपंचायत सचिव (ग्रामसेवक), प्राथमिक आरोग्य केंद्रातील डॉक्टर, प्राथमिक शाळेतील मुख्याध्यापक, पशु वैद्यकीय केंद्र कर्मचारी व गावांमधील इतर

- ३) रहिवासी वर्गाच्या मुलाखत व चर्चेच्या माध्यमातून प्राथमिक माहितीचे संकलन होणार आहे.

दुय्यम स्रोत:-

- १) परभणी जिल्हा परिषद आर्थिक वार्षिक विवरणपत्र, राज्य वित्त आयोग अहवाल तसेच परभणी जिल्ह्यातील ग्रामीण विकास विषयावर लिखाण करणारे लेखकांचे लेख असे अन्य स्रोत उपयोगी पडणार आहेत.

७. संशोधनाची गृहीतके

- H₁. परभणी जिल्ह्याच्या ग्रामीण विकासात पायाभूत सोयी सुविधांची भूमिका महत्वाची आहे.
- H₂. परभणी जिल्ह्यातील गावा मध्ये पायाभूत सोयी सुविधांची कमतरता आढळते.
- H₃. परभणी जिल्ह्यात ग्रामीण भागात पायाभूत सोयी सुविधांच्या प्रभावी अंमलबजावणी गरजेची आहे.

८. संशोधन पद्धती

संशोधन हि एक ज्ञान मिळवण्याची पद्धत आहे. संशोधनाच्या विविध पद्धती पाहण्यास मिळत आहेत. त्यामध्ये ऐतिहासिक संशोधन पद्धती , सर्वेक्षण संशोधन पद्धती, प्रायोगिक संशोधन पद्धती व अन्वेषणात्मक संशोधन पद्धती ह्यांचा समावेश होतो. सादर प्रबंध मध्ये सर्वेक्षण संशोधन पद्धतीचा वापर केला आहे. सर्वेक्षण संशोधन पद्धतीने मिळालेली माहिती हि योग्य प्रकारे प्रबंधात मांडून संशोधनाचे कार्य पूर्ण केले आहे.

‘परभणी जिल्ह्यातील शाश्वत विकास ध्येयांच्या सद्यस्थितीचा अभ्यास’ या संशोधन विषयासाठी सर्वेक्षण संशोधन पद्धती चा वापर केला आहे. सर्वेक्षण संशोधन पद्धती म्हणजे सद्यस्थितीचे वर्णन व वर्तमान काळातील संबंध विकासातील होत असलेले विचार प्रवाह ह्यांची माहिती होय. परभणी जिल्ह्यातील ग्रामीण भागातील नागरिकांना विशिष्ट प्रश्नावलीच्या माध्यमातून झालेल्या सर्वेक्षण व मुलाखतीने मोठ्या जनसंख्येच्या माध्यमातून माहिती संकलन केले आहे. सर्वेक्षणाचा संबंध एका व्यक्तीशी

नसून तो एका मोठ्या लोकसंख्येच्या माध्यमातून मिळालेल्या माहितीशी आहे. संशोधकाने संशोधनासाठी जो विषय निश्चित केलेला असतो त्या विषयासंबंधी विविध स्वरूपाची माहिती संकलित करावी लागली आहे. संशोधन करताना सर्वच साधने उपयुक्त नसतात. मात्र अनेक उपलब्ध संधानांमधून संशोधकाला यथायोग्य साधनांची निवड केली आहे. प्रबंधात परभणी जिल्ह्यातील ९ तालुक्यांमधील प्रत्येकी ५ गावांचा समावेश करण्यात आला आहे. संबंधित गावांमधील ग्रामपंचायत कार्यालय तसेच शासकीय विभागातील अधिकारी, गावकरी व इतर संबंधित लोकांशी संवाद, प्रश्न उत्तरे, मुलाखती व निरीक्षणाने मार्फत माहिती घेण्यात आलेली आहे. त्याद्वारे संशोधनाच्या शेवट काढलेले निष्कर्ष लागू आहेत. ग्रामपंचायतीच्या अधिकृत नोंदी आणि संकल्पना क्रमांक ६. नुसार परभणी जिल्ह्यातील गावांमध्ये पुढील पायाभूत सोयी सुविधांच्या उपलब्धतेनुसार सर्वेक्षण करण्यात आले आहे.

शासकीय परिपत्रकांमधून गोळा केलेली माहिती आवश्यक सांख्यिकीय साधनांच्या सहाय्याने एकत्रित, सारणीबद्धरित्या मांडली आहे. संशोधनामध्ये परभणी जिल्ह्यातील गावांमध्ये पुढील पायाभूत सोयी सुविधा आहेत कि नाही ह्या बाबत सर्वेक्षण करून माहितीचे संकलन करण्यात आले आहे. ग्रामपंचायत गावपातळीवर सर्वच सोयी सुविधा पुरविण्यात महत्त्वाची भूमिका बजावत असते. लोकांचे राहणीमान आणि सामाजिक, आर्थिक स्थिती सुधारण्यासाठी व पर्यायाने गावाचा सर्वांगीण विकास साधण्यासाठी ग्रामपंचायत प्रयत्नशील असतात. त्यामुळे परभणी जिल्ह्यातील पायाभूत सोयीसुविधांच्या ग्रामीण भागातील सद्यस्थितीचा सखोल अभ्यास करणे गरजेचे आहे.

अ.क्र.	पायाभूत सुविधा	आहे / नाही
१	ग्रामपंचायत इमारत	
२	अंगणवाडी	
३	आरोग्य केंद्र/उपकेंद्र	
४	पशुधन मदत केंद्र	
५	प्राथमिक शाळा	
६	सामान्य सेवा केंद्र	
७	कॉमन फॅसिलिटी सेंटर	
८	रस्ते	
९	कड्या घरांमध्ये राहणाऱ्या कुटुंबांची टक्केवारी	
१०	सर्व घरांना पाईपद्वारे नळाच्या पाण्याची उपलब्धता	
११	आवश्यकते नुसार उपलब्ध पथदिव्यांची टक्केवारी	
१२	सुरक्षिततेची खात्री करण्यासाठी इतर सार्वजनिक ठिकाणी पथदिवे	
१३	मूलभूत सुविधेसह स्मशान/ दफन भूमीची उपलब्धता	
१४	खेळाच्या मैदानाची सोय आणि खेळांना प्रोत्साहन	
१५	सुसज्ज लायब्ररीसह माहिती केंद्राची उपलब्धता	
१६	ग्रामपंचायत गोडाऊन	
१७	ग्रामपंचायतीला गोडाऊनची उपलब्धता (कायमस्वरूपी रस्त्याच्या उपलब्धतेसह)	
१८	आपत्ती व्यवस्थापन योजना ग्रामपंचायत स्तरावर उपलब्धता	
१९	ग्रामपंचायतीकडे सर्व सुविधायुक्त कम्युनिटी हॉल	
२०	सर्व सोयींनी युक्त बालखेळी बगीचा	

वरील माहिती परभणी जिल्ह्यातील निवडलेल्या प्रत्येक गावासाठी वेगळी असेल.

९. संशोधनाची मर्यादा शाश्वत विकास ध्येयांचा अभ्यास करत असताना महाराष्ट्रातील परभणी जिल्ह्याची

निवड करण्यात आली आहे. संशोधनामध्ये परभणी जिल्ह्याच्या मुख्यत्वे ग्रामीण भागावर लक्ष्य केंद्रित करण्यात आले आहे. स्वयंपूर्ण पायाभूत सोयी सुविधांनीयुक्त गाव तयार करण्यासाठी केंद्र सरकार, राज्य सरकार तसेच स्थानिक स्वराज्य संथांच्या माध्यमातून मोठ्या प्रमाणात

प्रयत्न केले जातात. परभणी जिल्ह्यातील ग्रामीण भागातील पायाभूत सोयी सुविधांचा अभ्यास करत असताना संशोधनाच्या पुढील मर्यादा आहेत.

- १) महाराष्ट्राच्या परभणी जिल्ह्यातील शाश्वत विकासाच्या पायाभूत सोयी सुविधांच्या सद्य स्थितीचा अभ्यास करण्यात आला आहे.
- २) प्रस्तुत प्रबंध परभणी जिल्ह्या पुरता मर्यादित असून मुख्यत्वे संशोधनामध्ये परभणी जिल्ह्यातील ग्रामीण भागाचा समावेश करण्यात आला आहे.
- ३) परभणी जिल्ह्याच्या ग्रामीण भागातील गावांमध्ये पायाभूत सोयी सुविधांची उपलब्धता तपासणे हे संशोधनाचे मुख्य उद्दिष्ट आहे.
- ४) परभणी जिल्ह्यातील स्थानिक स्वराज्य संस्थांच्या माध्यमातून उपलब्ध होणाऱ्या पायाभूत सोयी सुविधांचा अभ्यास केलेला आहे.

१०. संशोधनातील निष्कर्ष

संयुक्त राष्ट्र ने शाश्वत विकासाच्या १७ ध्येय निश्चित केलेली आहेत. त्यापैकी संशोधनातील मुख्य संशोधन विषय हा ध्येय क्रमांक ९ पायाभूत सोयी सुविधांचा विकास हा आहे. पायाभूत सोयी सुविधांची महाराष्ट्रातील परभणी जिल्ह्यातील सद्य स्थितीचा आढावा घेण्यात आलेला

असून शाश्वत विकास व ग्रामीण विकासाच्या दृष्टिकोनातून पायाभूत सोयी सुविधांची उपलब्धता ग्रामीण भागासाठी महत्वाची आहे. पायाभूत सोयी सुविधांची उपलब्धता ही एक स्वयंपूर्ण गावाच्या दिशेने नेऊन ग्रामीण भागातील अनेक समस्यांचं निराकरण करते. संशोधकाने पुढील निष्कर्ष मांडली आहेत.

- १) केंद्र सरकार व राज्य सरकार मार्फत स्थानिक स्वराज्य संस्थांना पायाभूत सोयी सुविधांच्या अंमलबजावणीसाठी होणाऱ्या निधी वितरणात दर वर्षी वाढ होत आहे.
- २) स्थानिक स्वराज्य संस्थान मार्फत पायाभूत सोयी सुविधां बाबत उदासीनता दर्शविताना दिसतात.
- ३) शाश्वत विकास ध्येय पूर्ती करताना भारतातील ग्रामीण विकासाला मोठी चालना मिळत आहे.
- ४) शाश्वत विकासाच्या ध्येयांची अंमलबजावणी करत असताना स्थानिक पातळीवर जनजागृती व लोक सहभाग हा महत्वाचा ठरतो.
- ५) पायाभूत सोयी सुविधांच्या उपलब्धतेमुळे ग्रामीण भागातील स्थानिक पातळीवरील समस्या सोडविण्यासाठी मदत होते.

अ.क्र.	पायाभूत सुविधा	उपलब्धतेची टक्केवारी
१	ग्रामपंचायत इमारत	९५ %
२	अंगणवाडी	९० %
३	आरोग्य केंद्र/उपकेंद्र	८० %
४	पशुधन मदत केंद्र	७५ %
५	प्राथमिक शाळा	९२ %
६	सामान्य सेवा केंद्र	६० %
७	कॉमन फॅसिलिटी सेंटर	५० %
८	रस्ते	७६ %
९	कच्च्या घरांमध्ये राहणाऱ्या कुटुंबांची टक्केवारी	३७ %
१०	सर्व घरांना पाईपद्वारे नळाच्या पाण्याची उपलब्धता	८३ %
११	आवश्यकते नुसार उपलब्ध पथदिव्यांची टक्केवारी	७६ %
१२	सुरक्षिततेची खात्री करण्यासाठी इतर सार्वजनिक ठिकाणी पथदिवे	८० %
१३	मूलभूत सुविधेसह स्मशान/ दफन भूमीची उपलब्धता	९४ %
१४	खेळाच्या मैदानाची सोय आणि खेळांना प्रोत्साहन	४५ %
१५	सुसज्ज लायब्ररीसह माहिती केंद्राची उपलब्धता	३९ %
१६	ग्रामपंचायत गोडाऊन	३३ %
१७	ग्रामपंचायतीला गोडाऊनची उपलब्धता (कायमस्वरूपी रस्त्याच्या उपलब्धतेसह)	३३ %
१८	आपत्ती व्यवस्थापन योजना ग्रामपंचायत स्तरावर उपलब्धता	२१ %
१९	ग्रामपंचायतीकडे सर्व सुविधायुक्त कम्युनिटी हॉल	२९ %
२०	सर्व सोयीनी युक्त बालखेळी बगीचा	१४ %

११. संशोधनातील शिफारशी शाश्वत विकास ध्येयांची व पायाभूत सोयी सुविधांची परभणी जिल्ह्यातील अंमलबजावणी हि धीम्या गतीने होत आहे.

