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संपादक

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वर्ष : 17 अंक : 4 □ अक्टूबर-दिसम्बर, 2024

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सम्पादकीय

Privatization of Banks: The Risk of Allowing Foreign Entities to have a Controlling Stake

If equity route disinvestment is ruled out, a number of foreign institutions might jump at the opportunity of taking over India's well run banks under the philosophy of 'government has no business to be in business'. In March 2020, Yes Bank was almost bankrupt due to the failure of private management. People lost their trust in the bank, and the depositors started withdrawing their deposits. The price of Yes Bank's share once fell to less than two rupees. The bank was saved from collapse only when the State Bank of India picked up 49% of its shares. After that, there was a revival in the fortunes of Yes Bank which went on to resume normal banking activities. Later, Yes Bank issued new shares and increased the shareholding of the bank, and as a result State Bank of India's stake came down to 24%. Apart from this, 11 other lending institutions have about 9.74% stake. 16.05% of Yes Bank's shares are held by two other private equity investors.

Talks of selling stock in Yes Bank to a Japanese company called Mitsubishi UFJ Financial Group have progressed. The proposed foreign buyer wants to acquire 51% of Yes Bank's shares so that it gets the decision making power. Although initially foreign entity was not agreeable to the condition of the Reserve Bank of India that it would have to bring down its promoter stake to 26% in the next 15 years, but now they have agreed. It is worth mentioning that to rescue this bank, State Bank of India had recapitalized Yes Bank by Rs. 7520 crore at the rate of Rs. 10 per share. But after the revival of the bank, the capital invested by SBI has now grown to Rs. 18000 crore. That is, it can be said that after the intervention of RBI, not only the money of the depositors was saved from sinking, but people's faith in the banking system was restored too; and in this process State Bank of India also got a capital gain of more than Rs. 10000 crore. In such a situation, it is important to consider whether it would be appropriate to hand over 51% shares of Yes Bank into foreign hands, i.e. hand over an important bank like Yes Bank to foreign hands. Under the LPG policies, many government enterprises were privatized and some sectors like insurance, where only public sector companies were working, were also opened for the private sector. Along with this, 26 percent foreign capital was first allowed in the sector and later the limit of foreign direct investment was raised. In the banking sector, private Indian and foreign banks were already working and they continued to function as before. Along with this, some public sector non-financial institutions were converted into banks and some new ones were set up to work in the private sector. But even during this period, the government kept avoiding the privatization of public sector banks.

It is worth noting that banking is an important financial sector for any country. It is true that both private and public banks are found in the world. In capitalist countries like the USA and Europe, most of the banks are in private hands. In private banks, the depositors' money is safe only to the extent of insurance. In the past years, thousands of banks went bankrupt in the US itself, due to which the depositors lost their hard-earned money. The situation in Europe is also not very different and there too, news of bankruptcies is a common thing. India is a country where, after independence and especially after the nationalization of big banks in 1969, news of private banks going bankrupt are exceptions. It is not possible for the depositors' money in public banks to be lost, because this amount is under the sovereign guarantee of the government. Due to the strict regulation of the Reserve Bank of India, people's money is safe to a great extent in private banks and whenever there is a possibility of them going bankrupt due to mismanagement, it is rectified by government intervention. The recent revival of Yes Bank is a living example of this.

Why privatization of banks by handing them over to foreign hands?

Recently, the number of public sector banks has been reduced by merging some selected public sector banks. At the same time, the government has been talking about its intent to privatise public sector banks. But no public

sector bank has been privatized so far. Along with this, some time ago the government helped in selling a private sector bank (Laxmi Vilas Bank), whose financial condition was not good, to a Singapore bank. Since no government bank has been handed over to foreign hands till now, there has been no debate in the country on this subject. Today, when there is no policy discussion on this subject in the country, handing over an important bank, which was saved from failing through the intervention of State Bank of India, to foreign hands will have to be understood from the point of view of its benefit to the customers of Yes Bank, the stability and development of the country's financial sector.

Is handing over Yes Bank to foreign hands the only option, or are there other options?

If there are options, whether have they been seriously considered or not?

When the government was going ahead with the disinvestment searching for strategic investors, a sane idea came from some quarters, that we can disinvest through the equity route and since then the government has been disinvesting through equity route by selling the shares held by the government in various commercial ventures, in the market. In the process, the government could achieve the objective of reducing its equity in different commercial ventures and also garner a significant amount of money to fund its developmental expenditures. In the present case, nothing stops SBI from selling its stake in the market. While SBI might be willing to recover its investment in Yes Bank, the same path can be adopted by divesting SBI's shareholding in the bank in the share market. In the process, the State bank of India will get the similar amount that they are expecting to get by selling their stake to a foreign firm.

If the shares sold in the market are held by the general public, diverse shareholding will ensure that there will be no dominance of any foreign player in the day-to-day working of the bank. Second important point here is that since the time SBI rescued Yes Bank, peoples' faith in Yes Bank, increased manifold as they considered their deposits in Yes Bank, equivalent to the deposits held in SBI, which are virtually enjoying sovereign guarantee. Most worrying part of the whole episode is that depositors are being kept in complete darkness about what is happening in the closed door meetings with regard to stake sales of Yes Bank, by different investors, including SBI. In all fairness, depositors have to be told well in advance of any transaction that they will no longer be enjoying the patronage of SBI and therefore, sovereign protection. Banks mainly make a profit on the funds of depositors, what they term as Net Interest Margin. So the principal stakeholder is the depositor and their interest is paramount.

Third, the point is philosophical, whether we should disturb the faith of people in the banking system. If the proposed deal of selling controlling stake in YES bank to foreigners goes through, this may open a Pandora box of disinvestment of banks and selling them to foreigners. It may be noted that, in the present scenario, we don't have many Indian players who possess the financial muscle to buy the stakes in Indian banks. But there is no dearth of foreign players willing to pick up the stake. If equity route disinvestment is ruled out, a number of foreign institutions might jump at the opportunity of taking over India's well run banks under the philosophy of 'government has no business to be in business.

Therefore, in all fairness, it would be advisable to motivate SBI and other investors to sell their stakes through equity route and let Indian management run Yes Bank. The foreign buyer is bringing no value (other than a small amount of capital which we don't need) to merit a free entry to the Indian banking sector. Countries usually don't permit such entry into their banking sector through the back door.

— Editor

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Continuous and Comprehensive Evaluation: In the Perception of its Main Pillars Student, Teachers and Parents

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Abstract

Education aims at making children capable of becoming responsible, productive and useful members of society. Knowledge skills and attitudes are built through learning experiences and opportunities created for learners in schools. It is in the classroom that learners can analyze and evaluate their experiences, learn to doubt, to question, to investigate and to think independently. Stressing on this aspect of education NCF (2005) states that Education must promote and nourish as wide a range of capacities and skills in our children as possible. The gamut of such skills include the performing arts (music, dance, drama and so on) painting and crafts, and literacy abilities (weaving stories, wielding language to portray different aspects of life, a fair for a metaphorical and poetic expression, etc). Also, skills as diverse as some children special capacity to bond with nature with trees, birds and animals - need to be nurtured. In the light of such an aim, it becomes imperative that classroom teaching and evaluation also gets reinvented.

Keyword: Student, Teachers, Parents, Education, NCF, CCE, Perception

Introduction

Evaluation does not just mean measurement of the level of learning outcomes but it acts more so as an approach for further improving the system. It needs to be diagnostic and formative in nature to provide remedial help to the students. NCF (2005) in its Position Paper on Examination Reforms states that External examinations are largely inappropriate for the knowledge society of the 21st century and it needs for innovative problem solvers, questions if not framed well, call for rote memorization and fail to test higher order skills like reasoning and analysis, lateral thinking, creativity and judgment. External exams make no allowance for different types of learners and learning environments and induce an inordinate level of anxiety and stress. Therefore there is a need for a functional and reliable system of school - based evaluation.

In the light of NCF (2005) and emerging demands of a knowledge society, the CBSE introduced the concept of continuous and comprehensive evaluation in schools since 2010.

Continuous and Comprehensive Evaluation: Concept

Continuous and comprehensive evaluation refers to a school-based evaluation of students that covers all aspects of students development. It is a developmental process of assessment which emphasis on two fold objectives. These objectives are continuity in evaluation and assessment of board based learning and behavioral outcome on the other. In this scheme the term 'continuous' is meant to emphasis that evaluation of identified aspect of students 'growth and development' is a continuous process rather than an event, built into the total teaching- learning process and spread over the entire span of academic session. It means regularity of assessment, frequency of unit testing, diagnosis of learning gaps, use of corrective measures, retesting and feedback of evidence to teachers and students for their self evaluation. The second term 'comprehensive' means that the scheme attempts to cover both the scholastic and the co- scholastic aspects of student's growth and development. Since abilities, attitudes and aptitudes can manifest themselves in form other than the written word, the term refers to application of variety of tools and techniques (both testing and non testing) and aims at assessing a learner's development in area of learning like: knowledge, understanding, applying, analyzing, evaluating, creating. The scheme is thus a curricular initiative, attempting to shift emphasis from testing to holistic learning. It aims at creating good citizen possessing sound health, appropriate skills and desirable qualities besides academic excellence. It is hoped that this will equipped the learners to meet the challenges of life with confidence and continuous and comprehensive evaluation.

A study was conducted in schools of Delhi with the objective to know and compare the perceptions of students teachers and parents of government and private schools about CBSE scheme of continuous and comprehensive evaluation under the guidance of an expert of education from IASE department of Jamia Millia Islamia University Delhi. Since Continuous and Comprehensive Evaluation was introduced by CBSE mainly to offset the deficiency in our external examination system. With the ever increasing importance of life skills there is now greater realization that student performance should be assessed in both scholastic as well as co-scholastic aspects. Therefore CBSE introduced CCE in its affiliated schools and made quite a lot of efforts in its implementation. So it was very important to find out the perceptions of its main pillars: students, teachers and parents about it and it was also very important to find out the problems they faced in the execution of continuous and comprehensive evaluation in schools and if they had any suggestion to give in making CCE effective and fruitful. For the study self constructed perceptionnaires and some open ended questions was used for the result and discussion of data some statistical techniques such as mean standard deviations and t-test was used.

The perceptions of students, teachers and parents as revealed by the study was as follows:

Perception of Students

Students are the individuals who have the direct bearing of all the functions done during the process of continuous and comprehensive evaluation. So the success of CCE pattern of evaluation depends on students' sincere participation in it. My study revealed that students no matter whether they are in private or government schools are satisfied with CCE. In their perception, CCE has decreased the pressure or workload of learning in schools. Schools have become better place for learning now. Besides that grading system has also decreased

the competition among students only for I mark About 80% of government and 70% of private school students agreed that under this grading system they have only healthy competition but no stress have to face, rest of the students said that scoring system was better than grading system because scoring system gives exact position of a student in a class. About 50% of private school students and 60% of government school students agreed that now more marks are under teacher's hand so they have to do little cramming in front of teachers but at the same time other student said that no one can be failed and no exact marks can be awarded to any student, so students are not very attentive towards teachers, on the other side teachers' biasness is adversely effecting the progress of students. The biasness and written exam is at minimum level but in project/assignments and class activities, this biasness can make a difference. Learning is a fun for students and 5 schools because the fear of examinations has been decreased due to CCE and splitting up the whole syllabus into parts is very good method to make an appropriate learning atmosphere and school it has also decreased pressure from the minds of students.

Suggestions of Students Regarding CCE

- Students have given the following suggestions to make CCE more efficient.
- Less manual work
- No force full participation in co-curricular activities
- Marks along with grades
- Minimum teachers' biasness
- Less project/assignments should be given.

Perceptions of Teachers

Teachers are the main pillar of CCE. Their role is very crucial in it, actually teachers are the persons who are facing more problems under CCE. Register work has increased too much now and because of this it has become difficult to handle a class with many students. Again the teachers who are familiar with traditional teaching are facing a lot of problems under CCE. Students are getting more in disciplined

Study has revealed that about 60% of government schools teachers are not satisfied with CCE as it is burdensome and decreases the competition level among students and 55% of private school teachers. On asking about the problems they are encountering while executing continuous and comprehensive evaluations, they answered that students are becoming careless and not participating actively, the classes are overcrowded, record maintenance is an extra work. Resource crunch, indiscipline among students and their attitude are also the problems.

- Suggestion of teachers regarding CCE
- All teachers suggested that:
- Base level of performance in academics should be a criteria for promotion to the next level
- Moral education right from class I should be introduced to sublimine aggressive tendencies in students
- One of the teacher suggested that it would be better to use percentile at the place of grade.
- Board exams must be there along with continuous and comprehensive evaluation

Perception of Parents Regarding CCE

Most of the parents of private school students are aware about CCE that has been implemented in the schools but it is not same with the parents of the students who are studying in government schools.

About 80% of the parents of government school students are not fully aware about continuous and comprehensive evaluation. For them it is just a grading systems in place of scoring systems and replacement of board exams. It is because of the reason that they are not well educated and well established. The parents of government school students are satisfied with the replacement of board exams. But the parents of private school students said that it is better for those students who are low achievers in academics but for those who are good in studies, it is not so good. They also agreed that due to CCE students are becoming less sensitive towards study and some students even copy the project/assignments from their classmates.

Suggestions of Parents

Parent Teacher meetings should be conducted regularly taking in view the perceptions of students, teachers and parents I have given some suggestions to them for successful implementation of CCE.

As suggestions for parents and suggestions for students

Appreciate the need to change the assessment system and cooperate faithfully in the effective implementation of the CCE. They should recognize their crucial role in making implementation of CCE successful. Take Initiative to get oriented and offer services as master trainers.

Adopt improved pedagogy for the benefit of students.

Students

- Cooperate with the new assessment system.
- Try to improve their academic performance
- Take initiative to participate in co- curricular activities in the school.
- Play active role in class activities.

Awareness and counseling sessions should be organized for them

Parents

- Appreciate and cooperate with the new system
- Play active role in PTA meetings
- Participate actively in advocating new assessment system

Interactive awareness sessions should be organized for them by the schools

Conclusion

Therefore it can be concluded that collaborative efforts of teachers, parents and student can lead to an effective and innovative learning environment for the students under continuous and comprehensive evaluation.

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A Study of the Problems Faced in Taking Loans from Regional Rural Banks (With Special Reference to Indore District of Madhya Pradesh)

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Abstract

Our economy depends heavily on small farmers and the agricultural production sector, and these businesses need less funding than larger ones. However, even this tiny sum cannot be disregarded because the farmer might not have enough cash during the production house's early operations or throughout its existence. The establishment of these production houses is being greatly aided by a number of financial institutions, as well as numerous government programs designed specifically for individuals and small farmers.

The paper is empirical in nature and the researcher has highlighted the financing problems of small farmer and individuals by the Regional Rural Bank in Indore District of Madhya Pradesh. The data is collected from primary sources. The methodology adopted is convenient sampling and the owners of the agricultural land are interviewed using interview schedule.

Keywords: Financing, Crop production, Small farmer and individuals, Regional Rural Bank, Indore district.

Introduction

The Banking industry, real backbone of any country because it controls the entire economy. It was some twenty years after the attainment of independence in India that the national makers thought of involving the Banks in a big way in the development plants of the country. Banking industry in India has come a long way from the time when Banks used to be mere deposit-taking and money-lending institutions. Regional Rural Bank (RRBs) have contributed a lot in developing in rural India. Regional Rural Banks (RRBs) were entrusted with this Herculean task immediately after nationalism.

With acceleration in provisioning due to elevated NPAs and a sharp increase in operating expenses – largely attributed to higher wage bills on account of implementation of pension scheme – RRBs reported net losses for the second consecutive year. Their operating profits also declined, despite robust growth in both interest and non-interest income. At the same time, it is very essential for the development of rural area and for the creation of credit,

hence this study is being done in this area by the researcher which will help in solving the current systems and problems. And in future, this research work will be very beneficial for the rural residents and the people of the country.

Objective of the Study

The main objective of the presented research paper is to study the problems faced in taking loans from Regional Rural Banks.

Hypotheses of the Study

1. There is no significant relationship between the difficulties faced by the land owners (Farmers) of Indore district in getting the loan sanctioned and the problems faced in getting the loan and implementing the government schemes.

Research Methodology

Small farmers play an important role in the development of a country. The priority credit scheme adopted by the financial institutions is very important in the development of small farmers. The success of the scheme depends upon the experiences of the borrowers that they face while availing the loan and repaying it back.

Regional Rural Bank acts as the largest lender and it easily gains the trust of the beneficiaries. In fact, whenever the beneficiary deals with any financial institutions, their main objective is only so that there should not be any difficulty while dealing with them, if any, if any, it should be resolved immediately. The employees of Regional Rural Bank are not present regularly or their behavior is not cooperative towards the beneficiaries and the beneficiary has to face many types of problems. In order to get better facilities to the beneficiaries, it is necessary that the Regional Rural Banks should also keep in mind their normal working practices. Beneficiaries should also not do such work due to which businessmen or employees have to face problems. For this, a survey of the beneficiaries was done and it was tried to know that the facilities provided by the Regional Rural Bank to the beneficiaries, important things related to the loan schemes and how is the behavior of the employees of financial institutions with them?

Under this paper, an analytical study has been done on the services and facilities provided by the Regional Rural Bank to its Agriculture land owners (Farmers) in Indore district of Madhya Pradesh, on the basis of which 15 questions asked in the questionnaire have been considered. 200 respondents were selected whose account is with the selected Regional Rural Bank. The present paper provides information about the objectives developed and the analysis of primary data with the help of chi-square test. Statistical Analysis Excel 2016 and SPSS 25.0 version.

Data Analysis and Interpretation

Table -1

Classification of respondents on the basis of age		
Age	Frequency	Percent
21 - 30 year	78	39.0
31- 40 year	56	28.0
41 - 50 year	42	21.0
above 50 years	24	12.0
Total	200	100.0

Source- Primary Data Analysis

In the above table, the Regional Rural Bank in Madhya Pradesh has divided the age factor in the demographic variables of the Agriculture land owners (Farmers) of its Indore district into different groups - 21 to 30 years, 31 to 40 years, 41 to 50 years, and over 50 years. The above table shows that out of the total 200 respondents, 78 respondents i.e. 39 percent belong to the age group of 21-30 years; which are the highest.

Table -2

Classification of respondents on the basis of gender		
Gender	Frequency	Percent
Male	145	72.5
Female	55	27.5
Total	200	100.0

Source- Primary Data Analysis

In the above table, the Regional Rural Bank has divided the gender factor in the demographic variables of the Agriculture land owners (Farmers) of its Indore district in Madhya Pradesh. The above table shows that out of the total 200 respondents, 145 respondents i.e. 72.5 percent belong to the male category; which are the highest.

Table -3

Classification of respondents on the basis of reason for availing loan:		
Reason for availing loan	Frequency	Percent
To start the agricultural activity	65	32.5
To expand the agricultural activity	52	26.0
Low family income	45	22.5
Unemployment	38	19.0
Total	200	100.0

Source- Primary Data Analysis

In the above table, the respondents have been divided into different groups on the basis of the reason for obtaining loans of Agriculture land owners (Farmers) of Indore district by Regional Rural Bank in Madhya Pradesh. The above table shows that out of the total 200 respondents, 65 respondents i.e. 32.5 percent, belong to the category to start the agricultural activity; which are the highest.

Table -4

Classification of respondents on the basis of type of difficulties faced in getting loan sanctioned:		
Difficulties faced in getting loan sanctioned	Frequency	Percent
loss of labor	41	20.5
lengthy loan approval process	39	19.5
contingencies	45	22.5
Other	75	37.5
Total	200	100.0

Source- Primary Data Analysis

In the above table, Agriculture land owners (Farmers) of Indore district in Madhya Pradesh have been classified on the basis of difficulties in getting loans sanctioned of various Government schemes, in which the difficulties in getting loans sanctioned are divided into different groups. has gone:

1. Loss of Labor
2. Long Loan Approval Process
3. Contingency Expenses
4. Other

The above table shows that out of the total 200 respondents, 75 respondents i.e. 37.5 per cent, belong to other difficulties category; which are the highest.

Hypothesis testing: -

There is no significant relationship between the difficulties faced by the Agriculture land owners (Farmers) of Indore district in getting the loan sanctioned and the problems faced in getting the loan and implementing the Government schemes.

Table -5

Problems in getting loan and implementing the Government schemes * Difficulties in getting loan sanctioned Crosstabulation							
			Difficulties in getting loan approved				
			loss of labor	lengthy loan approval process	incidental expenses	Other	Total
Problems faced in getting loan and implementing the Government schemes	Lack of sympathetic attitude on the part of Regional Rural Bank officials	Count	7	10	4	4	25
		Expected Count	5.1	4.9	5.6	9.4	25.0
		% of Total	3.5%	5.0%	2.0%	2.0%	12.5%
	Lack of facilities for technical consultancy	Count	4	8	12	7	31
		Expected Count	6.4	6.0	7.0	11.6	31.0
		% of Total	2.0%	4.0%	6.0%	3.5%	15.5%
	Lack of post credit supervision	Count	9	4	8	6	27
		Expected Count	5.5	5.3	6.1	10.1	27.0
		% of Total	4.5%	2.0%	4.0%	3.0%	13.5%
	Insufficient amount of credit limit	Count	3	2	4	3	12
		Expected Count	2.5	2.3	2.7	4.5	12.0
		% of Total	1.5%	1.0%	2.0%	1.5%	6.0%
	Lack of identification of eligible borrowers	Count	1	1	0	2	4
		Expected Count	.8	.8	.9	1.5	4.0
		% of Total	0.5%	0.5%	0.0%	1.0%	2.0%
	premature approval of loan	Count	1	1	1	3	6
		Expected Count	1.2	1.2	1.3	2.3	6.0
		% of Total	0.5%	0.5%	0.5%	1.5%	3.0%
	high interest rate	Count	2	1	2	6	11
		Expected Count	2.3	2.1	2.5	4.1	11.0
		% of Total	1.0%	0.5%	1.0%	3.0%	5.5%
	cumbersome process	Count	3	2	2	2	9
		Expected Count	1.8	1.8	2.0	3.4	9.0
		% of Total	1.5%	1.0%	1.0%	1.0%	4.5%
	faulty Government schemes appraisal	Count	1	1	3	5	10
		Expected Count	2.1	2.0	2.3	3.8	10.0
		% of Total	0.5%	0.5%	1.5%	2.5%	5.0%
	uncontrolled use of credit	Count	1	1	1	2	5
		Expected Count	1.0	1.0	1.1	1.9	5.0
		% of Total	0.5%	0.5%	0.5%	1.0%	2.5%
	lack of understanding	Count	3	2	1	6	12
		Expected Count	2.5	2.3	2.7	4.5	12.0
		% of Total	1.5%	1.0%	0.5%	3.0%	6.0%
	lack of infrastructural support	Count	1	2	1	2	6
		Expected Count	1.2	1.2	1.3	2.3	6.0
		% of Total	0.5%	1.0%	0.5%	1.0%	3.0%
	exploitation by middlemen	Count	2	1	2	3	8
		Expected Count	1.6	1.6	1.8	3.0	8.0
		% of Total	1.0%	0.5%	1.0%	1.5%	4.0%
	Other	Count	3	3	4	24	34
		Expected Count	7.0	6.6	7.7	12.8	34.0
		% of Total	1.5%	1.5%	2.0%	12.0%	17.0%
Total	Count	41	39	45	75	200	
	Expected Count	41.0	39.0	45.0	75.0	200.0	
	% of Total	20.5%	19.5%	22.5%	37.5%	100.0%	

The above table shows the difficulties faced by the Agriculture land owners (Farmers) of Indore district in getting the loan sanctioned and the problems faced in getting the loan and implementing the Government schemes.

The following table shows the result of chi-square test: -

Table -6

Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	47.524 ^a	39	.164
Likelihood Ratio	47.448	39	.166
Linear-by-Linear Association	14.848	1	.000
N of Valid Cases	200		

a. 41 cells (73.2%) have expected count less than 5. The minimum expected count is .78.

The above table shows the chi-square measure of $(39, 1, n = 200) = 47.524$, $p > 0.05$ ($p = 0.164$). Therefore, there is no significant relationship between the difficulties faced by the Agriculture land owners (Farmers) of Indore district in getting the loan sanctioned and the problems faced in getting the loan and implementing the Government schemes.

As per the chi-square test in the table, thus, it is observed that the difficulties faced by the Agriculture land owners (Farmers) of Indore district in getting the loan and the problems faced in getting the loan and implementing the Government schemes have no significant relation. Therefore, we conclude that the null hypothesis is accepted which states that there is no significant relationship between the difficulties faced by the Agriculture landowners (Farmers) of Indore district in getting loans sanctioned and the problems faced in obtaining loans and implementing the Government schemes.

Problems Faced by The Farmer

1. The process of taking loans from the Regional Rural Bank is very lengthy and time-consuming processes.
2. The Farmer are facing power problem for which the Farmer have to run machineries using diesel sometimes, and this increases the cost of agriculture production.
3. Instability of agriculture materials supply and rate.
4. Uneven Geographical area leads in time consuming and costly transportation.
5. Payment and credit issue always affects healthy financial position and reduces ROI.

Findings

1. Most of the small farmer and individuals are in the big family. This shows that the farmer prefers to start their agricultural activities with their own support rather than totally depending on government and any financial institution.
2. The farmer and individuals are not well educated for starting and running the agricultural activities and they cannot easily take the advantage of the benefits provided by the Regional rural banks and the government.
3. Most of the farmer and individuals have taken loan for starting the agricultural activities This shows that Regional rural banks play a vital role in the starting of the small farmer.
4. Most of the farmer and individuals have taken both term loan and working capital loan. This shows that farmer and individuals require finance from Regional rural banks throughout the year.

5. Most of the farmer and individuals have not received subsidy on the loan. This shows that the government is not providing adequate subsidies to the small farmer and individuals.
6. The time required for processing the loan by the Regional rural banks is a very long period and the farmer and individuals have to wait for 6 months or more for getting the amount.
7. Most of the respondents disagreed that the procedure of obtaining finance from the Regional rural banks is simple and easy.
8. Many of the respondents disagreed that the Regional rural banks provide loans as and when required during the year and a few agreed to that.
9. Most of the respondents disagreed that the procedure of getting the subsidy is simple and easy.

Suggestions

1. The subsidy should be provided as early as possible. The farmer and individuals should not have to wait much time for getting the subsidy, and then the farmer will grow.
2. The Regional rural banks should organize seminars jointly for starting the relevant farmer to cater to the needs of the society and the country.
3. The entire process of registration of an farmer should be made online and the viability of the project should be approved online only, the farmer need not submit documents unnecessarily again and again.
4. The information regarding the registration and other government schemes information should be shared by directly to the Regional rural banks, so the farmer need not have to submit the same documents again at the time of getting the loan.

Conclusion

From the study it can be concluded that the Regional rural banks in Indore District of Madhya Pradesh are not adequately financing the small farmer and individuals and the government is not also working for the growth of the farmer with adequate schemes. The farmer is unaware of the schemes of the government, so the farmers themselves and the government should work more for the awareness of the farmers. Although the Regional rural banks are adequately small financing but the process is lengthy which in the competitive era demands to be made as easy as possible. If the entire process of financing and set up of a farmer is made easier, many new small farmer and individuals will be inspired in the rural areas leading to the development of the rural areas and the economy.

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El Nino and La Nina: An Overview

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Abstract

El Nino and La Nina events impact the Indian monsoon in terms of less than average rainfall and more rainfall in La Nina years. El-Nino events are likely to see rainfall variability during the monsoon and depressions over the Bay of Bengal (July-August). ENSO is a disturbance in ocean surface temperatures and atmospheric circulation over the Pacific Ocean that leads to large-scale changes in rainfall/precipitation patterns around the world. Effects of El Nino years on crop production in India due to lower rainfall during the southwest monsoon. In the kharif season (June to September), crops suffer from moisture and have lower yields in El-Nino years, but vice versa in La-Nina years. El Nino is associated with the possibility of drought on many occasions and La Nina is the opposite of El-Nino events.

El-Niño and La-Niña are thought to change the intensity and frequency of extreme weather events worldwide.

This article gives an overview of El-Nino, La-Nina and their effects.

Keywords: El-Nino, La-Nina, thermodynamic indices; precipitation; FRD, Monsoon

Introduction

El Niño and La Niña are two opposing weather patterns in the Pacific Ocean that can affect weather around the world.

Under normal conditions in the Pacific Ocean, the trade winds blow westward along the equator, taking warm water from South America to Asia. To replace the warm water, cold water rises from the depths - a process called upwelling. Scientists call these phenomena the El Niño-Southern Oscillation (ENSO) cycle.

El Niño is the “warm phase” of a larger phenomenon called the El Niño-Southern Oscillation (ENSO). La Niña, the “cold phase” of ENSO, is a pattern that describes the unusual cooling of a region’s surface waters.

El Niño and La Niña can have global effects on weather, forest fires, ecosystems and economies. El Niño and La Niña episodes usually last between nine and 12 months, but can sometimes last for years. El Niño and La Niña events occur on average every two to seven years, but do not occur regularly. El Niño generally occurs more often than La Niña.

El Nino

El Nino is a natural climate phenomenon characterized by higher-than-average sea surface temperatures in the central and eastern Pacific Ocean near the equator that occurs on average every 2–7 years. El Nino’s effects on climate extend far beyond the Pacific Ocean.

During El Niño, the trade winds weaken. The warm water is pushed back east, towards the west coast of America.

El Niño was recognized by fishermen off the coast of Peru as the appearance of unusually warm water. We have no actual records of what the native Peruvians called this phenomenon, but the Spanish immigrants called it El Niño, which means “the little boy” in Spanish. When capitalized, El Niño means Baby Jesus and was used because the phenomenon often arrived around Christmas. El Niño soon began to describe irregular and intense climate changes rather than just warming of coastal surface waters.

Led by the work of Sir Gilbert Walker in the 1930s, climatologists discovered that El Niño coincides with the Southern Oscillation. The Southern Oscillation is a change in air pressure over the tropical Pacific Ocean. As coastal waters in the eastern tropical Pacific warm (El Niño), atmospheric pressure over the ocean decreases. Climatologists define these combined phenomena as the El Niño-Southern Oscillation (ENSO).

The first recorded El Niño originated in the Central Pacific was in 1986. Recent El Niños in the Central Pacific occurred in 1986–87, 1991–92, 1994–95, 2002–03, 2004–05 and 2009–10. In addition, there were “Modoki” events in 1957–59, 1963–64, 1965–66, 1968–70, 1977–78 and 1979–80.

The ongoing El Niño period of 2023-24 was among the five strongest ever, according to the World Meteorological Organization (WMO). It came on the back of one of the longest and strongest La Niña phases, which lasted for three years between 2020 and 2022.

The Impact of El Niño on the Environment

El Niño affects ocean temperatures, the speed and strength of ocean currents, the health of coastal fisheries, and local weather from Australia to South America and beyond. El Niño events occur irregularly at two- to seven-year intervals. However, El Niño is not a regular cycle or predictable in the sense that ocean tides are.

El Niño can significantly affect our weather. Warmer waters cause the Pacific jet stream to move south of its neutral position. This shift makes areas in the northern US and Canada drier and warmer than usual. But along the Gulf Coast and southeastern US, these periods are wetter than usual and flooding has increased.

El Niño causes the Pacific Ocean’s jet stream to move south and spread further east. During the winter, this leads to wetter than usual conditions in the southern US and warmer and drier conditions in the north.

El Niño also has a strong effect on marine life off the Pacific coast. Under normal conditions, upwelling brings water from the depths to the surface; this water is cold and rich in nutrients. Without nutrients from the deep, there is less phytoplankton near the coast. This affects the fish that eat the phytoplankton and in turn affects everything that the fish eat. Warmer waters can also bring tropical species such as yellowfin and albacore to areas that are normally too cold.

El Niño was perhaps the most destructive in Africa, as drought ravaged much of the continent’s south. Southern Africa, including Zimbabwe, Botswana, Namibia, Angola, South Africa, Lesotho, Swaziland and the southern half of Mozambique, tends to see a drier December to February during El Niño.

Impact of El Niño on India

The El Niño phase is known to suppress rainfall over India during the monsoon, while La Niña has the opposite effect.

In 2023, the El Niño event had a major impact on Indian farmers. Erratic and late monsoon rains associated with El Niño led to widespread droughts, which particularly affected rice, pulses and stunted sugarcane crops in Maharashtra. Farmers struggled to get enough water for irrigation, which reduced crop production. This had a significant impact on India's agricultural sector, causing a decline in overall production and a possible rise in food prices.

The 2024 IMD report said above-normal maximum temperatures as well as heat wave days can be expected in the country from March to May this year. "This El Niño was not the strongest ever, but it is significant because it also combined with global warming to increase temperatures," Dr Murtugudde said on March 9, 2024.

"Flavors" of El Niño

El Niño variations are referred to as "flavors". For example, the transition period of an El Niño event is called "Trans Niño". Trans Niño events occur at the beginning and end of an El Niño event. Trans Niño events often include increased tornado activity in the American Midwest.

Another "flavor" of El Niño is El Niño Modoki, or Modoki Niño (Japanese: similar but different). The Modoki Niño, also called the Central Pacific Niño, is characterized by changes in sea surface temperatures in the central rather than the eastern Pacific. Some Modoki Niño events differ from traditional El Niño events, such as increased hurricane activity in the Atlantic and Gulf of Mexico. Many meteorologists criticize the Modoki Niño and call for more climate models to study the proposed phenomenon.

La Niña

La Niña means little girl in Spanish. La Niña is also sometimes called El Viejo, the anti-El Niño, or simply the "cold event." La Niña has the opposite effect of El Niño. During La Niña events, the trade winds are even stronger than usual and push more warm water towards Asia. Upwelling increases off the west coast of America, bringing cold, nutrient-rich water to the surface.

These cold waters in the Pacific push the jet stream north. This tends to lead to drought in the southern US and heavy rains and flooding in the Pacific Northwest and Canada. During a La Niña year, winter temperatures are warmer than normal in the south and colder than normal in the north. La Niña can also lead to a stronger hurricane season.

La Niña causes the jet stream to move north and weaken over the eastern Pacific. During La Niña winters, conditions are warmer and drier than usual in the south. The north and Canada tend to be wetter and cooler.

During La Niña, waters off the Pacific coast are cooler and contain more nutrients than usual. This environment supports more marine life and attracts more cold-water species like squid and salmon to places like the California coast.

Recent years with La Niña Modoki events include 1973–1974, 1975–1976, 1983–1984, 1988–1989, 1998–1999, 2000–2001, 2008–2009, 2010–2010. The recent discovery of ENSO Modoki is believed by some scientists to be related to global warming.

Impact of La Nina on India

Heavy rains could cause river and urban flooding, mudslides, landslides and cloudbursts in some regions. The eastern and northeastern Indian region receives below average seasonal rainfall during La Nina years.

Some Fascinating Facts about El Niño

1. *EL Niño MEANS “LITTLE BOY” or “CHRIST CHILD”:* In 1892, a Peruvian sea captain named Camilo Carrillo reported an abnormally warm current running along the west coast of South America. As he explained to his government, it usually appeared around Christmas and remained for several months. In honor of Jesus’ birth, fishermen from Peru and Ecuador nicknamed him El Niño.

As the years went by, the definition of the term changed. Currently, in North America (other regions are basically similar), El Niño is defined as “five consecutive three-month rolling mean sea surface temperature (SST) anomalies in the Niño 3.4 region that are above the +0.5° threshold C. .” This causes increased rainfall, flooding and hurricanes in certain areas.

2. *IT IS PART OF A BIGGER CYCLE:* Surface winds (also known as trade winds) normally blow across the Pacific from east to west. This pushes warmer, sun-warmed water toward Asia, while cooler H₂O rises from the depths near North and South America. The line of motion also means that sea level is generally about half a meter higher in Indonesia than around Ecuador.

But sometimes those winds are too weak to do their job. When that happens, the eastern Pacific gets unusually warm while the west suffers a cold spell—and you get El Niño. Conversely, the extra strong trade winds make the Pacific really, really cold as even more cold water comes up from the depths. Such events are called La Niña or “The Little Girl”.

El Niño and La Niña are two sides of the same coin. Typically, the first phase lasts nine to 12 months, while the second has a lifespan of one to three years.

3. *WE FOUND SEVERAL DIFFERENT TYPES.* No two El Niños are exactly the same. In recent years, climate experts have noticed that they can have several different varieties. The type described above is a conventional or eastern Pacific El Niño. However, you occasionally run into a Central Pacific El Niño that warms the Central Pacific to a greater degree than the East or West. It looks like there’s a whole spectrum of El Niños outside of these simplistic categories.

4. *EL Niños TO CREATE SEVERE AUSTRALIAN DROUGHT.* The most extreme dry spells down there have been linked to El Niño - but it’s hard to predict exactly how much Australia’s rainfall will be affected by any of them. During the 1997–1998 El Niño (which was the strongest in the 20th century), only eastern Australia and Tasmania experienced significant rainfall declines. A few years later, however, a relatively mild El Niño in 2002–2003 triggered a massive nationwide drought.

5. *THEY PROBABLY HELP MOSQUITOES SPREAD DISEASE.* In the early 20th century, the Punjab region of India was the site of regular malaria epidemics, and according to the World Health Organization, “recent analyzes have shown that the risk of a malaria epidemic increases about fivefold in the year following an El Niño event. “(similar observations were made in Sri Lanka). Currently, the number of Venezuelans and Colombians infected with malaria has increased by 33 percent after El Niño. Other mosquito-borne diseases — such as Rift Valley fever and dengue — are also booming after El Niño.

6. *ONE STUDY FINDS EL Niño COULD CAUSE CIVIL WARS.* In 2011, Columbia University economist Solomon Hsiang and two colleagues reviewed 234 civil wars that had broken out in about 175 countries since 1950 and found a disturbing pattern: tropical countries

were twice as likely to have fought in the years preceding El. Nino. According to Hsiang, “Since 1950, one in five civil conflicts has been influenced by El Niño. why is that? Droughts caused by weather events are partly to blame, as they tend to exacerbate long-term food shortages. “This represents the first major evidence that global climate is a major driver of organized patterns of violence,” says Hsiang.

7. EL Niño FORCES SEABIRDS TO VISIT UNUSUAL PLACES. Peruvian goats are not usually found as far north as Panama. Normally, the birds hunt for anchovies off the coast of Chile, Ecuador and – of course – Peru. However, regional fish populations take a big hit during El Niño, forcing some flycatchers to look elsewhere for food. El Niño-like conditions erupted in early 2014, and by that July several transplanted goats had been spotted in Panama. They similarly hit the country after El Niño in 1982-1983, when 3,500 people took up residence on Pachecha Island alone.