- १) २०३० पर्यंत १७ ध्येये साध्य करणे आवश्यक आहे. त्या दृष्टीने परभणी जिल्ह्यातील शाश्वत विकास ध्येयांची अंमलबजावणी गतिमान करणे गरजेचे आहे.
- २) ग्रामीण भागात पायाभूत सोयी सुविधांची समाजातील जागृतीची आवश्यक आहे.
- ३) संशोधनामधील माहिती व निरीक्षणा नुसार शाश्वत विकासाच्या दृष्टीने पायाभूत सोयी सुविधांनी युक्त स्वयंपूर्ण गाव होण्यासाठी स्थानिक पातळीवर मोठ्या प्रमाणात लोकसहभाग गरजेचा ठरतो.
- ४) शाश्वत विकासाच्या दृष्टीकोनातून असणाऱ्या केंद्र व राज्य शासनाच्या योजना प्रभावीपणे राबविण्यासाठी शासकीय यंत्रणेची तत्परता गरजेची आहे.
- ५) ग्रामीण भागात राहणाऱ्या जनतेमध्ये शाश्वत विकासाची व्याप्ती व महत्व समजावून सांगणे व त्या दृष्टीने प्रोत्साहन देणे आवश्यक ठरते.
- ६) परभणी जिल्ह्यातील गावांमध्ये ग्रामपंचायत इमारती ९५% गावांमध्ये आढळून आलेल्या आहेत. ५% गावांमध्ये इमारतीचे नवीन बांधकाम किंवा डागडुजी चालू आहेत.
- ७) परभणी जिल्ह्यातील ९०% गावांमध्ये अंगणवाडी शाळा आढळून आलेल्या आहेत. उर्वरित १०% गावांमध्ये अंगणवाडी शाळा उपलब्ध असणे आवश्यक आहे.
- ८) परभणी जिल्ह्यातील आरोग्य केंद्र व उपकेंद्र हे ८०% गावात आढळून आले आहेत. ज्या गावांमध्ये आरोग्य केंद्र नाहीत त्या ठिकाणी जवळच्या गावात आरोग्य सेवेसाठी जावे लागते. आरोग्य केंद्र व उपकेंद्र हि सर्व गावांमध्ये असणे आवश्यक आहे. त्यामुळे २०% गावांमध्ये अत्याधुनिक सेवांना युक्त आरोग्य केंद्र किंवा उपकेंद्र असणे गरजेचे ठरते.
- ९) ग्रामीण भागात मुख्यत्वे शेती व शेती पूरक व्यवसायात मोठ्या प्रमाणात समाज अवलंबून आहे. त्यामुळे ग्रामीण भागात पशुधन हे मोठ्या प्रमाणात आढळत असतात. त्यांच्या आरोग्याच्या दृष्टीने पशुधन मदत केंद्र हि पराभ्यानी जिल्ह्याच्या ग्रामीण भागात ७५% गावांमध्ये आहेत. २५% गावांमध्ये स्थानिक जवळच्या गावांमधील पशुधन मदत केंद्र मध्ये जावे लागते अथवा तेथील कर्मचारी किंवा डॉक्टर गावांना भेट देऊन पशुधनांवर उपचार करतात.
- १०) परभणी जिल्ह्यातील गावांमध्ये प्राथमिक शाळांची उपलब्धता हि ९२% आहे. विद्यार्थ्यांच्या कमी उपस्थितीमुळे व तसेच खाजगी शाळांच्या

उपलब्धतेमुळे ८% गावांमध्ये प्राथमिक शाळा बंद अवस्थेत आहेत.

- ११) परभणी जिल्ह्यात सामान्य सेवा केंद्र हि ६०% गावांमध्ये उपलब्ध होती. सामान्य सेवा केंद्र स्थापन करण्याची परवाना प्रक्रिया हि क्लिष्ट व रटाळ असल्या कारणाने सामान्य सेवा केंद्रांची संख्या कमी आहे व ४०% गावांमध्ये सामान्य सेवा केंद्र चालवण्यासाठी मुलभूत गोष्टींचा अभाव आहे. मुलभूत सुविधांची उपलब्धता व सामान्य सेवा केंद्र परवाना मिळविण्याची प्रक्रिया सोयीस्कर झाल्यावर सामान्य सेवा केंद्रांची उपलब्धता प्रत्येक गावात होईल.
- १२) कॉमन फॅसिलिटी सेंटरची परभणी जिल्ह्यातील गावांमध्ये उपलब्धता हि ५०% एवढी आहे.
- १३) परभणी जिल्ह्यातील एकंदर स्थिती समाधान कारक स्वरूपाची आहे. ग्रामीण भागातील पक्क्या रस्त्यांचे प्रमाण ७६% आहे. २४% गावांमध्ये जाणाऱ्या रस्त्यांची परिस्थिती हि अत्यंत बिकट असून गावांना पक्क्या रस्त्यांची उपलब्धता असणे आवश्यक आहे.
- १४) परभणी जिल्ह्याच्या ग्रामीण भागात कड्ड्या घरांमध्ये राहणारी कुटुंबे हि ३७ % एवढी आहेत. प्रधानमंत्री आवास योजना व इतर योजनांमुळे आर्थिक साहाय्य प्राप्त झाल्यामुळे हि संख्या पुढील काळात कमी होऊन ग्रामीण भागातील सर्वच कुटुंबे हि पक्क्या घरात वास्तव्य करतील त्या दृष्टीने केंद्रव राज्य सरकार आशावादी आहेत.
- १५) परभणी जिल्ह्यातील गावांमधील घरांना पाईपद्वारे पाण्याची उपलब्धता ८३% गावांमधील घरांमध्ये आढळून आली. १७% गावांमधील घरांची जोडणी पाणीपट्टी थकविल्या करणामुळे बंद केली गेलेली आढळली.
- १६) भारनियमनाच्या समस्येचा विचार करता गावांमध्ये आवश्यकते नुसार पथदिव्यांची सुविधा हि ७६% परभणी जिल्ह्यातील गावांमध्ये आढळून आली. २४% गावांमध्ये आवश्यकते नुसार पथदिव्यांची उपलब्धता आहे पण विजेच्या अनियमिततेमुळे व पथदिव्यांच्या देखभालीच्या अभावामुळे त्यांचा वापर बंद आहे.
- १७) सुरक्षिततेची खात्री करण्यासाठी इतर सार्वजनिक ठिकाणी पथदिवे हे ८०% परभणी जिल्ह्यातील गावांमध्ये आढळून आले. उर्वरित ठिकाणी पथदिव्यांची संख्या वाढविणे आवश्यक ठरते.
- १८) परभणी जिल्ह्यातील गावांमध्ये मूलभूत सुविधेसह स्मशान/ दफन भूमीची उपलब्धता ९४ % गावांमध्ये आढळून आली. ६% गावांमध्ये मूलभूत सुविधेसह स्मशान/ दफन भूमीची गजर भासत नाही करण शेजारील गावांमधील स्मशान अथवा दफन भूमीचा वापर करण्यात येतो.

a. परभणी जिल्ह्याच्या ग्रामीण भागात खेळाच्या मैदानाची सोय आणि खेळांना प्रोत्साहन देण्यासाठी ४५% ग्राम पंचायत पुढाकार घेताना दिसतात.

१९) सुसज्ज लायब्ररीसह माहिती केंद्राची उपलब्धता हि परभणी जिल्ह्यातील ३९% गावांमध्ये आढळून आली. ६१% गावांचे आकारमान लहान असल्या कारणाने सुसज्ज लायब्ररीसह माहिती केंद्राची देखभाल व व्यवस्थापन शक्य नसल्या कारणाने त्या गावांमध्ये सुसज्ज लायब्ररीसह माहिती केंद्र आढळून आले नाहीत.

२०) परभणी जिल्ह्यातील गावांमध्ये ग्रामपंचायतीची गोडाऊन हि ३३% गावांमध्ये आढळून आली आहेत. ६७% गावांमध्ये ग्रामपंचायतमार्फत गावांमध्ये गोडाऊन उभारणी करणे गरजेचे ठरते. ग्रामपंचायत गोडाऊनला कायमस्वरूपी रस्त्याची उपलब्धता सुद्धा सुलभ वावरासाठी आवश्यक आहे.

२१) परभणी जिल्ह्याच्या गावांमध्ये आपत्ती व्यवस्थापना संबंधीच्या योजना ह्या २१% गावांमध्ये पाहण्यास मिळाली. परभणी जिल्ह्यातील ७९% गावांमध्ये आपत्ती व्यवस्थापना विषयी जागरूकता कमी असल्या कारणाने ग्रामपंचायतींनी आपत्ती व्यवस्थापना संबंधीच्या योजना आढळून आलेल्या नाहीत. भविष्याचा विचार केला असता प्रत्येक गावांमध्ये ग्राम पंचायतीची आपत्ती व्यवस्थापना संबंधीची योजना तयार असणे गरजेचे आहे.

२२) परभणी जिल्ह्यातील ग्रामपंचायतींकडे सर्व सुविधायुक्त कम्युनिटी हॉल २९% गावांमध्ये आढळून आला आहे. ग्राम पंचायतींचा सर्व सुविधायुक्त कम्युनिटी हॉल असणे महत्वाचे ठरते.

२३) परभणी जिल्ह्याच्या गावांमध्ये सर्व सोयींनी युक्त बालस्नेही बगीचा उपलब्ध असल्याचे प्रमाण १४% आढळून आले.

गृहीतके

H₁. परभणी जिल्ह्याच्या ग्रामीण विकासात पायाभूत सोयी सुविधांची भूमिका महत्वाची आहे.

H₂. परभणी जिल्ह्यातील गावा मध्ये पायाभूत सोयी सुविधांची कमतरता आढळते.

H₃. परभणी जिल्ह्यात ग्रामीण भागात पायाभूत सोयी सुविधांच्या प्रभावी अंमलबजावणी गरजेची आहे.

संदर्भ

- 1) संयुक्त राष्ट्र संकेत स्थळ
- 2) इ- स्वराज संकेत स्थळ
- 3) विकिपीडिया संकेतस्थळ
- 4) परभणी जिल्हा परिषद संकेतस्थळ
- 5) आर्थिक वार्षिक विवरणपत्र परभणी जिल्हा परिषद
- 6) सामाजिक आर्थिक सर्वेक्षण जिल्हा परभणी

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DOI- 10.5281/zenodo.7740810

गोष्टवारा

कुक्कुटपालन हा एक प्राचीन व्यवसाय आहेत . कोंबडी पालन हे शेतीस पूरक म्हणून उपजिविकेचे साधन आहे . यामध्ये मांसासोबत अंड्याचे उत्पादन होते .तसेच कोंबडीचे तीन प्रकार आहेत. लेयर चिकन, ब्रॉयलर चिकन आणि देशी चिकन यांचा समावेश आहे. अंडी मिळवण्यासाठी लेयर कोंबडीचा वापर केला जातो. वयाच्या 4-5 महिन्यांनंतर ते अंडी घालू लागते. यानंतर ते सुमारे 1 वर्षापर्यंत अंडी घालते. त्यानंतर, जेव्हा त्यांचे वय सुमारे 16 महिने असते, तेव्हा ते मांस विकले जातात. दुसरा ब्रॉयलर चिकन आहे, ते मुख्यतः मांस म्हणून वापरले जातात. ते इतर प्रकारच्या पोल्ट्रीच्या तुलनेत वेगाने वाढतात, जे त्यांना मांस म्हणून वापरतात. शेवटचे देशी कोंबडी आहे, ते अंडी आणि मांस दोन्ही मिळवण्यासाठी वापरले जातात. त्यानुसार कुक्कुटपालन व्यवसाय केला जातो. कुक्कुटपालन व्यवसायामुळे समाजिक, आर्थिक विकासासाठी मदत होईल. तसेच या शोधनिबंधात आगरी समाजातील बेरोजगारीचे प्रमाण कमी करणे आणि कृषी आणि पुरक क्षेत्राला चालना देणे हा आहे. व्यक्तीला योजनेद्वारे स्वतःचा व्यवसाय सुरू करायचा आहे, महाराष्ट्र कर्ज योजनेबद्दल याबद्दल संशोधक चर्चा करणार आहे . या शोधनिबंधाच्या माध्यमातून अनेक बेरोजगार युवक व व्यक्तींना रोजगार संधी व ते स्वतःचा व्यवसाय सुरू करण्यासाठी प्रोत्साहन मिळेल.