8. MIDWEST TORNADOES BECOME LESS FREQUENT DURING EL Niño. On the plus side, El Niño years make life easier in the flat states. La Niña warms and moistens the wind currents that regularly swing up from the Gulf of Mexico, increasing the number of local tornadoes. Meanwhile, El Niño has the opposite effect.

9. EL Niño CREATED A DROUGHT IN 1876 THAT KILLED 18 MILLION PEOPLE. In 1876, an intense El Niño-induced drought broke out in India and northern China. Crops were decimated in both areas, and—due to the weakening of the central government in China and colonial trade policies in India—neither government was adequately prepared for the disaster. As a result, roughly 12 million Chinese and 6 million Indians died of starvation by 1879.

10. THE 1982-’83 MODEL COST THE GLOBAL ECONOMY OVER \$8 BILLION. Forest fires hit Indonesia and Australia. Major typhoons hit Hawaii and Tahiti. The mass exodus of sardines has had a major impact on the fishing industry in Ecuador and Peru. There was extensive flooding in the southern US. It was not a great time for international trade.

11. SOME ECONOMICS ACTUALLY BENEFIT FROM THEM. After El Niño in 2010, Argentina’s GDP grew by 1.08 percent, Canada’s by 0.85 percent, and Mexico’s by 1.57 percent. How did it happen? El Niño led to a decrease in hurricanes on the East Coast, which was great for Mexico’s oil industry. The influx of warm weather meant that Canada’s fisheries could produce more. Argentina’s soybean farmers were ultimately helped by increased rainfall.

12. THEY ARE BECOMING MORE COMMON. Climatologists largely agree that El Niños are increasing in frequency—and may be getting stronger. Of the 23 El Niños in the 20th century, the four strongest occurred after 1980.

Conclusion

El-Niño and La-Niña are associated with the El-Niño Southern Oscillation (ENSO), an ocean-atmosphere phenomenon generally observed in the tropical Pacific Ocean. ENSO occurs due to irregular sea surface temperature (SST) and changes in wind patterns. The El-Niño period can last up to 9 to 12 months and can potentially destroy marine life during extreme conditions in the tropical Pacific Ocean. During El-Niño, SST changes drastically and shifts convective activities from west to east in the tropical Pacific Ocean. During La-Niña, SST decreases, facilitating the westerly drift of wind stress. The climatic environment of the

Maritime Continent and Southeast China is strongly influenced by the El-Niño and La-Niña phases in the Asian sector. As a result, the area experiences an unusual scattering of rainfall and an increase in lightning. El-Niño and La-Niña are also responsible for interannual lightning anomalies on a regional and global scale.

El-Niño years are associated with warmer atmospheric conditions that are favorable for generating convective activity far to the east of the western Pacific Ocean. Many studies report lightning activity and associated storms during El-Niño and La-Niña in different parts of the globe.

Since thunderstorms during the pre-monsoon months are catastrophic and their prediction and assessment are important to protect life and property in the region, it will be worth seeing if ENSO changes the frequency or intensity of these storm events.

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A Study on Awareness and Perception of Consumers Towards GST With Special Reference to Hotels in Indore City

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Abstract

In India, various types of indirect taxes are levied on goods and services by the central and state government such as sales tax, VAT, service tax, excise duty, entry tax etc. Goods and Services Tax (GST) was implemented across the country in the year 2017 with the intention of one nation, one tax and one market. GST subsumed all indirect taxes including taxes levied on hotels such as service tax, VAT etc. Taxes levied on services are a major contributor to government revenue. GST implementation has impacted consumers who pay tax on services provided by hotels. The aim of the study is to find out the level of awareness and perception of consumers on GST in hotels. The study used descriptive research design.

Keywords: Indore city, Goods and Services Tax (GST), awareness, perceptions.

Introduction

After independence, the Goods and Services Tax can be considered the biggest indirect tax reform as a result of the demand for reform in the indirect tax structure that has been constantly rising in India. Because it has completely changed the age-old concept. The suggestion of implementing the Goods and Services Tax in India given by Shri Vijay Kelkar Committee has been implemented in India on 1 July 2017. It is a great relief for the Indian trade board, industry board, consumer market, which was suffering from the problem of 21 types of indirect taxes that existed in ancient times. Now if we talk about indirect tax in India, then there is only one tax, the Goods and Services Tax.

The biggest feature of the Goods and Services Tax is that the earlier tax system which was in place in India for years, till now had different taxes for a common businessman like excise duty, VAT, service tax, all these taxes which were collected by the businessmen in different formats in different departments.

The current tax structure is as follows-

Figure-1 Currently prevalent tax structure

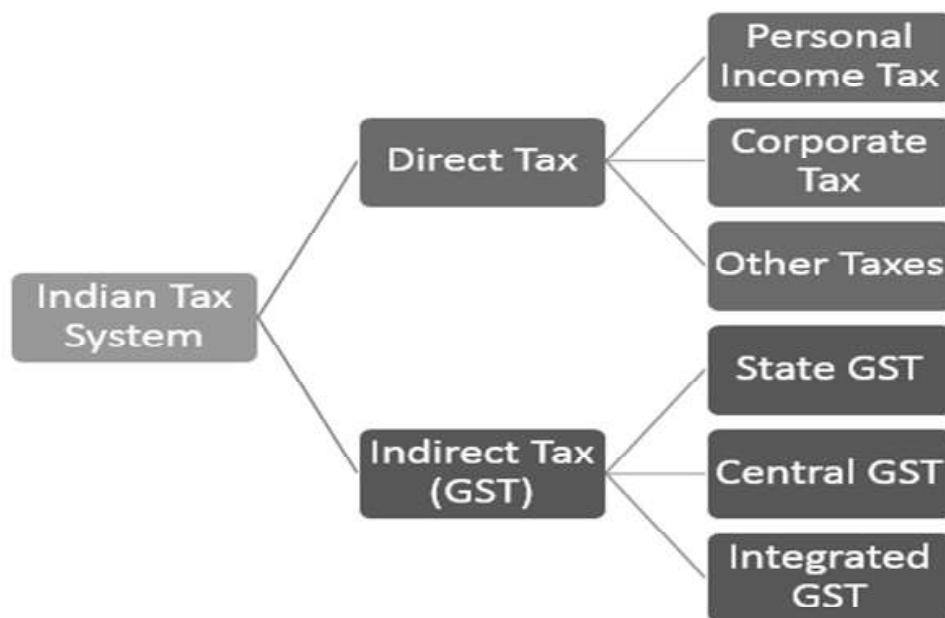
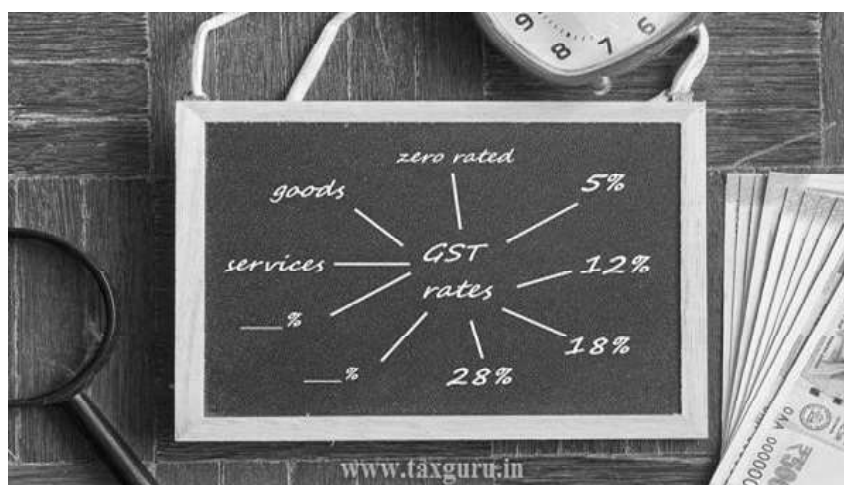


Figure-2 GST Rates



History of GST

In 1954, France became the first nation to implement GST. Since then, almost 160 countries have implemented GST in one form or another. A single GST scheme exists in the majority of countries. In comparison to what India will implement, Brazil and Canada have a dual scheme. Only products and the provision of maintenance, replacements, and processing facilities are subject to GST in China.

Indirect taxes were considered a burden for the taxpayer and were also increasing inflation (Kumar A., 2017). So, the concept of Goods and Services Tax was introduced and launched at midnight on July 1, 2017 by Pranab Mukherjee (President) and Narendra Modi (Prime Minister) in India to remove all the drawbacks with the slogan “One Nation, One Tax, One Market” and to subsume all the indirect taxes into a single tax (Kumar A., 2017). All the states, including Jammu and Kashmir, Delhi, and Pondicherry, came under SGST, and five

Union Territories adopted UTGST (Kumar A., 2017). It is considered the most drastic change in income tax with five tax rates, i.e., 0%, 5%, 12%, 18%, and 28% (Kumar A., 2017). It helped to remove the tax burden cascading effect of corruption (Roshni S. et al., 2017).

The GST is a national tax on the manufacture, marketing, and use of products and services that make no difference between products and services for the purposes of taxation. This would be a great substitute for indirect taxes on goods and services by the central and state governments of India. Because GST is a tax on goods and services for which everyone must pay tax on their output and they are entitled to pre-tax credit on the tax paid on their inputs, the end user bears the tax but less.

GST Hotels Bill

As an end consumer, we hardly pay attention to our food bill in these hotels and most of us are not even aware of the components included in it. If you look at your food bill again before GST, you will find that service tax, service charge, VAT is also being added in addition to the price of the food.

The Goods and Services Tax was introduced to promote equitable distribution of tax revenues among authorities and to remove any confusion related to various indirect taxes, among other things. Since 2017, only three types of Goods and Services Tax have been levied on parties involved in the trade of a particular product or service, namely CGST, SGST and IGST.

Objectives of the Study

1. To study the level of awareness of consumers towards GST in hotels.
2. To find out the perception of consumers towards GST.
3. To analyse the level of satisfaction of consumers towards GST in hotels.

Need for Study

Most of the consumers are not aware of the GST applicability and rates on various goods and services and also, they are confused with the tax rates levied on food, beverages and services in various hotels. Not only this, some hotels are charging GST on their food, beverages and services at different rates than other hotels, as a result of which they are fooling the customers by charging higher rates or different rates of GST. Hence, there is a need to make consumers aware about GST in hotels.

Research Methodology

The study used descriptive research. It describes the situation or phenomenon. The study used survey method to collect responses from customers in different hotels. Data for the study has been collected from both primary and secondary sources. Primary data was collected using questionnaire technique. The questionnaire was collected from 139 respondents belonging to Indore city. The sample was selected using random sampling technique from the population belonging to different demographic profile like gender, age, education and occupation. Secondary data was collected through internet, website, research journals and published books etc.

Data Analysis and Interpretation

Data was collected from various respondents so that the findings could be analysed and interpreted. The collected data is presented in the form of tables and graphs. A brief description of the analysis and interpretation is given below:

Table 1 Number of Respondents by Gender

S.N.	Gender	Frequency	Percentage
1	Male	88	63%
2	Female	51	37%
3	Others	0	0%
Total		139	100%

(Source: Primary data)

Explanation: The table given below shows the number of consumers in Indore city by gender. Out of a total of 139 consumers, 88 i.e. 63% consumers are men, while 51 i.e. 37% consumers are women. Thus, we see that the number of men is more than that of women. The main reason for this is that women are engaged in household chores.

Table 2 Number of Respondents by Age

S.N.	Age	Frequency	Percentage
1	Below 25 years	50	36%
2	25 – 60 years	79	57%
3	Above 60 years	10	7%
Total		139	100%

(Source: Primary data)

Explanation: The table given below shows the frequency based on age in Indore city. Out of 139 consumers, 50 i.e. 36% consumers are below 25 years of age and 79 i.e. 57% consumers are between 25-60 years of age while 10 i.e. 7% consumers are above 60 years of age. In conclusion, most of the consumers are between 25-60 years of age.

Table 3 Frequency based on education

S.N.	Education	Frequency	Percentage
1	Primary Education	26	19%
2	Secondary Education	19	14%
3	Degree holder or UG	63	45%
4	Master degree holder or PG	11	8%
5	Above Master degree holder	3	2%
6	Illiterate	17	12%
Total		139	100%

(Source: Primary data)

Interpretation: The table given below shows the frequency based on education in Indore city. Out of total 139 consumers, 26 i.e. 19% consumers have education upto primary class. 19 i.e. 14% consumers have education upto secondary class. 63 i.e. 45% consumers are degree holders or UG. 11 i.e. 8% consumers are master degree holders or PG. Similarly, 3 i.e. 2% consumers have degree above master degree. While 17 i.e. 12% consumers are illiterate. In conclusion, most of the consumers are degree holders or UG which shows their intellectual ability.

Table 4Frequency of consumers by occupation

S.N.	Occupation	Frequency	Percentage
1	Government Employee	22	16%
2	Private Employee	65	47%
3	Businessman	39	28%
4	Student	17	12%
5	Unemployed	10	7%
Total		139	100%

(Source: Primary data)

Explanation: The given table number 4 shows the frequency based on occupation in Indore city. Out of total 139 consumers, 22 i.e. 16% consumers are government employees. 65 i.e. 47% consumers are private employees. 39 i.e. 28% consumers are businessmen. 17 i.e. 12% consumers are students while 10 i.e. 7% consumers are unemployed. In conclusion, most of the consumers are private employees i.e. they are working in private sector.

Table 5 Frequency on consumer awareness about GST in hotels

S.N.	Consumer Awareness	Frequency	Percentage
1	Yes, fully aware	89	64%
2	No, not aware	21	15%
3	Maybe, not sure	29	21%
Total		139	100%

(Source: Primary data)

Interpretation: The given table number 5 shows the number of consumers on awareness about GST in hotels of Indore city. When a total of 139 consumers were asked questions in this regard, 89 i.e. 64% consumers said that they have complete knowledge of this topic. 21 i.e. 15% consumers said that they do not have knowledge of this topic. Whereas 29 i.e. 21% consumers said that they do not have knowledge of this topic. In conclusion, most of the consumers are aware about GST in hotels.

Table 6 Frequency on consumer satisfaction regarding GST in hotels

S.N.	Consumer Satisfaction	Frequency	Percentage
1	Highly satisfied	7	5%
2	Satisfied	24	17%
3	Dissatisfied	58	42%
4	Highly dissatisfied	21	15%
5	Neither satisfied nor dissatisfied	29	21%
Total		139	100%

(Source: Primary data)

Interpretation: The given table number 6 shows the number of consumers on satisfaction regarding GST in hotels of Indore city. When a total of 139 consumers were asked questions in this regard, 7 i.e. 5% consumers were highly satisfied. 24 i.e. 17% consumers were satisfied.

58 i.e. 42% consumers were dissatisfied. 21 i.e. 15% consumers were highly dissatisfied while 29 i.e. 21% consumers were neither satisfied nor dissatisfied. In conclusion, most of the consumers were dissatisfied, so they do not agree with it.

Table 7 Consumer perception about GST being a very good tax reform for India

S.N.	Consumer Perception	Frequency	Percentage
1	Strongly Agree	39	28%
2	Agree	56	40%
3	Neutral	11	8%
4	Dis Agree	22	16%
5	Strongly Dis Agree	11	8%
Total		139	100%

(Source: Primary Data)

Interpretation: The above table no. 7 shows the perception of consumers about GST in Indore city which states that GST is a very good tax reform for India. When this question was asked to a total of 139 consumers, 39 i.e. 28% consumers were completely agreed with this statement. 56 i.e. 40% consumers were agreed. 11 i.e. 8% consumers were neutral. 22 i.e. 16% consumers were disagreed. While 11 i.e. 8% consumers were completely disagreed. In conclusion, most of the consumers agreed with this statement and hence they consider GST as a good tax reform.

Table 8 Consumer perception about whether GST has increased the tax burden on consumers

S.N.	Consumer Perception	Frequency	Percentage
1	Strongly Agree	25	18%
2	Agree	65	47%
3	Neutral	33	24%
4	Disagree	11	8%
5	Strongly Disagree	4	3%
Total		139	100%

(Source: Primary Data)

Interpretation: Table 8 given above shows that GST has increased the tax burden on consumers in the context of Indore city. When this question was asked to a total of 139 consumers, 25 i.e. 18% consumers were completely agreed with this statement. 65 i.e. 47% consumers were agreed. 33 i.e. 24% consumers were neutral. 11 i.e. 8% consumers were disagreed. While 4 i.e. 3% consumers were completely disagreed. In conclusion, most of the consumers agreed with this statement and hence they consider GST as a good tax reform.

Table 9 Number of respondents who check Hotel bills for GST component

S.N.	Check Hotel Bills	Frequency	Percentage
1	Always	88	63%
2	Sometimes	35	25%
3	Never	17	12%
Total		139	100%

(Source: Primary Data)

Interpretation: The above table 9 shows whether consumers check GST bill in Hotels or not in the context of Indore city. When this question was asked to 139 consumers, 88 i.e. 63% consumers said that they always check the bill. 35 i.e. 25% consumers said that they check sometimes. While 17 i.e. 12% consumers said that they never check the bill. In conclusion, most of the consumers always check GST bill, so consumers are aware.

Findings of the Ctudy

From the above data analysis and interpretations, following are the findings of the study:

1. Most of the consumers are from the male category, i.e. 63%.
2. Most of the consumers fall in the age group of 25-60 years, i.e. 57%.
3. Most of the consumers (i.e. 45%) are graduates, which is their highest education qualification.
4. Most of the consumers (i.e. 37%) are employees of private institute or organization and 28% of the consumers are businessmen, according to their occupation level.
5. Out of all the respondents, most of the consumers (i.e. 64%) are aware about the GST imposed on hotels.
6. Out of all the respondents, 42% of the consumers are not satisfied regarding the GST imposed on hotels.
7. Most of the consumers (i.e. 40%) agree with the statement that GST is a very good tax reform in India.
8. Out of all the respondents, 47% of the consumers agreed with the statement that GST has increased the tax burden on consumers.
9. Majority of the consumers (i.e. 53%) check the restaurant bill for GST component while making payment.

Conclusion

From the above results, it is concluded that most of the people are aware of the GST levied on hotels including the GST rate. The GST rate should be reduced as people feel that it is a burden on the consumers and most of the consumers are not satisfied with the GST rates levied on food, beverages and services in hotels. People are well aware of the GST implementation in India and they feel that GST reforms are very good for India in terms of economic growth. The government and hotels need to take some steps to make the consumers well aware about the GST rates levied on food, beverages and services.

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Subhash Chandra Bose's Role as a Bengali Patriot in the Indian Independence Movement

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Abstract:-

This article highlights the remarkable life and contributions of Subhash Chandra Bose, and his role as a leader, his efforts for armed resistance and his lasting impact on India's freedom struggle.

Key Words: Bengali, Patriot, Indian, Freedom, Movement.

Introduction:

In the history of the struggle for India Independence, Bengal occupies a unique position in the previous of India. It has not played only a very permanent role in strengthening the foundations of the Indian National Congress but has always made the most valuable contribution towards the fight for the emancipation of the country.¹

The people of this province can rightly be called the inspiration of the national movement in India. In appearance they all quiet minded, mild gentle and refined, but in fact they all sensitive patriot of the most astounding character. They would never shrink from making the supreme of the sacrifices toward the cause of their motherland.² Generally, they are emotional in nature. Sir John Anderson, the governor of Bengal, had rightly admitted that terrorism is the perverted expression of the extreme love of the Bengali race for their motherland.³ The Country is indebted to this province because it gave the congress such great leaders like as Bipin Chandra Paul, Aurobindo Ghosh, Deshbandhu C. R. Das, J. M. Sen Gupta and lastly Subhash Chandra Bose. Subhash Chandra Bose was born in the first hour of noon on Saturday, January 23, 1897, at a small village Kotalia situated in the province of Orissa.⁴ His father Rai Bahadur Janaki Nath Bose, on account of his inherited intelligence and excellent capability in the profession of Law, had been a public prosecutor, leader of Bar and a chairman of the District Board of Cuttack. His Mother name Shrimati Prabhavati Devi, a religious minded lady with excellent simple habits, always took the greatest call in beginning up her children to the simplest made of living.

Bose's Role as a Bengali Patriot in the Indian Independence Movement:

Subhash Bose, son of highly placed lawyer received his primary education in a protestant European schools furnished and designed in the western fashion. He passed his matriculation from Ravenshaw collegiate school and got 2nd position in whole of the university. He was admitted to the presidency college Calcutta. But his lofty ideals from the very childhood caused the immediate termination of his college studies. Subhash Bose's interests were mainly intellectual. When he was hardly fourteen years old he began a thorough study of Rama Krishna Parmhansa under the guidance of Swami Vivekanand. Subhash passed his B.A. examination in 1919 with first class honors in philosophy. So at the age of 22 Subhash Chandra Bose was a full-fledged graduate. Now Subhash parent's decided to send him to England to sit for the I.C.S. So with in the short period of eight months, apart from the I.C.S. examination he received the Degree in Philosophy from the Cambridge University and returned to his home with new hopes, fresh Ideas and wider knowledge. At his return from London, he did not think of enjoying the I.C.S offices, but concentrated towards the betterment and uplift of the starving millions on his country. In Childhood, after passing his Matriculation Examination, he had left the pleasures of the world in search of some spiritual instructor and in his youth he kicked off so great an office like I.C.S and worried for a political guide. He met several political leaders, exchanged ideas with them and at the end of 1921, he threw off the I.C.S. job and entered in active politics of the congress.⁵ After landing in Bombay from London on 16 July, 1921, Subhas Chandra Bose first meet Mahatma Gandhi at Mani Bhavan and discussed with him about his future plan in congress.⁶ But somehow, Bose was not impressed by Gandhi. And, Gandhi himself suggested Bose that he should meet Deshabandhu Chittaranjan Das in Calcutta for his guidance. So Bose met Das in Calcutta and on his first meeting with him, he accepted him as his leader.⁷

The first assignment of Bose in the congress was the office of the Principal of the National College, and along with it he was also made the chief of the publicity board of the Bengal Provincial Congress Committee and the head of the National Volunteer Corps.⁸ Das gave him also the responsibility to keeping contacts with the revolutionaries, some of whom were underground. In the starting Bose proved the ability of his leadership, and within three or four month he became famous as an important leader not only in Bengal but throughout the country.

In the strike in Calcutta, on 17 November, 1921, organized by the congress in protest against the visit of the Prince of the Wales, he proved his organizing capacity, and in the Non-cooperation movement started at that time he was nominated by C.R. Das as one of his successors for the leadership of the movement. Bose started the newspaper 'Swaraj' and also editor of the newspaper 'Forward' founded by Chittaranjan Das. He was arrested on 20 December, 1921 and was awarded six months imprisonment.⁹ The period of next four or five years was just like a hurricane for Bose. Bose addressed a number of conferences of students and youth, both within and outside Bengal. He did a very excellent work for flood relief in North Bengal. He became the General Secretary of the B.P.C.C. in 1923. He was arrested many times in between 1921 to 1930. In 1927, after being released from prison, Subhash Chandra Bose became general secretary of congress party and worked with Jawaharlal Nehru for independence.

In 1928, Bose organized the annual meeting of the Indian national congress in Calcutta. In 1932, after the Second Round Table Conference Mahatma Gandhi returned disappointed to India, he called a meeting of the working Congress committee at Bombay. Subhash Chandra Bose had also come to Bombay for certain clarification and exchange of ideas with the Congress high command but was arrested there under Regulation 3 of 1818 Act.¹⁰ After 1933, next four or five year up to 1938, Bose was in foreign. His health was not good and he took the surgery treatment from Austria in 1933. Bose also meet Emilie Schenkl in 1934 in Austria, who became the mother of Bose baby child, after 8 years in 1942.¹¹ In Europe during his stay in Vienna between 1932 and 1935, he had acquired the art of face make-up from an Indian residing abroad. A picture, entitled “The Tiger of Ishanpur” was being prepared in Germany under the direction of that man at that time. This skill became useful to him, when, in February, 1941, he succeeded to reach Kabul with a view to meet the German Ambassador in Afghanistan throwing dust in the vigilant eyes of the Indo-British rulers, in spite of the warrant of arrest against him.¹²

Bose became two time president of Indian National Congress. This was the time when the session of the congress was to be held at Haripura. Four names were prepared for the President Ship, Mr. Subhas Chandra Bose, Maulana Abul Kalam Azad, Pandit Jawaharlal Nehru and Khan Abdul Ghaffar Khan.¹³ All the three members withdraw their names in favour of Subhas and thus, elected him unopposed president of Indian National Congress for the year 1938.¹⁴ Mr. Subhas Chandra Bose was in foreign till that time. Although his health was not in a position to shoulder so heavy responsibility, yet he bowed before the country's decision and on January 14, 1938, flew back to his country by air. Rash Behari Bose who was in Japan, he was congratulated to Subhas Chandra Bose by sending a letter. After his return from Europe in 1938, he started speaking that another world war would start soon in Europe and Britain would be involved in it. Bose suggested again and again that India should take the advantage of this situation, and gave a call for the final struggle for the total independence of the country. From the Jalpaiguri session of the Bengal provincial Congress Committee in February 1939, he suggested that an ultimatum of six months should be given to the British Government and if after the expiry of this period, the British Government did not leave India, the final struggle should be started. Thus site for Haripura congress was selected on the river Tapti. The open session of Congress was to meet on the 19th February and this session adopted several re-solutions, the most important of which was the war re-resolution.¹⁵ Although health of Subhas Chandra Bose was not good but still, he delivered a great address at the time of 51 open session of Congress.¹⁶

The 52nd session of the Congress was to be held at Tripura. This time the competition was between Maulana Abul Kalam Azad, Dr. Pattabhi Sitarmayya and Subhas Chandra Bose. Subhas Chandra Bose got 1580 votes out of the total 2957 polled votes. Dr. Pattabhi Sitarmayya got 1377 votes, and Mr. Subhas Chandra Bose was declared re-elected as the President of National Congress by the majority of more than 200 votes.¹⁷

In his Tripuri address (March 1939), which was very brief compared to the Haripura address and read in absentia due to his illness; Bose just referred to the point that the Congress should have to work in close co-operation with the anti-imperialist organizations in the country like the Kisan movement and the trade union movement. All the radical elements in the country must work in close harmony and co-operation, and efforts of all

anti-imperialist organizations must coverage in the direction of a final assault on British imperialism.¹⁸ But very shortly, Mr. Bose era in the Congress came to an end in sad Circumstances. But at the same time he had firm convictions that the Student's Organizations and more movements in the country would decidedly prefer dynamic leadership. Hence the forward bloc, the advanced wing of the congress came into being existence.

In April 1939, Subhas Chandra Bose left Congress and on 03 May, 1939, he established the "Forward Bloc" of the Indian National Congress. This formation was announced in a public rally in Calcutta. Here, he said that those who are joining would never return to the British and must fill the pledge form by cutting their finger and signing it with their blood. Subhas Chandra Bose became the president of the Forward Bloc and Sardar Sardul Singh Cavesheer its vice president. In June 1939, a Forward Bloc conference was held in Bombay. In July 1939, Subhas Chandra Bose announced the committee of the Forward Bloc. The All India Forward Bloc is a left-wing nationalist party in India. It emerged as a faction within the Indian National Congress in 1939. In the starting of the formation, first of all, seventeen young girl came up and signed the pledge form. The aim of the Forward Bloc was to rally all the left wing sections with in the Congress and develop an alternative leadership inside the Congress. In June 1939, Constitution and programme of the Forward Bloc were approved and in July Subhas Chandra Bose announced the Forward Bloc committee.

- (1) Subhas Chandra Bose - President
- (2) Sardar Sardul Singh Cavesheer - Vice President
- (3) Lal Shankar Lal - General Secretary
- (4) Pandit B Tripathi - Secretary
- (5) Khurshed Nariman – Secretary

After the arrest of Capt. Mohan Singh, Indian National Army not only became leaderless but also faced chaotic situation, when most of the members of the council of action of Indian Independence League and Indian National Army resigned from their posts. It was the matter of concern for the Japanese circle, also. Now Rash Behari Bose was the 'One Man Force' in IIL and INA. In spite of his old age and deteriorating health, Rash Behari Bose plunged into the task of collecting money; organizing a national army and at the same time making a start with recruitment and training of young Indian volunteers for the national army.¹⁹ Despite the best efforts of Rash Behari Bose after the crisis in the Indo-Japanese relations, the Indian independence movement in East Asia moved at a slow pace. "During the early negotiation between Capt. Mohan Singh and Fujiwara, and subsequently at the Bangkok conference, the Indians had insisted that Subhas Chandra Bose be brought to East Asia from Berlin where he had escaped from India to organize the Indian independence movement."²⁰ After Capt. Mohan Singh, the president of the council of action, Rash Behari Bose, appointed a committee of administration to manage the affairs of INA. The committee of Administration had Lt Col J.K. Bhonsle as its chairman, with two Punjabi members, i.e., Lt. Col. M.Z. Kaini, and Lt. Col. Ehsan Qadir and one Col A.D. Loganadhan.²¹ On February 06, 1943, Rash Behari Bose put forward a proposal to the Lwakuru Kikan for reviving the INA. Rash Behari Bose felt the need of Netaji Subhas Chandra Bose, who was in Germany, to come over to the eastern war front and relieve him. Germany, Italy and Japan being allies as Axis power during Second World War, he negotiated with the Japanese Government to being Netaji form Germany where he had setup the free India Centre and the Indian Legion with the German government.²²

The news of the crisis reached to Subhas Chandra Bose in Berlin. After travelling for 90 days in a Submarine, Bose arrived at Tokyo on May 16, 1943. For about one month his presence in Tokyo was kept secret.²³ On June 18, 1943, the Tokyo Radio announced that “Chandra Bose who had been in Germany recently, arrived in Tokyo. Subhas Chandra Bose started his activities after arrival in Japan. The personality and patriotic speeches of Subhas Chandra Bose impressed many Punjabis in South-East Asia. Shah Nawaz Khan said: “When Netaji arrived in Singapore, I watched him very keenly. I had never seen or met him before, and did not know very much about his activities in India. I heard a number of his speeches, which had profound effect on me. It will not be an exaggeration, if I say that I was hypnotized by his personality and his speech. He portrayed the true picture of India before us and for the first time I saw India, through the eyes of an Indian.”²⁴ Another Punjabi, Habib-Ur-Rahman, who devoted himself to Subhas Chandra Bose, said: “I was most impressed by Netaji’s selflessness, his absolute devotion to the country, his frankness and his refusal to bow before the Japanese wishes.” In the following month Subhas Chandra Bose went to the Singapore.²⁵ On July 04, 1943, in East Asia, Rash Behari Bose handed over the leadership of the Indian Independence League and Indian National Army (renamed as Azad Hind Fauj) to Subhas Chandra Bose.²⁶ A public meeting was held at Cathay Hall, Singapore on October 21, 1943, where before the crowd, Netaji read out, his famous proclamation in a clear and resonant voice, setting up the provisional Government of Azad Hind. From that day, with the formation of provisional Government, the INA had a will, a purpose and a mission. It was the time to fight out India’s last war of Independence with the new war cry “on to Delhi” and a sense of dignity.²⁷ He warned his men and officers: “For the present I can offer you nothing except hunger, thirst, suffering, forced march and death. But if you follow me in life as well as in death, I will lead you on to the road to victory and freedom. It does not matter who among us will live to see free India. It is enough that India will be free and we will give our all to make her free.”²⁸

Concluding Remarks:

Subhash Chandra Bose is one of the most important figures in Indian history. The role of Subhash Chandra Bose in the freedom struggle is important, and there have been many contributions of Subhash Chandra Bose to India.

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Concept of Mental Health in Indian Conventional Yoga

(With Reference to the Special Themes of the Yogic Texts)

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In the tradition of yoga, the subject of mental health has not been discussed or formulated separately independently like psychology; Because here the individual has always been taken as a whole. Unlike modern psychology, in Indian thought, the existence of the individual is based on the soul and not on the mind. The existence of the mind here is nothing more than the apparatus of the soul. The ultimate goal of life is the realization of its true nature, the Self. This has been described under various names such as moksha, liberation, nirvana, self-realization, God-realization. From the yogic point of view, this condition is the complete state of existence of a person, in this state a person can be said to be completely mentally healthy. In this way, the problem of mental health has been considered in a compound view, which modern psychology has not yet been able to imagine properly. Maharishi Patanjali has laid down a well-organized highway to provide this healthy state of mind, which is famous as Ashtanga-Yoga. It defines the ideal state of mental health as samadhi and considers the various steps to reach it from a subtle psychological point of view.

Etymology of the word “yoga” ‘युज्-संयमने’, ‘युजिर्-योगे तथा ‘युज्-समाधौ with the suffix घञ्। Which means presenting the process for attaining the ‘samadhi-state’. It broadly implies two meanings – the first is the contemplation of the soul and the Supreme Soul or the realization of non-duality and the second is the cessation of the attitudes of mind by practice and disinterest, the goal of which is to reach the state of samadhi or to be established in the form of the Self (real form).¹ Maharishi Patanjali has defined this fact as chittavritti nirodha.²

Maharishi Vyas has also explained the meaning of yoga as Samadhid³ In fact, this is the culmination of individual development, where mental health is expressed in its entirety. In fact, it is the ideal state of psychological equilibrium, from the womb of which man’s spiritual nature manifests and develops. Here mind refers to conscience, mind, intellect and ego.⁴ In the words of Shri Ram Sharma Acharya Ji, stopping the movements of the mind from becoming outward and turning them inward and engaging them in spiritual contemplation is called cessation of attitudes and this is called yoga.⁵ It is the composite organization of the physical, mental, intellectual and spiritual aspects of the human personality.⁶

Samadhi is the climax of the cessation of mindfulness and from the yogic point of view this is the normal state of mental health. Earlier, we can discuss different levels of mental health according to different stages of attitudes. According to Yoga philosophy, there are five states of mind:- मूढ़, क्षिप्त, विक्षिप्त, एकाग्र और निरुद्ध

The state of mindfulness is the state in which tamoguna is predominant. In this state, rajas and sattvas are subdued. Therefore, man remains in a state of sleeplessness, laziness, attachment, fear, confusion and humility. In this state, the power of thinking of a person

remains blunt. As a result, he cannot see any object properly. In this state, the person is unable to think of right and wrong due to being irrational. He doesn't understand what to do and what not to do. Possessed by lust, anger, greed, and attachment, he does all kinds of undesirable and vile acts. This is the state of a man who is degenerate from humanity, a frantic and despicable person who is consumed by drugs. In this state, *tamas* prevails, due to which this position is considered to be of lowly people.⁷

In the eyes of psychology it is the state of a person deviating from normal behavior; Whose mental health is seriously sick. This can be called a severe disorder of abnormal behaviour that requires proper treatment.

The state of mind is the state of menopause in which *sattva* and *tamas* are subdued. In this state the mind is very fickle, constantly running after its pleasures. It is an outward state of mind, in which the mind is running all over by the senses. Such a mind remains constantly restless and unstable. This scattered power of the mind cannot do any work properly. There is no control over mental activity in this state; That is, in this state, the person keeps dancing at the behest of the senses, brain and mind tastes, imaginations and instructions and there is a lack of restraint on these.⁸ As a result, his *dasha* is full of passion and aversion. Therefore, according to these, he is entangled in the vicious cycle of happiness and sorrow, joy and sadness, worry and grief. In this state the mind is *Rajoguna* predominant, but secondarily *Sattva* and *Tamas* also accompany it. When *tamas* suppresses *sattva*, there is a tendency in ignorance, unrighteousness, disinterest, immorality, and when *tamas*, when *satguna* suppresses *tamas*, there is a tendency in knowledge, religion, disinterest and opulence. In this way, in this state, there is a tendency between religion-*adharma*, passion-dispassion, opulence-immorality and knowledge-ignorance. This is often the state of ordinary worldly human beings.⁹ In the view of modern psychology, if the behavior of a person is harmonious in this situation, then it will be said to be healthy and normal, but often in this state the person is affected by various types of mental disorders. From the yogic point of view, this condition is considered to be far from a state of health and completely unsuitable for yoga.

In the neurotic state of mind *Sattva* is predominant, and the other two *gunas*, *rajas* and *tamas*, are suppressed. In the distressed state the mind is never fixed due to the predominance of menopause; it is always restless; in the neurotic state it sometimes attains stability due to the excess of *sattva*.¹⁰ In this, the person is inclined towards knowledge, religion, disinterest and opulence. In this state, lust, anger, greed, attachment etc. become secondary and interest in worldly pleasures goes on and the person is inclined to selfless action; But stillness of mind is not permanent. Intermittent surges cause instability and fluctuations. In this way, the mind attains inner stability. In this, the mind is not completely stopped, but in this state concentration begins and from here the *samadhi* begins. A man with this state of mind is happy, happy, enthusiastic, patient, charitable, kind, merciful, brave, forgiving, high-minded and superior. This is the state of those seekers who strive to walk on the spiritual path with a feeling of becoming wanderers.¹¹ Great men and gods also fall into this category. In the eyes of modern psychology, a person who has reached this stage will be considered completely normal and mentally healthy on most of the criteria; But in the yogic view of human existence which is very excruciating, the normal state of mental health is still far from *samadhi* and it is only in the next two states of mind that it attains this state. In these cases, the excess of *sattva* increases. Therefore, in these conditions, the mind becomes useful for *Samadhi*.¹²

In a concentrated state of mind, the mind becomes a pure Sattva form, and rajas and tamas are left to nothing. Therefore, due to the stopping of the distractions of Rajoguna and Tamoguna, the flow of attitudes remains in the same direction and due to the predominance of Satoguna, the mind becomes pure and stable like a pure crystal-gem, then that state is called concentrated state.¹³ In this state there are certain impressions of external objects experienced in the past, which sometimes suddenly awaken and sometimes interfere with spiritual practice, but often the mind remains concentrated. This is the appropriate state for samadhi because of the concentration of attention on one subject apart from all subjects. By practice, the state of concentration becomes the nature of the mind and this state is maintained even in the dream state. Through this samadhi, accurate knowledge of objects, the cessation of afflictions, the loosening of the bondage of karma and reaching the state of restraint, these four actions are performed. Although this state does not involve cessation of all the attitudes of mind, it is a fully helpful state in yoga.¹⁴ However, in this state, the devotee acquires realization of all matters from atoms and atoms to the Mahatva. This state of mind is also called Sampradaya Samadhi, which is the state of yogis.¹⁵

In a state of restraint all the tendencies of the mind are stopped. Stillness is fully established in the mind. In the concentrated state, the devotee realizes the distinction between the soul and the mind. This position of the yogi is 'prudence'; But discernment is also an attitude of the mind, even if it is the highest sattvik. Therefore, its prevention is also necessary. This highest sattvikavritti is stopped by detachment and the devotee reaches a state of stagnant mind. This is the height of detachment 'knowledge'. Which arises when the state of 'rationality' is permanent. In this, the mind becomes established in the form of the Self, in which the five afflictions of ignorance etc. are destroyed. Therefore, having ceased all the attitudes of the mind, the mind becomes completely without instinct and the Purusha (soul) becomes established in its own form. It is also called 'Asamprajñât-samadhi' or 'Nirbija-samadhi'.¹⁶ Of these five stages, the first three are absolutely useless for yoga (samadhi), but in the last two stages yoga arises.¹⁷ Sattva predominates in them, so no disease arises in them. Various mental illnesses arise in the stupid and depressed states of mind.¹⁸ In modern psychology, only the first three lands or states have been studied and on the basis of this, the concepts of general and abnormality related to mental health have developed, whereas the overall concept of mental health is not possible by remaining confined to this limit. Holistic mental health emerges from the last two states of mind, which modern psychology divides into abnormalities. In this way, the yogic approach takes a holistic view of human existence and paves the way for holistic mental health by treating the deepest levels of human consciousness through its yogic practices, to which Ayurveda through its therapeutic science adds new dimensions.

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Trends- State-level Inequalities in Maternal and Child Healthcare (MCH) in India

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Abstract

This study analyzed economic inequalities in the coverage of key maternal and child healthcare (MCH) indicators in India and its states over the past 15 years. Design: Data from the last three rounds of the National Family Health Survey (NFHS) conducted in 2005-2006, 2015-2016, and 2019-2021 were used. The analysis employed bivariate methods, richest-to-poorest ratios, the slope index of inequality (SII), and multivariate binary logistic regression to assess coverage and disparities in MCH outcomes at national, state, and district levels. Primary Outcomes: The study focused on full antenatal care, institutional deliveries, postnatal care for mothers within 48 hours of delivery, and full immunization among children. Participants: The analysis included women aged 15-49 who had given birth in the five years preceding the surveys for maternal healthcare indicators, and children aged 12-23 months for childhood immunization.

Results: Over the last 15 years, MCH coverage in India has significantly improved across all socioeconomic segments, with greater absolute gains among the worse-off populations. This progress led to a reduction in economic inequalities across all MCH indicators. For example, the SII value for institutional deliveries decreased from 0.76 in 2005-2006 to 0.45 in 2015-2016, and further to 0.37 in 2019-2021. Despite this overall decline in inequality, significant geographic disparities persist at both state and district levels.

Conclusion: While substantial improvements in MCH coverage and reductions in economic inequalities were observed, some regions continue to exhibit low coverage and persistent disparities. Incorporating a spatial perspective into inequality research and implementing targeted interventions is critical to achieving universal access to reproductive healthcare services by 2030 in India.

Keywords: Antenatal care; Institutional births; Postnatal care; Childhood immunisation

Introduction

The year 2023 marked the midpoint for achieving the global Sustainable Development Goals (SDGs), which include the goal of ensuring healthy lives and promoting well-being for all at all ages. Among the 17 SDGs, one target is to reduce the global maternal mortality ratio (MMR)—defined as the number of maternal deaths per 100,000 live births—to less than 70 by 2030. While nations strive toward this target, the disparity in maternal death risks between developed and developing countries remains one of the most significant health divides globally¹.

According to United Nations estimates, approximately 24 million children were born in India in 2017, with around 35,000 mothers dying during childbirth or shortly thereafter,

resulting in an MMR of 145 per 100,000 live births ^{2,3}. A large proportion of these deaths occurred in rural areas and were likely underreported. Over the past two decades, despite India's economic growth, its human development indicators have struggled to improve. Maternal and child health (MCH) indicators in India remain suboptimal compared to those in other South and East Asian countries. Inequities in healthcare are further exacerbated by factors such as caste, socioeconomic status, gender, and geographic location⁴.

Recent studies indicate a significant increase in the utilization of maternal healthcare services, particularly skilled birth attendants, but persistent gaps remain across socioeconomic groups ⁵. For instance, while antenatal care (ANC) coverage increased by 12% between 1992 and 2006, the increase among poorer segments was a mere 0.1% ⁶. Similarly, skilled birth attendance rose by 13% overall, yet it was only 2% among women in the poorest wealth quintile ⁷. Another study assessing the Coverage Gap Index (CGI) for reproductive, maternal, newborn, and child health (RMNCH) services found significant variation between states, with CGI as low as 10.5% in Kerala and as high as 55% in Nagaland. Moreover, the poorest quintile had a CGI 2.5 times higher than the richest ⁸.

India has long been committed to reducing its high maternal and child mortality rates, with significant investments over the years. The launch of the National Rural Health Mission (NRHM) in 2005, including the Janani Suraksha Yojana (JSY) program, marked a major step toward improving healthcare access for rural and vulnerable populations, particularly women and children. Initially targeting 18 states with low institutional delivery rates, NRHM later expanded nationwide and was integrated with the National Urban Health Mission under the National Health Mission (NHM) in 2013. While the NHM contributed to notable progress in MCH indicators and reductions in infant and under-five mortality rates, the benefits have not been equitably distributed across socioeconomic groups and regions. The programme focused on low performing states (such as Uttar Pradesh, Uttarakhand, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, Assam, Rajasthan, Odisha and Jammu and Kashmir) with low institutional delivery rates and high performing states with high institutional delivery rates, differently.⁹

Between 2007-2009 and 2018-2020, India's MMR declined significantly, from 212 to 97. However, the pace of decline varied across states, and the national average conceals disparities at the state and district levels¹⁰. Previous studies on MCH inequalities have primarily focused on national trends or a limited number of states, often comparing northern and southern regions. Furthermore, most analyses concentrated on the period before the NRHM launch, with limited evidence on the post-NRHM period^{5,7,8}.

This study seeks to fill this gap by examining trends in the coverage of critical MCH services across India and 28 states over the past 15 years. It also investigates socioeconomic inequalities in MCH service coverage at both state and district levels. To the best of our knowledge, this is the first study to assess district-level socioeconomic inequality in MCH service coverage in a manner that compares districts within their respective states. The findings of this study will provide valuable insights for policymakers and program designers to prioritize regions with low coverage and high inequality, ensuring a more targeted approach to achieving universal reproductive healthcare access by 2030.

Methods

Data

The study used data from the last three rounds of the National Family Health Survey (NFHS) of India conducted during 2005–2006,¹⁴ 2015–2016¹⁵ and 2019–2021.¹⁶ The NFHS is a multi-round large-scale household survey conducted across the states and union

territories of India which covers more than 99% of the population of the country in each round. International Institute for Population Sciences, Mumbai, remained a nodal agency to conduct multi rounds of the NFHS with collaborative assistance from several national/international organisations and development partners.

The surveys aimed to provide estimates on fertility and family planning, infant and childhood mortality, nutritional status of children and mother, and use of MCH services, at the national and state level. Additionally, the NFHS 2015–2016 and NFHS 2019–2021 also provide estimates of some of these indicators at the district level. The survey adopted multi-stage sampling designs across rural and urban areas. The NFHS data were collected using a household schedule and eligible women/individual schedules. Details of the sampling design, sample size estimation and response rates are given in reports of various rounds of the NFHS.¹⁷

Measures

Outcome Variables

This study analyzed four outcome variables related to maternal and child healthcare (MCH) services, covering critical stages of healthcare—prenatal, childbirth, postnatal, and early childhood. The outcome variables are defined as follows:

Full Antenatal Care (ANC):

The percentage of mothers who, during their last pregnancy in the five years preceding the survey, met all of the following criteria:

- Attended four or more antenatal visits,
- Received at least one tetanus toxoid injection, and
- Consumed iron and folic acid supplements for a minimum of 100 days.

Institutional Births:

The percentage of mothers who delivered their babies in any healthcare facility, whether public or private. This indicator includes all births that occurred in the five years prior to the survey.

Postnatal Care (PNC):

The percentage of mothers who received postnatal care from a healthcare professional (doctor, nurse, female health visitor, auxiliary nurse midwife, or other health personnel) within two days of delivery. This indicator is estimated for the last birth delivered within the five years before the survey.

Childhood Immunisation:

The percentage of children aged 12–23 months who received all vaccines recommended by the World Health Organization (WHO), including:

- One dose of Bacille Calmette–Guérin (BCG) vaccine,
- Three doses of polio vaccine,
- Three doses of the combined diphtheria, tetanus toxoid (TT), and pertussis (DTP) vaccine, and
- One dose of measles vaccine.

Children who received all the recommended doses of these vaccines were considered fully immunised. This indicator is estimated for all children born in the five years preceding the survey.

Predictor Variable

Household wealth serves as the key predictor in this study, used to measure socioeconomic inequality. The household wealth index, a proxy for a household's economic status, was derived from economic indicators such as housing quality, household amenities, ownership of consumer durables, and landholding size.

In all three survey rounds, the National Family Health Survey (NFHS) computed the wealth index using principal component analysis. The index was divided into five wealth quintiles: poorest, poorer, middle, richer, and richest, with each quintile representing 20% of the population.

The wealth index is consistent and comparable across survey years. These national-level wealth indices were utilized to assess economic inequalities both at the state level and within states.

Statistical Analysis

Univariate, bivariate, and multivariate analyses are applied in the study. Univariate analysis is used to examine trends in coverage of the selected outcome variables in India and states. Bivariate analysis is applied to examine the differences in coverage of selected MCH outcomes by household wealth quintiles. Average annual growth in percentage points is calculated to measure the progress in coverage of the MCH services across five wealth groups in India and states across the different NFHS rounds. To measure the socioeconomic inequality in the outcome variables, first, we calculated the ratio of richest to poorest wealth quintiles. However, given that the ratio includes only two extreme groups and ignores other groups, we estimated the slope index of inequality (SII), which is a measure of overall socioeconomic inequalities in health, and established a linear association between

socioeconomic status and health in a way that enables valid comparison between-population.¹⁷ The value of SII ranges between -1 and $+1$, where a positive value indicates concentration of the indicator among the advantaged and negative value indicates the concentration among the disadvantaged population.¹⁸ When the SII takes a value of 0 , it indicates perfect equality in coverage of the services. The advantages of using SII is that it considers the patterns of all economic groups and hence preferred over other measures of the inequality.^{19–21} Multivariate logistic regression analysis is conducted at the state level to measure association of outcome indicators with household wealth quintiles. All the analyses are conducted using STATA V.15. As the NFHS used a multistage sampling design, all the values reported in the study were estimated after applying appropriate weights. The result is organised in the following four sections: trends in coverage of MCH services in India and states, differences in coverage of MCH services across household wealth quintiles, trends in socioeconomic inequality in MCH services in India and states, and trends in the inequality in coverage of the services at the district- level.

Result

Trends in coverage of MCH services at the national and state

Level

Coverage of MCH services has increased consistently in India over last 15 years. For instance, coverage of full ANC has increased from 12% in 2005–2006 to 21% in 2015–2016 and further to 31% in 2019–2021 (table 1). Similarly, coverage of PNC has increased from 33% to 65% to 78% and full immunisation

Table 1 Trends in coverage of maternal and child healthcare services in India, 2005–2021						
Per cent coverage				Average annual growth		
	2005–2006	2015–2016	2019–2021	2005–2006	2015–2016	2019–2021
Full ANC	11.6	21.0	31.2	0.94	2.04	1.31
Institutional births	38.7	78.9	88.6	4.02	1.94	3.33
Postnatal care	33.2	65.1	77.7	3.19	2.52	2.97
Full immunisation	43.6	62.0	76.4	1.84	2.88	2.19
ANC, antenatal care						

Table 2 Trends in coverage (%) of maternal and child healthcare services across states of India, 2005–2021						
	Full ANC			Institutional births		
State	2005–2006	2015–2016	2019–2021	2005–2006	2015–2016	2019–2021
Andhra Pradesh	22.1	43.9	46.8	64.4	91.6	96.5
Arunachal Pradesh	4.9	3.5	14.4	28.5	52.3	79.2
Assam	6.7	18.1	26.9	22.4	70.6	84.1
Bihar	4.2	3.3	7.5	19.9	63.8	76.2
Chhattisgarh	5.6	21.7	29.6	14.3	70.2	85.7
Goa	57.6	63.4	81.2	92.3	96.9	99.7
Gujarat	20.7	30.7	48.7	52.7	88.7	94.3
Haryana	11.9	19.5	34.9	35.7	80.4	94.9
Himachal Pradesh	15.8	36.8	45.3	43.1	76.4	88.2
Jammu & Kashmir	12.7	26.8	23.3	50.2	85.7	92.4
Jharkhand	4.9	8.0	14.9	18.3	61.9	75.8
Karnataka	24.8	32.8	33.9	64.7	94.3	97.0
Kerala	67.3	61.2	68.2	99.3	99.9	99.8
Madhya Pradesh	4.7	11.4	32.9	26.2	80.8	90.7
Maharashtra	14.7	32.4	37.6	64.6	90.3	94.7
Manipur	5.8	33.9	46.0	45.9	69.1	79.9
Meghalaya	4.2	23.5	26.4	29.0	51.4	58.1
Mizoram	11.8	38.5	37.3	59.8	79.8	85.8
Nagaland	0.6	2.4	5.3	11.6	32.8	45.7
Delhi	24.3	39.0	55.6	59.0	84.5	91.8
Odisha	12.4	23.0	49.8	35.6	5.4	92.2
Punjab	11.8	30.7	34.1	51.3	90.5	94.3
Rajasthan	6.3	9.7	21.6	29.6	84.0	94.9
Sikkim	22.4	39.0	34.9	47.2	94.7	94.7
Tamil Nadu	27.5	45.0	70.8	87.8	99.0	99.6
Tripura	7.5	7.6	14.6	46.9	79.9	89.2
Uttar Pradesh	2.7	5.9	11.8	20.6	67.8	83.4
Uttarakhand	12.7	11.5	31.4	32.6	68.7	83.2
West Bengal	9.7	21.8	47.5	42.0	75.2	91.7
ANC, antenatal care.						

increased from 44% to 62% to 76% during 2005– 2006 to 2015–2016 to 2019–2021, respectively. This increasing trend is observed across the states in India. For instance, in Bihar (state from north India), coverage of institutional delivery increased from 20% in 2005–2006 to 64% in 2015–2016 and 76% in 2019–2021 (table 2). In Karnataka (state from south India), coverage of PNC increased from 55% in 2005–2006 to 68% in 2015–2016 and further to 88% in 2019–2021 (table 3). In Meghalaya, a northeastern state, full immunisation has increased from 33% to 64%, while in Gujarat, state located in the western part of the country, coverage of full ANC increased from 21% to 49% from 2005–2006 and 2019–2021 respectively.

Trends in MCH Service Coverage Across Household Wealth Quintiles

The coverage of MCH services increased across all five wealth quintiles. For instance, between 2005–2006 and 2019–2021, the coverage of institutional delivery increased from 13% to 76% among women of the poorest quintile, 24% to 87% among the poorer quintile, 39% to 92% among middle quintile, 58% to 95% among richer quintile and 84% to 97% among richest quintile (table 4). In the last 15 years, the maximum point increase has occurred among the poorest and poorer quintile in full ANC, PNC and full immunisation, compared with their better-off counterparts. Despite the increase in coverage of the healthcare services among poor women, there still exists differences across the five wealth quintiles.

Table 3 Trends in coverage (%) of maternal and child healthcare services across states of India, 2005–2021						
State	Postnatal care			Full immunisation		
	2005–2006	2015–2016	2019–2021	2005–2006	2015–2016	2019–2021
Andhra Pradesh	58.2	83.0	91.8	46.0	65.3	73.0
Arunachal Pradesh	21.8	33.5	55.8	28.8	38.2	64.9
Assam	14.3	57.0	65.0	31.4	47.1	66.4
Bihar	13.1	44.3	55.7	32.9	61.7	71.0
Chhattisgarh	13.2	64.7	81.0	48.7	76.4	79.7
Goa	84.6	92.8	97.6	78.9	88.4	81.9
Gujarat	49.4	66.0	88.9	45.5	50.4	76.3
Haryana	35.0	69.0	91.1	65.3	62.2	76.9
Himachal Pradesh	35.0	71.9	84.6	74.7	69.5	89.3
Jammu& Kashmir	45.2	77.2	81.3	66.7	75.1	86.2
Jharkhand	14.1	46.0	63.8	34.5	61.9	73.9
Karnataka	54.5	67.7	87.7	55.1	62.6	84.1
Kerala	90.7	92.5	97.5	75.6	82.1	77.8
Madhya Pradesh	22.9	56.5	82.2	40.3	53.6	77.1
Maharashtra	55.2	80.1	84.1	58.8	56.2	73.5
Manipur	46.3	68.8	74.9	47.2	65.8	68.8
Meghalaya	28.2	51.0	53.4	32.9	61.4	63.8
Mizoram	50.1	68.9	78.1	46.5	50.7	72.5
Nagaland	9.6	24.2	39.8	21.0	35.4	57.9
Delhi	51.4	65.1	84.8	63.4	68.8	76.0
Odisha	27.9	75.5	88.8	51.9	78.6	90.5
Punjab	49.8	88.1	85.9	60.1	89.1	76.2
Rajasthan	24.5	64.7	84.3	26.5	54.8	80.4
Sikkim	47.9	77.9	74.8	69.6	83.0	80.6
Tamil Nadu	83.6	88.4	98.2	80.9	69.7	89.2
Tripura	31.2	65.7	73.7	49.7	54.5	69.5
Uttar Pradesh	12.6	55.6	71.5	23.2	51.1	69.6
Uttarakhand	28.2	56.9	77.2	60.0	57.6	80.8
West Bengal	34.2	62.2	69.2	64.3	84.4	87.8

For instance, in 2019–2021, coverage of full ANC was 18% among the poorest women, 25% among poorer women, 33% among middle women, 38% among richer women and 44% among the richest women. The pattern of increase in the utilisation of MCH services across the wealth quintiles as well as the difference between the groups was similar across states of India.

Economic inequality in MCH services at the national and state levels Economic inequality in coverage of MCH services has reduced over time in India. For instance, the ratio of richest to poorest in full ANC coverage declined from 13.6 in 2005–2006 to 5.6 in 2015–2016 to 2.4 in 2019–2021 (online supplemental table 1). Such decline was consistent for institutional births, PNC and full immunisation as well. This pattern remained similar when the overall inequality was measured through the SII. For instance, the value of SII for institutional births decreased from 0.76 in 2005–2006 to 0.45 in 2015–2016 and further to 0.37 in 2019–2021. State-wise results also showed that socioeconomic inequality in coverage of MCH services has declined over time. For instance, the ratio of richest to poorest in coverage of institutional birth has decreased from 8.3 to 1.4 in Bihar, 7.4 to 1.2 in Uttar Pradesh, 4.5 to

1.2 in Maharashtra, 5.3 to 1.3 in Punjab and 22.4 to 1.3 in Assam during 2005–2006 to 2019–2021, respectively (online supplemental table 2). The results of the summary measure of inequality showed a similar trend. For instance, the value of SII for child immunisation decreased from 0.27 to 0.05 in West Bengal, 0.67 to 0.12 in Mizoram and 0.38 to 0.09 in Andhra Pradesh during 2005–2006 to 2019–2021, respectively (online supplemental table 3).

	Per cent coverage			Average annual growth		
	2005–2006	2015–2016	2019–2021	2005–2006	2015–2016	2019–2021
Full ANC						
Poorest	2.4	6.8	18.2	0.44	2.28	1.05
Poorer	4.6	14.3	25.1	0.97	2.16	1.37
Middle	9.3	22.6	32.7	1.33	2.02	1.56
Richer	16.2	29.2	38.4	1.30	1.84	1.48
Richest	32.1	38.1	44.1	0.60	1.20	0.80
Institutional births						
Poorest	12.7	59.6	76.2	4.69	3.32	4.23
Poorer	23.5	75.2	87.2	5.17	2.40	4.25
Middle	39.3	85.0	92.3	4.57	1.46	3.53
Richer	57.9	90.6	95.4	3.27	0.96	2.50
Richest	83.7	95.3	97.4	1.16	0.42	0.91
Postnatal care						
Poorest	8.6	44.7	61.0	3.61	3.26	3.49
Poorer	17.6	58.9	73.8	4.13	2.98	3.75
Middle	31.3	70.4	81.9	3.91	2.30	3.37
Richer	48.5	76.9	86.3	2.84	1.88	2.52
Richest	75.2	81.7	90.6	0.65	1.78	1.03
Full immunisation						
Poorest	24.4	52.8	71.0	2.84	3.64	3.11
Poorer	33.3	60.6	75.4	2.73	2.96	2.81
Middle	46.9	64.2	79.6	1.73	3.08	2.18
Richer	55.4	66.9	79.3	1.15	2.48	1.59
Richest	71.0	70.0	78.7	-0.10	1.74	0.51

Trends in District-level Inequality

The results showed decreasing inequality in MCH service coverage across states; however, such an average value can mask the within-state variation in the inequality. Therefore, we estimated the SII at the district level for each of the outcome variables. Based on the findings, the districts are categorised as follows: districts where SII is less than 0 (shown in blue colour), low category are those where districts with SII is between 0 and less than half of its respective state's SII (shown in green colour), medium category refers to districts with SII more than half of its respective state's SII to average state SII (shown in light brown colour), the district with SII more than the state average but below to two times of the state average are the high category districts (shown in medium brown colour) and lastly, districts with SII more than two times of the state value are the highest category (shown in dark red colour) (figure 1). The findings showed that in a state like Assam, Bihar, Chhattisgarh, Jharkhand and Uttar Pradesh, which has comparatively higher inequality, many districts have negative SII indicating the pro-poor situation in the use of MCH service coverage. A contrasting picture is observed in states like Andhra Pradesh, Kerala, Karnataka and Maharashtra—lower state-level inequality but very high inequality in many districts within these states.

Multivariate Analysis

The result from the multivariate logistic regression at the state level indicates that the odds ratio (OR) of availing full ANC has increased at the national level from the NFHS 2005 to 2019. However, the gap between the poorest and the richest quintile is still substantial. Richest wealth quintile is more likely to avail maternal and child health services than the

poorest quintile. This trend is constant among all indicator across almost all states. For instance, the OR of full ANC was significantly higher among women of poorer to richest wealth quintile than the poorest quintile, quite noticeable in Bihar (1.3–5.5), Jharkhand (1.2–3.9) and in northeastern states such as Nagaland (1.3–9.1), Mizoram (2.5–7.2) and Manipur (2.0–6.2). States such as Kerala and Goa, however, have managed to keep the gap little with the richest having the probability of availing full ANC only 0.10 times more than the poorest (online supplemental appendices 5–8).

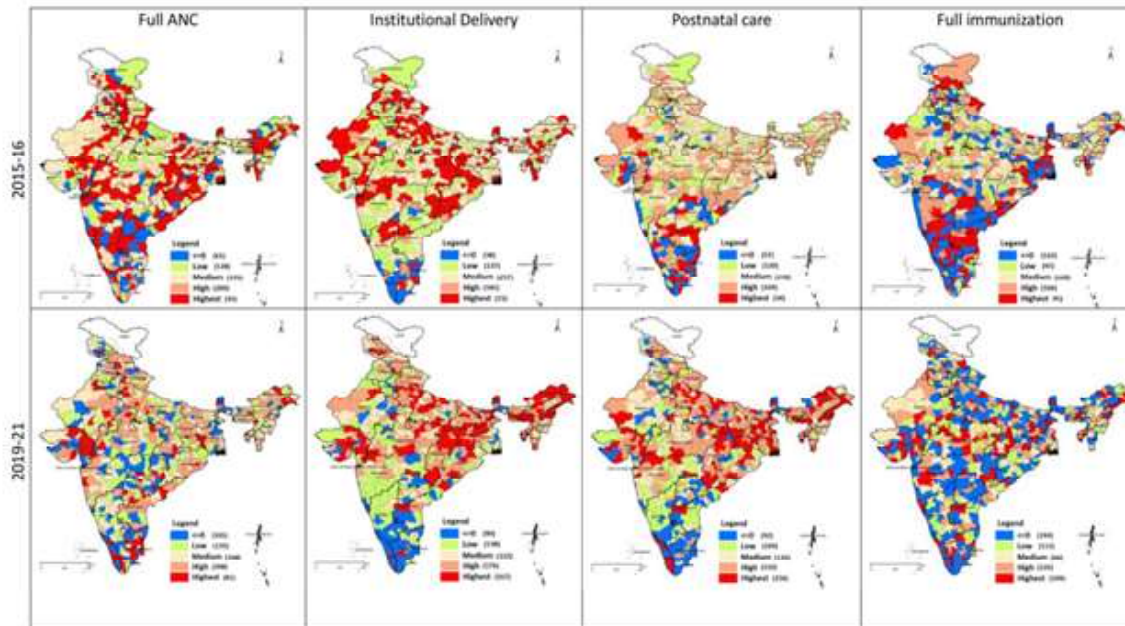


Figure 1 Maps showing trends in district-level inequality for outcome indicators for the year 2015–2016 and 2019–2021. The district level inequality calculated using slope index of inequalities (SII) for each district. The colour coding is done in comparison to each district's respective to the state SII index. The districts are categorised as follows: districts where SII is less than 0 (shown in blue colour), low category are those where districts with SII is between 0 to less than half of its respective state's SII (shown in green colour), medium category refers to districts with SII more than half of its respective state's SII to average state SII (shown in light brown colour), the districts with SII more than the state average but below to two times of the state average are the high category districts (shown in medium brown colour), and lastly, districts with SII more than two times of the state value are the highest category (shown in dark red colour). Figures in parenthesis are the number of districts of respective categories.

Discussion

Owing to the fact of high level of maternal and childhood mortality rates caused by low level of MCH utilisation, particularly due to high level of home delivery, the Government of India launched several initiatives under the flagship of the National Health Mission in 2005. Using the three latest rounds of the NFHS data conducted between 2005 and 2021, the current paper examined trends in coverage and economic inequality in important MCH services in India, and at the subnational level, during the post-NHM period. Findings showed that the coverage of the MCH indicators has increased in India, states and across household wealth quintiles in the last 15 years. Furthermore, increase in the coverage was much higher among poor women than their better-off counterparts. These findings showed that the health programmes and initiatives after launch of the NHM helped in expanding the services with increasing awareness, demand, availability and accessibility. This further indicates that the NHM interventions has worked in a targeted manner and reached out to the vulnerable population in the country and its states. For instance, in 2005, the government of India

launched JSY or safe motherhood schemes under the NHM to reduce maternal and child deaths by incentivising institutional births. The JSY initially focused on all pregnant women in low and performing states and pregnant women in high performing states.

The findings further showed that the JSY has worked effectively; as in number of districts, share of deliveries in public hospitals has increased. The share has increased more in low-performing states than in high-performing states. Similarly, the impact of Mission Indradhanush on universal immunisation has increased the pace of improvement in immunisation coverage, but compared with the achievement of institutional births, the growth is tapered.²² The impact of the NHM on maternity services uptake is discussed in several pieces of literature and has documented positive impact of the world's largest demand side financial incentive programme. The cash incentive did increase the utilisation of maternity services, especially for poor and uneducated women.²³ The finding can be corroborated with the analysis in the study in which the gap between the poorest and richest quintile in institutional delivery has reduced in the latest round. This reduction was achieved after highest increase of services among the poorest—an average annual growth of 4.23percentage points in the last 15 years, while for the same period, the richest quintiles experienced growth rate of 0.91percentage points (table 4). Other studies too support these findings,²⁴ which highlight the role of health infrastructure improvements in increasing service utilisation, particularly in rural areas. Previous research also emphasised on programmes like JSY and Mission Indradhanush to ensure long-term improvement as they have an important role to play by reducing the financial barriers in accessing maternal health services.²⁵ Comparative analyses, such as those by the WHO (Global Health Observatory) show that India's progress in reducing MCH inequalities aligns with trends observed in other developing countries, although specific regional and socioeconomic contexts vary.

Though the inequality in services coverage has reduced over time, the poorest wealth quintile in all the outcome variables has still not reached the level the richest wealth quintiles were in 2005. This indicates that the health programmes should be continued targeting the marginalised group of women to bring them close to the universal level. Moreover, the extent of inequality varies among regions, with Kerala, Sikkim and Goa having the least inequality and Bihar, Uttar Pradesh, Nagaland and Manipur having the most. This indicates that while the focused programmes resulted in improvement of the services coverage, there is still a certain group of population in certain geographies who lag to tap the opportunity. While the literature suggests that there exist several factors behind utilisation of maternal health services, including education, place of residence, caste, religion, exposure to mass media etc.,²⁶ the study emphasis more on the need for some geography and population, which needs targeted intervention.

Findings of this paper need to be interpreted with certain limitations. First, the findings are based on cross-sectional data, which may not allow to demonstrate a causal relation between programme efforts and increase in service coverage among women. Second, the analysis did not include union territories of the country owing to the very small sample to provide an estimate. Third, district-level data are available to the latest two rounds of the NFHS only, which restricts to estimate the district level situation pre-National Health Mission period, aligned with the national and state-level estimates.

Conclusion

In conclusion, a consistent increase in coverage of MCH services in the country, states, districts and among women of low socioeconomic status is indeed good news and reflects the success of the long-standing MCH programmes in India, which are increasingly reaching to poor. This has resulted in closing the gap between the poor and the rich. Despite this success, the current level of MCH use among the poorest mothers is to the level that the richest women had 15 years back. This indicates that the ongoing MCH programmes in the country should continue to focus on targeting marginalised sections of the population, if India has to achieve universal access to reproductive health as committed to achieving the SDGs 3.7. The high inequality in selected geographies underscores the need to increase the accessibility of services in hard-to-reach areas with special targets among poor and marginalised populations. This will help in ensuring overall universal coverage of reproductive and child health services as well as achieving the SDG targets related to maternal and childhood mortality. The analysis across the districts indicates that the NHM has intervened in the correct directions but at some level still need to understand the unique challenges to aim for better implementation.

Strengths and Limitations of this Study

This is the first study, which examined the trends in economic inequality in selected maternal and child healthcare indicator at the district level. Hence, this study provides evidence going beyond to the national level, which masks the gap at the subnational level.

- The analysis of large datasets at the district level inequality comparable to its state's slope index of inequality. This result carves paths to have more in-depth analysis to target intrastate inequalities.
- The findings are based on the cross-sectional data, which may not allow to demonstrate a causal relation between impact of programme efforts on increase in service coverage among women.
- The analysis did not include union territories of the country owing to a very small sample to provide an estimate. District-level data are available to the latest two rounds of the National Family Health Survey only, restricting the estimation at the district level situation pre-National Health Mission period, aligned with the national and state-level estimates.

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Unemployment in the Age of Automation: Understanding the Risks and Mitigation Strategies

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Abstract

This research paper examines the impact of automation on unemployment and explores strategies to mitigate its potential negative effects. As technological advancements continue to reshape the labor market, concerns about job displacement and unemployment have become increasingly prevalent. This study analyzes the current state of automation, its projected impact on various industries, and the potential risks to employment. Furthermore, it investigates mitigation strategies, including education and skill development, policy interventions, and economic reforms. The findings suggest that while automation poses significant challenges to the workforce, proactive measures can help minimize unemployment and ensure a smoother transition to an automated economy.

Keywords: Automation, Unemployment, Artificial Intelligence, Workforce Development, Skills Mismatch, Economic Inequality, Lifelong Learning, Labor Market Policies, Digital Transformation, Industry 4.0

1. Introduction

The rapid advancement of technology, particularly in the fields of artificial intelligence (AI) and robotics, has led to increased automation across various industries. While automation has the potential to enhance productivity and economic growth, it also raises concerns about job displacement and unemployment (Frey & Osborne, 2017). As machines become more capable of performing tasks traditionally done by humans, the nature of work is evolving, and the labor market is undergoing significant transformations.

This research paper aims to provide a comprehensive analysis of unemployment in the age of automation, focusing on understanding the risks associated with technological advancements and exploring strategies to mitigate their potential negative impacts on employment. By examining current trends, projections, and expert opinions, this study seeks to contribute to the ongoing dialogue on the future of work and provide insights for policymakers, businesses, and individuals navigating this complex landscape.

The paper is structured as follows: Section 2 provides an overview of automation and its impact on the labor market. Section 3 discusses the potential risks and challenges associated with automation-induced unemployment. Section 4 explores various mitigation strategies,

including education and skill development, policy interventions, and economic reforms. Section 5 presents case studies of countries and industries that have successfully adapted to automation. Finally, Section 6 offers conclusions and recommendations for addressing unemployment in the age of automation.

2. Automation and Its Impact on the Labor Market

2.1 The Rise of Automation

Automation refers to the use of technology to perform tasks with minimal human intervention. This includes the application of robotics, artificial intelligence, machine learning, and other advanced technologies to streamline processes and increase efficiency across various industries (Brynjolfsson & McAfee, 2014). The rapid advancement of these technologies has led to a significant increase in automation adoption across sectors.

2.2 Historical Context

Automation is not a new phenomenon. Throughout history, technological advancements have led to changes in the labor market. The Industrial Revolution, for instance, saw the mechanization of many manual tasks, leading to significant shifts in employment patterns (Acemoglu & Restrepo, 2018). However, the current wave of automation, often referred to as the Fourth Industrial Revolution, is characterized by its unprecedented pace and scope, affecting a wide range of industries and job categories simultaneously.

2.3 Current State of Automation

To understand the current state of automation, it is essential to examine its adoption rates across different industries and regions. Table 1 presents data on automation adoption rates in various sectors:

Table 1: Automation Adoption Rates by Industry (2020)

Industry	Automation Adoption Rate
Manufacturing	64%
Financial Services	59%
Healthcare	36%
Retail	45%
Transportation	53%
Agriculture	28%

Source: Global Automation Survey (2020)

As evident from the data, industries such as manufacturing and financial services have seen higher rates of automation adoption, while sectors like healthcare and agriculture have relatively lower rates. However, it is important to note that automation is rapidly expanding across all sectors.

2.4 Projected Impact on Employment

Numerous studies have attempted to quantify the potential impact of automation on employment. One of the most cited studies, conducted by Frey and Osborne (2017), estimated that 47% of US jobs were at high risk of automation within the next two decades. However, other research suggests that while certain tasks within jobs may be automated, complete job displacement may be less severe (Arntz et al., 2016).

To visualize the projected impact of automation on employment across different job categories, consider the following figure:

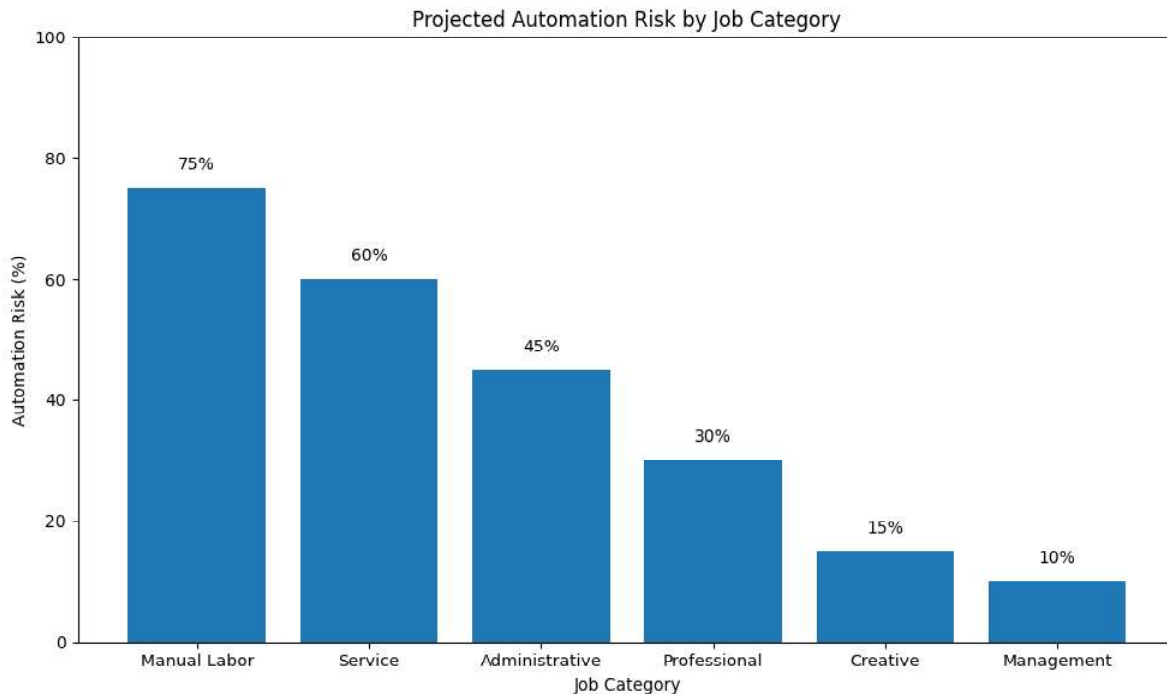


Figure 1: Projected Automation Risk by Job Category

This figure illustrates that manual labor and service jobs are at higher risk of automation, while creative and management roles face lower risks. However, it is important to note that these projections are subject to change as technology evolves and new job categories emerge.

3. Risks and Challenges of Automation-Induced Unemployment

3.1 Job Displacement

One of the primary concerns associated with automation is the potential for widespread job displacement. As machines become capable of performing tasks more efficiently and cost-effectively than humans, certain job categories may become obsolete (Acemoglu & Restrepo, 2020). This displacement can lead to unemployment, underemployment, and income inequality if not properly managed.

3.2 Skills Mismatch

Automation often creates a skills mismatch in the labor market. As traditional jobs are replaced by automated systems, new roles emerge that require different skill sets. This mismatch can result in structural unemployment, where job seekers lack the necessary skills for available positions (Autor, 2015). The challenge lies in bridging this gap through education and training initiatives.

3.3 Economic Inequality

The uneven impact of automation across different job categories and skill levels can exacerbate economic inequality. High-skilled workers who complement automation technologies may see their productivity and wages increase, while low-skilled workers face job losses or wage stagnation (Brynjolfsson & McAfee, 2014). This widening gap can lead to social and economic tensions if left unaddressed.