प्रस्तावना

भारत हे विविध धर्मीय राष्ट्र आहे . येथील समाजात जात , वंश , परंपरा , रुढी यांचे प्रबल्य आहे . भारतीय समाज व्यवस्थेला तर जाती व्यवस्थेचे संग्रहालय म्हणून ओळखले जाते . सद्यस्थितीत भारतात ८००० पेक्षाही जास्त जाती आहात. त्यापैकी ३७४३ जाती इतर मागास वर्गीयामध्ये (ओ.बी.सी.) येतात . महाराष्ट्रातील आगरी समाजाचाही समावेश इतर मागास वर्गीयामध्ये होतो , आगरी म्हणजे कोण ? 'आगरी' या शब्दाची उत्पत्ती 'आगर' या शब्दापासून झालेली आहे. 'आगर' म्हणजे शेत होय. माड, पोकळीची बागा, मीठ पिकविण्याची जागा म्हणजे 'आगर' होय. 'आगरी' या शब्दाचा अर्थ शेतकरी असा आहे. आगरी म्हणजेच शेती करणारा आगरी म्हणजे केवळ आगरांत राहणारा नाही तर आगर म्हणजे शेत निर्माण करणारा, शेत पिकविणारा तो आगरी समुद्रकाठी, खाडीकिनारी जमिनीला बंदिस्त करून तिचे शेतात रूपांतर करणारा तो आगरी. भात शेती करणारा तो आगरी आगरी म्हणजे कोटीक, कोठा, पराण किंवा खालट मोडणारा. अशा खालटांची मालिका म्हणजे आगर होय. या आगरात शेती करणारा समाज म्हणजे आगरी होय. मीठाचा आगर अर्थात

साठा तयार करणारा तो आगरी. मुख्य म्हणजे शेती तयार करून त्यात पीके घेणारा, भात पिकविणारा शेतकरी म्हणजे आगरी होय. तसेच भिवंडी तालुक्यातील ग्रामीण भागातील आगरी समाज शेती सोबत शेती पुरक व्यवसाय सुद्धा मोठ्याप्रमाणात करतात. त्यात भाजीपाल्याचे लागवड आणि विक्री, पशुपालन, दुध उत्पादन, कुक्कुटपालन इत्यादी शेती पुरक व्यवसाय केले जातात. या शोधनिबंधात संशोधक आगरी समाज आणि कुक्कुटपालन व्यवसायाचा अभ्यास करणार आहे. आगरी समाजात मांस आणि अंडी मिळवण्यासाठी कुक्कुटपालन व्यवसाय मोठ्या प्रमाणावर केला जातो, त्यामध्ये ब्रॉयलर चिकन आणि देशी चिकन यांचा समावेश आहे. आगरी समाजात कुक्कुटपालन व्यवसाय हा जास्त करून घरा शेजारी गावी, म्हशींसोबत देशी कोंबड्यांचे एकत्रीत पालन करतात मुक्त पद्धतीने संभाळ केल्यास 100 पक्षी अगदी कमी वेळ आणि भांडवल खर्च करून व्यवसाय सुरू करता येतो. तसेच मोठ्या कुक्कुटपालन व्यवसाय करण्यासाठी पोल्ट्रीतील फार्म उभारली जातात.

महाराष्ट्र शासन कुक्कुटपालन कर्ज योजना या योजनेद्वारे स्वतःच्या व्यवसायाचे स्वप्न बघणारे अशा व्यक्तींसाठी राज्य सरकारने एक नवीन योजना सुरु केली आहे, ती म्हणजे “महाराष्ट्र कुक्कुट पालन कर्ज योजना”. मांस व्यवसायासाठी ब्रॉयलर कोंबड्या व अंडी उत्पादनासाठी लेयर्स कोंबड्या या दोन्ही अशा प्रकारच्या उत्पादनासाठी ही कुक्कुटपालन योजना सरकारने आपल्या समोर आणली आहे. या योजनेच्या मार्फत आपल्या सर्वांचे स्वप्न नक्कीच पूर्ण होतील यात तिळमात्र शंका नाही. या योजनेच्या आधारे आपल्याला कुक्कुट उभारणी साठी माफक धनराशी मिळू शकते आणि त्यातून तुम्ही तुमच्या शेतामध्ये कुक्कुटपालन उभारून चांगला व्यवसाय सुरु करू शकतात. महाराष्ट्र कुक्कुटपालन कर्ज योजनेचा लाभ घेण्यासाठी इच्छुक व्यक्ती अर्ज करून कुक्कुटपालन पालन उभारणी साठी कर्जराशी मिळवू शकतात. भारतातील पोल्ट्री योजनेला नाबार्डने पूर्ण पाठिंबा दिला आहे. या योजनेतर्गत राज्यात नवीन पोल्ट्री फार्म स्थापन करण्यात येत आहेत. राज्यातील लोकांना कुक्कुटपालन करण्यास प्रोत्साहित करण्यासाठी राज्य सरकार आर्थिक मदत देखील करते. या योजनेमुळे राज्यातील बेरोजगारीचा दर कमी होण्यास मदत होणार आहे. हे सर्वज्ञात आहे की ब्रॉयलर कोंबडी मांसाच्या उद्देशाने पाळली जातात तर लेयर कोंबडी अंडी घालण्यासाठी पाळली जातात. भिवंडी तालुक्यातील ग्रामीण भागातील आगरी समाजातील कुक्कुटपालन व्यवसायाचे विकासातील योगदान, कुक्कुटपालन व्यवसायामुळे झालेली रोजगार निर्मिती याबद्दलचे अभ्यास प्रस्तुत शोधनिबंधात केले जाणार आहे.

संशोधनाची उद्दीष्ट्ये

- 1) भिवंडी तालुक्यातील ग्रामीण भागातील आगरी समाजाच्या कुक्कुटपालन व्यवसायाचा अभ्यास करणे, हे या संशोधनाचे मुख्य उद्दीष्ट्य आहे.
- 2) आगरी समाजाला व्यवसाय करताना येणाऱ्या समस्यांचा वेध घेणे आणि त्यावर उपाययोजना सुचविणे.

संशोधन गृहीतक

H 0 : ग्रामीण भागातील आगरी समाज कुक्कुटपालन व्यवसायाकडे विकासात्मक दृष्टिकोनातून पाहतो.

H 1 : ग्रामीण भागातील आगरी समाज कुक्कुटपालन व्यवसायाकडे विकासात्मक दृष्टिकोनातून पाहत नाही.

१. संशोधनाचे महत्व

महाराष्ट्र राज्यातील कोकण विभागात बहुसंख्य जनतेचा व्यवसाय शेती आहे. त्यामध्ये आगरी समाज हा मोठ्या प्रमाणावर शेती व्यवसाय पूर्वी पासून करत आला आहे. त्याच बरोबर शेती पुरक व्यवसाय सुद्धा करत आला आहे. शेती व्यवसाय हा परंपरागत केला

जाणारा व्यवसाय आज सुद्धा मोठ्या प्रमाणावर केले जाते, त्या बरोबर शेतीला पुरक व्यवसाय म्हणून कुक्कुटपालन व्यवसाय केले जाते. सामाजिक, आर्थिक दर्जा सुधारण्यास आगरी समाजाच्या कुक्कुटपालन व्यवसायाच्या योगदानाबाबत सर्वांना माहिती होईल. तसेच आज बरेच ग्रामीण भागातील लोकसुद्धा नोकरीसाठी स्थलांतर करतात, व्यवसाय कोणीच करत नाही हे लोकांच्या निदर्शनात आणायचे आहे कि, नोकरी करणारे लोक यांच्या साठी आगरी समाजाच्या कुक्कुटपालन व्यवसायाचे योगदान महत्वाचे आहे, आज आगरी समाज हा कुक्कुटपालन व्यवसायाच्या जोरावर समाजाने आपले विकास केले आहे. आगरी समाजाबरोबरच ईतर समाजाला देखील याचा फायदा होणार आहे.

- १) कुक्कुटपालन व्यवसायामुळे आगरी समाजाच्या विविध गरजांची पूर्तता करण्यास मदत होईल.
- २) यामुळे समाजातील घटकांना व्यवसायांचे महत्व लक्षात येईल व कुक्कुटपालन व्यवसायाची स्थापना करण्यास प्रोत्साहन मिळेल.
- ३) ग्रामीण आगरी समाजाच्या कुक्कुटपालन व्यवसायाचा विकास होण्यास मदत होईल.
- ४) व्यवसायामुळे आगरी समाजाचा सर्वांगीण विकास होईल.

२. संशोधन पद्धती

प्रस्तुत शोधनिबंधात प्राथमिक आणि दुय्यम स्त्रोतांच्या आधारे तथ्य संकलन केले जाईल. यासाठी प्रत्यक्ष निरीक्षण, मुलाखत, प्रश्नावली इत्यादींचा वापर करण्यात येणार आहे. शिवाय दुय्यम स्त्रोतांच्या आधारे शासकिय अहवाल, मासिके, माहिती गोळा केली जाईल.

संशोधनाची नमुना निवड

प्रस्तुत विषयाच्या अध्ययनासाठी यादृच्छिक नमुना निवड पद्धतीचा अवलंब केला जाणार आहे. सदर नमुना निवड ही सहेतुक नमुना निवड पद्धतीने करण्यात येणार आहे. प्रस्तुत संशोधनात पुढीलप्रमाणे संशोधनाचा नमुना निवड संशोधकाने निवडले आहे. संशोधनासाठी विशेष संदर्भ म्हणून भिवंडी तालुक्यातील ग्रामीण भाग व यादृच्छिक पद्धतीने तालुक्यातील दहा टक्के गावांचा म्हणजे १३ गावे व प्रत्येक गावातील एक व्यवसायीक म्हणजेच १३ गावातील १३ व्यवसायीकांचा/ मुलाखत धारकांचा संशोधनात समावेश असणार आहे.

तक्ता: सर्वेनुसार भिवंडी तालुक्यातील ग्रामीण भागातील कुक्कुटपालन व्यवसायीक

क्र.	भिवंडी तालुक्यातील गावे	पोल्ट्री फार्म	मुक्त संचार	एकुण
.	सावंदे	1		1
.	आनगाव	--	1	1
.	कारिवली	--	1	1
.	एलकुंदे	1	--	1
.	कोन	1	--	1
.	गोवे	1	--	1
.	सरवली	--	1	1
.	सोनाळे	--	1	1
.	रांजणोली	1	--	1
0.	सापाड	--	1	1
1.	शेलार	--	1	1
2.	बोरपाडा	1	--	1
3.	वालशिंद	1	--	
	एकुण	7	6	13

संशोधनाची साधने

प्राथमिक स्रोत:

प्रश्नावलीचा समावेश आहे. प्रश्नावलीस मिळालेल्या उत्तरांमधून अनुमान व निष्कर्ष मिळत असतात. त्यामुळे मिळालेल्या माहिती संकलनात सरासरी, उपलब्धता, टक्केवारी, अशा साधनांचा वापर करून उद्दिष्ट व गृहितकांची सत्यता असत्यता संशोधक पडताळणार आहे. तसेच मिळालेल्या माहितीचे संकलन

करून तक्त्यात, आलेखाद्वारे, तुलनात्मक परिस्थिती संशोधक दाखवणार आहे. उदा. व्यवसायानुसार, उत्पन्नानुसार, अशा अनेक भागांमध्ये वर्गीकृत माहिती प्रश्नावलीच्या माध्यमातून संशोधक मिळवणार आहे.

दुय्यम स्रोत :

शासकीय कार्यालयातील सांख्यिकीय माहिती, कार्यालयातील माहिती, सन २०१७-१८, २०१८-१९ व

२०१९-२० शासकीय सर्वेक्षणों आणि योजना लेखा-जोखा अशा माध्यमांचा उपयोग होणार आहे. वृत्तपत्रे : वृत्तपत्रातील कात्रण उपयोगी पडणार आहेत.

तथ्यांचे विश्लेषण व सादरीकरण:

प्रस्तुत अध्ययनामध्ये तथ्य संकलनासाठी प्राथमिक व दुय्यम सामुग्री संकलन पद्धतीचा अवलंब केला आहे. संकलीत केलेल्या माहितीचे वर्गीकरण व्यवसाय पद्धती माध्यमातून करून त्याचे सांख्यिकीय विश्लेषण केले आहे. आवश्यक तेथे सादरीकरणासाठी तक्ते व आलेख याचा उपयोग केला आहे. निवडलेल्या अध्ययन विषयाच्या अनुषंगाने संकलीत केलेल्या तथ्यांचे विश्लेषण करून उद्दिष्टानुरूप प्रवृत्ती व तथ्ये शोधली आहेत. यादृच्छिक नमुना पद्धतीचा अवलंब करून प्रश्नावलीमार्फत प्राप्त झालेल्या माहितीची व गृहितकांची सिद्धता करण्यात आली आहे.

निष्कर्ष

H o : ग्रामीण भागातील आगरी समाज कुक्कुटपालन व्यवसायाकडे विकासात्मक दृष्टिकोनातून पाहतो.