3.4 Regional Disparities

Automation's impact is not uniform across geographic regions. Areas heavily dependent on industries susceptible to automation may experience higher unemployment rates and economic decline. This can lead to regional disparities and the concentration of economic opportunities in certain areas, potentially exacerbating existing inequalities (Acemoglu & Restrepo, 2018).

3.5 Social and Psychological Impact

Unemployment resulting from automation can have significant social and psychological consequences. Job loss can lead to decreased self-esteem, increased stress, and mental health issues. Moreover, the social fabric of communities built around certain industries may be disrupted as jobs disappear (Brand, 2015).

3.6 Fiscal Challenges

Widespread unemployment can pose fiscal challenges for governments. Reduced tax revenues from a smaller employed workforce, coupled with increased demand for social services and unemployment benefits, can strain public finances (Furman & Seamans, 2019). This may limit the government's ability to invest in necessary programs and infrastructure.

To illustrate the potential fiscal impact of automation-induced unemployment, consider the following figure:

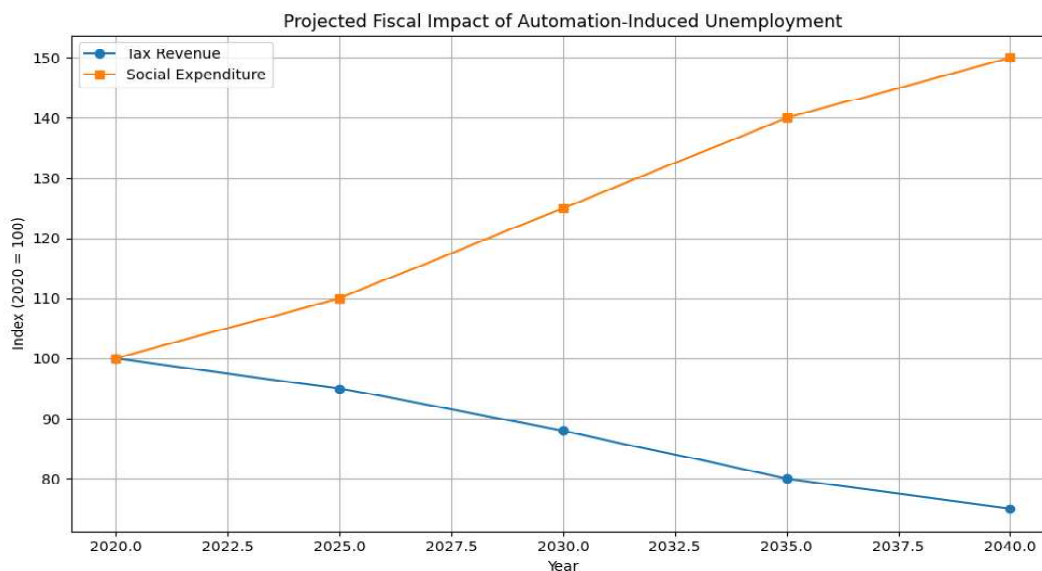


Figure 2: Projected Fiscal Impact of Automation-Induced Unemployment

This figure demonstrates the potential divergence between tax revenues and social expenditures as automation-induced unemployment increases over time. The growing gap between these two factors highlights the fiscal challenges that governments may face in the coming decades.

4. Mitigation Strategies

To address the challenges posed by automation-induced unemployment, various mitigation strategies have been proposed and implemented. This section explores key approaches to managing the transition to an automated economy while minimizing negative impacts on employment.

4.1 Education and Skill Development

4.1.1 Lifelong Learning

Promoting a culture of lifelong learning is crucial in adapting to the changing demands of the labor market. Encouraging continuous skill development and retraining can help workers remain relevant in an increasingly automated workplace (World Economic Forum, 2020). This approach involves:

- Developing flexible and accessible education systems that cater to learners of all ages
- Encouraging businesses to invest in employee training and development
- Creating incentives for individuals to engage in continuous learning and skill upgrading

4.1.2 STEM Education

Emphasizing Science, Technology, Engineering, and Mathematics (STEM) education can prepare the workforce for the jobs of the future. As automation increases the demand for technical skills, a strong foundation in STEM subjects becomes increasingly valuable (Deming & Noray, 2020). Strategies include:

- Integrating STEM subjects into curricula from early education onwards
- Providing resources and support for STEM education in underserved communities
- Encouraging partnerships between educational institutions and industry to align curricula with job market needs

4.1.3 Soft Skills Development

While technical skills are important, soft skills such as creativity, critical thinking, and emotional intelligence remain uniquely human attributes that are less susceptible to automation (Deming, 2017). Developing these skills can enhance employability and adaptability. Approaches include:

- Incorporating soft skills training into educational curricula
- Promoting project-based learning and collaborative work environments
- Encouraging extracurricular activities that foster leadership and communication skills

4.2 Policy Interventions

4.2.1 Labor Market Policies

Governments can implement policies to support workers affected by automation and facilitate smoother transitions in the labor market. These may include:

- Strengthening unemployment insurance and social safety nets
- Implementing job search assistance and career counseling programs
- Promoting labor market flexibility to encourage job creation in emerging sectors

4.2.2 Tax Policies

Tax policies can be used to incentivize job creation and discourage excessive automation in certain sectors. Strategies may include:

- Implementing a robot tax to fund retraining programs and social services
- Providing tax incentives for companies that invest in human capital development
- Exploring progressive taxation models to address income inequality

4.2.3 Universal Basic Income

The concept of Universal Basic Income (UBI) has gained attention as a potential solution to automation-induced unemployment. While controversial, proponents argue that UBI could

provide a safety net for displaced workers and stimulate economic activity (Van Parijs & Vanderborght, 2017). Considerations include:

- Piloting UBI programs to assess their effectiveness and economic impact
- Exploring funding mechanisms for UBI, such as taxes on automation or wealth
- Evaluating the potential effects of UBI on work incentives and social welfare

4.3 Economic Reforms

4.3.1 Fostering Innovation and Entrepreneurship

Encouraging innovation and entrepreneurship can create new job opportunities and industries that complement automation technologies. Strategies include:

- Providing support for startups and small businesses through funding and mentorship programs
- Streamlining regulations to facilitate business creation and growth
- Investing in research and development to drive technological advancements

4.3.2 Promoting the Gig Economy and Alternative Work Arrangements

The rise of the gig economy and alternative work arrangements can provide flexibility and opportunities for workers displaced by automation. However, it is essential to ensure adequate protections and benefits for these workers (Katz & Krueger, 2019). Approaches include:

- Developing legal frameworks to protect gig workers' rights and benefits
- Creating platforms to connect freelancers with job opportunities
- Encouraging companies to adopt flexible work arrangements

4.3.3 Investing in Infrastructure and Green Technologies

Large-scale investments in infrastructure and green technologies can create jobs while addressing pressing societal needs (Pollin, 2020). This approach can help offset job losses in other sectors. Strategies include:

- Developing renewable energy projects and sustainable transportation systems
- Upgrading digital infrastructure to support remote work and emerging technologies
- Investing in climate adaptation and resilience measures

To visualize the potential impact of these mitigation strategies on unemployment rates, consider the following figure:

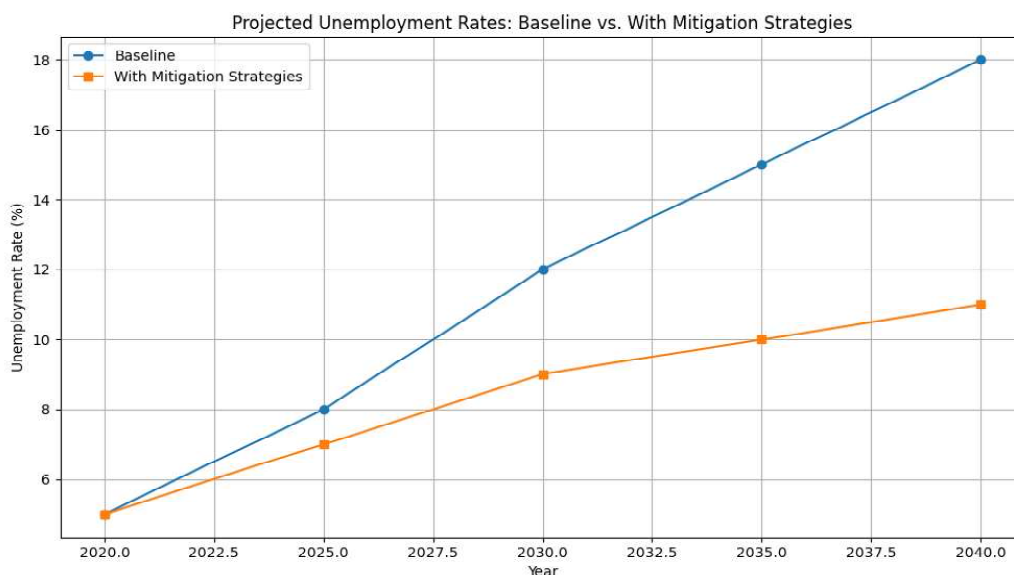


Figure 3: Projected Unemployment Rates: Baseline vs. With Mitigation Strategies

This figure illustrates the potential effectiveness of mitigation strategies in reducing unemployment rates compared to a baseline scenario without interventions. While unemployment is projected to increase in both cases, the implementation of mitigation strategies significantly moderates the rise in unemployment.

5. Case Studies

Examining real-world examples of countries and industries that have successfully navigated the challenges of automation can provide valuable insights for developing effective mitigation strategies. This section presents case studies that highlight successful approaches to managing automation-induced unemployment.

5.1 Germany: Industry 4.0 and Dual Vocational Training

Germany has been at the forefront of adopting Industry 4.0 technologies while maintaining a strong manufacturing sector and low unemployment rates. Key factors contributing to Germany's success include:

- The dual vocational training system, which combines classroom education with practical work experience, ensuring a skilled workforce aligned with industry needs (Solga et al., 2014).
- Strong cooperation between government, industry, and labor unions in developing and implementing automation strategies (Müller et al., 2018).
- Emphasis on continuous learning and upskilling programs for workers throughout their careers.

5.2 Singapore: SkillsFuture Initiative

Singapore has implemented a comprehensive national program called SkillsFuture to prepare its workforce for the future of work. The initiative includes:

- Providing every citizen with a learning credit to encourage lifelong learning and skills development (SkillsFuture Singapore, 2021).
- Collaborating with industries to identify future skill needs and develop relevant training programs.
- Offering career guidance and job matching services to facilitate smooth transitions between jobs and industries.

5.3 Amazon: Upskilling and Retraining Programs

As a leader in e-commerce and automation technologies, Amazon has implemented various programs to support its workforce in adapting to technological changes:

- The Career Choice program, which provides funding for employees to pursue education in high-demand fields, even if not directly related to their current roles at Amazon (Amazon, 2021).
- Technical Academy, an initiative that retrains non-technical Amazon employees for software development engineer roles within the company.
- Machine learning training programs for employees across various departments to enhance their skills in AI and data analysis.

5.4 Denmark: Flexicurity Model

Denmark's flexicurity model combines flexible labor markets with strong social security and active labor market policies. This approach has helped the country maintain low unemployment rates while adapting to technological changes:

- Easy hiring and firing processes for companies, allowing for quick adaptation to market changes (Andersen et al., 2015).
- Generous unemployment benefits and social support for displaced workers.
- Comprehensive job search assistance and retraining programs to facilitate rapid re-employment.

5.5 Automotive Industry: Automation and Workforce Transition

The automotive industry has been at the forefront of automation for decades and provides insights into managing workforce transitions:

- Gradual implementation of automation technologies, allowing for phased workforce adjustments (Krzywdzinski, 2017).
- Collaboration with labor unions to develop retraining programs and negotiate transitions for affected workers.
- Diversification into new areas such as electric vehicles and autonomous driving, creating new job opportunities within the industry.

These case studies demonstrate that successful management of automation-induced unemployment requires a multi-faceted approach involving collaboration between government, industry, and educational institutions. Key themes emerging from these examples include:

1. Emphasis on continuous learning and skill development
2. Strong partnerships between stakeholders
3. Proactive identification of future skill needs
4. Flexible labor market policies combined with robust social support
5. Gradual implementation of automation technologies
6. Investment in emerging industries and technologies

To illustrate the effectiveness of these approaches, consider the following figure comparing unemployment rates in countries with proactive automation management strategies:

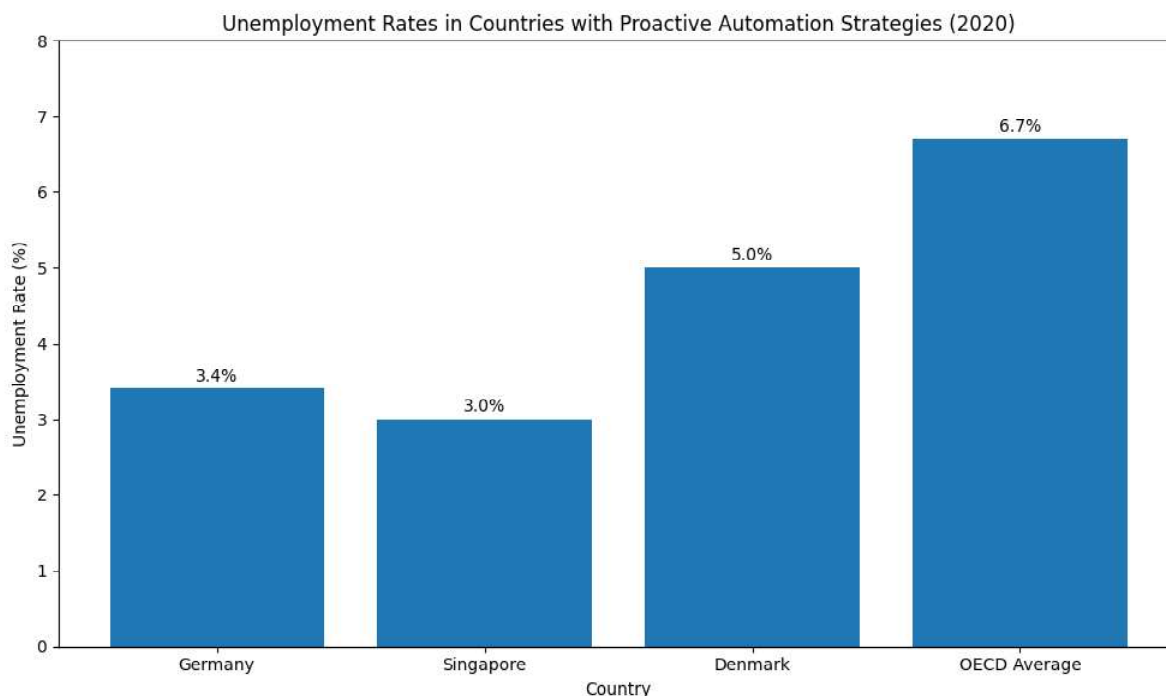


Figure 4: Unemployment Rates in Countries with Proactive Automation Strategies (2020)

This figure demonstrates that countries with proactive strategies for managing automation tend to have lower unemployment rates compared to the OECD average. While other factors contribute to these differences, the case studies suggest that targeted policies and initiatives play a significant role in mitigating the negative effects of automation on employment.

6. Conclusions and Recommendations

The age of automation presents both challenges and opportunities for the global workforce. While the risk of job displacement and unemployment is significant, proactive measures can help mitigate these risks and ensure a smoother transition to an automated economy. Based on the analysis presented in this paper, the following conclusions and recommendations can be drawn:

6.1 Conclusions

1. Automation is rapidly transforming the labor market, with varying impacts across industries and job categories.
2. The risks associated with automation-induced unemployment include job displacement, skills mismatch, economic inequality, and fiscal challenges.
3. Successful mitigation strategies involve a combination of education and skill development, policy interventions, and economic reforms.
4. Countries and industries that have implemented proactive measures have demonstrated greater resilience to automation-related challenges.

6.2 Recommendations

1. Prioritize lifelong learning and skill development:
 - Invest in flexible education systems that cater to learners of all ages.
 - Encourage businesses to provide ongoing training and development opportunities for employees.
 - Emphasize STEM education and soft skills development in curricula.
2. Implement supportive labor market policies:
 - Strengthen unemployment insurance and social safety nets.
 - Develop comprehensive job search assistance and career counseling programs.
 - Explore innovative approaches such as Universal Basic Income, while carefully evaluating their potential impacts.
3. Foster innovation and entrepreneurship:
 - Provide support for startups and small businesses through funding and mentorship programs.
 - Invest in research and development to drive technological advancements and create new job opportunities.
4. Promote collaboration between stakeholders:
 - Encourage partnerships between government, industry, and educational institutions to align skills development with labor market needs.
 - Engage labor unions in discussions on automation implementation and workforce transitions.
5. Invest in emerging industries and technologies:
 - Support the development of green technologies and sustainable infrastructure projects.

- Encourage the growth of the gig economy while ensuring adequate protections for workers.
- 6. Adopt a gradual approach to automation implementation:
 - Encourage businesses to implement automation technologies in phases, allowing for workforce adjustments and retraining.
 - Develop transition plans for workers in industries at high risk of automation.
- 7. Address regional disparities:
 - Implement targeted economic development strategies for regions heavily impacted by automation.
 - Invest in digital infrastructure to support remote work opportunities in affected areas.
- 8. Monitor and evaluate the impact of automation:
 - Establish systems to track automation adoption rates and their effects on employment across industries.
 - Regularly assess the effectiveness of mitigation strategies and adjust policies accordingly.

By implementing these recommendations, policymakers, businesses, and individuals can work together to navigate the challenges posed by automation and create a more resilient and adaptable workforce. While the transition to an automated economy may be challenging, proactive measures can help ensure that the benefits of technological advancement are shared more equitably across society.

As we move forward, it is crucial to recognize that the future of work will likely involve a complex interplay between humans and machines. By focusing on developing uniquely human skills and fostering innovation, we can create a future where automation complements human labor rather than replacing it entirely. Continuous research, policy experimentation, and international cooperation will be essential in addressing the ongoing challenges and opportunities presented by automation in the coming decades.

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Study of Caste Race and Society in Ancient India

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ABSTRACT:

The study of caste, race, and society in ancient India is a complex and multifaceted exploration of the social structures, hierarchies, and dynamics that existed in the Indian subcontinent over millennia. This abstract provides an overview of the key themes and findings within this field of study. The study of caste, race, and society in ancient India provides a comprehensive analysis of the intricate interplay between these elements in shaping the historical and cultural landscape of the subcontinent. It underscores the importance of understanding this complex past to comprehend the challenges and opportunities faced by modern Indian society in its ongoing pursuit of social equality and harmony.

Keywords: Caste, Race, Society, Ancient, India

Introduction: The study of caste, race, and society in ancient India is a complex and multifaceted topic that has been the subject of extensive research and scholarship. These three elements have played significant roles in shaping the social, cultural, and historical landscape of India. Here's an overview of these aspects in ancient Indian society:

Caste System: The caste system in ancient India was a hierarchical social structure that categorized people into specific groups based on their occupation, birth, and social status.

The caste system was divided into four main varnas (or classes): Brahmins (priests and scholars), Kshatriyas (warriors and rulers), Vaishyas (merchants and farmers), and Shudras (laborers and servants). Beyond these varnas were the "Dalits" or "Untouchables," who were considered outside the caste system.

Caste was hereditary, and one's social status and occupation were determined by birth. The caste system had a significant influence on all aspects of life, including marriage, occupation, and social interactions.

Race: The concept of race, as understood in modern terms, was not as central in ancient India as the caste system. The division of people was primarily based on social and occupational factors rather than physical attributes. However, there were historical interactions and migrations that influenced the genetic diversity and cultural influences in different regions of India. The Vedic period saw the arrival of the Indo-Aryans, who played a role in shaping the cultural and social landscape. It is essential to note that discussions about race in ancient India are often framed in contemporary terms and may not precisely match modern understandings of the concept.

Society: Ancient Indian society was complex and diverse, with a multitude of regional and cultural variations. The caste system was a central feature, but it was not the only aspect of society.

Indian society was also characterized by its rich religious and philosophical traditions, with the emergence of Hinduism, Buddhism, and Jainism. These religions had a profound impact on the social and moral values of the society.

Trade and commerce were vital in ancient India, and it had a sophisticated system of governance, with various dynasties and empires ruling different regions.

To study caste, race, and society in ancient India, researchers and scholars rely on a variety of sources, including ancient texts, inscriptions, archaeological evidence, and comparative analyses. It is important to approach these topics with a nuanced understanding, as interpretations may vary based on different historical periods and regions within ancient India. Additionally, the study of caste, race, and society should consider the ongoing changes and developments over time in Indian history.

Objectives of Study of caste race and society in ancient India

The study of caste, race, and society in ancient India is a complex and multifaceted field of research that can have several important objectives. Here are some of the primary objectives of studying these topics:

- **Historical Understanding:** To gain insights into the historical development and evolution of caste and race-based structures and their roles in ancient Indian society.
- **Social Dynamics:** To understand the social dynamics and interactions between different castes and races, as well as the implications of these interactions on society.
- **Cultural and Religious Implications:** To explore how caste and race influenced the culture, traditions, and religious practices of ancient India, including their roles in the formation of social norms and values.
- **Economic and Political Aspects:** To investigate the economic and political aspects of caste and race, including their influence on access to resources, power, and political hierarchies.
- **Social Mobility:** To examine the possibilities for social mobility and the restrictions imposed by caste and race-based systems, as well as the mechanisms for upward or downward mobility.
- **Discrimination and Social Justice:** To identify instances of discrimination, inequality, and social injustices related to caste and race in ancient India, and to understand how these issues were addressed or perpetuated.
- **Comparative Analysis:** To compare the caste and race systems in ancient India with similar systems in other parts of the world, identifying similarities and differences and their historical contexts.
- **Impact on Modern India:** To study how the caste and race-based systems of ancient India have influenced contemporary Indian society, politics, and identity.
- **Academic Scholarship:** To contribute to the academic scholarship and discourse on the history and sociology of ancient India, adding to our understanding of this complex and multifaceted society.
- **Contemporary Relevance:** To shed light on the contemporary relevance and implications of the ancient caste and race-based systems, particularly in the context of social justice, affirmative action, and identity politics in modern India.

By pursuing these objectives, scholars and researchers can provide valuable insights into the complex and nuanced relationships between caste, race, and society in ancient India, helping to inform our understanding of both the past and the present.

Literature Review: A literature review on the study of caste, race, and society in ancient India would require an examination of various scholarly works and research papers that have explored these topics. While I can't provide specific citations due to my knowledge cutoff date of September 2021, I can give you a general overview of the key themes and research findings in this area. Keep in mind that new research may have emerged since that time, so it's essential to consult the most recent literature for a comprehensive review.

Caste System in Ancient India: Various historical and sociological works have delved into the origins and development of the caste system in ancient India. Some key points of discussion include the varna system (Brahmins, Kshatriyas, Vaishyas, and Shudras) and the jati system (sub-castes).

Scholars have explored the social, economic, and religious dimensions of caste, as well as its impact on ancient Indian society.

Race and Ethnicity in Ancient India: The concept of race in the context of ancient India is often different from modern understandings. Research has examined the distinctions made based on geography, ethnicity, and language, which contributed to notions of identity and belonging.

The interactions and migrations of different groups, such as the Indo-Aryans and Dravidians, have been subjects of interest in understanding the complex dynamics of ancient Indian society.

Socioeconomic Stratification: Ancient Indian society was not solely defined by caste but also by socioeconomic status. Researchers have explored the interplay between caste and class, which created a multi-layered structure.

Landownership, occupation, and access to resources were critical factors in determining social and economic status in ancient India.

Religious and Philosophical Dimensions: The intersection of caste, race, and religion is a significant theme in the literature. The influence of Hinduism and other religions on the caste system and social hierarchy has been examined.

Philosophical texts like the Manusmriti and Dharmashastras have been analyzed for their role in perpetuating or challenging caste divisions.

Social Mobility and Change: Researchers have explored instances of social mobility within the caste system and the mechanisms through which individuals or groups could change their social status.

Historical events, such as the rise and fall of empires or the spread of Buddhism, have been considered in the context of social change.

Challenges and Critiques: The literature also contains critiques of the caste system, highlighting its discriminatory aspects and social injustices.

Studies on the impact of British colonialism on caste dynamics and the emergence of social reform movements, like those led by B.R. Ambedkar, have been a focus of scholarly attention.

Archaeological and Anthropological Evidence: Archaeological findings, such as excavations of ancient settlements and inscriptions, have provided insights into the material culture and social organization of ancient India.

Anthropological studies have contributed to our understanding of caste, race, and societal norms by examining modern Indian communities.

In summary, the study of caste, race, and society in ancient India is a complex and multidisciplinary field that draws from history, sociology, anthropology, and religious studies. Researchers have explored the intricate web of social relationships, economic factors, and religious beliefs that shaped the ancient Indian society, while also considering the enduring impact of these historical dynamics on contemporary India. It's important to consult a variety of sources and perspectives to gain a comprehensive understanding of this topic.

Findings of Study of Caste Race and Society in Ancient India

The study of caste, race, and society in ancient India is a complex and multifaceted topic that has been explored by scholars from various disciplines, including history, sociology, anthropology, and archaeology. These studies have provided insights into the social, political, and economic dynamics of ancient Indian society. While it's impossible to provide an exhaustive list of findings, here are some key insights and findings from research on this subject:

Varna System: The caste system in ancient India was primarily based on the Varna system, which divided society into four major varnas: Brahmins (priests and scholars), Kshatriyas (warriors and rulers), Vaishyas (merchants and farmers), and Shudras (laborers and service providers). This system was intended to be based on occupational roles, but it became more rigid over time.

Jatis and Sub-castes: Within the four major varnas, there were numerous jatis or sub-castes. These jatis often had their own specific occupational and social roles. The jati system added layers of complexity to the caste structure.

Racial and Ethnic Diversity: Ancient India was not a homogenous society. It was characterized by considerable racial and ethnic diversity. Different regions and time periods witnessed the movement of various racial and ethnic groups, leading to a complex interplay of cultural and social factors.

Social Mobility: While the caste system was generally rigid, there were instances of social mobility. Some individuals and groups could move between castes, albeit rarely. This mobility was often linked to political or economic factors.

Caste and Religion: The caste system had a significant influence on religious practices and beliefs in ancient India. It determined one's eligibility for religious rituals and participation in religious activities. The Brahmins held a privileged position in religious matters.

Discrimination and Social Hierarchy: The caste system also involved the hierarchical organization of society, with higher castes enjoying more privileges and power than lower castes. Discrimination and inequality were widespread, with lower castes often facing social and economic marginalization.

Interactions with Other Societies: Ancient India had interactions with other societies and civilizations, including the Greeks, Persians, and Central Asian peoples. These interactions led to cross-cultural influences and exchanges, which affected the social dynamics of the region.

Evolution Over Time: The caste system was not static but evolved over the centuries. The rise and fall of empires, the spread of religions like Buddhism and Jainism, and external influences contributed to changes in the caste system.

Archaeological Evidence: Archaeological excavations and findings have provided insights into the material culture of different castes and their lifestyles. These findings help paint a more comprehensive picture of ancient Indian society.

Literary and Historical Sources: Ancient texts, such as the Vedas, the Manusmriti, and Buddhist and Jain scriptures, provide valuable information on the caste system, social norms, and religious beliefs of the time. Historical accounts also offer glimpses into the social structure of various periods.

It's important to note that the study of caste, race, and society in ancient India is a dynamic field, and research continues to uncover new insights and perspectives. Additionally, the interpretation of these findings may vary among scholars and can be influenced by different methodologies and perspectives.

Limitations of Study of Caste Race and Society in Ancient India

The study of caste, race, and society in ancient India is a complex and multifaceted area of research, and it comes with several limitations that researchers need to be aware of. Here are some of the limitations:

Lack of Written Records: Ancient India primarily relied on oral traditions, and written records were not as extensive as in some other ancient civilizations. This makes it challenging to reconstruct the full history of caste and race in the region.

Selective Preservation: The texts and inscriptions that have survived are often selective and may not represent the full diversity of ancient Indian society. They tend to be biased towards the upper castes and elites.

Multiple Perspectives: Ancient Indian society was not homogenous; it consisted of various regions, each with its own social structures and practices. Studying the entire subcontinent can be challenging due to these variations.

Interpretation Challenges: Interpretation of ancient texts and inscriptions can be subjective. Different scholars may interpret the same texts differently, leading to varying conclusions.

Time Gaps: There are often significant gaps in the historical record, which can make it difficult to trace the evolution of caste and race over time.

Biases and Stereotypes: Some ancient texts may contain biases and stereotypes, particularly regarding different caste and racial groups. Researchers need to be cautious when dealing with such sources.

Cultural and Linguistic Changes: Over thousands of years, cultures and languages in India have evolved. Understanding ancient texts can be challenging due to changes in language and context.

Limited Archaeological Evidence: While some archaeological evidence can shed light on ancient societies, there are limitations to what can be inferred from the available archaeological findings.

Modern Biases: Researchers, consciously or unconsciously, may bring modern biases into their interpretations of ancient Indian society, which can distort the findings.

Absence of Autobiographical Narratives: Unlike in some other societies, autobiographical narratives from the perspective of marginalized groups are scarce. This means that we often rely on the perspectives of the elites and dominant groups.

Caste Mobility and Fluidity: Caste in ancient India was not always rigid and hereditary, as it is often portrayed. Some periods and regions saw more caste mobility and fluidity, making it a challenge to generalize.

Ethical Considerations: The study of caste and race in ancient India can be sensitive due to its relevance to contemporary social and political issues. Researchers must navigate these issues carefully.

Despite these limitations, researchers continue to make valuable contributions to our understanding of ancient Indian society, caste, race, and their complexities. Interdisciplinary approaches, combining historical, archaeological, and sociological methods, are often used to mitigate these limitations and gain a more comprehensive perspective on these subjects.

Scope of Study of Caste Race and Society in Ancient India:

The study of caste, race, and society in ancient India is a rich and complex field that encompasses a wide range of historical, sociological, anthropological, and cultural aspects. The scope of such a study is extensive and can include:

Historical Evolution: Investigating the historical origins and development of caste and race in ancient India. This involves tracing the evolution of these social constructs from the Vedic period to the medieval and early modern periods.

Social Hierarchy: Examining the caste system in ancient India, its structure, and the role it played in organizing society. This involves understanding the varna system (Brahmins, Kshatriyas, Vaishyas, and Shudras) and the jati system (sub-castes), as well as the hierarchies and interrelationships within them.

Religious and Philosophical Foundations: Studying the religious and philosophical underpinnings of caste and race in ancient India. The influence of Hinduism and other belief systems on these constructs is a significant aspect of the study.

Social Mobility: Analyzing the possibilities and limitations of social mobility within the caste system, as well as the role of race or ethnicity in determining one's social status.

Economic and Occupational Aspects: Investigating the economic and occupational divisions among different castes and races in ancient India. Understanding how these divisions influenced economic activities and labor relationships.

Political and Legal Dimensions: Exploring the political and legal aspects of caste and race, including the rights and restrictions imposed on individuals belonging to different groups. This includes examining the role of kings and rulers in upholding or challenging the caste system.

Cultural and Artistic Expressions: Investigating the impact of caste and race on ancient Indian art, literature, and culture. This involves studying how these social constructs influenced artistic creations, including religious texts, architecture, and art forms.

Intersectionality: Considering how factors such as gender, class, and regional variations intersect with caste and race in shaping the social fabric of ancient India.

Comparative Studies: Comparing the caste and race systems in ancient India with similar systems in other parts of the world to gain a broader perspective on social hierarchies and identities.

Modern Relevance: Examining the contemporary relevance and legacy of caste and race in India, including how these historical constructs continue to impact modern Indian society, politics, and culture.

Archaeological Evidence: Utilizing archaeological findings to supplement historical and textual sources in reconstructing the social dynamics of ancient India.

Regional Variations: Recognizing that the caste and race systems in ancient India were not uniform and varied from region to region. Studying these regional variations is essential to understanding the full scope of the subject.

Ethnographic and Sociological Approaches: Using ethnographic studies and sociological perspectives to understand how caste and race continue to affect communities and individuals in contemporary India.

The study of caste, race, and society in ancient India is multi-disciplinary and involves a nuanced exploration of these interrelated social constructs. Researchers in this field employ historical texts, archaeological findings, sociological surveys, and anthropological research to shed light on the complexities of ancient Indian society and its enduring influence on the modern era.

Conclusion:

The study of caste, race, and society in ancient India is a complex and multifaceted topic that has been the subject of extensive research and debate among scholars. While I can't provide the specific conclusion of a particular study without more information, I can offer some general insights and conclusions drawn from research in this field.

Complexity of Caste: Caste in ancient India was a complex social system that encompassed a wide range of social and occupational groups. It was not solely based on race or biology but was deeply intertwined with social, economic, and religious factors.

Varna System: The ancient Indian caste system was traditionally organized into four main varnas or social classes – Brahmins (priests and scholars), Kshatriyas (warriors and rulers), Vaishyas (merchants and farmers), and Shudras (laborers and service providers). This hierarchical system was underpinned by the belief in karma and dharma.

Jatis and Sub-castes: Within the varna framework, there were numerous jatis or sub-castes that further stratified society based on specific occupations and local customs. This led to a highly fragmented social structure.

Racial and Regional Variations: India's social structure was influenced by various racial and regional factors. The concepts of race were not uniform across the subcontinent, and different regions had their own unique social hierarchies and practices.

Evolution and Change: The caste system was not static, and it underwent significant changes and adaptations over time. Historical and sociopolitical factors played a role in reshaping the caste system, such as the influence of Buddhism and Jainism in challenging caste divisions.

Social Mobility: While the caste system was often associated with rigid social hierarchies, there were instances of social mobility, where individuals or groups could change their caste status over time. However, this mobility was often limited by societal norms and restrictions.

Continuity and Contemporary Relevance: The caste system's legacy still persists in modern India, and it remains a significant factor in contemporary Indian society. Caste continues to influence aspects of people's lives, including marriage, occupation, and social interactions.

Challenges and Debates: The study of caste, race, and society in ancient India has been a subject of debate and controversy, with various scholars offering different perspectives on its origins, development, and implications for Indian society.

In conclusion, the study of caste, race, and society in ancient India reveals a complex and multifaceted social system with deep historical roots. It has left a lasting impact on Indian society, and understanding its nuances requires careful examination of historical, cultural, and regional factors. Researchers continue to explore this subject to gain a deeper understanding of its historical context and contemporary relevance.

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- Rigveda - One of the oldest sacred texts of Hinduism, which contains references to social organization and religious practices in ancient India.
- Buddhist and Jaina texts - Explore the perspectives on caste and society from non-Brahmanical traditions.
- Ashoka's Edicts - Inscriptions of the Mauryan Emperor Ashoka that shed light on the social and ethical principles of his time.

Importance of Makhna Production in Economic Development of Bihar: Prospect and Future

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Abstract

Bihar produces 90% of Makhana (fox nut) of the world. This has been adapted to India's tropical climate and found in its natural, wild form in different pieces of north-east India and dissipated pockets of focal and northern India. The states of Bihar, West Bengal, and Assam are the primary locations for the cultivation of Makhana. Bihar is the leading producer of Makhana in India, accounting for about 85% of the country's total output. Madhubani, Darbhanga, Sitamarhi, Saharsa, Katihar, Purnia, Supaul, Kishanganj, and Ariaria are the state's principal districts for the production of Makhana. Hand-picking the seeds, drying, roasting and popping, storage, and grading are just a few of the labour-intensive and time consuming processes involved in Makhana cultivation and processing. Given that it accounts for 20% of the state GDP. A significant obstacle to the state's agricultural industry is the fragmented land holding situation, with 91.2 percent of farm families in Bihar having marginal holdings (less than one hectare), which accounted for 57.7 percent of the state's total land area in 2015–16 (Agriculture Census, 2016). Over 85% of Bihar's total cropped land is planted with cereals, making cereals the main component of the state's agricultural economy. Wheat, rice, and major cereal crop of the state.

The present research article overview the state of Makhana production and its role in improving Bihar's economy as well farmers' income.

Keywords: Makhana, Tropical climate, Economy, Agricultural industry, Makhna production, Economic development of Bihar

Introduction

The Nymphaeaceae Family of water crops, including Makhana (*Euryale ferox*), is a cash produce to the rural poor, particularly in north Bihar, Bengal, and lower Assam. In these states, cultivators have mastered the skill of Makhana cultivation. The Makhana seeds are used to make a variety of desserts and cuisines, as well as popped and consumed roasted. This crop has significant export potential and possesses both nutritional and therapeutic qualities. Thousands of farming families, most of whom are located in Bihar's Makhana producing areas, operate this primary processing as a family business. They procure seeds from growers or acquire them from nearby distributors and do contract processing, foundation. Processors with limited resources and Makhana producers are exploited because they borrow money in advance at higher monthly interest rates of 3-5% from local wholesalers or private money lenders.

Bihar's Makhana Production Scenario

Bihar is a state in Eastern India that shares borders with Jharkhand to the south, West Bengal to the east, Nepal to the north, and Uttar Pradesh to the west. Despite supporting 12.63% of India's population, its 93.6 lakh hectares of land only make up 3% of the nation's total land area (Bihar Economic Survey, 2018–19). The state of Bihar is divided into two halves, North Bihar and South Bihar, by the powerful Ganga River. In general, North Bihar is prone to flooding, but South Bihar is more likely to experience drought. Approximately 74% of Bihar's labor force is employed in agriculture or related industries. This industry makes around 20% of the state GDP, highlighting the role that agriculture plays in the state economy. The state's principal grain crops include rice, wheat, and maize. There are four Agro-climatic Zones in the state.

Production System of Makhana Crop

There are many of ponds in the districts of Darbhanga and Madhubani, almost in every block. According to secondary data from the District Fisheries Office, Darbhanga has 910 ponds overall, covering 2134.76 acres in area. These 77.25% of the ponds were government ponds. Similarly, there were 2,111 ponds in the Madhubani district, totaling 2,097.4 hectares of land. 83.4% of the ponds in this location were owned by the government sector. The majority of Makhana grown in these two districts is grown in ponds. Makhana is generally grown in low-lying areas in Purnea and Katihar, although there is also a sizable area used for pond farming. Farmers produce Makhana in the same field where they pick paddy in Purnea and Katihar.

Value Added Products of Makhana

Popped Makhana is nutrient rich and popularly used to prepare dishes like dal makhani and mixed with other vegetables as thickening agent. Raw popped Makhana can be eaten directly or served with tea or coffee after roasting with salt and ghee or other oils. Popped Makhana in raw form is a bulky product which is difficult to handle. Development of processed products from it will certainly enhance the value of Makhana and its consumer demand in the market. The handling becomes easy and shelf life also increases due to compact packaging. Several companies prepare Makhana snacks in the form of small attractive packs or container by adding some popular flavours like chilli, onion, tomato, pudina, butter etc.. Company like Shakti Sudha Industries, Patna are also offering Makhana atta (Makhana flour mixed with wheat flour), Makhana bhujia, Makhana flakes, cookies etc. in addition to roasted flavoured Makhana pop. ICAR RCER Research Center for Makhana, Darbhanga has also carried out some research on preparation of value added products of Makhana. It has developed technology for preparation of Makhana Kheer Mix and Makhana powder. Some work on preparation of different dishes like Makhana Burfi, Makhana Kalakand, Makhana curry, Makhana chapatti etc. has also been done.

Impact on farmers and Local Bihar economy

From an economic point of view, improved machine and marketing processing can increase the Bihar's agricultural exports and align with the wider India strategy to promote indigenous superfoods around the world like Moringa, Jamun (Indian blackberry) Amla, Ashwagandha (Winter icing) millet like ragi. The development of infrastructure, such as the extension of Patna airport and the establishment of new airports in Purnea and Darbhanga, will further

support the exports of improvement of logistics. In addition, the focus of the government on food processing through initiatives such as the National Institute of Food Technology, Business and Bihar management will contribute to the sector's growth.

The key results in policy are pushing for the production of Makhana:

- Increased income: by finding a fair pricing and reducing intermediaries, farmers can expect better financial revenues.
- Employment opportunities: The establishment of processing units will generate jobs for local workers, particularly women who are often involved in Makhana processing.
- Export growth: With better quality control and branding, Makhana exports are likely to rise, contributing to India's foreign exchange earnings.
- Rural development: The success of the Makhana Board could set a precedent for other agricultural sectors, encouraging similar initiatives for products like litchi, mango, and mustard seeds cultivated in Bihar.

How Makhana Can Make Bihar Rich

Bihar, a state most of the time characterized by glorious history and poor economy, perhaps found the golden ticket to prosperity—Makhana. This humble fox nut, which floats in a bowl of kheer or is munched guiltlessly as a snack, can make a multi-billion agricultural powerhouse out of Bihar.

Makhana: Hidden Treasure of Bihar

It is mainly cultivated in Mithila of Bihar. More than 85 percent of India's Makhana is produced in this state, making it, by far, the largest producer of Makhana in the world. With nutritional values par excellence and growing global demand, along with its recent superfood tag, Makhana can really do for Bihar what Basmati did for Punjab or saffron for Kashmir.

But the million-dollar question is, can Bihar actually grab this opportunity, or would it slip again another economic goldmine?

Rising Demand for Makhana

Makhana is not just a festive sweet anymore. The world has shifted toward a healthier lifestyle. Demand for plant-based, gluten-free, and high-protein foods is on the rise. Makhana is it. World's fitness enthusiasts and wellness advocates adore it for being packed with protein and very low in calories and plentiful in antioxidants.

Makhana will soon join the ranks of quinoa, chia seeds, and avocados that have already made their mark in global super-food markets. Provided Bihar plays its cards right.

The Billion-Dollar Estimate

Industry estimates say that the global market for Makhana is going to touch the \$100 billion figure by 2028. Being the biggest producer of Makhana, India also has the first-mover advantage. But industry-wise, even though Bihar produces the most of the state's Makhana output, the processing and marketing industries do not belong to organized territory.

Currently, Makhana farmers earn minimal profits due to middlemen exploitation and lack of infrastructure. If Bihar can modernize its supply chain, invest in value-added products (Makhana-based protein bars, snacks, and powders), and tap into international markets, it could transform its rural economy and generate thousands of jobs.

Challenges in Bihar's Makhana Industry

1. **Lack of Proper Branding and Export Strategy:** Unlike Basmati rice or Darjeeling tea, Makhana lacks geographical indication (GI) tagging and aggressive branding in the global market.
2. **Primitive Harvesting Techniques:** Farmers still rely on manual harvesting and sun-drying methods, leading to inconsistent quality and lower yield.
3. **Middlemen Exploitation:** The absence of direct farmer-to-market access results in most profits being siphoned off by intermediaries.
4. **Limited Government Support:** While recent policy changes have helped, Makhana cultivation still lacks the structured subsidies and research investment that crops like wheat or rice receive.

How Bihar Can Become the 'Makhana Capital of the World'

1. **Government Incentives:** Policies supporting Makhana farmers with subsidies, mechanization, and easier loans can boost production.
2. **Infrastructure Development:** Setting up Makhana processing and packaging units can add value to raw produce and increase shelf-life.
3. **Direct Market Access for Farmers:** Eliminating middlemen by introducing farmer cooperatives or direct-to-market platforms can increase profitability.
4. **Branding & Export Promotion:** Positioning Makhana as a premium superfood and securing GI tagging can create international demand.
5. **Encouraging Startups & Innovation:** Developing Makhana-based ready-to-eat snacks, protein powders, and health supplements can cater to urban consumers and global health markets.

Makhana Export

Owing to its high nutrient value and several health benefits, the demand for Makhana has increased steadily in recent times. In India, Makhana is now consumed across the country. Although, commercial production of Makhana is limited to selected districts of North Bihar, West Bengal, Assam and Manipur. It reaches to all major cities of the country through a chain of traders which include producers, processors, local wholesalers, commission agents, distant wholesalers, retailers and consumers. As far as export is concerned, its export potential is still untapped. Currently, India is exporting only 1.0% of its total production. Nearly 100 tonnes of popped Makhana is exported to other countries. Shakti Sudha Industries, Patna is one of the major players in export of Makhana from Bihar through its online marketing platform. Global Marketing companies like Amazon, Flipkart etc. also play major role in export of Makhana. Several private firms active in big cities like New Delhi, Mumbai, Amritsar, Kolkata, Badodra, etc. are involved in export of Makhana. United States of America, United Kingdom, Australia, Banladesh, Pakistan and Gulf Nations like U.A.E, Qatar, Saudi Arabia, Kuwait, Oman are the major export destinations of Makhana from India. Being a minor crop, Government has not allocated a separate HS code for Makhana which is a major hindrance in its export. Makhana falls under HS Code: 19041090 (Other prepared foods obtained by the swelling or roasting of cereals or cereal products) and it is exported with many other products. Therefore, data of Makhana export from India is not available. However, export data from APEDA for HS Code 19041090 shows trends in its export.

During year 2019-20, India exported 11,777 tonnes of Makhana along with related products worth Rs 13859 lakhs. USA was major destination with almost one third of total export was contributed by this country followed by UAE (11.54%), Nepal (9.73%), United Kingdom (5.39%) and Australia (4.81%). Gulf countries like Quatar, Saudi Arab, Oman, Kuwait, etc. also listed in top destination for Makhana export.

Despite having high potential, the quantity of popped Makhana exported outside the country is very small as compared to many other dry fruits like almond, cashew etc.. Major reason for lack of export is low production of Makhana, lack of quality produce, lack of mechanization in harvesting and processing, near absence of value addition in Makhana etc..

Promoting Export through Branding

Scope for Makhana export can be enhanced by branding of value added products. There are some Makhana companies which prepare value added products by using tomato, pudina, chilli, butter or other flavours. Branding of these products by large retail sector companies like Reliance, Haldiram, Bikaji, ITC, etc. will help in export of Makhana based products across the world.

Conclusion

Makhana also known as Gorgon Nut or Foxnut (*Euryale Ferox* Salisb.) is a water crop belonging to the Nymphaeaceae family. Makhana is traditionally grown in stagnating permanent water formations such as ponds, soil depression, lakes, ditches or wetlands that have a stagnant shallow water depth of up to 4-6 ft. Due to proper growth and development, optimal temperature range, relative humidity and annual precipitation are 20 -35O C, 50-90% and 100-250 cm. Makhana seeds are the edible part of the plant, which after processing is consumed in the form of a popped lava. Makhana is a highly nutritious food and a very good source of carbohydrates, proteins and minerals. It is very popular among Indian households and largely consumes in the form of fried snacks, vegetable curry, sweet porridge, etc. Makhana sale increases during various festivals such as returning, Kojagara, EID and wedding season because it is used for different religious rituals. It is consumed during their fasting as unrealistic food. Cultivation, harvesting and processing Makhana is a very laborious and time -consuming activity, which also includes a lot of drudgers.

Makhana cultivation has a huge potential for strengthening the economic state of the Mallah community (fishermen) who are particularly devoted to growing. Makhana cultivation can be supported by the state government together with NRC, Darbhanga and CUM training program Demonstration programs on practices should be handed over for effective cultivation. Makhana cultivated in a system with a pond is a completely organic product. This aspect of the Makhana should be highlighted and promoted between developed countries of the world on foreign exchange foreign exchange Fetch. The scientific community can also help to increase the marketing of the Makhana by emphasizing nutritional values and other benefits.

Bihar has long been considered a loser in the Indian economic story. But with Makhana has a chance to rewrite this story. The global health food market is growing rapidly, and if Bihar can use this demand with intelligent policies, farm initiatives and aggressive global marketing, Makhana can turn into a multimillion industry.

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Efficacy of Digital Media in the Public Relations Industry: A Study to Find out the Relevance of Digital Media in the PR Industry

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Abstract: The influence of social media in contemporary society offers significant advantages, particularly within the digital economy. Social networks have emerged as a widespread phenomenon, capturing the interest of a vast audience. Numerous experts have provided various definitions of the technologies that remain essential to society today. The pace of business development in Indonesia is notably swift and continues to advance. This study employs a qualitative approach, utilizing library research and descriptive qualitative methods. It builds upon prior research, revisiting it to uncover previously unknown insights. The analysis indicates that social media is crucial in facilitating overall activities, particularly in fostering public relations with customers. Social media has evolved into a platform that enables business professionals to engage, promote, introduce, and brand their products effectively in the online marketplace. Its significance spans all societal levels, serving as a medium for information sharing and discovery. The role of Public Relations is vital for every business, functioning not only as an image enhancer but also as a means of marketing products to the public. The findings suggest establishing public relations with customers is essential for supporting overall business activities.

Keywords: Digital Media, Public Relations, Social Media, Marketing

Introduction

In contemporary society, it is indisputable that individuals' lives are intricately linked to social networks, with social media playing a crucial role across various aspects of life. Whether it involves communicating with friends, disseminating information, or pursuing knowledge, social media has become a fundamental component of daily existence. With a global population of 8 billion, there are approximately 5.16 billion internet users, representing around 64.4%, and 4.76 billion social media users, which accounts for 59.4%. The average duration of online engagement is approximately 6 hours and 37 minutes each day. Consequently, it is not surprising that many assert social networking has evolved into a vital necessity for a significant portion of the population. The presence of social media within society offers

substantial advantages, particularly in the realm of the digital economy. Social networking has emerged as a widespread phenomenon that captivates the interest of numerous individuals.

Numerous scholars have articulated diverse definitions of technology, which remains essential in contemporary society. In Indonesia, business development is witnessing swift progress and continuous advancement. Various sales techniques are available for product promotion, particularly through social media platforms such as Facebook, Instagram, and WhatsApp. Educating individuals on how to effectively utilize social media, including Facebook and WhatsApp, serves as an optimal strategy for promoting products, aiming to enhance marketing efficiency and budget management for advertising purposes. Promotional initiatives are crafted to generate awareness and interest, ultimately driving product purchases. The function of Public Relations (PR) is crucial for businesses, serving not only to enhance their image but also to effectively present products to the public. Customer Relationship Marketing (CRM) is a strategic approach focused on strengthening marketing efforts through relationship management, sales interactions, documentation, and integration. Relationship marketing aims to develop, sustain, enhance, and commercialize customer relationships, thereby ensuring mutual success for all parties involved (Grönroos, 2011). Digital marketing encompasses all marketing activities that leverage electronic devices or the internet. Companies engage with current and prospective customers through digital channels such as search engines, social media, email, and their websites. This concept is often referred to as 'online marketing', 'internet marketing', or 'web marketing'. Digital marketing involves employing various digital strategies and channels to interact with customers via online platforms, including websites, digital branding assets, online advertising, email marketing, online brochures, and other components. In essence, it encompasses a broad spectrum of activities within the realm of digital engagement.

Literature Review

Social Media

Social media represents a category of online platforms that enable users to interact, share, and produce content, encompassing blogs, social networking sites, wikis, forums, and virtual social networking environments. Among these, blogs, social networks, and wikis are the most prevalent forms of social media worldwide. An alternative definition describes social media as online platforms that facilitate social interaction, employing web-based technologies to convert traditional communication into an interactive dialogue. In their efforts to categorize various forms of social media, Kaplan and Haenlein (2010) developed a pertinent classification framework.

In the 2010 article published in "Business Horizons," Kaplan and Haenlein identified six distinct categories of social media. The first category encompasses collaborative website projects, which enable users to modify, add, or remove content, exemplified by platforms like Wikipedia. The second category includes blogs and microblogs, which offer users a platform for expressing their opinions, as seen on Twitter. The third category consists of content-sharing platforms that facilitate the sharing of various media types, including videos, ebooks, and images, with YouTube serving as a prime example. The fourth category is social networking sites, such as Facebook, which allow users to connect and share personal information. The fifth category features virtual gaming worlds that simulate 3D

environments, enabling user interaction through avatars in online games. Lastly, virtual social worlds like Second Life create immersive environments where users can engage in everyday life experiences (Kaplan & Haenlein, 2010). According to Puntodi (2011), social media offers several notable advantages. Firstly, it serves as a platform for personal branding accessible to all individuals. Various platforms, including Facebook, Instagram, Twitter, and YouTube, provide opportunities for individuals, beyond just public figures, to communicate, engage in discussions, and gain recognition within the social media landscape. Secondly, Puntodi highlighted that social media has emerged as a powerful marketing channel, effectively replacing television due to the shift in consumer lifestyles that increasingly rely on smartphones. Thirdly, social media fosters closer interactions with consumers, as the more personal, one-on-one, and two-way communication allows marketers to gain insights into consumer behaviors, engage personally, and cultivate deeper relationships. Finally, Puntodi emphasized the viral nature of social media, which enables rapid dissemination of information. Users' tendencies to share information swiftly can lead to certain products or content going viral, resulting in significant and rapid exposure.

Public Relations

The function of public relations holds considerable importance within a corporate framework, serving not only as a means to shape public perception but also as an effective instrument for promoting products to consumers. Customer Relationship Marketing (CRM) represents a communication strategy designed to enhance marketing efforts through the management of relationships, sales interactions, documentation, and integration processes. It is anticipated that this CRM index will address potential challenges that may emerge during the ongoing journey. As noted by Kotler (2001), contemporary marketing activities exhibit traits consistent with relational marketing, particularly regarding the two-way communication dynamics between businesses and their customers. Consequently, research in communication underscores the critical role of two-way communication in establishing and sustaining relationships between companies and their clientele.

Developing effective strategies to achieve objectives, particularly in the realm of media relations, is a crucial undertaking. Smith (2020) emphasizes various public relations strategies pertinent to media engagement. Initially, it is essential to formulate a media service strategy that facilitates optimal collaboration. Additionally, strategies focused on building trust are vital for cultivating strong relationships with media representatives. Moreover, disseminating information tailored to the specific needs and characteristics of the media is a fundamental approach. Establishing positive cooperation in information exchange, preparing necessary resources, and nurturing personal connections with media personnel are also critical components of a successful public relations strategy. By executing these measures, organizations can forge robust relationships with the media, thereby advancing their objectives. Public relations significantly influences the modification of public attitudes and behaviors, both directly and indirectly, as a result of product presence.

Public relations (PR) offers numerous advantages for an organization. Primarily, PR contributes to the development of a favorable image through effective communication and strategic initiatives, thereby enhancing the organization's reputation and fostering public trust. Additionally, PR seeks to bolster public understanding and support by fostering a mutual comprehension between the organization and its audience. Through transparent and open communication, PR enables organizations to articulate their goals, values, and

activities, thereby securing public endorsement and acceptance. Furthermore, PR plays a critical role in addressing potential challenges and issues. By recognizing the concerns and needs of the public, PR devises suitable communication strategies to manage these challenges, which helps preserve the organization's reputation. Additionally, PR aids in cultivating positive relationships with stakeholders, including employees, customers, business partners, and the broader community. By nurturing these relationships, organizations can enhance their overall effectiveness.

Digital Marketing

Digital marketing encompasses marketing efforts that leverage technology and digital platforms on the Internet. This includes strategies such as social media marketing, online advertising, email campaigns, and partnerships with other websites to enhance the reach of target consumers and fulfil marketing objectives (Chaffey & Ellis-Chadwick, 2019). The components that constitute this variable include aspects of entertainment, engagement, current trends, personalization, and risk assessment. As noted by Chaffey & Ellis-Chadwick (2019), digital marketing represents a marketing approach that employs digital media through the Internet, including websites, social media, email, databases, mobile/wireless technologies, and digital television. The primary objective is to enhance customer targeting and discovery by analyzing the profile, behavior, and value of the product, while simultaneously fostering customer loyalty to meet marketing objectives.

According to Istiqomah et al. (2022), several essential components characterize digital marketing indicators. Primarily, the website is recognized as the most critical element within the digital landscape, as it has the capacity to directly engage potential customers. Websites enable businesses to showcase compelling and current information, thereby creating opportunities to capture attention and enhance consumer interaction. Additionally, social media platforms are deemed highly effective for disseminating information or promoting a company's products, facilitating direct engagement with the audience. The third component is the application platform, which allows businesses to deliver services efficiently through digital communication. Lastly, appealing programs serve as a significant indicator, with the success of such programs being assessed based on their attractiveness to consumers. The presence of diverse and unique programs can enhance promotional competitiveness, thereby adding value to the business. These engaging programs can motivate consumers to make purchases, foster community among consumers, and improve customer retention. By comprehending and leveraging these indicators, companies can formulate more effective and relevant digital marketing strategies in an ever-evolving market. Furthermore, digital marketing offers the advantage of effectively connecting with consumers online. In contemporary times, consumers are more inclined to seek product and service information via the internet rather than through traditional classified advertisements. Utilizing the various tools and channels available in digital marketing, business owners can target consumers who are actively searching for information online. With an appropriate digital strategy, including the use of websites, social media, and online search tools, companies can more readily establish connections with potential consumers, provide pertinent information, and enhance conversion opportunities. Digital marketing offers the dual benefit of expanding audience reach while leveraging the growing reliance of consumers on the internet for product and service research and evaluation (Kurdi et al., 2022)

Methodology

This study employs a qualitative methodology, utilizing both a library research approach and a qualitative descriptive framework. This methodology builds upon prior research, revisiting it to uncover previously unrecognized elements. The objectives of library research and descriptive qualitative analysis are to achieve a more profound comprehension of the subject matter. This approach does not prioritize the establishment of relationships, hypothesis testing, or predictive analysis; instead, it focuses on articulating direct observations, elucidating phenomena based on facts, and detailing their occurrences. The primary aim of this research is to elaborate on and comprehend the experiences of the research subjects, encompassing their behaviors, perceptions, motivations, actions, and other relevant factors. This understanding is articulated through descriptive language that is contextually relevant, employing various scientific techniques. Furthermore, this research method integrates the relationship between social media and public relations, which significantly influences the burgeoning field of digital marketing currently experiencing rapid expansion in Indonesia.

Results and Discussion

The examination of prior findings (Koay et al., 2020; Rim et al., 2020; Pelletier et al., 2020; Shahbaznezhad et al., 2021; Tarsakoo & Charoensukmongkol, 2020) indicates that social media plays a crucial role in facilitating various activities, particularly in fostering public relations with customers. As of January 2023, the estimated number of active social media users in Indonesia stood at 167 million, representing 60.4% of the nation's total population. Notably, there was a substantial decrease of approximately 12.57% in the number of active social network users compared to the previous year, which recorded 191 million users. This decline signifies the first occurrence of such a trend in the last decade.

The utilization of social media offers numerous benefits across different facets of life, including enhanced time efficiency, reduced costs, and increased flexibility in communication and information sharing, unrestricted by time or location. Public relations (PR) is crucial for businesses to ensure their longevity and sustainability over time. Research conducted by Akter & Sultana (2020), Alaimo et al. (2020), and Yunus et al. (2019) indicates that social media plays a pivotal role in the execution of contemporary digital marketing strategies. It serves as a platform that significantly facilitates interactions among business professionals, enabling them to promote, introduce, and compare their products effectively. Additionally, social media's extensive reach allows it to engage diverse age groups and various economic demographics. In 2020, Indonesia's digital economy was valued at 44 billion USD, reflecting an 11% increase from 2019, and contributing 9.5% to the nation's Gross Domestic Product (GDP). Currently, social media is integral to the expansion of the digital economy, functioning as a primary communication tool for nearly all internet users, including innovative entrepreneurs in Indonesia. The digital economy has experienced remarkable growth over the past ten years.

The e-commerce sector in Indonesia is projected to reach USD 62 billion by 2023, contributing 75.6% to the Gross Merchandise Value (GMV) of the nation's digital economy, which is anticipated to total USD 82 billion that year. Nevertheless, the growth of Indonesia's e-commerce GMV is currently experiencing a modest increase, estimated at approximately 7% Year over Year (YoY). In comparison to 2022, the annual growth rate of e-commerce

GMV in the country is expected to rise to 20% YoY. The digital economy holds significant potential to emerge as a crucial pillar of Indonesia's economic landscape in the future. Digital marketing enables consumers to access comprehensive information about products and conduct transactions online. It also necessitates that sellers monitor and address the needs and preferences of potential customers without the constraints of time and location. In this regard, digital marketing serves as a two-way communication channel that can enhance public awareness and engagement with specific products and brands. Ultimately, leveraging social media can significantly enhance the effectiveness of digital marketing strategies for products.

The findings align with prior studies. Social media serves as a potent instrument for addressing organizational challenges, enabling companies to formulate policy decisions by observing and assessing key factors through community interactions. Since their emergence, social networks have been structured as venues for users to engage, share, and exchange information and ideas within virtual communities. The significant function of social media is evident in its ability to disseminate information to a broad audience across various sectors, including business, travel, education, and religion. In the realm of business, social media acts as an online advertising medium, facilitating access to links that provide information about products and services (Mason et al., 2021). The advantages of social media are numerous, encompassing time and cost savings, and it allows for information dissemination and communication at any time and from any location without temporal limitations. Research has substantiated the vital role of social media in enhancing digital marketing strategies. It has become an essential component of the rapidly evolving digital marketing landscape. Social media platforms offer substantial benefits for businesses in terms of interaction, promotion, introduction, and the cultivation of brand image. Furthermore, the reach of social media is extensive, encompassing diverse age groups and economic demographics. In 2020, Indonesia's digital economy was valued at 44 billion USD, reflecting an 11% increase from 2019 and contributing 9.5% to the nation's Gross Domestic Product (GDP). Currently, social media plays a crucial role in the progression of the digital economy. Customer Relationship Marketing (CRM) is a communication strategy designed to enhance marketing through relationship management, sales interactions, documentation, and integration.

Digital marketing encompasses all marketing activities that utilize electronic devices or the internet. Social media refers to online platforms that enable users to generate content, engage in blogging, connect through social networks, contribute to wikis and forums, and interact within various global social networks.

Public Relations (PR) offers numerous significant advantages to an organization. Primarily, PR enhances the organization's image and reputation through strategic and effective communication efforts. Additionally, it is instrumental in fostering public trust by ensuring that communications are transparent, honest, and credible. PR also plays a vital role in cultivating and sustaining positive relationships with the public through open, responsive, and ongoing dialogue. Moreover, it aids in improving the public's comprehension of the organization, its products or services, and its core values and objectives. Through targeted and informative communication, PR can influence public perceptions favorably. Furthermore, PR contributes to increasing public loyalty by maintaining consistent communication, delivering added value, and reinforcing relationships with stakeholders. In times of crisis, PR is crucial in assisting organizations to navigate challenging situations,

managing public communication, disseminating accurate information, and restoring trust. It also emphasizes media relations, fostering strong connections with the media to secure positive coverage and broaden the reach of communications. Ultimately, PR significantly influences organizational sustainability by nurturing ongoing public support. By employing effective communication strategies, PR enables organizations not only to endure but also to prosper over time. Thus, the function of PR transcends mere communication, becoming a fundamental component of an organization's overarching strategy (Gregory & Willis, 2022).

Digital marketing offers significant advantages, including higher return on investment (ROI), the capacity to remain competitive, and the ability to challenge larger corporations. As we approach the era of the Internet of Things, projected to encompass approximately 26 billion connected devices worldwide by 2020, leveraging digital marketing becomes a crucial strategy for adapting to evolving market dynamics (Guvén, 2020). The primary objective of marketing is to broaden market reach and identify new potential customers. When consumers express interest in the products available, it can result in increased sales and revenue for the organization. While traditional marketing methods may capture a portion of the market, digital marketing—utilizing company websites, social media channels, and email campaigns—proves to be a more effective strategy. One of the key benefits of embracing digital marketing is the enhanced ability to engage with consumers. Providing responsive and efficient service to consumer inquiries can foster greater appreciation for the brand (Setiawati et al., 2019). Furthermore, digital marketing enables companies to directly introduce new products to their audience. This approach also allows for the monitoring of consumer behavior, equipping companies with insights into emerging trends and the most pertinent consumer needs.

Conclusion

Social media, as a prominent form of online communication, plays a crucial role across various sectors by enabling the exchange of information and facilitating data retrieval. Effectively leveraging social media platforms such as Facebook and WhatsApp is an optimal strategy for promoting goods or services, allowing businesses to reach their target audiences swiftly and accurately. Additionally, digital marketing contributes positively to the effectiveness and efficiency of marketing expenditures. The function of Public Relations (PR) is vital for any organization, serving not only to enhance its image but also to assist in product marketing to the public. Social media serves to enhance public relations efforts. An analysis of previous findings indicates that social media is instrumental in supporting a range of activities, particularly in fostering relationships with customers.

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The Role of Gratitude in Professional Success Among Private Sector Employees

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Abstract

Gratitude, thankfulness, or gratefulness is a feeling of appreciation (positive response) by a recipient of another's kindness. This kindness can be gifts, help, favors, or another form of generosity to another person.

Gratitude is a valuable emotion with an array of functional outcomes. Nonetheless, research on gratitude in organizations is limited.

It turned out that gratitude is a basic source for strengthening individual well-being. In terms of positive psychology, gratitude is considered to be a promising opportunity for individuals, as it can be increased by specific training according to the primary prevention framework. In organizations, gratitude is now considered to be essential for the efficiency, success and productivity of employees and at the same time improves the behavior of organizational citizenship, pro-social organizational behavior and organizational climate. Thus, gratitude is remarkable because it increases positive relationships, social support and well-being, reduces negative emotions in the workplace and increases organizational health and success.

With the increasing significance of gratitude studies at the workplace, the present study aims to lay a roadmap for researchers and practitioners interested in workplace gratitude.

Keywords: Emotion; gratitude; appreciation; multilevel; human resource practices

Introduction

Organizations are often criticized as environments that cultivate egocentrism and selfishness (Mueller, 2012; Vogel, 2006). Media reports on corporate greed and financial scandal seem to reinforce this critique, with many observers lamenting employees' growing sense of entitlement (Twenge & Campbell, 2010). Organizations consequently suffer from a range of troubles including increased conflict, incivility, deviance, and turnover (Fisk, 2010; Harvey & Martinko, 2009). At the same time, there is evidence of an alternative. Some organizations cultivate appreciation and thankfulness, promoting high-quality relationships and prosocial behavior (Cameron & Spreitzer, 2012). In these organizations, gratitude can play a critical role.

A growing body of work in the social sciences has shown that gratitude improves life satisfaction (McCullough, Emmons, & Tsang, 2002), reduces aggression (DeWall, Lambert, Pond, Kashdan, & Fincham, 2012), and motivates prosocial behavior (Bartlett & DeSteno, 2006; Tsang, 2006). However, only a handful of studies have examined its role in organizations (Grant & Wrzesniewski, 2010; Kaplan et al., 2014; Waters, 2012). Even in domains where

gratitude would seem to play a central role (e.g., servant leadership, organizational citizenship, and customer service), it is scarcely mentioned.

An understanding of gratitude in organizations requires explicit attention to how the organizational context shapes the emergence and functions of gratitude itself. Organizations are not simply extensions of everyday social interactions. Rather, the organizational context introduces a unique suite of constraints and affordances that influence how individual employees feel, think, and act on a daily basis. As noted by House, Rousseau, and Thomas-Hunt (1995), “Until general psychological theories are linked to organizational contextual variables.

Although the word “gratitude,” or its linguistic equivalent, is present in almost every language, the concept has rarely been examined in the social sciences in general or organizational psychology in particular. The construct of gratitude is traditionally a fundamental variable in the positive psychology framework and has been studied in relation to well-being. More recently, certain studies have focused on organizational contexts, analyzing not only the relationship between gratitude and well-being but also the relationship with other variables, in particular relational aspects such as positive relationships and social support at work, prosocial organizational behaviors, organizational citizenship behaviors, and teamwork and altruism. Gratitude also emerges as a variable of interest in relation to efficiency, success, productivity, and job performance.

The importance of developing programs that enhance gratitude from a positive primary prevention perspective and a resources reinforcement perspective has also been highlighted.

Literature Review

Gratitude is a prominent construct within the framework of positive psychology. People’s natural tendency to respond positively to another person’s altruism is characterized by gratitude.

Gratitude has been related to a series of results related to well-being for people, such as mental health, satisfaction, happiness, a healthy sense of pride, hope, a greater degree of satisfaction with life and a stress and depression reduced.

Gratitude and Positive Psychology

In the framework of positive psychology, gratitude is conceived as an appreciation of all the positive aspects of one’s life. Gratitude was studied in relation to well-being and the search for positive relationships. Gratitude correlates positively with hope and optimism and negatively with depression, anxiety and envy demonstrated moderate to strong relationships between the affective and cognitive aspects of well-being and gratitude. In a study by Froh et al. (2009), positive relationships between gratitude and positive affection, satisfaction with life, optimism and social support were found. In addition, gratitude is associated with well-being and is largely, although not completely, mediated by affection and belief. Gratitude also predicts psychological well-being above the personality of the five greats. A recent study showed that the gratitude of a higher order, which consists of multiple components (that is, thanking others, to thank God, appreciate blessings, appreciate the difficulties and appreciate the moment), explained the variance in integrated mental well-being, in Terms of depression, self -esteem and psychological well-being, after controlling gender, age, religion, the five personality features of the five greats and the no factorial gratitude (GQ). After considering the results present in the literature, training was developed to improve gratitude and, consequently, to promote well-being.

Gratitude in the Workplace

In a positive primary preventive perspective, gratitude was considered a resource that should be improved from the beginning to promote well-being. Gratitude in the workplace although the construction of gratitude in organizations has not been studied thoroughly, research emphasizes and confirms its fundamental role in organizational success. An individual who generally exhibits gratitude in his personal life may not necessarily do it at work. In the context of the organization, gratitude is considered the act of being grateful for any work related to work and how one can positively affect one, the predisposition of an individual to experience positive emotions in the context of their profession and feel appreciative in response to your work.

According to Youssef-Corgan et al. (2022), at work, gratitude is conceptualized and operationalized as (1) grateful evaluations of work, (2) gratitude towards colleagues and (3) an intentional attitude of gratitude. It is also said that work -related results such as job performance and OCBs are positively correlated with gratitude in the workplace. Having demonstrated the beneficial effects of gratitude, organizations can use gratitude as a strategy to improve employee's well-being. Anticipated gratitude also has a relationship with performance. This form of gratitude speaks of how it anticipates that others, as colleagues and supervisors, can feel grateful for the efforts and contributions of one.

For example, Grant and Wrzesniewski (2010) investigated whether the relationship between basic self -assessments and performance was determined by anticipated guilt and gratitude. They discovered that employees who had central self -assessments and experienced anticipated guilt and gratitude were more likely to have high performance.

In an experiment by Grant and Gino (2010), it was discovered that the expressions of gratitude of the supervisors increased the contribution of the agents of the call center. In addition, according to Hu and Kaplan (2014), if performance management systems can promote a culture of cooperation among team members, they can cause gratitude. Gratitude can also promote social ties and pro-social behavior among colleagues.

It is associated with the satisfaction of the supervisor and, according to Fredrickson (2004), social ties are strengthened through gratitude when individuals give in order to benefit another, instead of waiting for something in return. Once a benefit has been granted, the donor is motivated to do more by the current and future beneficiary, an important consideration for OCB and, in addition, a culture of reciprocity, teamwork and recognize how good others do. When people experience gratitude, they tend to attribute the benefit they receive as valuable and, therefore, see the act of giving as more altruistic and evaluate the donor more positively. Therefore, this could lead to greater satisfaction with the social aspect of work, that is, with colleagues and supervisors.

Measuring Gratitude

Literature reveals different questionnaires to measure gratitude, which have changed as construction has evolved in the last 15 years. The first questionnaire developed to measure gratitude is the gratitude questionnaire-6. This instrument considers gratitude as a generalized tendency to recognize and respond with grateful emotion to the benevolence of other people. It consists of six elements, including "I am grateful to a wide variety of people" and "I have a lot in the life for which to be grateful", and it is one -dimensional.

According to the same definition of construction, McCullough et al. (2002) developed a short instrument, the verification list of adjectives of gratitude, composed of three adjectives (grateful, grateful and grateful). Subsequently, questionnaires were developed to measure gratitude as a multidimensional construction. The resentment test and appreciation of gratitude consists of 44 elements and individualizes three dimensions: sense of abundance (“life has been good for me”), simple appreciation (“I often surprises how beautiful the sunset is”), and appreciation of others (“I could not have reached where I am today without the help of many people”).

Another multidimensional questionnaire is the scale of appreciation, which measures the eight dimensions described by Adler and Fagley (2005). It is composed of 57 articles. The eight dimensions are interpersonal (“I remember appreciating my family”); Personal assets (“I remember myself to think about the good things I have in my life”); Present moment (“I stop and enjoy my life”); Rituals (“I stop to thank my food before eating”); Amazing (“I have moments when I realize how lucky I am to be alive”); Social comparison (“I think of people who are less fortunate than me to help me feel more satisfied with my circumstances”); Appreciation of life in general in relation to loss and adversity (“Loss experiences have taught me to value life”); and expression of gratitude (I say “please” and “thanks” to indicate my thanks “).

Spence et al. (2013) developed the state gratitude scale to evaluate the real experience of gratitude, conceptualized as a transitory state that is of a discreet and episodic nature. It consists of five articles, including “I feel grateful”, “I feel a warm sense of appreciation” and “I have benefited from the goodwill of others.” However, this questionnaire considers that the construction of gratitude is one-dimensional. Two years later, Martini et al. (2015) created the perceived gratitude scale, an instrument of nine items that specifically measures the perception of users’ gratitude to socioanitary operators. The scale has a two-dimensional structure that measures the gratitude expressed by users (“several users express gratitude for the care we offer”) and gratitude as a source of support (“the gratitude of some users compensates for the efforts made in the place of work “). Due to the number of different questionnaires present in the literature, Morgan et al. (2017) created the measure of multiple gratitude (MCGM) to evaluate four components of gratitude: conceptions of gratitude, grateful emotions, attitudes towards gratitude (including motivational aspects and evaluations of its importance) and behaviors related to gratitude. Respondents are presented scenarios to examine their understanding of gratitude.

Conclusion

In current accelerated pace work environments, express gratitude has become a crucial aspect to promote positive cultures in the workplace, improve employee participation and boost organizational success. Gratitude is not only a personal virtue, but a powerful leadership skill that companies and relationships within the teams can transform. Research has shown that practicing gratitude in the workplace can lead to better job satisfaction, greater employee participation and better mental health. The integration of gratitude in the workplace is a powerful tool for leaders to inspire, motivate and involve their teams. When expressing their appreciation, leaders can create a positive work environment, strengthen relationships and boost performance.

Gratitude is not only kindness, but a fundamental aspect of effective leadership that can transform workplaces and raise organizational results. In a framework of positive psychology,

gratitude is considered a fundamental individual resource and an individual promising strength in the organizational context. In fact, gratitude seems crucial for efficiency, success, productivity and well-being of employees. According to these promising findings, future research should continue studying the relationship between gratitude and efficiency, success and productivity in different organizational contexts. In addition, future research on the relationship between gratitude and well-being in organizational contexts could examine the association between gratitude and hedonic well-being and eudemonic well-being.

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India's Strategic Takeaways from the Russia-Ukraine War: Balancing Power in a Multipolar World

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Abstract

The conflict between Russia and Ukraine has been causing unintended effects worldwide. The Russia-Ukraine war has significantly reshaped global geopolitics, international security, and economic stability and continues to shape the international order as it extends into its fourth year in 2025. This conflict presents crucial lessons for India across diplomatic, military, strategic and economic domains. The current crisis in Ukraine has deep roots and is not limited to Ukraine only. By understanding the strategies implied by Russia and Ukraine, this paper analyses the military lessons India can draw from the ongoing crisis. The multifaceted nature of the conflict, encompassing conventional warfare methods, hybrid tactics, and strategic considerations, provides a unique opportunity for India to seek valuable insights to enhance its defence capabilities and strategic preparedness. The findings equip Indian policymakers with actionable insights to fortify the nation's defence capabilities and navigate the evolving challenges in an increasingly complex geopolitical environment.

Keywords: Global geopolitics, Military lessons, Multifaceted nature.