संदर्भ सुची

- 1) जिल्हा उद्योग केंद्र , ठाणे जिल्हा, महाराष्ट्र शासन.
- 2) http://di.maharashtra.gov.in/_layouts/15/doistaticsite/Marathi/investors_guide_msme.html



अपारंपारिक ऊर्जा साधनांचा विकासाचे ग्रामीण विकासातील महत्त्व “महाराष्ट्र सौर कृषी पंप योजनेच्या वापराचा अभ्यास “ : संदर्भ - तालूका - डहाणू , जिल्हा – पालघर.

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¹ग्रामीण विकास, संत गोन्सालो गार्सिया महाविद्यालय , वसई, महाराष्ट्र.

²पर्यावरण शास्त्र, संत गोन्सालो गार्सिया महाविद्यालय, वसई महाराष्ट्र.

³शोध प्रबंध विद्यार्थिनी, संत गोन्सालो गार्सिया महाविद्यालय, वसई महाराष्ट्र

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DOI-10.5281/zenodo.7740825

१. गोष्टवारा :-

मानवाने , विज्ञान आणि तंत्रज्ञानात केलेल्या प्रगतीमुळे ऊर्जा मिळविणे शक्य झाले आहे. ऊर्जा वापराच्या क्षमतेनुसार राष्ट्राच्या प्रगतीची अवस्था ठरते.औद्योगिकीकरणामुळे ऊर्जेचा अधिकाधिक वापर होत आहे. भूपृष्ठात या ऊर्जेचे साठे उपलब्ध असले, तरी ते मर्यादित स्वरूपात आहेत. त्यांची निर्मिती होण्यास दीर्घकाळ लागतो. जीवाश्म इंधने संपुष्टात येण्याच्या मार्गावर आहेत. मानवी आयुष्याच्या कालावधीत या ऊर्जा संसाधनांची निर्मिती होऊ शकत नाही.अशा अपारंपरिक ऊर्जा संसाधनांवर उपाय म्हणून अपारंपारिक ऊर्जा संसाधनांची निर्मिती झाली .अपारंपारिक ऊर्जा निर्मिती लाभ्यार्थ्यांचे सर्वेक्षण , मुलाखतीद्वारे केल्यानंतर तिथल्या आदिवासी विभागातील , अल्प भूधारक शेतकऱ्यांशी संवाद साधल्यानंतर असे निरीक्षण नोंदविले गेले की , अपारंपारिक ऊर्जा निर्मितीची मेगावॅट क्षमता वाढली शिवाय भविष्यकालीन दृष्टिकोनातून अपारंपरिक ऊर्जा निर्मिती धोरण २०२० खूपच फायद्याचे आहे .तसेच शेतकऱ्यांमध्ये एक आत्मविश्वास आला . परंतु ह्यासाठी शेतकऱ्यांनी काय करावे ? , ऑनलाईन फॉर्म कशा पद्धतीने भरावा ? , किती एकरसाठी कोणता एच पी चा पंप मिळेल ? (३ एच पी , ५ एच पी , ७.५ एच पी) तसेच या पंपसाठी किती भांडवल लागेल व भरावे लागतील ? , शासन किती अनुदान देईल व कोणत्या पद्धतीने आपल्याला मदत करतील ? ह्यांचा सर्वांगीण विचार होणे आवश्यक आहे .ह्या संशोधनातून इतकेच सिद्ध करण्याचे प्रयोजन आहे की , पारंपारिक पद्धतीने करत असलेली शेती व अपारंपारिक पद्धतीने करत असलेली शेती यामध्ये फायदेशीर पद्धत कोणती याबद्दल शेतकऱ्यांमध्ये स्व - जागृती निर्माण करणे गरजेचे ठरणार आहे . तसेच ह्या संशोधनाद्वारे शासनालाही योग्य उपाययोजना साकारण्यासाठी सहाय्य होऊ शकते

सूचक शब्द :-ग्रामीण भागातील आदिवासी शेतकरी , अपारंपारिक ऊर्जा संसाधनांमुळे , विकास, तालूका - डहाणू , जिल्हा - पालघर .

प्रस्तावना :-

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रगुती वापरासाठी किंवा औद्योगिक कारणांसाठी लागणारी ऊर्जा (उष्णता, प्रकाश किंवा वीज) मिळविण्यासाठी जे पदार्थ अथवा वस्तू वापरल्या जातात, त्यांना ऊर्जा संसाधने म्हणतात. निसर्गात या संसाधनांचे प्रमाण व्यावहारिक दृष्ट्या अमर्याद आहे. त्यांच्या नूतनीकरणास सापेक्षतः अल्प कालावधी लागतो. बहुतांशी अक्षयक्षम ऊर्जा संसाधनांच्या ऊर्जेचा प्रत्यक्ष-अप्रत्यक्ष स्रोत सूर्य आहे. त्यामुळे जोपर्यंत सूर्य आहे, तोपर्यंत ही ऊर्जा संसाधने कार्यक्षम राहतील. यात सौर

ऊर्जा, पवन ऊर्जा, भूऔष्णिक ऊर्जा इ. संसाधनांचा समावेश होतो. ही ऊर्जा संसाधने संपुष्टात येत नसल्याने त्यांना ‘शाश्वत ऊर्जा संसाधने’ असेही म्हणतात. अन्न, लाकूड, पाणी व पिकांची अपशिष्टे ही इतर जैविक इंधनेसुद्धा नूतनीक्षम संसाधने आहेत. अशा जैविक इंधनांचा त्याच्या पुनर्निर्मितिक्षमतेपेक्षा अधिक वेगाने वापर केला, तर तेसुद्धा संपुष्टात येतील. या निसर्गनिर्मित ऊर्जा संसाधनांचे योग्य

नियोजन व व्यवस्थापन केल्यास ते निरंतरपणे उपलब्ध होऊ शकतात.

ऊर्जा संसाधनाचे वर्गीकरण आणखी एका प्रकारे केले जाते:

(१) पारंपरिक ऊर्जा संसाधने व

(२) अपारंपरिक ऊर्जा संसाधने. सरपण, शेणाच्या गोवऱ्या, पेंढा हे पारंपरिक इंधन वर्षानुवर्षे वापरले जात आहे. याशिवाय कोळसा, खनिज तेल, जल ऊर्जा, अणुऊर्जा इत्यादींचा पारंपरिक ऊर्जा संसाधनांत समावेश होतो. सौर ऊर्जा, पवन ऊर्जा, सागरी लाटांची ऊर्जा, औष्णिक ऊर्जा, रासायनिक ऊर्जा. इंधनकोशिका, घन अपशिष्टे, हायड्रोजन इत्यादींचा समावेश अपारंपरिक ऊर्जा संसाधनांत होतो.

महाराष्ट्र सौर कृषी पंप योजनेचे प्रकार :-

३ एच पी पंप : ३ एकरपेक्षा कमी जमीन असलेल्या शेतकऱ्यांना लाभ मिळतो.

५ एच पी पंप : ५ एकर पेक्षा जास्त जमीन असलेल्या शेतकऱ्यांना लाभ मिळतो . तसेच ७.५ एचपी पंपाचा लाभ मिळतो.

संशोधनाचे महत्त्व :-

आजही असे बरेच शेतकरी आहेत . जे आपल्या शेतात डिझेल आणि इलेक्ट्रिक पंपांनी शेती करतात, त्यामध्ये त्यांचा खूप खर्च होतो . कारण , डिझेल पंप खूप महाग आहेत. ही तक्ता क्र. १ पालघर जिल्ह्यातील तालुके

समस्या लक्षात घेता राज्य सरकारने ही योजना सुरू केली आहे. महाराष्ट्र मुख्यमंत्री सौर कृषी पंप योजना २०२२ अंतर्गत राज्य सरकार राज्यातील शेतकऱ्यांना त्यांच्या शेती सिंचनासाठी सौर पंप पुरवणार आहे. सौर पंप योजनेंतर्गत राज्य सरकार पंप खर्चाच्या ९५ % अनुदान देते. शेतकऱ्यांना फक्त ५% रक्कम भरावी लागेल. महाराष्ट्र सौर कृषी पंप योजना २०२२ च्या माध्यमातून सौर पंप मिळवून शेतकऱ्यांच्या उत्पन्नात देखील वाढ होईल आणि त्यांना बाजारपेठेतून जास्त किमतीचे पंप खरेदी करावा लागणार नाही. या सौर पंपांच्या अस्तित्वामुळे पर्यावरणाचे प्रदूषण देखील होणार नाही.

संशोधनाची उद्दिष्टे :-

१) " महाराष्ट्र सौर कृषी पंप योजने " ची पार्श्वभूमी तपासणे .

२) " महाराष्ट्र सौर कृषी पंप योजना " ग्रामीण विकासासाठी फायदेशीर आहे किंवा नाही हे तपासणे .

संशोधनाची व्याप्ती :-

पालघर जिल्ह्यातील ८ तालुक्यांपैकी डहाणू या तालुक्याची निवड केली आहे .तसेच डहाणू तालुक्यातील १४ गावांमधील " महाराष्ट्र सौर कृषी पंप " (३ एच पी) प्राप्त झालेले २९ आदिवासी शेतकऱ्यांचा समावेश आहे .

अ.क्र .	तालुका	महाराष्ट्र सौर कृषी पंप (३ एच पी) लाभार्थ्यांची संख्या
१.	मोखाडा	८
२.	तलासरी	१८
३.	वसई	-
४.	विक्रमगड	१८
५.	पालघर	६
६.	डहाणू	२९
७.	जव्हार	२७
८.	वाडा	-
	एकूण	१०६

संदर्भ : (Maharashtra State Electricity Distribution Company Limited Ag Offgrid

Solar Circle Wise Revenue List As On 20/09/2022.)

संशोधनाची रूपरेषा :-

डॉ. अरुण पां. माळी , नंदकुमार झांबरे , सोनल वि .सावर

१. ऑगस्ट २०१४ रोजी विभागलेल्या ठाणे जिल्ह्यातील देशातील सर्वात मोठा नागरी समुद्र - टेकडीचा भाग किंवा ३६ वा नवीन जिल्हा पालघर अस्तित्वात आला . जिल्ह्यात मोखाडा , तलासरी , वसई , विक्रमगड, पालघर , डहाणू , जव्हार आणि वाडा असे एकूण ८ तालुके आहेत . यापैकी डहाणू या तालुक्याची निवड करून . या तालुक्यातील १४ गावांमधील " महाराष्ट्र सौर कृषी पंप योजना " प्राप्त झालेले आदिवासी शेतकरी एकूण २९ लाभार्थ्यांची निवड केली आहे .

तत्काळक्रमांक - १ . " महाराष्ट्र सौर कृषीपंप योजना "

संशोधनाचे विश्लेषण :-

"महाराष्ट्र सौर कृषीपंप" योजना भाग - १

" महाराष्ट्र सौर कृषी पंप " योजना कोणत्या पद्धतीने व सदर योजनेची माहिती कोणाकडून मिळाली , शासनातर्फे मिळणारे अनुदान किती ? , अर्ज केल्यानंतर प्रत्यक्ष योजनेची सुरुवात , सौर कृषीपंपचे स्वरूप तसेच शेतकऱ्यांचे शेतीसंदर्भात इतर सर्व गोष्टींचा तपशील खालीलप्रमाणे आहे .

अ. क्र.	" महाराष्ट्र सौर कृषीपंप " योजना भाग - १							
१.	शेतजमीन प्राप्तीचा प्रकार	वारसा हक्क	खरेदी हक्क	भाडेपट्टी हक्क	दोघांचे हिस्से			
		१६	-	-	१३			
२.	जमिनीचे एकूण क्षेत्रफळ / भू - धारकाचा प्रकार	किरकोळ भूधारक (० - १ एकर)	लहान भूधारक (१ - २ एकर)	अर्ध मध्यम भूधारक (२ - ३ एकर)	मध्यम भूधारक (३ - ४ एकर)	मोठी भूधारक (४ - ५ एकर)		
		११	६	८	१	२		
३.	जमिनीमध्ये लागवड करत असणारी पिके	खरीब पिके	रब्बी पिके	बागायती पिके	उन्हाळी पिके			
		१०	१०	१	८			
४.	जल स्रोत	तलाव	सरोवरे	नदी	विहीर	कालवे	बोरव्हेल	
		-	-	१	११	-	१७	
५.	पाणी देण्याच्या पद्धती	पारंपरिक	आधुनिक					
		१२	१७					
६.	सदर योजनेची माहिती	पारंपरिक समाज	आधुनिक समाज	प्रसार माध्यमे				
		५	-	२४				
७.	" महाराष्ट्र सौर कृषी पंप " योजनेची पद्धत	ऑनलाईन	ऑफलाईन					
		२९	-					
८.	शासनातर्फे मिळणारे अनुदान	डी. डी .	रोख रक्कम	शेतकऱ्यांच्या बँक खात्यामध्ये	इतर			
		-	-	२९	-			

९.	प्रत्यक्ष योजनेची सुरुवात	महिना	वर्ष					
		१ महिना	२ महिना	३ महिना	४ महिना	५ महिना	६ महिना	१ वर्ष
		५	१	५	१	१	१	१५
१०.	महाराष्ट्र सौर कृषी पंपाचे स्वरूप	जुनी सौर कृषी पंप	नवीन सौर कृषी पंप					
		-	२९					

(संदर्भ - प्राथमिक मुलाखतीद्वारे २०२३)

वरील कोष्टकावरून असे दिसून येते की , एकूण लाभार्थ्यांची संख्या २९ असून या लाभार्थ्यांचे विभाजन विविध प्रकारे झालेले दिसून येते .तसेच सदर योजनेसंदर्भात देखील माहिती मिळते .

"महाराष्ट्र सौर कृषीपंप " योजनाभाग – २

तत्काक्रमांक - २. " महाराष्ट्रसौरकृषीपंप " योजनेपासून शेतकऱ्यांच्या उत्पन्नात होणारी वाढ

" महाराष्ट्र सौर कृषीपंप " योजनेचा लाभ , ऋतुमानानुसार वापर करणे , योजनेच्या लाभ घेण्याचे कारण ? , शेतीमध्ये वापरण्यात येणारे खत , शेतकऱ्यांचे योजने अगोदर आणि नंतरचे एकूण वार्षिक उत्पन्न , समस्या तसेच शेतकऱ्यांचे " महाराष्ट्र सौर कृषीपंप " योजनासंदर्भात मत इत्यादींचा तपशील खालीलप्रमाणे

अ. क्र.	" महाराष्ट्र सौर कृषीपंप " योजनाभाग – २					
१.	" महाराष्ट्र सौर कृषी पंप " योजनेचा लाभ	१ वेळा	२ वेळा			
		२९	-			
२.	१२. महाराष्ट्र सौर कृषी पंप (३ एच पी) ऋतुमानानुसार	उन्हाळा		पावसाळा		
		सकाळ	संध्याकाळ	सकाळ	संध्याकाळ	
		४ तास	३ तास	१ - २ तास	-	
३.	सौर कृषि पंप योजनेचा लाभ घेण्याचे कारण					
	अपुन्या पाणी पुरवठ्यामुळे	२९				
	वीजेची बचत करण्यासाठी	-				
	चांगल्या स्वरूपाचे उत्पादन घेण्यासाठी	-				
	इतर	-				
४.	लाभार्थ्यांच्या शेतीचे स्वरूप	पारंपरिक	आधुनिक			
		-	२९			
५.	शेतीमध्ये वापरत असलेले खत	रासायनिक	सैद्धांतिक			
		-	२९			
६.	शेतकऱ्यांचे एकूण वार्षिक उत्पन्न	एकूण लाभार्थ्यांची संख्या	" महाराष्ट्र सौर कृषी पंप योजना " प्राप्त करण्या अगोदरचे शेतकऱ्यांचे एकूण वार्षिक उत्पन्न	" महाराष्ट्र सौर कृषी पंप योजना " प्राप्त केल्या नंतरचे शेतकऱ्यांचे एकूण वार्षिक उत्पन्न		

		२९	१० ते ४० हजार रुपये	१ ते २ लाख रुपये	
७.	महाराष्ट्र सौर कृषि पंप वापरताना समस्या येतात का?	होय	नाही		
		२	२७		
८.	समस्या येतात तर कोणत्या ?	समस्या	समस्या येणाऱ्या लाभार्थ्यांची संख्या		
		बॅटरी चार्ज होत नाही	-		
		सूर्याचे तापमान कमी असल्यामुळे सौर ऊर्जा व्यवस्थित सुरु होत नाही	-		
		यांत्रिक अडचण	२		
		इतर	-		
९.	समस्येवरील उपाय	सबसिडी	५ वर्ष व्हॉरंटी	कृषी खात्यामधील कर्मचारी पाठवून यंत्रणेमध्ये सुधारणा करणे	
		-	२९	-	
१०	महाराष्ट्र सौर कृषि पंप योजनेबद्दल मत	चांगले	वाईट		
		२९	-		

(संदर्भ - प्राथमिक मुलाखतीद्वारे २०२३)

वरील कोष्टकावरून असे लक्षात येते की , एकूण लाभार्थ्यांची संख्या २९ असून या लाभार्थ्यांचे विभाजन विविध प्रकारे झालेले दिसून येते. सदर योजनेच्या लाभ घेतल्यामुळे तसेच इतर साधनांचा वापर केल्यामुळे शेतकऱ्यांच्या वार्षिक उत्पन्नात वाढ झालेली दिसून येते .

१०. अभ्यासाचे महत्वाचे निष्कर्ष :-

१. " महाराष्ट्र सौर कृषि पंप योजना " ही एक महाराष्ट्र राज्य सरकार प्रमुख योजना आहे की , योजना महाराष्ट्रातील शेतकऱ्यांना शेती सिंचनासाठी सौर पंप (महाराष्ट्र सौर पंप योजना) उपलब्ध करून देणार आहे . यासाठी लाभार्थ्यांची पात्रता ठरवली आहे . त्याचप्रमाणे लाभार्थीला योग्य रीतीने सौर कृषि पंप बसवून शेतीतही सिंचन करून देणे म्हणून या योजनेकडे बघितले जाते .
२. " महाराष्ट्र सौर कृषि पंप योजने " ची माहिती लाभार्थ्यांना प्रामुख्याने महावितरण मधील कृषि खात्यामध्ये मिळालेले

दिसून येते . तसेच सामाजिक माध्यम यु - ट्यूब द्वारे सुद्धा माहिती मिळते . त्यामुळे शेतकऱ्यांना माहिती मिळण्याचे हे प्रमुख व दुय्यम असे दोन्ही स्वरूपाचे स्रोत आहेत हे निदर्शनास येते .

३. " महाराष्ट्र सौर कृषि पंप योजनेतर्गत " राज्य सरकार पंप खर्चाच्या ९५ % अनुदान देते . शेतकऱ्यांना फक्त ५ % रक्कम भरावी लागेल . एकरपेक्षा कमी जमीन असलेल्या सर्व शेतकऱ्यांना ३ एच पी पंप आणि ५ एकर पेक्षा जास्त जमीन असेल तर त्या शेतकऱ्यांना ५ एच पी किंवा ७.५ चे पंप मिळतील .. " महाराष्ट्र सौर कृषि पंप योजनेचा " लाभ घेण्यासाठी शेतकऱ्यांकडे विहिरकिंवा बोरव्हेल असणे आवश्यक आहे .
४. डहाणू तालुक्यातील , एकूण १८ गावांपैकी १४ गावातील आदिवासी शेतकऱ्यांनी " महाराष्ट्र सौर कृषि पंप " योजनेचा लाभ घेतला आहे .

शिफारस :-

१. " महाराष्ट्र सौर कृषी पंप योजना " फॉर्म भरून प्रत्यक्ष योजनेचा लाभ घेण्यामध्ये जास्त कालावधी लागतो . हा कालावधी कमी करून लवकरात लवकर शेतकऱ्यांपर्यंत योजना पोहचवावी.
२. " महाराष्ट्र सौर पंप योजना " वेगवेगळ्या कंपनीद्वारे बनविले आहे . यामध्ये काही कारणास्तव " सौर पंप " बंद किंवा तांत्रिक अडचणीमुळे बंद पडल्यावरती शेतकऱ्यांसमोर मोठा प्रश्न निर्माण होतो . यासाठी शासनाने काही बंधनकारक उपाय सुचविणे आवश्यक.

निष्कर्ष :-

" महाराष्ट्र सौर कृषी पंप योजना " ग्रामीण भागातील शेतकऱ्यांच्या विकासासाठी योग्य आहे दिसून येते .

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महिला सशक्तिकरण और आर्थिक विकास

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DOI- 10.5281/zenodo.7740833

महिलाएं हमारे देश की आधी आबादी हैं, जब अधिक महिलाएं काम करती हैं, तो इसका सीधा असर हमारी अर्थव्यवस्था पर पड़ता है। महिला आर्थिक सशक्तिकरण सकारात्मक विकास परिणामों और उत्पादकता को बढ़ाता है, इसके आलावा यह आर्थिक विविधीकरण और आय समानता को भी बढ़ाता है। भारत जैसे देश में जहां गहरी पितृसत्ता वाले समाज के रूप में, भले ही महिलाएं रोजगार प्राप्त करना चाहती हों, लेकिन दूषित और रूढ़िवादी सामाजिक सोच के कारण महिला घरेलू जिम्मेदारी की प्रमुख वाहक के रूप में मानी जाती हैं। और यही सोच उनके पुरुष समकक्षों की तुलना में उनकी आर्थिक उन्नति और अवसरों तक पहुंच को सीमित करती है। इस तरह के परिदृश्य में, स्वयं सहायता समूह उन महिला उद्यमियों के बीच एक ब्रिज के रूप में कार्य कर रहे हैं जिनके पास अपना उद्यम शुरू करने की इच्छा है, लेकिन उनके पास अपने सपने को पूरा करने के लिए पर्याप्त संसाधन और माहौल नहीं हैं।

सामूहिक प्रयासों ने बढ़ाई अर्थव्यवस्था में महिलाओं की भागीदारी

महिलाओं के अधिकारों और लैंगिक समानता को फलीभूत करने के लिए महिला आर्थिक सशक्तिकरण केंद्रीय आवश्यकता है। इसमें मौजूदा बाजारों में समान रूप से भाग लेने की महिलाओं की क्षमता; उत्पादक संसाधनों तक उनकी पहुंच और नियंत्रण, अच्छे कामों तक पहुंच, अपने समय, जीवन और शरीर पर नियंत्रण; और घर से लेकर अंतरराष्ट्रीय संस्थानों तक सभी स्तरों पर निर्णय लेने में उनकी सक्रिय और सार्थक भागीदारी शामिल है।

अर्थव्यवस्था में महिलाओं को सशक्त बनाना और काम की दुनिया में लैंगिक अंतर को खत्म करना सतत विकास के लिए 2030 एजेंडा को प्राप्त करने की कुंजी है। समाज को एक साथ रखने की अधिकांश जिम्मेदारी महिलाएं ही उठाती हैं, चाहे वह घर हो, स्कूल हो, स्वास्थ्य सेवा हो या हमारे बुजुर्गों की देखभाल। ये सभी कार्य वे आमतौर पर बिना वेतन के करती हैं। और इन कामों का हमारे समाज में कोई मूल्य नहीं समझा जाता।

महिलाओं ने बीते दशकों में स्वयं को आत्मनर्भर बनाने की दिशा में महत्वपूर्ण कदम उठाये हैं। महिलाये सांगठनिक स्तर पर अधिक मजबूती से आगे बढ़ रही हैं। उनके सामूहिक प्रयास बड़े पैमाने पर सामाजिक, आर्थिक और काफी हद तक राजनैतिक परिदृश्य पर बड़े बदलाव के

साक्षी बन रहे हैं। महिलाये संगठित हो कर ही अपनी दिशा और दशा बदल सकती है, ये बात वो समझ चुकी है। शुरुआत में औपचारिक रूप से संचालित समूहों ने समय के साथ अपनी पहचान बनाई और बाद में सरकार ने भी इसकी महत्ता और शक्ति को समझते हुए औपचारिक स्वरूप प्रदान कर इन्हे मान्यता दी और प्रोत्साहित करने हेतु विभिन्न योजनाओं से जोड़ते हुए इन्हे और अधिक सशक्त करने हेतु प्रयास तेज किये। इसी के साथ देश में स्वयं सहायता समूहों की अवधारणा ने जन्म लिया और इससे महिलाओं को सांगठनिक स्तर पर एकजुट होकर अपने सर्वांगीण विकास की दिशा में तेजी से कदम बढ़ाना शुरू कर दिया।

जिन्होंने महिलाओं को आर्थिक रूप से सुदृढ़ करने में अग्रणी भूमिका निभाई है। छोटे-छोटे समूहों ने सामूहिक प्रयास से अपने स्टार्टअप शुरू किये और धीरे-धीरे भारतीय बाजारों में अपनी उपस्थिति दर्ज करवाने लगे। भारत में, वर्ष 2015 में जब स्टार्टअप इंडिया अभियान का ऐलान किया गया था। तब से नए लघु और मध्यम व्यवसायों की संख्या बढ़ रही है। इस अभियान का मुख्य उद्देश्य स्टार्ट-अप के लिए आर्थिक मदद को बढ़ावा देना है ताकि देश के आर्थिक विकास में स्टार्टअप अपनी भूमिका निभाते रहें। इस अभियान ने कई स्मॉल बिजनेस और स्टार्ट-अप को प्रोत्साहित किया है, जो अधिक रोजगार सृजन को भी बढ़ावा दे रहे हैं और राष्ट्र की आर्थिक ग्रोथ में मदद कर रहे हैं।