Introduction

The Ukraine War, triggered by Russia's 'special military operation' in February 2022, has dramatically impacted world geopolitics and continues to shape the international order as it extends into its fourth year in 2025. Today, in the global political debate, the ongoing Russia-Ukraine war is one of the most controversial events with a deep-rooted genesis and multifaceted precedence. While the conflict may have begun as a localized military operation, it has transformed into a multidimensional struggle with overarching consequences.¹ It is rooted in years of simmering tensions in the aftermath of the Cold War when the West retained NATO despite the disintegration of the Soviet Union. As NATO membership expanded, its military alliance nearly doubled in size, making Russia feel insecure, and the 2014 Maidan revolution, the conflict disrupted energy, food and fertilizer supplies, which broadened the East-West divide and hampered global economic recovery. This insecurity

ultimately led to a series of disputes. While India has advocated for a ceasefire, dialogue and respect for territorial integrity, the war's long-term implications for global security and the potential for broader conflict remain a source of grave concern. The Russia-Ukraine war has significant global implications, affecting worldwide politics, economies and security dynamics. The conflict offers essential lessons in defence strategy and diplomacy for India, a country facing two potential threats from China and Pakistan. The war highlights the vulnerability of an interconnected world and reinforces the need for international cooperation from international organizations, world leaders and a rules-based order. The war's economic and political consequences are much more severe as nations recover from the pandemic. India has consistently advocated for peace, dialogue, and respect for territorial integrity, acknowledging the broader risks to global security. Studying this conflict helps India and other nations better understand modern warfare methods, strategic alliances and economic disruptions, which could be crucial in shaping future policies and responses. The Russia-Ukraine war is a complex crisis with significant global consequences. India has been calling for peace, dialogue, and respect for international laws, recognizing the war's risks to global security. Many countries, including India and China, are studying this conflict to learn important lessons for their security threats. The war has worsened economic, social, and political problems, especially for developing nations still recovering from the pandemic. This situation highlights the importance of diplomacy, global cooperation, and following international rules and laws. This paper will explore India's key concerns and the long-term effects of the war on its security, and it will also suggest ways for India to strengthen its defence and strategic response to the changing global landscape.

Geopolitical Implications

The Russia-Ukraine war has triggered profound geopolitical shifts, straining international relations and reshaping global alliances. The conflict has critically damaged Russia's ties with Western nations, leading to considerable economic sanctions, diplomatic isolation, and raised tensions. These sanctions have targeted key sectors of Russia's economy, including banking, energy, and defence, to weaken its ability to sustain the war. It has affected Russia's economy and disrupted global trade and supply chains, particularly in energy and food markets. At the same time, the conflict has also deepened the rift between Russia and institutions such as NATO and the European Union (EU). NATO, which faced questions about its relevance earlier, has found renewed purpose as Eastern European nations seek greater protection from potential Russian aggression. Countries like Poland, the Baltic states, and Finland have increased their defence cooperation with NATO. Sweden and Finland have joined the alliance, marking a historic shift in their foreign policy. This growing alignment with NATO underscores the heightened security concerns in Europe and a change in the continent's defence strategy. This shift marks a clear departure of Ukraine from Russia's sphere of influence and highlights its determination to secure its sovereignty through stronger partnerships with Western powers. As the war continues, the world remains watchful, hoping for a resolution that ensures Ukraine's sovereignty while addressing broader security concerns in the region. For India to successfully navigate this ever-changing terrain, it must employ a strategic approach that includes developing alliances, modernizing its military, diversifying its energy sources, and playing a leading role in international organizations. Only through such preventative measures will India be able to secure its future as a powerful and influential power once the conflict is over.

Lessons for India's National Security

The ongoing conflict, now spanning over three years (as of this writing) has led defence analysts worldwide to revisit the lessons learnt many times. The assessment of evolving phases of military operations in these years can be analyzed for well-informed lessons that would be relevant for any other country with further extrapolation in their local context. Following are a few of the lessons drawn in the Indian context.

(a) Modern warfare tactics and military modernization

The importance of combined arms has highlighted the crucial role of combined arms operations, seamlessly integrating infantry, artillery, armoured forces, and airpower for maximum effectiveness. The widespread use of drones, missiles, and other precision weapons has demonstrated their ability to inflict significant damage with minimal collateral damage. This will likely accelerate the prompting of investments in advanced weaponry and counter-measures. The war has shown the enhanced importance of cyber warfare as a tool for disrupting critical infrastructure, communications, and command and control systems. This mandates robust cyber defences and offensive capabilities. It has underscored the significance of information dominance in shaping public opinion, influencing political decisions and disrupting enemy operations. Indigenous defence development has emphasized the need for India to reduce its dependency on imported weapons and develop indigenous defence capabilities. This includes encouraging private sector participation and fostering collaboration with strategic partners. It also emphasizes the need for robust air and missile defence systems to counter aerial threats, particularly from unmanned aerial vehicles (UAVs). India must modernise its inventory and acquire advanced platforms like next-generation tanks and long-range artillery systems. The need for robust cyber defence practices to protect critical infrastructure and networks, coupled with offensive cyber capabilities to deter and respond to cyber-attacks. It has shown the effectiveness of special forces in conducting asymmetrical warfare and intelligence gathering. India must amplify its special forces capabilities and invest in modern intelligence collection platforms and technologies.

(b) Strategic Roadmap and Alliance

A critical reassessment of India's military and strategic doctrines is needed to incorporate the evolving nature of warfare and adapt to the emerging threats. This includes developing strategies for dealing with hybrid warfare, potential nuclear escalation and cyber warfare. It has marked the importance of strong regional and international alliances and partnerships for deterring aggression and maintaining peace and stability. India must actively engage with its neighbours and other strategic partners to build robust security architecture in the Indo-Pacific region. It has exposed the risks of relying on a single source for critical military equipment. India must diversify its defence equipment sources to ensure its strategic autonomy and mitigate potential supply chain disruptions. It is essential to emphasize collaborating with international partners to develop emerging technologies like artificial intelligence, quantum computing and hypersonic weapons. The Russia-Ukraine war has served as a reminder of the ever-changing nature of warfare and the need for constant adaptation and innovation. India's strategic planning must consider the lessons from this conflict to enhance its national security in the face of evolving threats and challenges. India can emerge as a strong and capable military power in the post-war world by focusing on Indigenous development, acquiring advanced capabilities, strengthening regional alliances, and diversifying its defence collaborations.

(c) Multidimensional Approach and Control of Airspace

The conflict and the importance of a strong integrated air defence system have been highlighted. As threats continue to evolve, India must consider the possibility of offensively projecting its air defence capabilities. The air force, along with the army, navy, and continental domain, needs to be incorporated into India's narratives regarding national security initiatives using a multidimensional approach. For India to effectively manage complex security concerns, the country needs to adopt a multi-domain, multi-service approach. The crisis in Ukraine has highlighted the significance of controlling the airspace in conventional combat. Russia's strategy to prevent Ukraine from achieving practical air superiority has been an essential component of Russia's strategy. When it comes to India, this underscores the importance of giving air defence a higher priority and ensuring that the army and air force effectively coordinate their efforts.

(d) Importance of ISR

The conflict emphasizes the significance of skills in intelligence, surveillance, and reconnaissance (ISR). Intelligence, Surveillance, and Reconnaissance (ISR) refers to the coordinated use of information-gathering techniques and technologies to support military operations, national security, and strategic decision-making. It plays a vital role in modern warfare by providing real-time data and insights for situational awareness. These capabilities are something that India has to invest in so that it can keep its situational awareness and make informed decisions. ISR is a critical force multiplier in modern warfare, helping nations like India enhance security, plan operations efficiently, and respond to emerging threats with precision. Intensifying ISR capabilities will ensure better defence preparedness and national security resilience.

(e) Strengthening the Role of Special Forces

The Russia-Ukraine war has demonstrated the critical role of special forces and unconventional warfare tactics in modern conflicts. Special operations forces (SOF) have been instrumental in curbing urban combat, sabotage missions, intelligence gathering, and disrupting enemy logistics. Enhancing these capabilities is essential for India to address security challenges along its borders, counter-terrorism threats, and potential conflicts in urban and high-altitude environments. India must expand and modernize Special Forces Units by increasing recruitment, advanced training, and interoperability between the forces. Equip units with better night vision devices and AI-powered surveillance tools. Strengthen joint operations between Army, Navy, and Air Force SOF to enhance multi-domain warfare capabilities.

(f) Improve Logistics and Supply Chain Resilience

One of the strategic key takeaways from the Ukraine war has been the importance of flexible logistics and resilient supply chains in sustaining military operations using mobile supply chains to move essential supplies where needed quickly. For India, ensuring an uninterrupted supply chain of weapons, food, fuel, and medical aid is crucial in case of prolonged conflict, especially in high-altitude regions (Ladakh, Siachen), deserts (Rajasthan), and dense jungles (Northeast India).

Conclusions

The Russo-Ukrainian war in a technologically advanced era has much to offer about how war is not to be fought by the superior nation and how the end state of the superior force can

still be kept at bay by an inferior nation at a higher cost. It also reveals that every country must depend on itself during such a crisis due to global and regional geopolitical complexities. These lessons can be implied at the defence forces' strategic, operational, and tactical levels. This conflict has also brought various lessons for the national and political leadership, the general populace, industry, etc. The outcomes of the war, such as the notion that short and swift wars transitioned into long-drawn conflicts or that all-out physical warfare has returned, may not be the appropriate lessons in the Indian context. It cannot be denied that the conflict between Russia and Ukraine has served as an alarming call for India, prompting the country to conduct a complete evaluation of its national security landscape. The war emphasizes the need for rapid development of domestic military-industrial capabilities and self-sufficiency in defence production. According to the information presented in this paper, the conflict has thrown light on various difficulties and opportunities, which calls for the Indian authorities to respond in a sophisticated manner. As a result of the excessive reliance on imported equipment, especially those originating from Russia, vulnerabilities have been revealed, and the need for self-sufficiency in the fabrication of defence equipment has never been more apparent. This awareness should gear up robust policy initiatives supporting research and development in the domestic sector.

The importance of well-coordinated joint theatre operations has been highlighted, focusing on the critical role of seamless integration between air defence and information gathering. The Indian government should use this information to improve its capabilities in joint warfare and ensure that it adopts a comprehensive and unified strategy for national defence. There is an excellent shift in modern warfare, as the prevalence of advanced technologies such as drones, artificial intelligence, cyber warfare, etc. This paper calls for a forward-looking approach and making technology innovation a cornerstone of its national security strategy. By learning from the Russia-Ukraine war, India can strategically position itself for long-term security in a constantly changing global context.

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Indian Agriculture in the Globalization Era: Position and Prospects

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Abstract

With a rich green revolution experience of the 1960s initiated by the technological advance, a lot of Indian agriculture was expected in the following years. Then there was a period of almost calm. The new economic reforms of the 1990s promised a period of resurgence, with a rapid growth of the economy in the general and agricultural sector in particular. But, on the contrary, the period after the WTO has witnessed a strong decrease in agricultural production. The agricultural sector faces a crisis. Free trade has not been free of problems. The agricultural and agricultural community is waiting for fair treatment, even since many of them have lost interest or lives. The entire world knows what Indian farmers wanted, deserved and derived from globalization. There can be no better time than now, the period of second generation reforms, for a critical study of this vital sector of the Indian economy and to guarantee a second green revolution in the near future. This document, therefore, tries to trace the growth and problems of agriculture during the reform period and find ways and means to solve the current crisis to develop Indian agriculture in a vibrant sector that substantially contributes to the growth of the new era India. Economy and for its sustainable development.

Keywords: Globalization, Indian, Agriculture, economy, environment, village, population, sector, monopoly, capital

Introduction

Globalization has had a significant impact on several aspects of the county economy. However, agriculture in India hesitated. Being one of the main occupations in the rural areas of India, agriculture is of great importance. Globalization has had a great impact on it.

The contact and integration process between individuals, organizations and governments on a global scale is known as globalization. Since the 18th century, globalization has accelerated due to advances in communications and transport technologies.

- Due to globalisation, Indian farmers have faced increased difficulties, notably since 1990.

- India is a major producer of spices, jute, coffee, tea, rubber, cotton and rice. However, our agricultural products cannot compete with industrialized nations because of their heavily subsidized agriculture.
- The future of Indian agriculture was in doubt.
- To make agriculture economical and successful, it should be prioritised to improve the circumstances of small and marginal farmers.

Three features characterize competing in the current globalization context:

Cost reductions in one place have immediate impacts in other places. Cost reduction and associated production increase constantly occurs in agriculture, and the pace is accelerating, partly due to the forces of globalization. Thus, lower prices are often rapidly transmitted to producers who have not participated in cost reduction. If they have not experienced cost reduction in other endeavours either, they will experience a decline in income, eventually reverting to minimum subsistence agriculture. All too many of the least developed countries fall into this category. They become poorer and more food insecure. Cost reduction largely derives from technological advance. Cost-reducing technological change is the product of applied research, which increasingly depends on constantly advancing basic research. Low-income countries that are not rapidly expanding and improving their agricultural research capacity will not experience cost reductions and hence as others reduce costs, and prices decline, incomes of the non-innovators will decline.

Nowhere is this more dramatic than in Africa, which has suffered from increasingly efficient production of first oil palm, then cocoa, and now coffee from Asian countries that have been spending on research. Benefiting from research is now far more complex than a few decades ago. Basic research is moving far faster than ever before, constantly changing the context for applied research. Private firms are responsible for a much larger absolute and relative share of agricultural research than in the past. To benefit from modern biological science, complex relations between low-income and high-income countries must be developed and even more complex relations between private sector and public sector research. The first requisite for benefiting from research externalities is a strong national research system. Rate of return analysis shows that all low-income countries are vastly under-investing in applied agricultural research, particularly Africa.

For low-income countries, the role of the Consultative Group on International Agricultural Research (CGIAR) should become far more important than in the past as a link to basic research, private sector research and high-income countries. Well operating markets in low-income countries are concentrated in major cities with reasonably good physical infrastructure and hence at least moderate transaction costs. Undertaking international trade is constantly decreasing in cost. Thus major urban markets in low-income countries are increasingly open to foreign competition. Agricultural production in these countries takes place in rural areas that are frequently deficit in physical infrastructure. Hence foreign sources of competition may face low transport costs while domestic producers in low-income countries may face high transport costs. Such costs are reduced by investment in physical infrastructure - most notably roads, but also communications. However, improved infrastructure also facilitates the movement of imported goods further into the rural economy, posing the threat of increased competition to local production.

Globalization has greatly increased the returns to roads and consequently radical to reductions in costs. Rural roads in low-wage, low-income countries can be built with over

half the cost in labour and roughly half the cost represented by the food consumed by labour from their wages.

Discussion

The impact of agriculture on poverty is indirect is consistent with the three or four year lag noted before the full impact on poverty. That it works through the rural non-farm consumer-goods sector is consistent with the finding that agriculture has little impact on poverty decline when land distribution is highly unequal- usually associated with absentee landlords who have quite different consumption patterns from those of peasant farmers.

For a major effect on employment, agriculture must grow substantially faster than population growth. If it is to grow at the 4 to 6 percent rates required for achieving employment levels essential to food security, then major components of agriculture must be exported. This will include the traditional bulk exports such as cotton, coffee, tea, oil palm, and non-traditional exports including horticulture. Globalization requires constant reduction in costs through research and its application as well as constantly declining transaction costs through constantly increasing investment in rural infrastructure. Without these a nation cannot compete: it is no accident that it is African nations that suffer the most from declining commodity prices.

Opening the Economy to Trade and Market Forces

The benefits of globalization flow from trade. Exports require imports, but trade restrictions tend to drive up the cost of exports through higher costs of vital inputs and technology. Comparative advantage needs to be seen for each component of a supply chain, not just for the final product. Customs inefficiencies and corruption and a myriad other bureaucratic constraints are just as stifling as tariffs and all need to be dealt with. However, opening to global market forces does little good if costs are not being constantly reduced. Put differently, if the result of global forces interacting with domestic investment and policy is to leave comparative advantage with subsistence production, no amount of opening of markets will help. Investing in agricultural research and dissemination Low-income countries need to invest far more than at present in agricultural research and technology dissemination. Without such investment, opening markets will do little good for agriculture and hence for poverty reduction and food security. Identifying supporting mechanisms such as research and training to minimise the exclusion of small resource poor farmers from value chains is also important.

Facilitating Private Sector Activity

All too often forgotten in these days of removing public sector constraints is the role that the public sector plays in conjunction with the private sector, especially in exports. It is not enough to remove bureaucratic constraints. Private sector investors in low-income countries tend to search for quick turnover, particularly in trade. Initially, governments have to play a role in assisting the private sector by participating in the costs of market analysis, assisting in the development of trade associations that can diagnose needs, developing and enforcing grades and standards, meeting health regulations of high-income importers, diagnosing special niche markets and carrying out analysis of constraints. In the case of most low-income countries, such efforts are sometimes financed by foreign aid programs, in a sense acting as public sector. Such efforts need to facilitate private sector action and gradually low-income countries need to play that role themselves, rather than relying on foreign aid.

The impact of globalization on Indian agriculture has been felt since colonial times. Raw cotton and species were important export items from India. In 1917, Indian farmers revolted in Champaran against being forced to grow indigo instead of food grains, in order to supply dye to Britain's flourishing textile industry. Thus, globalization has had its boons and banes for Indian agriculture. Post liberalization, Indian farmers face new challenges in the form of competition from highly subsidized agriculture of developed nations. This prompts the need of making Indian agriculture successful and profitable by improving the conditions of small and marginal farmers, countering the negative effects of the Green Revolution, developing and promoting organic farming, and diversifying cropping patterns from cereals to high-value crops.

There are positive and negative impacts of globalization on Indian farmers:

Positive impact:

- i. New techniques are adopted in farming
- ii. Increase in productivity
- iii. Minimum usage of fertilizer, pesticides, and water
- iv. Fruits, nuts, vegetables which were first imported from foreign countries are now produced at our places and exported which in turn increases foreign exchange
- v. R & D to acquire a position in the world agriculture market
- vi. Establishment of food processing industries, increase in employment
- vii. Minimum wastage of grains, fruits, vegetables as we can adopt techniques from developed country

Negative impact:

- i. Less manpower in the field, unemployment in villages
- ii. High cost
- iii. Gap increase between rich and poor farmers
- iii. High cost > high loans > if crop fails > high loss > suicide.

Results

There are multiple components of globalization and they are classified as follows:

1. Economic
2. Cultural
3. Political
4. Philosophical
5. Social

Let us discuss the effect of globalization under these components.

Economic effect

As the supermarket structure arrived in India, it is very difficult for the farmers to sustain. Because of cheap export, small traders suffer a lot. Whereas, globalization has given chance to expand the Indian IT and Pharma sector, and also agricultural processed material. While the economy gets foreign currency, thereby to get more foreign reserves, all are kept quiet. We also know that chances to have more development activities is also provided by foreign currency.

Cultural effect

Due to globalization, many people have been attracted towards the western lifestyle. Nowadays, we can notice some significant changes in the expenditure pattern of the public.

Savings are very less as compared to consumption. People are eager to buy imported and branded goods that ultimately results in an increase in the current account deficit or causes a trade deficit. According to a study, globalization's cultural aspect is destroying our values and culture. Swami Vivekanand used to say that one should learn science from the west and let them have a deep sense of our rich moral values.

Social aspect

Due to globalization, nuclear families are coming more into the picture. MNC's are set up in metro cities. Small town guys get job in these companies and take a house on rent and then after some time get married. Nowadays, foreign deputation is of high value, which youths cannot resist. But in all these things, he finally loses touch with his parents. Nuclear families are more based on utilitarianism, thus, in case of any dispute, the relationship ends. Political effect: International organization such as WTO, IMF, and World Bank are interfering in internal matters of a democratic country, which is not always positive. A global accident can affect internal politics. A rise in right-wing leads to the formation of the government. This is a global trend.

Philosophical effect

According to the experts, globalization is philosophically defined by liberalism. In 1991, the fall of Russia resulted in rise of the USA. America supports an open market economy. Therefore, Globalization is making most of the leading economies easily penetrable. This is not fair in favor of the poor and needy population. There are many positive good impacts of globalization such as more consumer-centric services, fall of the caste system, the rise of the middle class, better buying options, more brands, cheap and good shopping deals, etc.

Globalisation has affected farmers all over the world. Corporate globalisation has affected the rural communities in several ways, and the same impacts can be seen in the case of India. Indian Agriculture still continues to affect more than half of the population and the steps taken to improve the sector, has become the cause of the ongoing crisis in the country. The green revolution of the country helped farmers to improve the productivity, but that was totally based on government support, which included, subsidies, price support, credit support and above all the knowledge support.

The reforms of 1991, was against the institutional changes in agriculture, rather it was said that opening the Indian Economy to trade will reduce the problems that is faced by the sector in order to increase the agricultural surplus. The reforms weakened the state support provided to the farmers, import tariffs were removed, due to fiscal reforms major subsidies were removed, leading to a high increase in the cost of input and fall in the prices of many commodities leading to a price shock, especially to the small farmers. The public capital in the agricultural sector was reduced and the government regulated markets were treated as a hinderance to the efficient markets. Not only the state support was removed, globalisation has also led to the destruction of the environment and at the same time, has affected the mental and physical health of the farmers across the country. This has also resulted in the surge of the suicides of the farmers, due to the same.

If the Neo-liberal policies, especially in agricultural sector are reversed, it will be of huge relief to the small farmers. The 'few' reliefs packages given by government, is just a myopic solution of the situation and the impact will not be reduced until and unless some bold steps are taken by the government to make the post-reform agrarian scenario in India a success.

With this study, an effort has been made to analyse the competitiveness of Indian agriculture in post reform and post WTO periods. It is found from the study that although it was expected that the liberalisation would promote agricultural exports of India; the annual growth rate agricultural export showed something else. If we consider the annual growth rate of agricultural exports, we will notice that the exports of agricultural products from India had reduced drastically in the immediate post reform period (1994-2006).

But if we consider the agricultural exports relative to India's total national export, we will see improvement during the same period. Moreover the analysis of the competitiveness of the agricultural products revealed that rice, wheat, maize, tea, cotton were mostly competitive during 1990-2006. However, the oilseeds were not at all competitive during that period.

Two factors came out to be mainly responsible for this lower competitiveness: they were availability of Palmolive oil in international market at cheap price and scale of diseconomies associated with the oilseed processing industries. It was found that both the compound growth rates of agricultural exports as well as agricultural imports had declined during this period; but the growth rates of Indian agricultural exports declined more sharply than that of agricultural imports.

Many studies in the existing literature as well as relative shares of exports of the agricultural products in total national agricultural exports has revealed that the composition of Indian agricultural exports and imports have undergone a significant change. Food grains including wheat, rice and other cereals, marine products, cotton, meat and preparations, guar gum meals and ground were considered as most competitive agricultural products in the international markets during this period and the shares of these products in the total agricultural exports has also increased considerably in this recent decade. Despite the steady increase in agricultural exports and increasing agricultural trade surplus, the growth rate of output and yield levels have experienced a significant decline in the post-WTO period as compared with the pre WTO period. It is often argued in the existing literature that agricultural export policies have been frequently changed in India to protect the demands of domestic consumers. It has created uncertainty among the farmers and also adversely affected the exports.

Conclusions

Therefore changes in policies will be ineffective or half-hearted unless two fundamental aspects are addressed. Firstly, to whom the priority should be given- farmer or the producer. Second, the poor consumer should not always be given highest priority at the expense of the farmers. The most sustainable way of improving the conditions of Indian agriculture is by increasing investments in productivity enhancing areas of primary sector. Such investments will reduce per unit costs in production and thus will make Indian exports more competitive in the international markets.

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Unleashing the Potential of SMEs: Strategies for Promoting Economic Development

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Abstract

Small and Medium Enterprises (SMEs) play a vital role in driving economic development globally. They are integral to job creation, fostering innovation, and contributing significantly to both local and national economies. SMEs promote regional development by enhancing local economies and reducing poverty while also playing a critical role in achieving sustainable economic growth. Despite their significant impact, SMEs often face a range of challenges that hinder their growth and development, including limited access to finance, regulatory and policy hurdles, and the intense competition they face from larger corporations. The future of SMEs is closely tied to their ability to adapt to changing global economic dynamics, particularly in the face of globalization and post-pandemic recovery. This paper suggests that SMEs can further capitalize on opportunities in green and sustainable industries by embracing technologies and business models that promote environmental sustainability. The conclusion of this study offers policy recommendations aimed at enhancing the competitive capacity of SMEs, improving their access to resources, and supporting their transition into the digital economy.

Keywords: Small and Medium Enterprises (SMEs), Economic Development, Job Creation, Innovation, Financing Models, Sustainability.

Introduction

The role of Small and Medium Enterprises (SMEs) in economic development has long been a subject of scholarly and policy debate. SMEs are considered the backbone of many economies worldwide, particularly in developing and emerging markets. These enterprises, characterized by their small to medium size in terms of employees, revenue, and assets, are pivotal in driving local economic growth, job creation, and innovation. As global economies continue to evolve, SMEs are increasingly recognized for their ability to contribute to sustainable development, reduce poverty, and foster social mobility.

In recent years, SMEs have gained significant attention as engines of economic development. This attention has been fueled by the recognition of their ability to contribute to multiple dimensions of economic prosperity, including job creation, GDP growth, innovation, and the promotion of a competitive market environment. Despite their crucial role, however, SMEs often face numerous challenges that hinder their growth and development, such as limited access to finance, regulatory barriers, and insufficient infrastructure.

This research aims to analyze the role of SMEs in economic development, with a specific focus on their contributions to employment, innovation, regional development, and social

growth. Additionally, it seeks to understand the challenges SMEs face and explore the policy interventions necessary to foster their growth and integration into national and global economic systems. By examining the role of SMEs in both developed and developing economies, this paper aims to offer a comprehensive perspective on how SMEs contribute to economic dynamism and prosperity.

Background and Significance of Small and Medium Enterprises (SMEs)

Small and Medium Enterprises are typically defined based on their size, which is measured in terms of the number of employees or annual turnover. Though the specific definition of SMEs may vary across countries, they are generally characterized by having fewer employees compared to large enterprises. SMEs can be found across all sectors of the economy, ranging from manufacturing and retail to services and technology.

The significance of SMEs in economic development cannot be overstated. They represent a large proportion of businesses worldwide and are critical to job creation. In many countries, particularly in developing regions, SMEs account for over 80% of total employment. These enterprises are also key drivers of innovation, providing a breeding ground for new ideas, products, and services that can lead to increased productivity and global competitiveness. Furthermore, SMEs play a crucial role in regional development, as they tend to be more geographically dispersed than large corporations, contributing to the economic vitality of rural and underserved areas.

The Role of SMEs in Economic Development

Small and Medium Enterprises (SMEs) play a pivotal role in driving economic development globally, contributing significantly to job creation, innovation, regional growth, export expansion, GDP, and inclusive growth. SMEs are increasingly recognized as the backbone of many economies, particularly in emerging markets, where they stimulate growth and address socioeconomic challenges. This section delves into the multifaceted role that SMEs play in fostering economic development.

Contributions to Employment Creation

One of the most significant contributions of SMEs to economic development is their role in employment creation. SMEs, due to their large numbers and ability to operate in diverse sectors, are often the largest employers in many economies, especially in developing and emerging markets. In some countries, SMEs account for up to 80% or more of total employment. Unlike large enterprises, SMEs are typically more labor-intensive, requiring a wider range of skill sets, from unskilled labor to highly specialized professionals.

Driving Innovation and Technological Advancement

SMEs are essential drivers of innovation and technological advancement in the economy. While large firms often dominate sectors that require substantial capital investment, SMEs frequently serve as incubators for new ideas, products, and services. Their flexibility and agility enable them to respond quickly to changes in consumer demands and market trends, making them more adaptable to emerging technologies and innovations.

In many industries, SMEs are at the forefront of introducing groundbreaking products and services, particularly in sectors like information technology, renewable energy, and

biotechnology. They often drive innovation by adopting new technologies that help improve productivity, reduce costs, and increase competitiveness. Moreover, SMEs contribute to technological advancement by participating in research and development (R&D) efforts, either independently or in collaboration with larger enterprises, universities, and research institutions.

The role of SMEs in promoting technological progress also extends to the adoption of digital tools and platforms, which can enhance operational efficiency, improve customer service, and expand market reach. As digital transformation continues to reshape economies, SMEs' ability to innovate and integrate new technologies becomes crucial to their survival and growth.

Fostering Local and Regional Development

SMEs are critical to local and regional development by contributing to the economic growth of smaller cities, rural areas, and underserved communities. Unlike large multinational corporations, which tend to concentrate their operations in urban centers, SMEs are more geographically dispersed. They are often located in areas that may otherwise have limited access to large-scale industries or major corporate investments. This geographic spread helps create employment opportunities in areas where jobs are scarce and contributes to the overall economic diversity of regions.

SMEs and Export Growth

SMEs are increasingly becoming key players in export growth, contributing to the diversification of export markets and enhancing a country's global competitiveness. While large corporations traditionally dominate export markets, SMEs are also making significant strides in exporting goods and services, especially with the rise of global trade platforms and digital technologies. SMEs, by their nature, tend to focus on niche markets, offering unique products or services that may not be available from larger companies.

The rise of e-commerce, digital marketing, and cross-border platforms has made it easier for SMEs to access international markets. For instance, through online platforms like Alibaba, Amazon, and Etsy, small businesses can reach global customers, overcome geographical limitations, and expand their market base. As a result, SMEs contribute to a country's foreign exchange earnings, reduce trade imbalances, and enhance the national economy.

Contribution to GDP in Different Economies

Small and Medium Enterprises are a significant driver of Gross Domestic Product (GDP) in many economies. In both developed and developing countries, SMEs contribute a substantial portion of total economic output. In some economies, SMEs account for as much as 40% to 60% of GDP, with their contributions varying depending on the sector and the level of industrialization.

The diversity of SME contributions to GDP is also seen in their involvement in key sectors such as agriculture, manufacturing, retail, and services. In these sectors, SMEs provide essential goods and services that meet the needs of both local populations and global markets. As such, they are indispensable for fostering economic growth, particularly in countries that are heavily reliant on small enterprises as their economic foundation.

SMEs and Social Development

Small and Medium Enterprises (SMEs) are not only key drivers of economic growth but also play a significant role in social development. They contribute to social mobility, provide

opportunities in underserved areas, empower marginalized groups, and support broader Sustainable Development Goals (SDGs). By engaging with these broader social challenges, SMEs help foster more equitable and inclusive societies, ensuring that economic growth benefits all members of society, particularly those who are often left behind in traditional development models.

Promoting Social Mobility

SMEs are a powerful tool for promoting social mobility by offering individuals, especially those from lower-income backgrounds, the opportunity to improve their economic standing. Unlike large corporations, which often require specialized skills or higher education for employment, SMEs tend to provide more flexible job opportunities, thus allowing individuals from diverse socioeconomic backgrounds to enter the workforce.

Creating Job Opportunities in Underserved Areas

SMEs are essential in creating job opportunities in underserved areas, particularly in rural regions, smaller cities, and economically marginalized communities. These areas often face challenges such as limited access to infrastructure, resources, and larger markets, which can stifle growth and employment opportunities. SMEs, with their lower barriers to entry and ability to operate on a smaller scale, are better suited to these areas than large businesses, which are typically concentrated in urban centers.

SMEs and Sustainable Development Goals (SDGs)

SMEs play a crucial role in advancing the Sustainable Development Goals (SDGs), a set of 17 global goals established by the United Nations to promote peace, prosperity, and sustainability. The operations of SMEs are closely aligned with several SDGs, such as poverty reduction, gender equality, decent work, and economic growth.

Barriers to Growth and Development of SMEs

Despite their significant contributions to economic and social development, Small and Medium Enterprises (SMEs) often face numerous challenges that hinder their growth and sustainability. These barriers can arise from financial constraints, regulatory complexities, infrastructure inadequacies, human capital deficiencies, and increasing competition from larger firms due to globalization. Understanding and addressing these challenges is crucial for unlocking the potential of SMEs and ensuring that they can continue to contribute to economic growth and job creation.

Access to Finance and Credit

One of the primary barriers to the growth and development of SMEs is access to finance and credit. SMEs typically struggle to obtain funding from traditional financial institutions due to several reasons, including perceived risks, lack of collateral, and limited credit histories. Banks and financial institutions often view SMEs as high-risk borrowers, leading to limited lending opportunities, especially for start-ups or small enterprises operating in emerging markets.

Infrastructural Limitations

Infrastructural limitations represent another significant barrier to SME growth, particularly in developing countries or rural areas. Poor infrastructure in terms of

transportation, energy, technology, and communication can increase the operational costs of SMEs and limit their market reach.

For example, inadequate transportation networks can hinder the movement of goods and services, resulting in delays and higher logistics costs. Similarly, unreliable energy supply can disrupt production processes, reduce productivity, and increase operational costs for small businesses. In many rural or underserved regions, SMEs face difficulties in accessing high-speed internet, limiting their ability to engage in e-commerce or digital marketing. Furthermore, a lack of access to modern technology and machinery can prevent SMEs from scaling up their operations or competing with larger firms.

Human Capital and Skills Gap

A critical barrier to SME growth is the human capital and skills gap. Many SMEs struggle to find and retain qualified employees due to a lack of access to education and training, particularly in specialized areas such as technology, management, and finance. The limited availability of skilled labor often leads to productivity losses and can prevent SMEs from adopting advanced technologies or expanding into new markets.

Additionally, many SMEs lack the resources to invest in employee training and professional development programs. This results in skill deficiencies, particularly in areas such as digital literacy, business management, and leadership. In some cases, entrepreneurs may lack the necessary managerial skills to run a business efficiently, leading to operational inefficiencies and higher failure rates.

To address this barrier, SMEs require greater access to training programs, technical assistance, and mentorship. Governments, educational institutions, and business organizations should collaborate to provide skill development opportunities for SME employees. Encouraging a culture of lifelong learning and offering incentives for businesses to invest in employee training can also help bridge the skills gap and enhance productivity.

Globalization and Competition from Large Enterprises

The process of globalization has introduced both opportunities and challenges for SMEs. While globalization provides SMEs with access to global markets and the potential to expand beyond their national borders, it also exposes them to increased competition from large, multinational corporations (MNCs) that benefit from economies of scale, advanced technology, and significant financial resources.

Large enterprises often have the capacity to reduce costs, offer competitive pricing, and dominate market share, making it difficult for SMEs to compete. Moreover, multinational corporations may have better access to international supply chains, more effective marketing channels, and stronger brand recognition, which can overshadow the efforts of smaller businesses.

SME Promotion Policies in Developed Economies

In developed economies, governments recognize the vital role SMEs play in driving economic growth, job creation, and innovation. As such, they often implement a wide range of SME promotion policies to create an environment conducive to entrepreneurship and business development. These policies typically include:

- Access to finance: Governments in developed economies often create programs that provide SMEs with easier access to capital. This includes loan guarantees, grants, and

subsidized interest rates, which reduce the risk for financial institutions and make it easier for SMEs to secure funding.

- **Tax incentives:** Tax reliefs and incentives are frequently offered to SMEs to reduce their tax burden and stimulate investment in growth. For example, small businesses may receive tax deductions for research and development, capital investments, or hiring additional employees.
- **Regulatory support:** Policies that simplify and streamline regulatory frameworks are common in developed economies. These may involve reducing the complexity of tax filings, easing business registration processes, and eliminating unnecessary compliance requirements.

Policy Frameworks in Developing Economies

In developing economies, the role of government in promoting SMEs is especially important, as these businesses are often the backbone of the economy. However, SMEs in developing economies face unique challenges such as limited access to finance, lack of infrastructure, and inadequate skilled labor. To address these issues, governments typically implement the following policy frameworks:

- **Financial inclusion policies:** In many developing economies, government-backed microfinance institutions and development banks provide affordable loans to SMEs that struggle to access credit from commercial banks. Financial support is often focused on rural SMEs and those in sectors such as agriculture and retail.
- **Incentives for entrepreneurship:** Governments may offer tax breaks, subsidies, and low-interest loans to entrepreneurs who establish new businesses in sectors of strategic importance, such as agriculture, manufacturing, or renewable energy. This helps to stimulate entrepreneurial activity and diversify the economy.
- **Infrastructure development:** Governments in developing economies invest in infrastructure such as roads, energy, and communication networks to improve the business environment for SMEs. This includes creating industrial parks, improving logistics systems, and enhancing access to digital tools.
- **Regulatory reforms:** Policy frameworks that streamline business registration processes and simplify compliance requirements are essential for reducing the administrative burden on SMEs in developing economies. These reforms help reduce corruption, improve transparency, and encourage business growth.

Training and Skill Development Programs

To address the skills gap and build the capacity of SMEs, governments often implement training and skill development programs aimed at both business owners and employees. These programs focus on improving technical, managerial, and entrepreneurial skills, thereby enhancing productivity and operational efficiency.

- **Entrepreneurship training:** Governments offer entrepreneurship programs to help aspiring business owners develop essential skills such as business planning, financial management, marketing, and leadership. These programs are often designed to encourage innovation, improve decision-making, and boost confidence in entrepreneurship.
- **Technical and vocational training:** Governments partner with educational institutions and private organizations to provide technical training in areas such as information technology, manufacturing, and engineering. These programs ensure that SMEs have access to a skilled workforce capable of meeting industry demands.

Public-Private Partnerships for SME Growth

Public-private partnerships (PPPs) play a crucial role in supporting SME growth by facilitating collaboration between the government and private sector players. These partnerships often focus on:

- **Infrastructure development:** PPPs can help fund the development of critical infrastructure, such as transport networks, digital connectivity, and industrial parks, which benefit SMEs by improving logistics and reducing operational costs.
- **Technology and innovation:** Collaborations between government agencies and private tech firms can promote the adoption of advanced technologies in SMEs. By pooling resources, both sectors can create innovation hubs, incubators, and accelerators to support high-growth SMEs.

Impact of Government Support on SME Performance

The impact of government support on SME performance is significant, as evidenced by improved access to finance, technology, markets, and skills. Countries that have implemented robust SME support mechanisms have witnessed increased productivity, innovation, and competitiveness in their small business sectors. Moreover, government interventions often lead to higher rates of SME survival, particularly in challenging economic conditions.

Studies show that SMEs benefiting from government support are more likely to expand their operations, create jobs, and contribute to national GDP growth. In addition, targeted support programs can help SMEs overcome the barriers that disproportionately affect them, such as access to finance, regulatory challenges, and technological obsolescence.

SME Financing and Innovation

Financing remains a major hurdle for Small and Medium Enterprises (SMEs) as they strive to grow, scale, and innovate. Securing adequate funding is crucial for SMEs to maintain operations, expand their reach, invest in technology, and enhance productivity. In addition to the traditional banking system, new and innovative financing models are emerging that leverage technology, alternative investment strategies, and social platforms. This section explores the challenges in SME financing, the role of financial institutions, alternative models, and how innovation plays a key role in scaling SMEs.