भारत में स्टार्टअप क्षेत्र तेजी से बढ़ रहे हैं। एक आर्थिक सर्वेक्षण में कहा गया है कि भारत ने यूके को पीछे छोड़ते हुए अमेरिका और चीन के बाद तीसरे सबसे बड़े स्टार्टअप देश के रूप में उभर कर सामने आया, जिसने 2021 में क्रमशः 487 और 301 यूनिकॉर्न जोड़े। 14 जनवरी 2022 तक भारत India में 83 यूनिकॉर्न थे, जिनका कुल मूल्यांकन यूएसडी 277.77 बिलियन था। नतीजतन, अमेरिका और चीन के बाद भारत दुनिया का तीसरा सबसे बड़ा स्टार्टअप इकोसिस्टम बन गया है।

इस उपलब्धि तक पहुंचने की यात्रा बड़ी लम्बी है और इसका श्रेय सालों पहले छोटे-छोटे समूहों के द्वारा किये गए भागीरथी प्रयासों को दिया जाये तो ये गलत नहीं होगा। और विशेषकर जैसा हमने पहले ही बताया की भारत में महिलाओं के समूहों ने अपने स्वयं के प्रयासों और सीमित संसाधनों के साथ सामाजिक विसंगतियों से जूझते हुए जो कीर्तिमान स्थापित किये वो अतुलनीय हैं। और उनसे प्रेरणा ले कर न सिर्फ भारत बल्कि पूरी दुनिया में महिलाओं का व्यापार जगत में दबदबा स्थापित हुआ और महिलाओं को उद्यमिता के क्षेत्र में नई पहचान मिली। भारत में महिला उद्यमिता और आत्मनर्भरता की अलख जगाने वाले कुछ सामूहिक प्रयास जहाँ से महिला उद्यमिता की नींव पड़ी।

महिला उद्यमिता से महिला सशक्तिकरण

पिछले कुछ दशकों में, कामकाजी महिला पेशेवरों ने अपनी प्रतिभा, समर्पण और उत्साह के साथ कड़ी मेहनत से काम किया है। वे भारत के आर्थिक विकास और समृद्धि में बड़े पैमाने पर योगदान कर रही हैं। वर्तमान में, भारत में लगभग 432 मिलियन कामकाजी महिलाएं हैं, जिनमें से 343 मिलियन असंगठित क्षेत्र में कार्यरत हैं।

महिलाओं के आर्थिक सशक्तिकरण हेतु चल रही योजनाएं

इंदिरा महिला शक्ति उद्यम प्रोत्साहन योजना
महिला स्वयं सहायता समूह कार्यक्रम
राष्ट्रीय खाद्य सुरक्षा मिशन बीज मिनिमिड
इन्दिरा गांधी राष्ट्रीय विधवा पेंशन योजना
जन समूह बीमा योजना
बाजार के बुनियादी ढांचे का सृजन/विकास
राजस्थान कृषि प्रसंस्करण, कृषि व्यवसाय एवं कृषि निर्यात प्रोत्साहन योजना 2019
सूक्ष्म और लघु उद्यम क्लस्टर विकास कार्यक्रम (एमएसई-सीडीपी)
अमृता हाट बाज़ार
कौशल सामर्थ्य योजना
भामाशाह योजना

नारी शक्ति पुरस्कार
सावित्री बाई फुले महिला कृषक सशक्तिकरण योजना
महात्मा ज्योतिबा फूले मंडी श्रमिक कल्याण योजना
धन लक्ष्मी महिला समृद्धि केन्द्र
सुकन्या समृद्धि योजना
प्रधानमंत्री उज्ज्वला योजना
सुरक्षित मातृत्व आश्रय सुमन योजना
फ्री सिलाई मशीन योजना
प्रधानमंत्री समर्थ योजना
महिला शक्ति पुरस्कार
वृद्धावस्था, विधवा/परित्यक्ता एवं विधेय योग्यजन पेंशन
माता यशोदा पुरस्कार योजना
इंदिरा गांधी राष्ट्रीय वृद्धावस्था पेंशन योजना, इंदिरा गांधी राष्ट्रीय विधवा पेंशन योजना
संशोधित महिला विकास ऋण योजना
राज्य योजनान्तर्गत वित्तीय सहायता योजना
गरिमा बालिका संरक्षण एवं सम्मान योजना, 2016

आर्थिक विकास और महिलाएं

महिलाएं आर्थिक विकास के मामले में तब आगे बढ़ेंगी जब लड़कियां शिक्षित होकर आगे बढ़ जायेंगी। इस तरह महिलाएं अपनी शिक्षा का उपयोग खुद के व्यवसाय में शुरू करने की कोशिश करेंगी और महिलाओं का समाज के आर्थिक विकास में भी योगदान बढ़ेगा। लगातार बढ़ रही आर्थिक असमानता भारत के आर्थिक विकास में बहुत बड़ी रुकावट है। भारत की कुल 'एमएसएमई' का सिर्फ उन्नीस प्रतिशत महिलाओं द्वारा संचालित हो रहा है। महिलाओं का वेतन भी पुरुषों के वेतन का पैंसठ प्रतिशत है। रोजगार में आर्थिक सुधारों में महिलाओं के आर्थिक विकास को मुख्य रूप में देखा जाना चाहिए। एक रिपोर्ट के अनुसार यदि भारत में महिलाओं को रोजगार में पुरुषों के बराबर ही तबज्जो मिल जाए, तो अर्थव्यवस्था में बिना कोई परिवर्तन हुए भी जीडीपी सात अरब अमेरिकी डालर तक बढ़ सकती है।

महिलाओं का आर्थिक विकास तभी सफल हो पायेगा जब हर महिला रोजगार को अपना लक्ष्य बना दे। भारत में वर्तमान महिला आर्थिक विकास से संबंधित कार्यों और नीतियों पर एक दृष्टि डालें, तो पाएंगे कि ये बात सच है कि आजादी के इतने वर्षों बाद भी महिला सशक्तिकरण का विचार हमारे जेहन में तो आता है लेकिन इस पर महत्वपूर्ण कार्य करना अभी बाकी है। समाज में धीरे-धीरे बदलाव देखने को मिल रहा है, जिसमें माता-पिता अपनी बेटी के लिए तकनीकी तथा व्यावसायिक प्रबंधन की शिक्षा को ज्यादा से ज्यादा प्राथमिकता देने की कोशिश कर रहे हैं।

आज भी हमारा समाज उद्यमिता में महिलाओं को कमजोर समझता है और लोगों की मानसिकता है कि बिजनेस करना सिर्फ पुरुषों का काम है। हमारी मानसिकता

है कि छोटे बच्चों के पालन-पोषण की जिम्मेदारी महिला की ज्यादा होती है, जिसके कारण शिक्षित महिलाएं नौकरी को प्राथमिकता नहीं दे पाती हैं। लेकिन अगर महिलाएं खुद आगे बढ़ कर कोई भी रोजगार करने का निश्चय करें तो आर्थिक विषमता कम होगी।

महिलाएं सिलाई, कढ़ाई, पेंटिंग, ब्यूटी पार्लर, कुकिंग, डांसिंग आदि से संबंधित कई तरह के प्रशिक्षण ले सकती हैं। लेकिन इन सबके बावजूद सबसे ज्यादा जरूरत इस बात की है कि इन सब प्रशिक्षण के बाद भी महिलाओं को उद्यमिता के बारे में भी सिखाना जरूरी है। महिलाओं को मार्केटिंग के बारे में जानना जरूरी है। यदि महिलाओं को उद्यमिता की तरफ मोड़ा जाये तो यह समाज में एक क्रांतिकारी बदलाव ला सकता है। अब समय आ गया है, जब स्त्री को आर्थिक विकास की मुख्यधारा में पुरुष के समान ही महत्व दिया जाए।

महिला सशक्तिकरण की रणनीति

महिलाओं की उन्नति, विकास और सशक्तीकरण की रणनीति के उद्देश्य निम्न हैं-

महिलाओं के प्रति भेदभाव को खत्म कर विभिन्न प्रणालियां बनायी जाये

आर्थिक एवं सामाजिक नीतियों के द्वारा महिलाओं का पूर्ण विकास के लिए माहौल बनाना

सामाजिक सुरक्षा, बराबर वेतन, व्यावसायिक तरीके, स्वास्थ्य देखभाल, गुणवत्तापूर्ण शिक्षा, एक अच्छा करियर, रोजगार, व्यावसायिक स्वास्थ्य तथा सुरक्षा और नौकरी में बराबर पहुंच

सामाजिक सोच और सामुदायिक प्रथाओं में परिवर्तन लाना महिलाओं के प्रति भेदभाव को दूर करना

महिला संगठनों को सुदृढ़ बनाना

सामाजिक, राजनीतिक और आर्थिक जीवन में भागीदारी करने में महिलाओं की समान पहुंच

विकास की प्रक्रिया में जेंडर परिप्रेक्ष्य को शामिल करना

निष्कर्ष:-

महिलाएं हमारे देश की आधी आबादी हैं, जब अधिक महिलाएं काम करती हैं, तो इसका सीधा असर हमारी अर्थव्यवस्था पर पड़ता है। महिला आर्थिक सशक्तिकरण सकारात्मक विकास परिणामों और उत्पादकता को बढ़ाता है, इसके आलावा यह आर्थिक विविधीकरण और आय समानता को भी बढ़ाता है।

महिलाओं के अधिकारों और लैंगिक समानता को फलीभूत करने के लिए महिला आर्थिक सशक्तिकरण केंद्रीय आवश्यकता है। महिला उद्यमियों के लिए मानसिक और आर्थिक रूप से उनकी सफलता की यात्रा के लिए अधिक सहयोग और अवसर प्रदान करना समय की मांग है।

सन्दर्भ ग्रन्थ सूची

SR NO.	पुस्तक का नाम	लेखक	प्रकाशक	वर्ष
1	महिला सशक्तिकरण	डॉ उषा रानी	नयी दिल्ली	2016
2	महिला सशक्तीकरण दशा और दिशा	योगेंद्र शर्मा	लोकभारती प्रकाशन	2018
3	नारी सशक्तिकरण के नए क्षितिज	डॉ संजय कुमार द्विवेदी	ओमेगा प्रकाशन, नई दिल्ली	2021
4	महिला सशक्तिकरण एवं वैश्वीकरण	डॉ ज्ञान प्रकाश गौतम	कला प्रकाशन	2009
5	महिला सशक्तिकरण (आहार एवं पोषण के संदर्भ में)	डॉ कुमकुम रंकावत और डॉ राका श्रीवास्तव	राजस्थानी ग्रंथागार, जोधपुर	2019



पंचायतराज व्यवस्थेतील गावपातळीवरील प्रशासनाची भूमिका व कार्यपद्धती

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DOI-10.5281/zenodo.7740847

घोषवारा (Abstract) :-

पंचायतराज व्यवस्था ही भारतातील ग्रामीण स्थानिक स्वराज्य संस्थांची विशिष्ट व्यवस्था होय.पंचायतराज चे उद्दिष्ट केवळ स्थानिक पातळीवरील लोकोपयोगी कामे करण्यासाठी प्रशासकीय यंत्रणा उभी करणे एवढ्यापुरते मर्यादित नाही.

महाराष्ट्रातील पंचायतराज त्रिस्तरीयव्यवस्थेतील तिसऱ्या स्तरावर म्हणजे गावपातळीवर कार्य करणारी संस्था म्हणजे ग्रामपंचायत होय. गावपातळीवर विकास कामांचा विचार करता गावपातळीवरील प्रशासन याना खूपच महत्वाची भूमिका बजावावी लागते.ग्रामीण जनतेशी प्रत्यक्ष संपर्क साधणारी लोकशाही संस्था असे तिचे स्वरूप असल्याने तिला पंचायतराज चा पायाभूत घटक मानले जाते.त्यामुळे ग्रामीण जनतेला विकासाच्या कार्यक्रमात सहभागी करून घेण्याचे पंचायतराज चे उद्दिष्ट साध्य करण्याच्या दृष्टीने ग्रामपंचायतीचे व गावपातळीवर काम करणारे प्रशासन यांचे योगदान अतिशय मोलाचे ठरते.

संशोधन संकल्पना (key words) :-पंचायतराज,स्थानिक स्वराज्य संस्था,प्रशासन,ग्रामपंचायत,मुलकी प्रशासन.

संशोधन पद्धती :-

प्रस्तुत संशोधनाकरिता संशोधकाने द्वितीय सामुग्रीचा वापर करून माहिती संकलित केली आहे.यामध्ये विविध मासिके ,संशोधन लेख ,संदर्भग्रंथ ,पुस्तके, व इंटरनेट वरील माहितीचा वापर केला आहे.

संशोधनाची उद्दिष्टे :-

- १) पंचायतराज व्यवस्थेची पार्श्वभूमी समजून घेणे.
- २) पंचायतराज व्यवस्थेतील गावपातळीवरील प्रशासन रचना अभ्यासणे.
- ३) पंचायतराज व्यवस्थेतील प्रशासनाचे गावविकासातील योगदान समजून घेणे.

संशोधनाची गृहीतके :-

पंचायतराज व्यवस्थेत गावपातळीवर प्रशासनाचे मोलाचे योगदान आहे.

माहितीचे विश्लेषण :-

पंचायतराज व्यवस्थेत गावपातळीवर कार्यरत असलेल्या प्रशासनात ग्रामसेवक,तलाठी.पोलीस पाटील,कोतवाल,इत्यादी भूमिका महत्वाची असते.यांचे सविस्तरपणे विश्लेषण मांडले आहे.

१) ग्रामसेवक :-

ग्रामपंचायतीचा कारभार लोकप्रतिनिधींच्या मार्फत केला जात असला तरी प्रशासकीय मदतीसाठी आणि शासकीय धोरणाच्या अंमलबजावणीसाठी शासकीय कर्मचारी गरज भासते ,म्हणून पंचायतराज व्यवस्थेत ग्रामपंचायतीचा सचिव म्हणून ग्रामसेवकांची शासनाकडून नेमणूक केली जाते.ग्रामसेवक हा ग्रामपंचायत व प्रशासकीय यंत्रणा

यामधील महत्वाचा दुवा असतो.ग्रामपंचायतीचे कार्यालयीन कामकाज आणि दैनंदिन व्यवहार यासंबंधीची जबाबदारी ग्रामसेवक सांभाळतो.

२) तलाठी:-

तलाठी हा महसूल प्रशासनाचा गावातील महत्वाचा घटक असून गाव पातळीवरील महसूल प्रशासनाच्या विविध विकास योजनांची अंमलबजावणी करताना तो प्रशासकीय यंत्रणेला सहाय्य करतो.महाराष्ट्र जमीन महसूल अधिनियम १९६६नुसार जमीन महसूलाचे गाव पातळीवरील अभिलेख ठेवणे.व अद्ययावत करणे ही तलाठ्याची महत्वाची जबाबदारी आहे.तसेच जमीन महसूलाची थकबाकी व इतर वसुली योग्य रक्कामाची वसुली व त्यांचे अभिलेखेही ठेवणे हे तलाठ्याचे दुसरे महत्वाचे कर्तव्य आहे. महसूल प्रशासनातील सर्व योजना व कार्यक्रम यशस्वी करणारा गावपातळीवरील सर्वात शेवटचा घटक म्हणजे तलाठी होय.

३)पोलिस पाटील:-

पोलीस पाटील हा गावातील मुलकी प्रशासनाचा भाग असून गावातील कायदा व सुव्यवस्थेची जबाबदारी त्याच्यावर असते. गावाच्या हद्दीत घडलेल्या गुन्ह्यांची माहिती तो आपल्या वरिष्ठांना देतो. नैसर्गिक आपत्तीच्या काळात आपत्तीविषयक माहिती तहसीलदारांना देण्याची जबाबदारी पोलिस पाटलाची असते.प्रशासकीय यंत्रणा वं

पोलीस यंत्रणा यामधील महत्वाचा दुवा म्हणजे पोलीस पाटील होय.प्रत्येक खेडेगावामध्ये पोलीस पाटील हे महत्वाची भूमिका बजावत असतात.पोलीस पाटील हे गावातील तंटामुक्तीचे कार्य करत असतात.कारण ते गावातील तंटामुक्ती समितीचे पदसिद्ध सचिव म्हणून काम पाहत असतात. त्यामुळे गावामध्ये पोलीस पाटील हे एक महत्वपूर्ण असणारे पद आहे.

४) कोतवाल:-

कोतवाल हा मुलकी व महसूल प्रशासनाचा घटक असून तो गावात दबंडी देऊन सरकारी सूचना जाहीर करतो. तलाठी व पोलीस पाटलास त्याच्या कामात मदत करणे, गुन्ह्यांसंबंधी माहिती पोलीस पाटलास देणे इत्यादी कार्ये पार पाडतो.

गावात होणारे वादविवाद आणि तंटे यांच्यावर नियंत्रण आणून गावातील शांतता व सुव्यवस्था राखण्याच्या दृष्टीने ग्रामसभा आपले म्हणणे ठराव करून मुलकी प्रशासनापर्यंत पोलीस पाटलामार्फत पोहोचवू शकते. गावातील तंटे गावात मिटविणे, विवादास्पद प्रकरणांची माहिती जमा करणे, जलदगती न्यायालयात खटले चालविण्याची विनंती करणे, इत्यादीबाबत ग्रामसभा स्वतःचे धोरण तयार करून वरील यंत्रणेला सहाय्य करू शकते.

निष्कर्ष :-

- १) पंचायतराज व्यवस्थेत गावपातळीवरील विकास प्रक्रियेत प्रशासनाची भूमिका महत्वाची आहे.
- २) गावपातळीवर शासकिय योजना ची अंमलबजावणी करण्यासाठी प्रशासन महत्वाची भूमिका पार पाडत असते.
- ३) पंचायतराज व्यवस्थेत गावपातळीवरील विविध समित्या मध्ये सचिव म्हणून प्रशासन भूमिका बजावत असतात.

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शाश्वत विकास पर मँड़राता खतरा: मास मीडिया और वैश्वीकरण

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DOI- 10.5281/zenodo.7740862

आज हमारा देश गंभीर आर्थिक, सांस्कृतिक तथा भाषा के संकट से गुजर रहा है। यह संकट अलग नहीं है बल्कि एक ही व्यापक संकट के अलग-अलग अंग हैं। वह संकट कौन-सा है ? वह संकट है साम्राज्यवाद की उदारीकरण नीति, खुली अर्थव्यवस्था तथा वैश्वीकरण की जहरीली नीति। साम्राज्यवाद पूँजीवाद का ही एक विकरालतम रूप है। उसे पूँजीवाद का अंतिम चरण भी माना जा सकता है। पिछले तीन दशकों में यह रूप अपनी पूरी भयावहता के साथ दुनिया के बड़े भाग पर छा गया है। हमारा देश भी पूरी तरह इसकी छाया आ चुका है। इसके विस्तार में मास मीडिया की अत्यंत महत्वपूर्ण भूमिका रही है। पूँजीवादी संस्कृति के वाहक तथा विस्तारक जनमाध्यम होते हैं। इसी कारण आज रेडियो, टेलीविजन, सिनेमा ये सभी इस अपसंस्कृति को बढ़ावा देने में लगे हुए हैं।

वैश्वीकरण की प्रक्रिया पीछले तीस वर्षों से काफी तेजी से चलती रही है। जैसा कि इसके नाम से ही प्रतिध्वनित होता है कि वैश्वीकरण एक ऐसी प्रक्रिया है जिसका क्षेत्र समस्त विश्व है। अर्थात् इस प्रक्रिया के तहत स्थानगत प्रतिबंध या सीमाएँ नहीं होंगी। इस प्रकार वैश्वीकरण एक ऐसी भौगोलिक प्रक्रिया है जो राष्ट्र-राज्य की सीमाओं का अतिक्रमण करती है। भौगोलिक प्रक्रिया के साथ-साथ वैश्वीकरण मुख्यतः एक आर्थिक प्रक्रिया है। वैश्वीकरण की प्रमुख विशेषता पूँजी और व्यापार का उदारीकरण है। आर्थिक विकास के संदर्भ में वैश्वीकरण का अर्थ है किसी देश की अर्थव्यवस्था को अन्य देशों की अर्थव्यवस्था से जोड़कर उसे विश्वव्यापी बनाना। इसके लिए सभी वस्तुओं के आयात की खुली छूट, सीमा छूट, सीमा शुल्क में कमी, विदेशी पूँजी के मुक्तप्रवाह की अनुमति, सेवा क्षेत्र विशेषकर बैंकिंग, बीमा तथा जहाज क्षेत्रों में पूँजीनिवेश आदि उदार अर्थनीतियों को अपनाना आवश्यक है। आर्थिक उदारीकरण वैश्वीकरण की आधारभूत शर्त है, जिसके बिना देश के अर्थव्यवस्था को विश्वव्यापी आयाम नहीं दिया जा सकता। उदारीकरण का अर्थ है देश के उद्योग, व्यापार, लघु उद्योग, निर्यात की उपेक्षा कर देश में विदेशी उद्योग व व्यापार स्थापित करने एवं आयात को बढ़ावा देने की उदारता बरतना। इस प्रकार वैश्वीकरण निर्यात की तुलना में आयात तथा स्वदेशी उद्योग धंधों की अपेक्षा विदेशी उद्योग धंधों को प्रोत्साहन देने की आधारभूत नीति को अपनाकर चलता है। जो किसी भी राष्ट्र के हित में नहीं है। विश्व के बड़े पूँजीवादी राष्ट्र वैश्वीकरण को विकासशील देशों के लिए एक साम्राज्यवादी देश विकास का सब्जबाग दिखाकर

विकासशील देशों का शोषण करना चाहते हैं। विदेशी और बहुराष्ट्रीय कंपनियों द्वारा विकासशील देशों में व्यापार और उद्योग स्थापित करने की छूट लेकर उस देश के उत्पादन और वितरण पर बड़े देशों का नियंत्रण स्थापित करना है। इन कंपनियों के प्रभाव से देशी उद्योग धंधों के विकास में बाधा उत्पन्न होती है और विदेशी व्यापार दिन-ब-दिन फैलता है। इस प्रकार वैश्वीकरण स्वदेशी उद्योगों को लुंजपुंज कर विदेशी उद्योगों का विकास करता है। वस्तुतः उदारीकरण तथा वैश्वीकरण का सर्वाधिक लाभ बहुराष्ट्रीय कंपनियों को होता है। भारत का उदाहरण ले तो ये बहुराष्ट्रीय कंपनियाँ पहले देश की कंपनियों की साझेदारी में अपना काम आरंभ करती हैं और फिर अपना वर्चस्व स्थापित होने पर उन कंपनियों को या तो खरीद लेती हैं या उन्हें अपना काम बंद करने के लिए मजबूर कर देती हैं। इस तरह इन कंपनियों ने हमारे देश का शोषण किया है।

आर्थिक उदारीकरण और भारत के बाजार में विदेशी और बहुराष्ट्रीय कंपनियों को प्रवेश दिए जाने के बाद बाजार पर व्यावसायिक कंपनियों के बीच स्पर्धा तेज हो गई। इन कंपनियों ने अपने उत्पादों को बढ़ावा देने के लिए, उसे बेचने के लिए तरह-तरह के तरीके अपनाएँ। इसके लिए उन्होंने मास मीडिया का सहारा लिया। इसी के कारण अखबारों, पत्रिकाओं और जनमाध्यमों में विज्ञापन छाने लगे। लोगों में उपभोग की प्रवृत्ति को बढ़ावा देने के लिए विज्ञापन के साथ-साथ टेलिविजन पर प्रसारित होनेवाले कार्यक्रमों का भी सहारा लिया गया। इस कारण कभी मनोरंजन और अच्छे जीवन संदेश देनेवाले धारावाहिक आज भारतीय संस्कृति और मूल्यों के साथ खिलवाड़ करते हुए

उपभोक्तावाद को बढ़ावा दे रहे हैं। ऐसा केवल टेलीविजन के साथ ही नहीं हुआ समाचार पत्र, फिल्मों और कुछ हद तक साहित्य के साथ भी हुआ है। इन सब में आज आम आदमी को धीरे-धीरे बाहर कर दिया गया है। ऐसा लगता है कि आज पूरा मास मीडिया कुछ मुट्ठी भर अमीर लोगो की अय्याशी को ही दिखाने में जुटा है। "कहने की जरूरत नहीं कि कारखानों में बने उपभोक्ता सामानों के लिए बनी बाजारव्यवस्था अब दुनिया के पैमाने पर विचार, स्वाद, पसंद और विश्वास की बिक्री के लिए इस्तेमाल की जा रही है। वस्तुतः विकसित पूँजीवाद के वर्तमान मंजिल में सूचना का उत्पादन और वितरण हर मायने में प्रधान अपरिहार्य गति बन गए हैं। अमेरिका में बने संवाद, विचार, जीने के तौर-तरीके और सूचना तकनीक आंतरराष्ट्रीय स्तर पर बेचे जा रहे हैं। यह भी उतना ही महत्वपूर्ण है कि विश्वस्तर पर उनकी नकल भी हो रही है। आज रूस और अनेक यूरोपीय राष्ट्र अमेरिका के उपनिवेश बनते जा रहे हैं। मार्केट मैकेनिज्म युक्त वहाँ मीडिया साम्राज्यवाद है।" १