Challenges in SME Financing

Access to finance is often identified as the most significant barrier to the growth and sustainability of SMEs. Several challenges contribute to the financing gap faced by small businesses, including:

- **Risk perception:** Financial institutions often view SMEs as high-risk due to their limited operational history, lack of collateral, and potential cash flow instability. This makes banks hesitant to provide loans, particularly to startups or businesses in high-risk sectors.
- **Inadequate credit history:** Many SMEs, particularly in developing economies, lack formal credit histories or financial records, which reduces their ability to secure funding from traditional lending sources. Without a proven track record, it becomes difficult for SMEs to convince lenders of their ability to repay loans.

Role of Banks and Financial Institutions

Banks and financial institutions are traditional sources of financing for SMEs. However, they often face challenges in meeting the unique needs of small businesses. Despite this,

they play a vital role in SME financing through the following methods:

- **Loans and credit facilities:** Banks provide loans and credit facilities to SMEs to help them fund working capital, purchase equipment, or expand their operations. Loan products designed specifically for SMEs, such as short-term loans and lines of credit, are essential for supporting the day-to-day needs of small businesses.
- **SME-specific products:** Many banks offer tailored financial products, such as SME credit cards or business loans, which offer lower interest rates, extended repayment terms, or additional flexibility compared to traditional loans. These products can make it easier for SMEs to manage their cash flow and fund long-term growth initiatives.

Microfinance and Alternative Financing Models

For SMEs, particularly in developing economies, microfinance and other alternative financing models play an essential role in providing access to capital. These models are often more accessible, flexible, and suited to the specific needs of smaller businesses.

- **Microfinance institutions (MFIs):** MFIs offer small loans to microenterprises and low-income individuals who do not have access to traditional banking services. These loans are typically small amounts and come with fewer requirements than conventional bank loans. Microfinance can be a lifeline for SMEs, especially in rural areas, where traditional banks may be scarce.
- **Peer-to-peer (P2P) lending:** P2P lending platforms connect borrowers directly with individual investors, bypassing traditional banks and financial institutions. These platforms allow SMEs to access funds from a broader range of investors, often with more flexible terms and lower interest rates than traditional banks. P2P lending is particularly beneficial for SMEs that may not meet the requirements of commercial banks.
- **Factoring and invoice financing:** Invoice financing, including factoring, allows SMEs to access cash by selling their outstanding invoices to a third party at a discounted rate. This model provides quick access to capital and helps businesses manage cash flow, particularly in industries with long payment cycles.

Innovative Financing Solutions for SMEs

Innovative financing solutions are transforming how SMEs access capital. These solutions are designed to address the unique needs of SMEs, such as limited credit histories, unpredictable cash flows, and the need for fast, flexible funding.

- **Revenue-based financing:** This financing model involves investors providing funds to SMEs in exchange for a percentage of the company's future revenues. Unlike traditional loans, revenue-based financing does not require collateral or fixed repayment schedules. This makes it ideal for businesses with unpredictable revenue streams.
- **Blockchain and cryptocurrency:** Blockchain technology and cryptocurrency have opened up new possibilities for financing SMEs. Blockchain can offer secure, transparent, and cost-effective methods for raising capital, while cryptocurrencies like Bitcoin can be used as an alternative form of payment or investment for SMEs.

The Role of Innovation and Technology in Scaling SMEs

The adoption of innovation and technology is critical for SMEs to scale and compete effectively in today's digital economy. Technology enables SMEs to improve operational efficiency, expand market reach, and innovate in product and service delivery.

- **Automation and digital tools:** SMEs can use automation tools to streamline processes, reduce operational costs, and improve productivity. Technologies like customer

relationship management (CRM) systems, enterprise resource planning (ERP) software, and digital marketing platforms enable SMEs to manage operations more efficiently.

- Cloud computing: Cloud-based solutions provide SMEs with affordable and scalable options for data storage, software tools, and computing power. This allows businesses to access enterprise-level technology without the high costs of on-premise infrastructure, making it easier to scale operations.

Adapting to Globalization and Global Supply Chains

Globalization has created both opportunities and challenges for SMEs. As businesses increasingly operate in interconnected global markets, SMEs must adapt to a complex and competitive environment that includes the integration of global supply chains and international trade.

- Market expansion: Globalization opens new markets for SMEs, allowing them to access customers and suppliers worldwide. With the right infrastructure and digital tools, SMEs can expand their reach and diversify their revenue streams by participating in international trade.
- Supply chain diversification: As global supply chains become more complex, SMEs must navigate risks related to trade barriers, logistics disruptions, and shifting consumer demands. SMEs will need to develop resilient supply chains that can withstand these challenges, which may include sourcing materials from multiple countries, adopting just-in-time inventory systems, and utilizing digital technologies to track and manage supply chain operations.

The Role of SMEs in Achieving the Sustainable Development Goals (SDGs)

Small and Medium Enterprises have a crucial role to play in achieving the United Nations Sustainable Development Goals (SDGs). SMEs can drive economic growth, innovation, and job creation while simultaneously contributing to social and environmental sustainability.

- Economic growth and decent work: SMEs are the backbone of many economies, particularly in developing countries. By fostering entrepreneurship and creating jobs, SMEs directly contribute to the achievement of SDG 8, which aims to promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.

The Post-COVID-19 SME Landscape

The COVID-19 pandemic has had profound effects on SMEs, forcing many businesses to adapt to new market realities, digital platforms, and remote work models. As the world begins to recover, the post-COVID-19 SME landscape will be shaped by several key factors:

- Digital acceleration: The pandemic has expedited the digital transformation of SMEs, pushing businesses to embrace e-commerce, remote work, and online customer engagement. The post-pandemic world will see greater reliance on digital tools, and SMEs will need to continue investing in technology to remain competitive.
- Resilience and flexibility: SMEs that were able to pivot and adapt to changing circumstances during the pandemic have demonstrated the importance of resilience and flexibility. In the future, SMEs will need to build stronger contingency plans and diversify their operations to withstand future disruptions, whether from health crises, economic downturns, or natural disasters.

Policies for Supporting the Future of SMEs

The future success of SMEs will depend on effective policies that address their unique challenges and enable them to thrive in an increasingly complex and dynamic environment. Policymakers must focus on creating supportive ecosystems that foster innovation, provide access to finance, and enable sustainable growth.

- **Access to finance:** Governments need to continue supporting SMEs with financial instruments such as loans, grants, and equity investments. Ensuring that SMEs can access affordable capital is crucial for their ability to grow, innovate, and scale operations.
- **Digitalization support:** Policymakers should invest in programs that help SMEs adopt digital tools, enhance their e-commerce capabilities, and improve digital literacy. This will enable SMEs to compete in the global digital economy and reach a wider customer base.
- **Sustainability incentives:** Governments can create policies that incentivize SMEs to adopt green technologies, reduce waste, and implement sustainable practices. These policies may include tax credits, subsidies for green innovation, and regulations that promote eco-friendly business practices.

Conclusion

Summary of Findings

The analysis of the role of Small and Medium Enterprises (SMEs) in economic development reveals that SMEs contribute significantly to employment creation, innovation, GDP growth, and social development. SMEs foster local and regional development, empower marginalized groups, and promote inclusive growth. However, SMEs face challenges such as limited access to finance, regulatory barriers, lack of infrastructure, and competition from larger firms. Government policies and support mechanisms, including financial assistance, training programs, and incentives for innovation, are essential for addressing these challenges and fostering SME growth.

The Integral Role of SMEs in Economic Development

SMEs play a pivotal role in fostering economic development by contributing to job creation, innovation, and regional growth. Their ability to drive entrepreneurship and create sustainable businesses is crucial to achieving long-term economic stability. SMEs are essential for economic diversification, particularly in developing economies where large enterprises may be concentrated in specific sectors. In addition, SMEs contribute to the Sustainable Development Goals (SDGs) by promoting social mobility, reducing inequalities, and supporting environmental sustainability.

Policy Recommendations

To maximize the potential of SMEs in contributing to economic development, the following policy recommendations are proposed:

1. **Improved Access to Finance:** Governments should ensure that SMEs have access to affordable credit and financial instruments. This can be achieved by promoting policies that encourage lending by financial institutions and supporting alternative financing methods such as microfinance, venture capital, and crowdfunding.
2. **Support for Digital Transformation:** Policymakers must invest in programs that facilitate digital adoption among SMEs, offering incentives and resources to enable businesses to engage with e-commerce platforms, adopt digital tools, and improve their operational efficiency.

3. **Strengthening Infrastructure:** Governments should enhance infrastructure, particularly in underserved and rural areas, by investing in transportation, communication, and energy infrastructure, which are crucial for the smooth operation of SMEs.
4. **Regulatory Reform:** Simplifying regulations and reducing bureaucratic red tape will encourage SMEs to formalize their businesses and expand. Policymakers should focus on creating a business-friendly environment by ensuring that regulatory frameworks are clear, transparent, and easy to navigate.
5. **Capacity Building and Training:** Investment in human capital is essential. Training programs should be developed to improve the skills of the workforce, including both technical and entrepreneurial skills. These programs should also promote innovation, digital literacy, and sustainability practices.

Suggestions for Future Research

Future research could further investigate the following areas:

1. **Regional Specificity:** Studies focusing on specific regions, especially developing economies, could provide a deeper understanding of the unique challenges and opportunities faced by SMEs in those contexts.
2. **Impact of COVID-19:** Given the transformative effects of the COVID-19 pandemic, future research could explore how SMEs in various sectors have adapted to the crisis and the long-term effects on their growth and sustainability.
3. **Financing Mechanisms for SMEs:** Further research could explore innovative financing models, such as crowdfunding, peer-to-peer lending, and impact investing, to assess their effectiveness in supporting SME growth, particularly in developing economies.
4. **SMEs and Sustainability:** Investigating the role of SMEs in achieving green growth and sustainable development goals will be important. Research could explore how SMEs are integrating sustainability into their business models and the impact of such practices on their profitability and growth.
5. **Digital Transformation:** Future research should focus on the role of emerging technologies such as AI, blockchain, and IoT in transforming SMEs, particularly in sectors like manufacturing, retail, and agriculture.

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The Relationship Between Nature and Music

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Abstract:

The synergy of nature and music and its synthesizing psychological effect on the listeners is an interesting topic covering the deep hole into mood, cognition, and emotional wellbeing through both of them. It is long established that music and nature each benefit mental health and that they do so more when combined. Through this exploration, we aim to understand how nature has shaped musical forms, inspired composers, and how the sounds of the natural world continue to influence modern music. By examining the cultural, emotional, and ecological significance of this relationship, this paper underscores the importance of preserving the natural world and its continued influence on creative expression.

Keywords: Nature, Music, Classical Music, Emotion, Relaxation, Stress Reduction, Technology, Film Music, Contemporary Mental Health.

Introduction to Psychological Impact of Nature on Music Listeners :

1. Relaxation and Stress Reduction:

Nature eases the human psyche. Research shows that spending time in natural environments such as green space or beautiful scenery is stress relieving, lowers blood pressure, and creates a deep sense of relaxation. These relaxing effects can be enhanced by incorporating natural sounds like rustling leaves, running water or birdsong into music. Music infused with nature has often been used in relaxation and meditation environments, as listeners tend to feel less anxious and more relaxed.

2. Improved Mood:

As being in nature can affect one's mood, so listening to natural-themed music can prompt positive emotional responses. Natural sounds captured in music can evoke feelings of happiness, tranquillity and nostalgia that can lift your mood both physically and emotionally and reduce negative ones, such as sadness or anger. This uplift will be of great benefit to those seeking relief from sadness or emotional suffering.

3. Cognitive Restoration:

Spending time outdoors is well-known to be an effective means of cognitive rehabilitation, which allows the brain to recover from mental fatigue. The logic behind this procedure, known as "directed attention restoration," is that the brain is positively affected by natural environments in that such environments provide an escape from the stressors of modern

life. The integration of nature sounds, such as gentle bird calls or ocean waves, into music may replicate the healing benefits of nature and serve as the ultimate mental getaway, she said, holding back listeners' thoughts and promoting concentration and clarity.

4. Emotional Regulation:

In general, music can be a means for emotional regulation, helping listeners regulate their emotions. Sounds from nature are often used in music as emotional grounding anchors. The sound of wind or running water, for example, might elicit contemplative and calming responses in listeners, serving as a means of processing difficult emotions. Especially for those who may have difficulty managing their anxiety or working through their emotions without external stimulus.

5. Spiritual and Reflective Experiences:

Nature has long been associated with spiritual rejuvenation and a feeling of connection to something greater than oneself. Its combination with music is capable of deepening introspective or transcendent experiences. Some find music that uses natural or environmental elements soothing, helpful in feeling connection to the Earth or in deep spiritual introspection. Music and ambient sounds can also enhance mindfulness by helping listeners remain aware of their surroundings.

Examples of Nature-Inspired Music:

Nature Soundscapes:

Even when you're indoors, listening to music that incorporates natural sounds — such as rain, birds, wind or ocean waves — can create the feeling of being in a natural environment. These compositions can be instrumental or complement mellow melodies to further enhance the immersive experience.

Classical Music with Nature Themes:

Even when you're indoors, listening to music that incorporates natural sounds — such as rain, birds, wind or ocean waves — can create the feeling of being in a natural environment. These compositions can be instrumental or complement mellow melodies to further enhance the immersive experience.

Classical Music That Evokes Nature Related:

Nature often inspires composers such as Beethoven and Vivaldi whose works include pieces such as The Pastoral Symphony (Beethoven) and The Four Seasons (Vivaldi). These compositions make up a sort of nature-themed sonic landscape, frequently evoking the countryside, the cycle of the seasons, and the sounds of thunder and rain with orchestral arrangements.

Ambient and New Age Music:

Ambient and new age artists like Brian Eno and Ludovico Einaudi regularly incorporate natural sounds into their work, producing soothing, immersive soundscapes that mimic being outdoors. These genres are generally popular for relaxation, meditation, and stress relief.

Binaural Beats and Nature:

Methods of this sound treatment include, nature sounds combined with binaural beats that are certain frequencies (sound) played in each ear to obtain synchronized brainwaves.

The combination is believed to facilitate deep relaxation, concentration, and emotional healing.

Psychological Mechanisms at Play:

1. Biophilia Hypothesis:

This perspective says that a love of nature is our inborn attraction that won out after thousands of years of natural selection. As part of our evolutionary environment and thus evolutionarily adapted to respond to, we feel an affinity with natural sceneries and sounds. This instinctive connection can be triggered by the incorporation of nature into music, resulting in favourable emotional and psychological responses.

2. Cognitive and Emotional Synchrony:

These are part of a rhythm and flow that human brains respond to in ways we know little about — but music and nature have this in common: They seem to both stick in our brains. Music and nature both have patterns—be it the gentle ebb and flow of the tides or the harmonies in a symphony. When this alignment is achieved, emotional and physiological responses can lead to relaxation and a resonant coherence and peace.

3. Attention Restoration Theory:

Being around the nature spaces restores focus and concentration. Nature-themed music can mimic these restorative effects by giving listeners a mental break from the growing flood of information and stimulation of modern life, she added.

4. Sound and Memory:

Some sounds in nature, such as birds or rustling leaves, remind me of memories or association experienced as a child or on holiday. Lagging, less traditional music can indicate nostalgia, improving mood and emotional well-being.

The Role of Technology in Nature-Inspired Music :

Nature has inspired music in new ways through technology. Technology has enabled musicians to synthesize and transform the sounds of our spaces, from birds to cities. Electronic music producers and sound artists use synthesizers, field recordings and sound libraries to create immersive compositions that sound like what nature looks like. Using technology to preserve natural sounds gives future generations a glimpse into a world as it once existed. Our planet's auditory landscape is preserved for posterity by capturing and archiving sounds from endangered ecosystems by musicians and sound artists.

Contemporary Approaches to Nature in Music

Nature is still a common theme in modern music. Genres such as ambient, new age and experimental music lean heavily on natural soundscapes. Building on this, more modern and experimental forms of ambient sound with electronic elements produce styles such as experimental ambient, minimalism, and New Age fusion, thus extending the range of music that encourages sustainability and environmental awareness.

Popular culture also employs nature-music in film scores, advertisements, and multimedia installations, often used to portray a sense of peace or environmental message. Through these media, nature is the literal and metaphorical backdrop of human storytelling.

Nature as an Inspiration for Music Composition

The influence of nature on music is pervasive in all eras and genres. The natural world around them — its landscapes, seasons and phenomena — has been a source of inspiration for composers. Beethoven's "Pastoral Symphony" is one of the six pieces you can hear today that best show how music can evoke nature's sounds and moods. The symphony imitates the natural world through its portrayals of rustic scenes, including a stream babbling and leaves rustling.

In the 20th century, John Cage and other composers were known for incorporation natural sounds in their compositions, taking advantage of chance and changing sounds of the environment. The most famous example is Cage's piece "4'33"," in which the performer doesn't play an instrument, making for an experience that compels the audience to pay attention to the ambient noises around them — the natural world enters the performance.

A minimalist influence can also be felt in the works of some modern composers like Philip Glass and Ludovico Einaudi, who utilize similar techniques of letting simple patterns stretch on for minutes at a time to create suggest a sense of natural flow and movement. Their pieces employ repetition and slight variation to emulate the slow shifts of nature, from the rolling of a sun to the swell and pull of the tides.

Conclusion:

So listening to music in the nature above, where, surrounded by beauty and silence, is able to have on our psychological life. Exposure to music that contains natural elements can reduce stress and improve a person's mood, as well as heal emotionally and cognitively. Accordingly, it is an excellent tool for promoting well-being and mental health. Music infused with nature provides listeners with a therapeutic experience, nourishing both the mind and soul, whether through mindfulness, relaxation or simply an escape from the stresses of modern life.

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Qualitative Research Challenges and Solutions

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Abstract :

Qualitative research plays a crucial role in sociological inquiry by providing deep insights into social phenomena through subjective, contextual, and interpretative methods. However, it faces numerous challenges, including researcher bias, data management difficulties, ethical concerns, and issues related to generalizability. These challenges can impact the reliability, validity, and integrity of qualitative research findings. This paper explores these key challenges and proposes solutions to mitigate their effects, ensuring methodological rigor and ethical responsibility. By addressing these issues, the study aims to contribute to the advancement of qualitative research in sociology and allied disciplines.

Keywords: *Qualitative Research, Methodological Challenges, Researcher Bias, Data Management, Ethical Considerations, Sociology*

Introduction

Qualitative research is essential for understanding the complexities of human behavior, social structures, and cultural phenomena. Unlike quantitative research, which focuses on measurable outcomes, qualitative research emphasizes the interpretation of experiences and social realities. However, the subjective nature of this research poses unique challenges that can affect its credibility and generalizability. This paper examines these challenges and provides practical solutions to enhance the methodological and ethical standards of qualitative research, particularly in sociology.

Methodology

This study adopts a literature review approach to identify and analyze the challenges and solutions associated with qualitative research. Peer-reviewed articles, books, and case studies were reviewed to develop a comprehensive understanding of the issues. Thematic analysis was employed to categorize the challenges into four primary domains: researcher bias, data collection, data management and analysis, and ethical considerations. Solutions were drawn from methodological guidelines, expert recommendations, and real-world examples.

Challenges and Solutions in Qualitative Research

1. Researcher Bias: One of the primary challenges in qualitative research is researcher bias, which occurs when personal beliefs, assumptions, or values influence data interpretation. This is particularly relevant in sociology, where researchers often engage deeply with participants. For instance, a sociologist studying marginalized communities might unconsciously interpret data through a lens of advocacy, affecting objectivity. Bias

can compromise the validity of findings, leading to skewed conclusions.

Solutions: To mitigate researcher bias, reflexivity is essential. Researchers should maintain a reflexive journal to document their assumptions and reflections throughout the study. Triangulation, which involves using multiple data sources or researchers to cross-verify findings, can enhance objectivity. Additionally, peer review and regular discussions with colleagues can help researchers recognize and address their biases.

2. Data Collection Issues: Data collection in qualitative research relies heavily on researchers' skills and participants' willingness to share information. Challenges include difficulties in accessing participants, unstructured interviews leading to inconsistent data, and participants' reluctance to discuss sensitive topics. For example, studying the lived experiences of domestic violence survivors may be challenging due to emotional vulnerabilities.

Solutions: Building rapport with participants is crucial to gaining trust and encouraging open dialogue. Researchers should invest time in understanding the social and cultural context of their participants. Training in qualitative interviewing techniques can help researchers conduct structured and semi-structured interviews effectively. Conducting pilot studies can also refine data collection instruments, ensuring clarity and consistency in the research process.

3. Data Management and Analysis: Qualitative research generates large volumes of textual, audio, or visual data, making storage, organization, and analysis complex. Challenges include a lack of standardized coding practices, difficulty in ensuring intercoder reliability, and the time-consuming nature of manual data analysis. For instance, analyzing hundreds of interview transcripts can be overwhelming, leading to potential oversight of critical themes.

Solutions: Using qualitative data analysis software such as NVivo or ATLAS.ti can streamline data organization and coding. To improve intercoder reliability, researchers should engage multiple coders and conduct regular calibration exercises. An iterative analysis approach, where codes and themes are refined progressively, can also enhance the accuracy of data interpretation.

4. Ethical Considerations: Ethical concerns in qualitative research are significant due to the close interaction between researchers and participants. Issues include obtaining informed consent, maintaining confidentiality, and balancing transparency with participants' anonymity. For example, researching LGBTQ+ communities in conservative societies requires heightened ethical sensitivity to protect participants from societal repercussions.

Solutions: To uphold ethical standards, researchers should provide detailed and understandable consent forms outlining study objectives and potential risks. Data anonymization techniques, such as using pseudonyms and secure data storage, can help protect participants' confidentiality. Additionally, training researchers in ethical protocols and crisis management strategies is essential for handling sensitive research topics responsibly.

5. Time-Intensiveness: Qualitative research is often time-intensive, requiring extended periods for data collection, transcription, coding, and analysis. Prolonged fieldwork can strain resources and disrupt research timelines. Moreover, iterative processes, such as thematic analysis or grounded theory, require revisiting data multiple times. For instance, conducting ethnographic research in remote communities can take months, adding logistical challenges.

Solutions: A well-structured project timeline with clear milestones can help researchers manage time effectively. Utilizing transcription software and qualitative data analysis tools can significantly reduce the manual workload. Researchers should also allocate sufficient time for fieldwork, analysis, and revisions in their study plans.

6. Difficulty in Generalizability: Since qualitative research typically involves small, context-specific samples, generalizing findings to larger populations is challenging. Critics may question the broader applicability of the study's conclusions, particularly in disciplines that require large-scale validation.

Solutions: Instead of focusing on generalizability, researchers should emphasize transferability by providing rich, contextual details through thick descriptions. Conducting multiple case studies or replicating research in diverse settings can also help test the applicability of findings across different contexts.

7. Emotional Challenges for Researchers: Qualitative researchers often engage deeply with participants, particularly in studies involving sensitive or traumatic issues. This emotional labor can lead to exhaustion or vicarious trauma. For example, researchers studying violence, grief, or social injustices may experience psychological distress.

Solutions: To manage emotional challenges, researchers should incorporate self-care practices and debriefing sessions into their research plan. Seeking supervision or professional counseling can provide emotional support. Additionally, researchers should be mindful of their own well-being and set boundaries when dealing with emotionally intense narratives.

Discussion: Qualitative research in sociology offers unparalleled depth in understanding human experiences but demands rigorous methodological and ethical adherence. Addressing challenges systematically enhances the credibility and impact of qualitative studies. Reflexivity, technological advancements, and ethical vigilance are critical components in overcoming these hurdles. By implementing these solutions, researchers can produce high-quality qualitative studies that contribute meaningful insights to the field.

Conclusion

Although qualitative research faces significant challenges, they are not insurmountable. By adopting appropriate strategies and tools, researchers can navigate these complexities effectively. This paper highlights the importance of continuous methodological innovation and ethical commitment in qualitative research. Future studies should focus on developing standardized frameworks to further address these challenges across diverse sociocultural contexts.

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Level of Teacher Effectiveness and Adjustment among Secondary School Teachers in in Jharkhand

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Abstract

Teacher effectiveness and adjustment play a crucial role in shaping the quality of education. This study examines the level of teacher effectiveness and adjustment among secondary school teachers in Jharkhand, focusing on gender differences and variations between government and private school teachers. The study adopts a descriptive research design with a quantitative approach, employing simple random sampling. A self-constructed questionnaire was used as the primary data collection tool, and simple percentage calculations were utilized for statistical analysis. The findings reveal notable differences in adjustment levels among teachers. Private school teachers demonstrated a higher percentage of very good adjustment compared to their government counterparts. Additionally, private school teachers exhibited a slightly higher percentage of good adjustment, whereas government school teachers had a higher percentage of poor adjustment levels. In terms of gender, male and female teachers displayed almost the same level of very good adjustment, though female teachers showed a slightly higher percentage of good adjustment. Conversely, male teachers had a higher proportion of average category adjustment, while female teachers had a slightly higher percentage of poor adjustment.

Keywords: Teacher effectiveness, teacher adjustment, secondary level, school teacher

Introduction

Teachers play a crucial role in shaping the educational experiences and overall development of students. Their effectiveness directly impacts student learning outcomes, classroom management, and the overall quality of education. Teacher effectiveness is a multidimensional concept encompassing pedagogical skills, subject knowledge, classroom interaction, student engagement, and assessment strategies. In the context of secondary education, where students transition from foundational learning to more advanced subjects, the effectiveness of teachers becomes even more significant. Jharkhand, a state in eastern India, has a diverse socio-economic and educational landscape. The state has been making strides in improving its educational infrastructure, yet disparities persist in terms of teacher qualifications, professional development opportunities, and resource availability. Secondary school teachers in Jharkhand work in varied environments, including government schools, private institutions, and tribal or rural schools, each of which presents unique challenges and expectations.

The effectiveness of teachers can be influenced by various categorical variables such as gender, teaching experience, educational qualifications, type of school (government or private), and subject specialization. Gender, for instance, may play a role in determining teaching styles, classroom management strategies, and teacher-student relationships. Similarly, experience in the profession often shapes a teacher's ability to handle diverse learning needs and implement innovative teaching methodologies. Educational qualification is another critical factor in assessing teacher effectiveness. Teachers with higher qualifications, such as postgraduate degrees or professional training, may exhibit better pedagogical strategies and subject mastery compared to those with minimal formal training. Additionally, the type of school significantly impacts teacher effectiveness, as government schools often have different resources and constraints compared to private institutions. The socio-economic background of students, classroom size, and school infrastructure further contribute to variations in teaching effectiveness. In Jharkhand, many schools cater to students from marginalized and tribal communities, which necessitates culturally responsive teaching approaches. Teachers who can adapt their instructional methods to the linguistic and cultural diversity of their students are likely to be more effective in fostering learning and engagement.

This study aims to analyze the level of teacher effectiveness among secondary school teachers in Jharkhand by examining the influence of categorical variables such as gender, experience, and school type. Understanding these variables' impact on teacher effectiveness can provide insights for policymakers, educational administrators, and teacher training institutions to enhance the overall quality of education in the state.

By identifying strengths and challenges associated with different categories of teachers, this research can contribute to the development of targeted interventions, capacity-building programs, and policy recommendations to improve secondary education in Jharkhand. A systematic evaluation of teacher effectiveness across different categorical variables will help in fostering a more inclusive, efficient, and equitable education system for future generations.

Review of Related Literature

In a research that was carried out by Shweta (2012), the primary objective was to investigate the relationship between the efficacy of instructors and the level of job satisfaction experienced by teachers working in upper secondary schools. The results revealed that instructors in government schools exhibited higher levels of effectiveness when compared to teachers in aided and non-aided schools. This was noticed in contrast to teachers in schools that received financial assistance. As an additional point of interest, teachers at public schools have outstanding academic and professional expertise, and they cultivate meaningful connections with students, principals, and parents.

The effectiveness of school teachers in the districts of Chennai and Thiruvallur was investigated by Sivasakthi Rajammal and Muthumanickam (2012) using a sample of 900 instructors. The study was carried out in order to establish whether or not school teachers are effective. It has been observed that there are significant variations in the effectiveness of teachers among other teachers, and these variations are influenced by factors such as gender, the level of teaching experience, and the location of the school. These findings are derived from the data that was collected. On the other hand, there were no noticeable differences found in the effectiveness of instructors based on criteria such as marital status,

age, management style, years of experience, or monthly compensation. This was the case regardless of whether or not the instructors were paid annually.

Kalita and Saha (2013) did study on the effectiveness of teachers in the teaching of English. The topic of their investigation was the efficiency of teachers. Teachers have been shown to display outstanding ability in the management of classrooms, particularly in the areas of lesson preparation, subject knowledge, encouraging diversity, maintaining discipline, and collecting feedback from students. These abilities have been identified. It has also been shown via research that female teachers have a greater chance of being effective than their male counterparts when it comes to addressing the concerns of their pupils. It was observed that teachers of both sexes exhibited an identical level of skill in their respective disciplines.

Tyagi (2013) presented the findings of a study that investigated the demographic characteristics of secondary school teachers as well as their effectiveness in the classroom. The survey was administered to a total of one hundred teachers working in secondary schools, and it was designed in such a way that it ensured a sample that correctly reflected the population. It was the researcher who independently developed the teaching effectiveness measure that was used for data collecting. Numerous statistical methods, such as correlation, t-test, standard deviation, and mean, were used in the process of analyzing the data. It seems from the data that the efficacy of secondary school teachers as educators was impacted by a variety of factors, such as their social background, marital status, training, and the number of years they had spent teaching.

George (2014) was in charge of a research project that was conducted under the heading "Identification of Specific Factors Influencing the Optimal Utilization of Teacher Effectiveness." He carried out an exhaustive investigation into the factors that constitute the factors that impact the performance of teachers. The components were separated into four unique groupings, which were referred to as individual dimensions, psychological dimensions, social dimensions, and institutional dimensions respectively. The results of his inquiry shed light on the elements that are responsible for imparting knowledge in an efficient manner. (ii) The psychological and institutional aspects were responsible for the most important elements that were found. (iii) The irrelevant features do not have any influence on the instructor's professional competence, and (IV) He has discovered important factors that lead to the most effective use of teacher effectiveness via the use of factor analysis.

According to the findings of a study that was carried out by Kiadese and titled "An Assessment of the Teaching Effectiveness of Prevocational Subject Teachers in Ogun State, Nigeria," it was discovered that instructors in Nigeria had a poor degree of competency in successfully delivering knowledge about their courses to their pupils. According to the findings of research, a sizeable percentage of instructors who are responsible for career-oriented classes have a low level of teaching effectiveness. When comparing male and female prevocational subject teachers on the Teaching Effectiveness measure, there were no statistically significant differences found between the two groups. To add insult to injury, the Teaching Effectiveness measure did not reveal any significant differences between prevocational subject instructors who had master's degrees and those who did not have an advanced degree. Chowdhury conducted a study on the effect that gender, age, experience, and credentials have on the efficacy of secondary school teachers in 2014. Specifically, he looked at how these factors influence the effectiveness of instructors. When it came to the process of passing on information to their pupils, the vast majority of teachers, regardless of gender, endeavored

to acquire a level of expertise that was considerably above the norm. According to the research, the level of performance that secondary school teachers achieve is the same regardless of factors such as gender, age, degree of experience, or prior educational attainment.

According to the findings of Kumari's study from 2014, it was discovered that there is no discernible difference in the efficacy of instructors in secondary schools based on gender inequalities. The contrast between them, on the other hand, was crystal evident when it came to their place of abode. Furthermore, the findings of the study showed that the kind of living arrangement has a considerable influence on the performance of teachers, although gender does not play a big role in this particular aspect. When it comes to the efficacy of instructors, the association between residence patterns and gender has a considerable influence.

For the Silveira A research that was carried out by Jason M. (2014) investigated the relationship between pace, intensity, and the efficacy of educational instructors. A stimulus movie that was carefully chosen and displayed purposeful fluctuations in pace was used to evaluate the performance of the instructor. The intensity, efficacy, overall impressions, and pace of the instructor were the primary items of attention throughout the assessment. An evaluation of the intensity, overall impressions, efficacy, and pace of professors was carried out with the participation of 164 college students who were allocated at random. Both ongoing and ending evaluations were employed by the students in order to evaluate the efficiency of their teacher with regard to the topic. The results of the investigation showed that there is a strong and direct connection between the components.

The review of literature highlights several studies that have explored teacher effectiveness based on various factors such as job satisfaction, gender, teaching experience, institutional background, and psychological dimensions. However, a noticeable research gap exists in the context of Jharkhand, where studies specifically addressing the effectiveness of secondary school teachers in relation to categorical variables like gender and school type remain limited. While studies by Shweta (2012) and Sivasakthi Rajammal & Muthumanickam (2012) have examined teacher effectiveness based on school management type and regional differences, they do not provide insights into the unique socio-economic and cultural influences of Jharkhand. Additionally, research such as that of Kalita & Saha (2013) and Kumari (2014) has explored gender-based variations in teaching effectiveness, but their findings lack regional specificity. The role of classificatory variables like government versus private school settings in influencing teacher effectiveness has not been adequately explored in the Jharkhand context. This study aims to bridge this gap by analyzing how teacher effectiveness varies among secondary school teachers in Jharkhand based on gender and school type, contributing to a more localized and policy-relevant understanding of teacher performance in the state.

Rationale of the Study

The rationale for this study lies in the critical role that teacher effectiveness plays in shaping student learning outcomes and overall educational quality at the secondary level. In Jharkhand, where schools operate in diverse socio-economic and cultural contexts, understanding the impact of categorical variables such as gender and school type on teacher effectiveness is essential for educational planning and policy formulation. Given the disparities in teacher training, resource availability, and school infrastructure across different institutions, this study aims to identify patterns and challenges in teacher effectiveness

that may influence student performance. By analyzing these factors, the research seeks to provide valuable insights for policymakers, educational administrators, and teacher training institutes to design targeted interventions, improve teacher professional development programs, and enhance the overall quality of secondary education in Jharkhand. Ultimately, the findings will contribute to fostering a more equitable and effective education system in the state.

Objectives

- To study the teacher effectiveness between male and female teachers.
- To study the adjustment effectiveness between government and private teachers.

Research questions

- What is the level of teacher effectiveness between male and female teachers?
- What is the level of adjustment effectiveness between government and private school teachers?

Methodology of the Study

This study is a descriptive research that follows a quantitative approach to analyze the level of teacher effectiveness among secondary school teachers in Jharkhand. A simple random sampling technique was employed to ensure unbiased selection of participants. The simple percentage calculation was used as primary statistical technique used for data analysis was. A self-constructed questionnaire was utilized as the primary tool for data collection, ensuring that the study specifically addressed the research objectives.

Data analysis and Interpretation

Level of Teacher effectiveness among Male and Female Secondary School Teachers

Group	N	Less Effective		Moderate Effective		High Effective	
		N	%	N	%	N	%
Male	150	35	23.33	67	44.67	48	32
Female	150	30	20	69	46	51	34

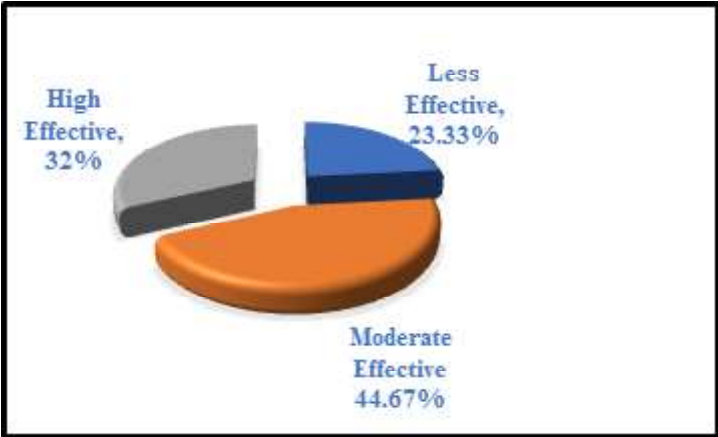


Figure -1: Level of Teacher effectiveness among Male Secondary School Teachers

The percentage of male teachers who indicate a high degree of effectiveness is higher than the percentage of female instructors (32%).In addition, according to the findings, 46% of male instructors and 44.67% of male teachers acknowledged a moderate degree of effectiveness in their teaching. The proportion of male teachers who were unsuccessful in the classroom was 23.33% higher than the percentage of female teachers, which was 20%.

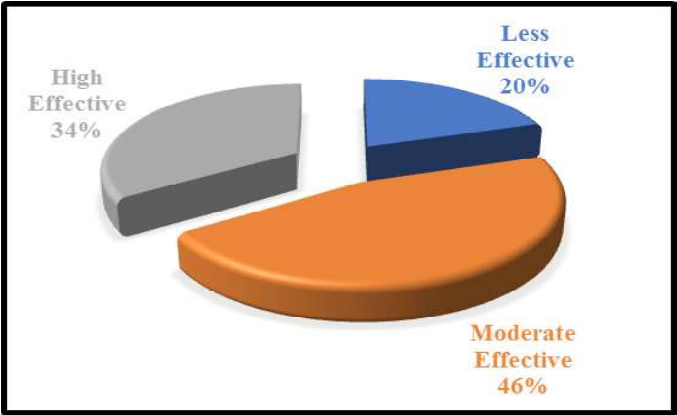


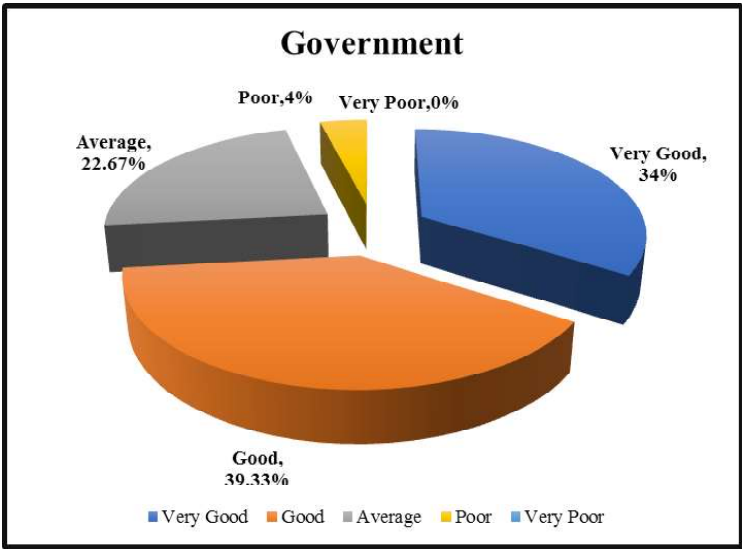
Figure-1: Level of Teacher effectiveness among Female Secondary School Teachers

The percentage of female teachers who indicate a high degree of effectiveness is higher than the percentage of male instructors (34% and 32%).In addition, according to the findings, 46% of female instructors and 44.67% of male teachers acknowledged a moderate degree of effectiveness in their teaching. The proportion of male teachers who were unsuccessful in the classroom was 23.33% higher than the percentage of female teachers, which was 20%.