आज अमेरिका सारी दुनिया का मालिक बन बैठा है। सोवियत संघ जो पहले एक दूसरी महाशक्ति, थी, टूट चुका है। रूस की अर्थव्यवस्था नष्ट हो चुकी है। इसके विपरीत अमेरिकी अर्थव्यवस्था खूब पनप रही है। सैनिक दृष्टि से भी अमेरिका दुनिया का बादशाह है, और व्यापार के हर क्षेत्र में भी है। अर्थव्यवस्था का 'वैश्वीकरण' आज अमेरिकी विदेशी नीति का सर्वोपरि लक्ष्य है। सारी दुनिया एक विशाल बाजार बन जाने से उस पर दैत्याकार बहुराष्ट्रीय कंपनियों का प्रभुत्व स्थापित हो जाएगा। यह अधिकांश कंपनियाँ अमेरिकी हैं। इनकी विशालकाय अर्थसत्ता के सामने छोटे उद्योग-धन्धे बाजार में नहीं टिक सकते। व्यापार और करों सम्बन्धी वैश्विक समझौता गैट और उसके फलस्वरूप स्थापित 'विश्व व्यापार संगठन' इस वैश्वीकरण के यानी धनी मुल्कों के हित में दुनिया के बाजारों को खोलने के लक्ष्य की पूर्ति के ही साधन है। "आधुनिक पूँजीवादी अर्थव्यवस्था में आर्थिक सांगठनिक ढाँचे की बुनियादी इकाई बहुराष्ट्रीय निगम है। पूँजी के इन दैत्याकार समूहों में कुछेक सौ विश्व बाजार में माल और सेवा के उत्पादन और वितरण पर अपना अधिपत्य कायम रखते हैं। इनमें अधिकांश समूह अमेरिका के स्वामित्व के अधीन होते हैं।" २

आज विश्व पर युरोपीय और अमेरिकी सपनों का पूर्ण साम्राज्य है। इन सपनों को मालों की दुनिया तेजी से साकार कर रही है। विज्ञापनों के माध्यम से मालों की कृत्रिम आवश्यकता तैयार की जा रही है। मास मीडिया के विराटकाय तंत्र ने इन सबको सम्भव बनाने में मदद की है। नई विश्व व्यवस्था का पूँजीवादी तंत्र आज दुनियाभर के मास

मीडिया पर अपनी पकड़ के जरिए एक नई भूमंडलीय संस्कृति के निर्माण का प्रयास कर रहा है। इलेक्ट्रॉनिक मास मीडिया बहुत ही शक्तिशाली मीडिया है जो लोकजीवन को बहुत ज्यादा प्रभावित करता है। टेलीविजन दृश्य-श्रव्य माध्यम होने के कारण दर्शक इसके साथ जल्द ही एकरूप हो जाते हैं। ऐसे शक्तिशाली माध्यम का अगर सही ढंग से इस्तेमाल किया जाए तो भारत जैसे पीछड़े देश में बहुत कम समय में आर्थिक परिवर्तन हो सकता है, और प्रगति तथा विकास का रास्ता तैयार किया जा सकता है। लेकिन अब तो जो परिस्थिति है उसे देख कर ऐसा लगता है कि इस माध्यम का देश से गरीबी, बेरोजगारी, जात-पाँत, साम्प्रदायिक, धर्मान्धता, अंधविश्वास, अशिक्षा और अज्ञान दूर करने में कम लोगों को निकम्मा और अराजक बढ़ाने के लिए अधिक उपयोग किया जा रहा है। इस संदर्भ में डॉ. कृष्ण कुमार रत्न का मत विचारणीय है- "दूरदर्शन ने जानबूझकर जागृति एवं विकासोन्मुख कार्यक्रमों के स्थान पर घटिया स्तर के मनोरंजन कार्यक्रम परोसने आरंभ कर दिये हैं। जिससे देश की युवा पीढ़ी गुमराह हो रही है। वैसे भी मालूम पड़ता है कि कार्यक्रम दस प्रतिशत उच्चवर्ग के दर्शकों को ध्यान में रखकर बनाये जा रहे हैं, जिनके पास पैसा और समय होता है। यह अधिकांश कार्यक्रम जनता की आशाओं और आकांक्षाओं को प्रतिबिम्बित करने के स्थान पर हमें केवल उपभोक्तावादी व्यवस्था के मोहजाल में फँसाते हैं। अक्षील, भौंडे और विलासितापूर्ण विज्ञापनों से दर्शकों की रूचि को विकृत किया जा रहा है। जिससे लगता है कि पूरा देश संपन्नता के समुद्र में गोते लगा रहा है। जब कि वास्तविकता यह है कि लगभग आधी आबादी 'गरीबी रेखा के नीचे' जीवन यापन करने के लिए अभिशप्त है।" ३ यह सब षड़यंत्र देखकर ऐसा लगता है कि देश का आम आदमी चाहे वह किसान हो या मजदूर इस व्यवस्था के हाथों की कठपुतली है, जो इनके इशारे पर नाचने के लिए मजबूर है। जो कि स्वाधीन भारत का एक नागरिक होते हुए भी गुलामी से भरा जीवन जिने के लिए शापित है।

जिस तरह का आधुनिकीकरण हमारे यहाँ बढ़ रहा है वह अनुकरण है, एक नकल है। इसमें सृजनात्मकता का अभाव है। इसका सबसे ज्यादा दुष्प्रभाव गाँवों के किसानों और मजदूरों को झेलना पड़ रहा है। अब वे न परम्परागत रह गए हैं, और न आधुनिक ही बन पाए हैं। आज भारतीय किसानों की समस्या, उनकी आत्महत्या हमारे संपूर्ण औद्योगिक विकास पर प्रश्नचिह्न लगाती है। मौजूदा दौर में जो सांस्कृतिक संकट दिखाई दे रहा है वह मूलतः आर्थिक संकट की उपज है। "हम भारतीय हैं और भारतीय सामान खरीदें यह नारा भारतीय पूँजी के विकास का आधारभूत नारा था। इस नारे को भुला दिया गया। इसमें

भारतीय टेलीविजन की प्रमुख भूमिका है। छोटे पर्दे से विज्ञापनों के जरिए विदेशी मालों का श्रेष्ठत्व, सीधे-सीधे प्रक्षेपित किया जा रहा है। भारत में माल की दुनिया में बहुराष्ट्रीय कंपनियाँ पूरी तरह हावी हैं। वे अंतरराष्ट्रीय ब्रांड को 'स्थानीय रूप में पेश करती हैं। बहुराष्ट्रीय कंपनियों की भारत में रणनीति एक है। एक प्रवृत्ति है 'ग्लोबल इमेज' के प्रचार की, दूसरी प्रवृत्ति है 'ग्लोबल रणनीति और स्थानीय इमेज'। अनुभव से देखा गया है कि दूसरी प्रवृत्तिवाली कंपनियाँ बाजार में विजेता रही हैं। उदा. पेप्सी, हिंदुस्तान लीवर आदि। वे इसका खयाल करती हैं कि स्थानीय स्तर पर किस चीज़ का महत्व है। उसकी वे उपेक्षा नहीं करती। वे स्थानीय इच्छा और आकांक्षा को ग्लोबल इमेज के साथ बेचने में सफल हो जाती हैं। साथ ही अपने विचार और जीवन शैली को भी लोगों के दिलो-दिमाग में उतारने में सफल हो जाती हैं।" ४

कहा जा सकता है कि हमारी भारतीय अर्थव्यवस्था आर्थिक उदारीकरण और वैश्वीकरण से बहुत ज्यादा प्रभावित हुई है। विश्व के बड़े पूँजीवादी राष्ट्रों की साजिश के तहत 'मास मीडिया' के हाथों शिकार हुई है। जिस कारण हमारे जो पारंपारिक छोटे-छोटे उद्योग धंधे थे वह पूर्ण रूप से बंद हो चुके हैं। साथ ही देशी और विदेशी कंपनियों ने अपने माल को बेचने के लिए तरह-तरह के हथकंडे अपनाकर, मास मीडिया की सहायता से इस देश के आम आदमी और निम्नमध्यवर्ग को उसकी क्षमता न होते हुए भी 'कर्ज' कि दलदल में फँसाया है। उसे 'कर्ज' निकालकर किशतों में क्यों न हो वस्तुएँ खरीदने पर मजबूर किया है, बढती महँगाई और कर्ज के बोझ ने समय से पहले ही उसकी कमर झुका दी है। उस से पहले ही उसे बूढ़ा होने पर मजबूर किया है। उदाहरण के तौर पर हम देखते हैं कि यदि कोई मध्यमवर्गीय व्यक्ति अगर अपना नया घर किशतों में खरीदता है तो उसकी बची हुई जिंदगी उस घर की कर्ज की किशतों को चुकाने में ही गुजर जाती है। यह कितनी दयनीय स्थिति है।

देशी-विदेशी कंपनियों ने अपने फायदे के लिए यहाँ लोगों में कृत्रिम आवश्यकताएँ पैदा की और उन्हें अपना माल खरीदने पर मजबूर किया। इस सबका परिणाम आज हमारे सामने है। आज लोगों को अपने जीवन में कई आर्थिक कठिनाईयों का सामना करना पड़ रहा है। आज किसी मध्यमवर्गीय परिवार को बाहर से देखने पर तो ऐसा लगता है कितना सुखी और संपन्न परिवार है, लेकिन असल में वह दीमक ने खाई उस लकड़ी की तरह अंदर से खोखला होता है, जो बाहर से दिखाई नहीं देता। ठीक उसी तरह की स्थिति आज हमारे भारतीय अर्थव्यवस्था की हुई है। आए दिन समाचार पत्रों, रेडियो, टेलीविजन पर बताया जाता है कि

'शेयर बाजार का निर्देशांक आज फलों-फलों आँकड़े की उँचाईयों को छू रहा है, दिन-ब-दिन यह बढ़ता ही जा रहा है। लेकिन ध्यान देने की बात यह है कि आज अधिकांश आम आदमीयों को यह भी पता नहीं की शेयर बाजार क्या है? यह कौन-सा बाजार है। इसमें क्या खरीदा और बेचा जाता है? उसका चढ़ना और उतरना समझना तो बहुत बाद की बात है। जब तक हमारे देश के आम आदमी के आर्थिक हालात नहीं सुधर जाते तब तक हमारे देश की अर्थव्यवस्था बहुत ही शक्तिशाली है ऐसा कहना खयाली पुलाव पकाने के समान है। जिसका वास्तव से कोई संबंध नहीं है, कोई अर्थ नहीं है।

निष्कर्ष-

शाश्वत विकास पर मास मीडिया और वैश्वीकरण का खतरा मँडरा रहा है। मास मीडिया का जो शुरूआती उद्देश्य था - सूचना, शिक्षा और मनोरंजन वह आज ज्यादातर मनोरंजन तक ही सीमित होकर रह गया है। इसके बारे में आज गंभीरता से विचार किया जाना चाहिए। जनसंचार माध्यम चाहे रेडियो, दूरदर्शन, सिनेमा या अन्य कई रूपों में हो, हमारे देश के बालमन, युवापीढी, पारिवारिक संबंधों, उपभोक्तावर्ग को प्रभावित कर रहे हैं। समाज में हिंसा, प्रदर्शन, सैक्स, गुनाह आदि को बढ़ावा मिला है। आज इन माध्यमों से फैलाये जा रहे विचार जनता की मौलिक सोच-समझ को खत्म कर रहे हैं। जो कुछ समाचार पत्रों, रेडियो, दूरदर्शन, सिनेमा से मिल रहा है, वहीं सोचने-समझने के अलावा अपना कुछ सोचने के लिए न समय रहता है न इच्छा-शक्ति रहती है। इस प्रकार चिंतन में बाधा डालने और सोच को नष्ट करने में अनजाने रूप से ये माध्यम बड़ी भूमिका निभा रहे हैं। मास मीडिया की जकड़ में सभी हैं। अतः कहा जा सकता है कि, मास मीडिया की भूमिका आज के मनुष्य के जीवन में अत्यंत महत्वपूर्ण है। अगर इस मीडिया का सही ढंग से इस्तेमाल किया जाए तो निश्चित रूप से सामाजिक परिवर्तन हो सकता है। लोगों में चेतना फैल सकती है। सूचना, शिक्षा और मनोरंजन के द्वारा देश के विकास में बहुत बड़ा योगदान दिया जा सकता है। हमारी अर्थव्यवस्था, संस्कृति और भाषा को पाश्चात्य राष्ट्रों की शिकार होने से बचाया जा सकता है। देश को एकता के सूत्र में पिरोने का काम हो सकता है।

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