Level of Adjustment among Government and Private Secondary School Teachers

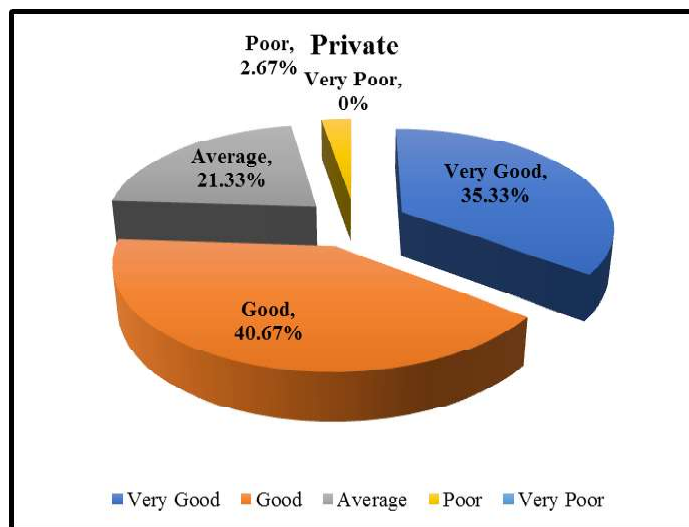
Group	N	Very Good		Good		Average		Poor		Very Poor	
		N	%	N	%	N	%	N	%	N	%
Government	150	51	34	59	39.33	34	22.67	6	4	00	0
Private	150	53	35.33	61	40.67	32	21.33	4	2.67	00	0

Figure-3: Level of Adjustment among Government Secondary School Teachers



Percentage of very good level of adjustment was found higher among private school teachers (35.33%) than government school teachers (34%). Private school teacher showed slightly higher good level of adjustment (40.67%) as compared to government school teacher (39.33%). Average category adjustment was found slightly higher among government school teacher (22.67%) than female school teachers (21.33%). Poor level adjustment was found higher among government school teacher (4%) than private school teachers (2.67%). Very poor level adjustment not found in both group.

Figure-4: Level of Adjustment among Private Secondary School Teachers



Percentage of very good level of adjustment was found higher among private school teachers (35.33%) than government school teachers (34%). Private school teacher showed slightly higher good level of adjustment (40.67%) as compared to government school teacher (39.33%). Average category adjustment was found slightly higher among government school teacher (22.67%) than female school teachers (21.33%). Poor level adjustment was found higher among government school teacher (4%) than private school teachers (2.67%). Very poor level adjustment not found in both group.

Findings

- Percentage of very good level of adjustment was found higher among private school teachers.
- Private school teacher showed slightly higher good level of adjustment.
- Average category adjustment was found slightly higher among government school teacher.
- Poor level adjustment was found higher among government school teacher.
- Male and female school teachers having almost same level of very good adjustment.
- Female school teacher showed slightly higher good level of adjustment.
- Average category adjustment was found higher among male school teacher.
- Poor level adjustment was found slightly higher among female school teacher.

Conclusion

The study on the Level of Teacher Effectiveness and Adjustment among Secondary School Teachers in Jharkhand reveals significant variations in teacher adjustment levels based on school type and gender. Findings indicate that private school teachers exhibit a higher

percentage of very good and good levels of adjustment compared to their government school counterparts. In contrast, government school teachers tend to fall more into the average and poor adjustment categories. When examining gender differences, male and female teachers demonstrate almost equal levels of very good adjustment, though female teachers show a slightly higher good level of adjustment. However, average adjustment is more common among male teachers, while poor adjustment is slightly higher among female teachers. These findings highlight the need for targeted interventions to enhance teacher adjustment, particularly among government school teachers, to improve overall teaching effectiveness and professional well-being in secondary schools in Jharkhand.

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Poetic Flow of the Cultural Pain in R. Parthasarathy's Poetry with Special Reference to His Poem, "Delhi"

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Abstract

R. Parthasarathy, a well known Indian English poet of Tamil origin reels in his poetic self between the axis of two cultures – The East and the West. In his adolescent years and the years of his early youth, he was fascinated with English language and everything English. He went to England in order to get a respectable name among the Englishmen of letters. But his actual realizations in England dismantled all his happy dreams and he began to search his cultural roots. He returned to India with the sense of home-coming. But when he watched the scene of his homeland closely, he found that the Indian cities were no longer emblems of Indian culture. They were largely changed in the practice of the people who were still under the impact of the British colonialism. He realized that the cultural past of India was mutilated, scratched and transformed into shabby looking face. His cultural pain bursts out, when he visits Delhi and compares its present with what he sees about its ancient glory of Indraprastha through the ventilators of the past. His poem with the title, "Delhi" expresses his deep concern with the lost culture of ancient roots in and around Delhi. He becomes sad after looking at the smashed and mutilated face of Delhi having groaned in the blood splashing events in the spoiling times.

Keywords: cultural moorings, conflict, eunuchs, Indraprastha, Brahminy kite

R. Parthasarathy is a big name in the Indian English poetry. It was he who changed the character of Indian English writings by infusing the Indian sensibility in English words, and, thus, by providing a unique character of native cultural values to English poetry of Indian poets. His *Rough Passage* is a long poem of semi-autobiographical nature, which restores his intense faith in the Indian cultural values even after his traumatic experiences in the environment of the alien cultural episodes. The self imposed exile had left a traumatic impression on Parthasarathy's soul and psyche while living in England in between 1963 and 1964. It was under the charms of English language. English manners and English styles that Parthasarathy chose to be in England and even hoped to earn a valuable place among the Englishmen of letters on the basis of his tremendous capabilities in the use of English language for both creative and analytical purposes. But soon his romantic euphoria of earning a respectable place in the English society was dismantled and he desired to search his roots and cultural moorings in the native traditions of Tamil culture in particular and in the whole of Indian culture in general., Based on his personal experiences, his poetic

work, *Rough Passage* exposes the innermost designs of his mind navigating from culture to culture and making a search for his identity. The poem is divided in three sections – “Exile”, “Trial” and “Homecoming”. Parthasarathy has called it a never ending poem under his subtle realizations. He makes his verdict true when he composed his poem “Delhi” much after the publication of *Rough Passage* in 1977 and added it to the “Homecoming” section because it also encompasses his vision about the cultural harm done to this ambitious city of India.

The poetry of R. Parthasarathy is the poetry of cultural conflict and psychological parametres in developing sense of belongingness for the wholesome development of the poetic personality. His poetic self faced dilemma in picking up the cultural values in the post-colonial times. In “Exile” he delineates his solitary condition in England. He also marks his fractured bond with Tamil culture. In “Trial” he develops symbols from physical love and sexual appetites in relation to his love for English language and western culture. He wants to find consolation through physical love by resting his hand on the left breast of the lady of his infatuation. But the night spent in the glamour of physical love is followed by the morning of dull experiences of headache, cloy, dismay and disappointment. In other words, his intense love for English language and culture did not open further gates of emotional and spiritual growth. That is why, his desire for homecoming, gained prominence. In “Homecoming”, he tries to harmonize the fusion of English language with his Tamil culture. What we find in *Ten Twentieth Century Indian Poets* is noteworthy to be placed here –

“Parthasarathy dwells upon the question of language and identity and upon the inner conflict that arises from being brought up in two cultures. “Exile”, the first part opposes the culture of Europe with that of India, and examines the consequences of British rule on an Indian, especially the loss of identity with his own culture, and, therefore, the need for roots. Again the turmoil of non-relationship personal love holds forth the promise of belonging, and the second part “Trial”, celebrates love as a reality here and now “Homecoming”, the third and final part of *Rough Passage* explores the phenomenon of returning to one’s home. It is a sort of overture made with the aim of starting a dialogue between the poet and his Tamil past. The strength of the poem derives from his sense of responsibility towards crucial personal events in his life”.¹

The poet’s crisis in his cultural conflict makes him a handicap in the use of language. Words come to his mind from all sides, but he cannot weave them in his poetic fabric, because his cultural identity is uncertain. Sense of alienation, prolonged silence and void are natural outcome of his queer delights in adopting other language. He shows all this struggle of his poetic self in “Exile”. He felt himself handicapped, because his use of the imperial language took away all his native voice and the energy of his poetic self. He writes the following lines to tell his condition –

*“My fingers are stiff
I can’t write even two lines
Letters come from all sides
I lay them aside, the days
Collapse on the pile”.*²

In the midst of his traumatic situation suddenly he realizes that his poetry is all about his search for his identity. He begins his struggle with colonial conditions and the environment created by the imperialistic designs of the British Rule. In the search, he found out that

these things were responsible for the debasement and deprivation in his creative energy. So, he searches for the disfigured and lost identity. Let us mark with curiosity what he writes in the following lines thus:

*“The sun has done its worst
skimmed language
worn it to a shadow.
The hourglass of the Tamil mind
is replaced by the exact chronometer
of Europe now”.³*

Cultural pain of the poet becomes more acute when he returns home and visits the places of India from Goa to Calcutta and from Jadavpur to Delhi. He finds that the people of India have gone far away from their cultural moorings and they have adopted the habits of the western culture. The life of clubs with all physical glammers and shameless gestures amidst “cigarette stubs” and beer/wine bottles has become a fashion with them. They have forgotten the real cultural values of family living in cheerful relations having been explored by the ancient saints with all scientific knowledge of the universal laws of the planetary system. His acceptance of foreign culture and language only provided a sense of guilt and self-deception. It was an insult to his native culture of better knowledge and superior relations on the touchstone of humanity. His quest for identity carries him to the past of Tamil culture and Indian culture as a whole. Standing on the banks of Hoogly River, he meditates and bursts out in poetic flow thus :

*“The years have given me little wisdom
And I have dislodged myself to find
Here, on the banks of Hoogly
The ashes are all that’s left
Of the flesh and brightness of youth
My life has come full circle: I’m thirty”.⁴*

Search for roots takes the poet towards his Tamil past. He looks at the Indian past with affectionate eyes and recognizes its significance in altering the clumsy present. He thinks that in his mind and imagination he can recreate his past and can integrate it to his present. In this manner, he thinks about the grand flow of Indian traditions by avoiding the crooked and dusty path of the present. He is discontented with the present state of his homeland due to encountered changes and uncertainties. But, gradually he learns to adopt his sensibility to embrace the evolving landscape of his surroundings. With the help of the grand cultural heritage of the Indian past, he begins to identify himself with the place and milieu. He decides to prepare a poetic network by exploring the relationship between the past and the present in order to illuminate the complexities of cultural identity and dynamic interplay between what was and what is around him. Let us mark the following lines of his decisiveness in carrying his poetic journey –

*“How long can foreign poets
Provide the staple of your lines.
Turn inward. Scrape the bottom of your past”.⁴*

Parthasarathy celebrates the memories of the past and remembers “familiar coconuts” and “rice-and-pickle afternoons”. All this becomes symbolic for tracing his cultural moorings in order to find consolation amidst the crisis of cultural conflict. The following comment of Sangita Padhi is of great value to highlight the identity of the poet between his past and the present.

“He recognizes and uses past as a mode of recreating the present and he treats it as a part of the grand flow of the tradition he belongs to”.⁵

In his poem, “Delhi”, the poet weeps for what has been done to this city, the earlier pride of India. The city was once a beautiful cultural emblem of Dharma and social sanctity. It takes us back to the ancient stories of *Mahabharat* when it was called Indraprastha, the rich capital of Kauravas and Pandavas. It was famous for its natural surroundings on the banks of Jamuna river. But what the poet sees in Delhi and its lanes is shocking and depressing. He tells us that the face of this prestigious place of India has been mutilated, scratched and disfigured by the repeated blows of the tyrants and uncivilized boors. The natural beauty of the banks of River Jamuna has been turned into cemetery stones and everywhere the stony tombs of Khiljees, Tughlaqs, Lodhis and Mughals stand staring at our crushed self and mutilated pride. The whole scene reminds us of cultural distortion sticking to the walls of this city of ancient glory in Indian civilization of Dharma and cultural prosperity. Let us mark how the poet exposes the truth about cultural disfiguring of the city –

*“I see everywhere
Khiljees, Tughluqs, Lodhis, Mughals
They stick to its face
Like turds”.⁶*

By calling the stony reminiscences of the Khiljis the Tughluqs and the Mughals as “turds” sticking on its face, Parthasarathy expresses his deep regret and intense cultural pain and weeps for the sins committed by the so-called plunderers.

The poet’s agony is further intensified when the pages of history are turned over before him. The foreign invaders with all the might at their hands tried to suppress the glorious basics of the Indian culture. After the Mughals, the British colonialism invested the whole energy of western outlook in erasing the inspiring emblems of Indian culture. The poet highlights it with the knock of the following words –

*.... When Ghajni knocked
Or was it Clive ? We paid off
Old scores in our backyard”.⁷*

Historical records tell us that Ghajni knocked down the beautiful shrines of Hindu religion and plundered gold from Indian icons. Lord Clive, the first Governor General of East India Company has been mentioned to tell the whole story of the British dominance of Indian scenes. The British also worked diligently to rub the cultural face of India in the name of modernization. It is further highlighted in the following lines –

*“The Angrez impudently rub salt
in our wounds. Our pride
Bites the dust
Still pullulate the decrepit ruins”.⁸*

The cultural pain of the poet comes on the forefront when he recalls to his mind the damage done to the pristine beauty of Indian culture by the British scrubber. Even “the decrepit ruins” of Indian culture as left by the Mughals were further scrubbed by the British colonial empire. These heavy blows to Indian culture and its social reality have left us in helpless conditions – “our pride bites the dust”.

The poet remembers the failure of the native people in preserving their own cultural values. He does not hesitate in mentioning the tendency of lickspittling by the greedy ones of the native land and their piping in the tune of the invaders. He denounces the attitude of the native people who let the cultural strings slip from their hands. Let us mark the following line thus :

*“Eight hundred years of blood letting
Has made eunuchs of us
Once for all unsettled”.⁹*

The image of “eunuchs” has been applied to the inhabitants and rulers of their native land. Persistence of slavery under the dominance of the foreign powers of the Islamic world and then of the European world for about eight hundred years made the Indian people culturally impotent. The ancient cultural values diminished to such an extent that their coherent character was unsettled and broken into piece-meals. It was really a sad episode of the glorious civilization which was alive with plenty of scientific knowledge and settled conclusions about the happiness of the human world. The painful condition of the city of Delhi has been projected with a few bold words when the Mutiny of 1857 failed and the British soldiers captured Bahadur Shah Zafar and his Redfort with the consequential step of killing all indiscriminately –

*“Now the blood trickles down
The Jamuna, while the emperor
Flies indecisive kites”.¹⁰*

Thus, the poet himself is very sad and perturbed to see that “the present is troubled” in cultural moorings and the things have become so worse that there seems to be “no respite”. His own imagination fails to work in these sad moments causing tears. He looks every illusion in the face and feels the weakness of the old age. He writes painfully thus:

*“Short of wringing of neck
I try every trick of phrase
To cosmetize the blank page
It refuses to improve. Now
I prefer to a brazen speech
Knock the metaphor out of it”.¹¹*

The poet is highly shocked to find the loss of the ancient cultural values of India in the face of the iconoclasts and destructive elements. His poetic self and creative energy suffer regression and as such his metaphors lose vigour of poetry. In order to relieve his pain, the poet takes temporary help of physical pleasure in the arms of a slut, Zora Jan and restores a little courage to pen down his feelings about Delhi because he cannot run away from this place, which has an ancient name of “Indraprastha”, a heavenly character in itself.

The poet finally decides to dwell on the cultural past of the city of Delhi surveyed by the meandering motions of the River Jamuna. He recognizes a ray hope in restoring the cultural heritage of this place of glory. He writes thus:

*A Brahminy kite preserves
The afternoon as I write this
Near thing distract me –
.....
..... (their distant
Tongue rasps my verse) –
Throw dust in the eyes. Will
Indraprastha rise again”?¹²*

The voice of Brahminy bird suddenly heard by him gives him a little consolation and he hopes that the Banyan tree of Indian culture, though harmed a lot by cutting its branches, will have new leaves and new branches to enliven its futurity. Actually Brahminy kite bird is an auspicious bird of Indian mythology and it is associated with Lord Vishnu and it is called Garud. This hope makes the poet sing with harmonious tunes the song of family emotions under the shadow of Indian culture.

*Life at forty five
Is a breath of fresh air.
The children are grown up
Their eyes hone
My nights: I soften to touch
My wife keeps house*

*From afar shapes the poems
Till they become familiar as prayers.
To be oneself, stir no postures
On rare occasions stumble upon
The blessings of simplicity –
I couldn't ask for more”.¹³*

Revitalization of the ancient Indian culture of emotionalism in family relations in the memory of the poet provides strong support to him and his imagination in composing the poem on “Delhi” works with fertility.

Thus, the cultural pain of Parthasarathy is visible in every poetic line he composed. He was very much dissatisfied with the present which had lost the pristine beauty of its ancient culture. But at the same time, he devised a method of bringing the past into the present, and, thus, developed a sense of belonging to the glorious past of India. In the poem, “Delhi”, no doubt there is dirt, its ochre air irritates the eyes and the squalor remains, but the poet's hope lies in the young generation. The presence of Brahminy bird promises the resurrection of India. The youths of India will be inspired and their patriotism will reshape and rebuild India with all its native glory.

Notes :

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4. Parthasarathy, R., *Rough Passage*, p. 50.
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7. Ibid.
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Religions, Spirituality and Cultural Consciousness for Peaceful World

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Abstract:- According to the Mahatma Gandhi truth and peace are ultimate goal of human being. Religions bring peace in the life of human being. While other philosopher separated politics with religion but Gandhijee believed that religion humanity and spirituality are key factors of politics because they are ultimately in human life. Buddha says, three things cannot be long hidden, the sun, the moon and the truth.”

Jesus Christ says,” I am the way the truth and the life.”William Shakespeare writes, to thin own set be true and it must follow as night the day that thou cannot then be false to any man.”

Buddha, Jesus, Gandhi were the Supporters of peace their Ideology were peace truth and non-violence. Hence peace is necessary of all human being and it is also necessary to social, economic, political and all types of development. In short we can say in any era either ancient or modern the necessity of peace has been model code of conduct for all country. With so called modernization and Urbanization humans have actually become when it come to following the Come to every weaker default morals which come to everyone of us from the inception of the human kind and Consciousness so what we modern people have done is that we have devised own morals which support Our Style, the life required to adapt to the modern world. Therefore we have forgotten the real morals. we have also forgotten truth of peace and another form of God. In modern time no one follow the principle of Grandhian truth. No one have faith and believes on the truth and peace. In modem time truth and ahimsa became a type of fun. and joke. Hence we all have lost their peace of mind, peace of heart and peace of life too.

Key Words:- Peace, Truth, Ahimsa, Morals, Ethics, Religion, Culture

Introduction:- Early Greek Literary works of Homer and Hesiod bear the testimony that they believed in divine law. In Hesiod’s view, Law was or peace founded on fairness, and to refrain from violence. In this period law and religion remained inseparable. The Divine Law or Command was considered superior to the command of the ruler. In this connection reference has been given from the Greek play Antigun. In this play Sophocles describes that Antigones brother, while he was rebelling against the king, was killed and his burial was prohibited by the King Croen. In defiance of the order Antigone buried her brother. When she was arrested the violating the order. She pleaded that she had acted in accordance with the “immutable, unwritten laws of heaven.” which even the King could not override. Despite the controversy regarding superiority of divine law to state enacted law, the Greek Philosopher, including Aristotle agreed that only rightly constituted laws i-e Law inconformity to recognised human values should be final sovereign which Considered as the beginning of human Rights.

Stoic thinkers postulated a Cosmopolitan philosophy, guided by the principles of equality of all men and universal application of natural Law Cicero was or law based on reason. Strong supporter of Stoic and firmly believed that the Sense of justice, though capable of growth and refinement, was a universal possession of all reasonable men.

Romans applied the stoic conception of natural law in the formation of body of legal rules for the administration of justice. It was the most outstanding intellectual contribution of Romans. They developed this body of rules on the basis of the custom and as well as by the application of reason. Acting in this manner, they not only Modernized their old law, but also laid stress upon the incorporation of high ethical. Standards in legal procedure.

Ongoing shifts in geopolitical power from west to east make the Asia-Pacific regime more important to the India today than before. The region is already engine of the global Economy, and major Asian countries are becoming global economic and political actors. yet, as Asia's importance has grown over the last decade, New Delhi and Washington has after been focused elsewhere. The present NDA government and also present U.S.A government needs a more active approach to the Asia-Pacific region than that recognizes the new geopolitical realities and positions the United States to deal effectively with Opportunities that lie ahead. Such strategy must build upon America's long Standing positive engagement in Asia and articulate a vision that can advance U-S interests and attract support from countries in the region.

The year 2020 was as tumultuous for the world as it was for the United States and the Asia Pacific, and it remains unclear, 2021 also not good for global peace and prosperity due to growing terrorism and Covid-19. Though a new democratic U.S. administration has taken office and is busy trying to wipe the World's collective memory of Trumpism, it is obviously plagued by Trump's legacy, The detritus of the last four years hangs over the new Biden team who are rushing to keep the doubt sown about U.S commitments, strength and staying power in the region from rooting and spreading at the same time, the U.S. government is newly resource constrained by domestic and plagued by political and societal divisions, even as it has Shortage of domestic and global ambition.

Love is very patient, very kind love does not know about Jealousy, Love is patient, gives itself no airs. Love cannot be rude, cannot be selfish, cannot be irritated, and never resentful. Love is gladdened by goodness, always slow to expose, always eager to believe the best, always hopeful, always patient. Love never disappoints. Peace and non-violence are another form of Love. Where there is violence love cannot exist. love brings peace in all aspects human life. Non-violence and love are means by which we get peace in our life. With violence we cannot imagine about love and peace.

Non-violence is part of the pursuit of truth. Non Violence or non-injury (Ahimsa) Literally means absence from violence in one's behaviour toward other living beings. This represents only the negative side of non-violence. Non violence is the greatest force at the disposal of mankind it is the mightiest weapon devised by ingenuity of man Mahatma Gandhi said Tibetan spiritual Guru the Dalai Lama has said that religious emphasize on the importance of compassion a tool to curb violence. Man kill man on the name of religion. The killing is justified as Dharma by the custodians of religions and they proclaim that it was for a purpose. Amid all these hoopla a question comes up can we really stand and justify such a gruesome violence in a civilized society or can violence be completely rooted out because violence is too dangerous not only for individuals but also for peaceful world.

Religion for Peaceful World:-

Ego, greed and jealousy are the main causes underlying violence. Religion built our mind to keep far away from these Evils which is ultimately cause of unrest and conflict between individuals and Nations too. An individual with inflated ego usually does not like anybody opposing his views and may become violent. Greed for acquiring power, fame and wealth has been the basic cause for much violence perpetuated at community as well as global level - Greed to capture the resources or wealth of another person is yet another reason for many actions of violence committed by criminals , jealousy on seeing another person with better things or resources also leads to violence.

Ahimsa in the Indian religions Jainism , Hinduism and Buddhism the ethical principle of not causing harm to other living things. In Jainism ahimsa is standard by which all actions are judged. For a house holder observing the small vows, the practice of ahimsa requires that one not in any animal life. However, for an ascetic observing that great vows ahimsa entails the greatest care to prevent the ascetic from knowingly or unknowingly being the cause of injury to any living soul, this ahimsa applies not only to human beings and to large animals but also to insects, plants and microbes. The interruption of another Jiva's spiritual progress causes one to incur Karma the accumulated effects of past actions, conceived by Jains as a fire particulate substance that all rates upon the Jiva - keeping one mired in Samsara. The cycle of rebirth in mundane earthly existence not only physical violence but also any type of negative thoughts are result in the attraction of Karma. Many common Jainism practices such as not eating or drinking after dark or the wearing of cloth, mouth covers by monks are based on the principle ahimsa.

Though the Hindus and Buddhist never required so strict an observance of ahimsa as the Jains, vegetarianism and tolerance toward all forms of life became wide spread in India . The Buddhist Emperor Ashoka, in his inscriptions of the 3rd Century BCE, stress the sanctity of animal life. Ahimsa is one of the first disciplines learned by the student of yoga and is required to be mastered in the preparatory stage the first of the eight stages that lead to perfect concentration. In the early 20th century Gandhiji extended ahimsa into the political sphere as Satyagraha, or non- violent resistance to a specific evil.

We should not forget that we all are creations of God who is an ocean of love. One should know that wars are not the curse of God but result of our actions. India wants to be a country of peace tolerance and prosperity. The only way to bring back peace is to empower ourselves spiritually and remove all negative qualities from our mind. Violence has many disadvantages for individuals, communities and even nations . So many people are killed or maimed due to Physical violence at a large-scale children are left homeless and orphaned people are displaced and become jobless and refugees and forced to become the thief, robber, kidnapper etc. All this suffering happens because of violence per peculated by a group of people against fellow human beings. Apart from this affected individuals get traumatized mentally due to shock of witnessing Such violent inhuman acts. Even at individual level violence committed against anybody harms that person in multiples ways.

If one considers the advantage if any of violence , it is absolutely no. Even the person or persons responsible for the violence do not live peacefully after committing it. They live in constant fear of being caught or punished for their wrong doing. They also fear retaliation by their victim. Result is the perpetual is also constantly happy and stressed. Therefore to make the world a better place, it is important to shun violence and understand the importance

of non-violence. If there is peace all around, people can work fearlessly of hours. There is no stress of any kind, thus people at large would be happy and healthy. This would automatically result in increased productivity in the society and prosperity and happiness for all.

Spirituality for Peaceful World:-

When there is darkness, light is needed. Today, with so much agony caused by violent conflict, war and bloodshed, the world badly need peace and harmony. This is a great challenge for religious and spiritual leaders. Every religion has an outer form or shell, and an inner essence or core. The outer shell consists of rights, rituals, ceremonies, beliefs, myths and doctrines. These vary from one religion to another. But there is an inner core common to all religions. The Universal teachings of morality and charity at a disciplined and pure mind full of love, compassion, goodwill and tolerance, it is this common denominator that religious leaders ought to emphasize, and that religious adherents ought to practice. If proper importance is given to the essence of all religions and greater tolerance is shown for their superficial aspects conflict can be minimized.

All persons must be free to Profess and follow their faith, in doing so, however they must be careful not to neglect the practice of the essence of their own religion not to disturb other by their on religious practices and not to condemn or belittle other faiths.

“One should not honor only one’s own religion and condemn other religions. Instead, one should honor other religions for various reasons. By so doing one helps one’s on religion to grow and also render service to the religions of others. In action otherwise one digs the grave of one’s on religion and condemns other religions may do so out of devotion to his religions thinking, I will glorify my religion but his actions injure his own religion more gravely. Concord is good. Let all listen and be willing to listen to the doctrines professed by other (Rock Edict 12) It is all too clear that the votaries of violence primarily hurt their own Kith and Kin. They may do directly through their intolerance or indirectly by provoking a violent response to their actions. On the other hand, It is said, “Blessed are the merciful, for they shall obtain mercy. “This is the law of nature. It may equally be called the decree or way of God. The Buddha Said.” Animosity can be eradicated not by animosity but only by its opposite.

This is an eternal Dharma. What is called Dharma in India has nothing to do with Hinduism, Buddhism, Jainism, Christianity, Islam, Judaism, Sikhism or any other ism- It is this simple truth, before you harm others you first harm yourself by generating mental negativity, and by removing the negativity you can find peace within and strengthen peace in the world.

Every religion worthy of the name calls on its follower to live a moral and ethical way of life, to attain mastery over the mind and to cultivate parity of heart. One tradition tells us, “Love the neighbor another says Salam Walekum— “May peace be with. you still another says Bhavatu Sabba Mangalam or Sarve Bhavantu Sukhinah- “May all beings be happy.” whether it is the Bible, the Quran or the Gita the scriptures call for peace and amity from Mahavir to Jesus, all great founders of religions have been ideals of tolerance and peace yet our world is often riven by religious and sectarian strife or even war-because we give importance only to the outer shell of religion and neglect its essence. The result is a lack of love and compassion in the mind.

Peace in the world cannot be achieved unless there is peace within individuals. Agitation and peace cannot co-exist. One way to achieve inner peace is insight meditation a non-

sectarian scientific results-oriented technique of self observation and truth realization. Practice of this technique brings experiential understanding of how mind and body interact. Every time negativity arises in the mind, such as hatred, it triggers unpleasant sensations within the body. Every time the mind gone rates settles love compassion and good will the entire body is flooded with pleasant sensations.

Ancient India gave two practices to the world. one is the physical exercise of yoga, postures and breath control for keeping the body healthy. The other is do mental exercise of meditation for keeping the mind healthy. People of any faith can and do practice both these methods. At the same time, they may follow their own religions in peace and harmony, there is no necessity for conversion, a common source of tension and conflict for society to be peaceful more and more members of society must be peaceful. As leaders, we have a responsibility to set an example to be an inspiration. A sage once said," A balanced mind is necessary to balance the unbalanced mind of others."

More broadly a peaceful society will find a way to live in peace with its natural setting. We all understand the need to protect the environment, to stop polluting it. What prevents us from acting on this understanding is the stock of mental pollutions, such as ignorance, cruelty or greed. Removing such pollutants will promote peace among human beings as well as a balanced, healthy relationships between human society and its natural environment. This is how spirituality brings peace in the life of human beings and also International relations.

Cultural Consciousness for Peaceful World:-

Scientific research shows that even small groups of peace creating experts can quietly transform trends in society from conflict and enmity to peace and co-operation. Lasting peace must include the transformation of all areas of life to eliminate poverty, suffering disease, crime and war from our world family. Development of consciousness of the level of individual and Nation will bring cosmic creativity, Intelligence and balance to all areas of life. Individuals will not make mistakes and administration not be faced with the problems that prevent the full value of life from being enjoyed. Healthcare is the science and art of realizing perfect health. The ideal of perfect health is realised by handling health from the label from which it emerges in the field of immorality. Enlivening the transcendental unmanifest field of immorality at the basis of existence spontaneously nourishes and integrates all levels of life. This is the field of total knowledge of health. Located in the field of the Science and Technology of total Natural Law, the United field of all the laws of nature.

The Global country of world peace offers this complete knowledge of natural law to each field of life including Health Care, so that responsible leader can take recourse to higher intelligence, the total Natural law that peacefully administers the universe without a problem to create a prevention oriented and problem free Government, and national and international life filled with peace, good health, prosperity and fulfillment. In the field of health-Global country of world peace offers the vedic approach to health that Maharishi has introduced to the world.

Maharishi Vedic approach to health is the consciousness based, prevention oriented, natural health care system, which enlivens the basic reality of the physiology-consciousness to restore physiological balance, create frictionless communication in the physiology, improve immune function and restore and Ideal relationship between the physiology and the

intelligence which administers the body and the whole universe, so that the life of the individual becomes a field of all possibilities.

Responsible leaders can take recourse to higher intelligence the total Natural law that peacefully administer the universe without a problem to create a prevention-oriented and problem-free Government and National and International life filled with peace, good health, prosperity and fulfillment.

As a powerful force that bridges across differences, culture brings people together and thus underpins social cohesion, peace and security. Lack of education and unemployment can also level lead young people to enroll in armed groups as a way of making a living historical settlements and archaeological sites, both as targets or as Collateral damage of armed conflict, can be left vulnerable to looting and illicit trafficking of Cultural objects. This can sometimes inflict irreversible damage to our country's collective memory and social cohesion, thus hindering its capacity to recover. This issue has been highlighted in a statutory meetings of the 1970 convention on the means of prohibiting and preventing the illicit Import, Export and transfer of ownership of cultural property, which celebrates its 50th anniversary this year. Article 9 of the convention Lays down the conditions for the prevention of irremediable injury to culture heritage endangered by the pillaring of Archaeological or Ethnological materials. The adoption of UN Security Council resolutions for the protection of Heritage has given new impetus to multilateral co-operation in cultural heritage protection in situation of armed conflict.

Conclusion:-

Most of us long for world in which there are no bombings riots, wars why then does non-violence seem so difficult to put into action?

The challenge of putting non-violence into action is two fold. During his trial Nathuram Godse, Gandhi's assassin, made and elaborate, almost eloquent argument justifying the use of violence and explaining its necessity. The first aspect is to counter those, like Godse, who see violence as a necessity, as a means to be deployed to get what they want or as a tool of either acquiring power or holding on to power.

The second aspect is more complicated. How do we answer the cynicism of those who are not votaries of violence and may actually want to reduce the use of violent methods, but have no faith in non-violence as a philosophy, as a method, as a way of life?

Many people who admire or even revere Mahatma Gandhi don't believe that his advocacy of non-violence is practical. October 2 as the United Nations day of non-violence and call it an empty gestures in an age when senseless violence and random acts of cruelty seem to be proliferating everywhere. In recent time mob lynching an another form of violence occurring in different place of India. It is the worst form of mob-violence. It is perhaps beginning of Anarchy. In front of mob there is no law and Constitution. They take law in own hands without any fear. Certainly those who see life from this Vantage point have evidence to marshal in their favour. If non-violence is a force more powerful they argue, why did Gandhiji and Martin Luther King fall to assassin's Bullet what good has the ideal of non-violence done for the victims of innumerable terrorist strikes or of the wars launched to fight terrorist.

There is no simple answer and yet, when the obvious futility of violence is expressed from the heart of suffering, its power is indomitable. According to Gandhiji, "An eye for an eye will only make the whole World blind." Why then do many people find re-affirmation in

such action mostly because stating and repeatedly restating our intention in favour of non-violence is an essential starting point. It is the bare minimum that we can do the necessary first step which begins a Thousand Miles Journey.

This is why is striking of Mohandas Karamchand Gandhi in this Endeavour is so vital to our species present and future. Gandhiji himself came to non-violence through his own personal struggles and what was this 'non-violence' which Gandhiji learnt. He wrote in the weekly journal Young India. "kindness and love of peace is a more active and more real fighting against wickedness and retaliation. Whose very nature is to increase wickedness. This meant a mental and therefore a moral confidence is a passionate rejection of cowardice, Which Gandhijee sees as being wholly inconsistent with non-violence. This is why Gandhiji repeatedly insisted writing in the Harijan newspaper, that "the path of truth and non-violence requires much more courage than violence."

Skeptics have said that this is the purview of saints or saintly person- It is unrealistic to expect than ordinary people can practice nonviolence. This line of reasoning Gandhiji described as "a gross self deception of mankind was not habitually non-violent, it would have been self destroyed age ago. But in the duel between forces of violence and non-violence The latter have always come out Victorious in the end." he wrote in Young India "The truth is that we have not had patience enough to wait and apply ourselves whole heartedly to the spread of non-violence among the people as a means for political ends."

Though he had Supreme confidence in the ideal of non-violence Gandhiji remained, to the end a seeker striving towards an ideal rather than claiming to have arrival at a goal, "Ahimsa is a science." The word failure has no place in the vocabulary of science. He wrote in the Harijan. Failure to obtain the expected result is often the precursor to further the discoveries.

We can all draw strength from the fact that even the most rigorous and accomplished travelers of this path have emphasized that non-violence is a work in progress. After sometime a day will come when there will be no place of hate, war, terror and other negative aspects in the society. An idealistic dream will be true where a world government will founded. Dharma is one and only one. Ahimsa means moksha and Moksha is the realization of truth. Some Scholars says that the most distinctive and largest contribution by Hinduism to India's culture is the doctrine of Ahimsa. No power on earth can subjugate you, when you are armed with the sword of ahimsa, it enables both the Victor and the vanquished. The power of unnamed non-violence is any day far superior to that of Armed force. To attain to perfect purity one has to become absolutely passion free in thought speech and action to rise above the opposing currents of love and hatred. All great Saints and spiritual leaders who have appeared in the world have come to established world race and Unity for humanity as a whole. Jealousy and hatred are the two causes by which humanity is ruined. In our lives these two vices should have no any place. We should follow the single sentence of the Bible- "Do not injure, abuse, oppress enslave, insult, torment, torture or kill any creature all living beings." Imagine how different our world might be if the Bible contained this as its Central precept.

We can say that to follow the path of non-violence. The empire of peace will be established in the world because Ahimsa is the true way of human life. It is an accurate weapon in the war of life and conflict between two Nations. Ahimsa is the best austerity. Ahimsa is the greatest gift. Ahimsa is the highest self control. Ahimsa is the highest sacrifice. Ahimsa is

the highest power. Ahimsa is the highest friend. We should always remember of the statement of M.K.Gandhi-

“An Eye for an eye will only make the whole World Blind.”

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Literature as Sacred Ecology: Eco Spiritual Discourses Across Cultures

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Abstract

In an age marked by escalating environmental crises and a deepening human disconnection from nature, the literary imagination emerges as both sanctuary and catalyst for healing. *Eco-spirituality*, a confluence of ecological sensitivity and spiritual consciousness, forms a compelling axis around which global literature increasingly revolves. This paper delves into eco-spiritual reflections across diverse literary traditions, illuminating how nature is not merely depicted as backdrop or setting but as a sentient, sacred force that commands reverence and reflection.

Drawing from indigenous narratives, Romantic and mystical poetry, climate fiction, eco-feminist writings, and Asian philosophical texts, this study reveals the multifaceted portrayal of the Earth as a spiritual entity. From the ceremonial landscapes of Leslie Marmon Silko's *Ceremony* to the regenerative eco-theologies of Margaret Atwood's *The Year of the Flood*, literature becomes a vessel for sacred ecology — a medium through which planetary trauma and spiritual longing are voiced, entwined, and, at times, transcended.

Indigenous authors such as Linda Hogan (1995) offer narratives where the land is memory, relative, and healer. Romantic poets like William Wordsworth and Rabindranath Tagore articulate nature as a sublime teacher and divine interlocutor. In speculative realms, writers like Octavia Butler (1993) envision new spiritual systems birthed from ecological ruin, while eco-feminist voices such as Susan Griffin and Vandana Shiva underscore the embodied knowledge of Earth as mother and muse. Meanwhile, the contemplative traditions of Asia, as expressed in the works of Thich Nhat Hanh and Matsuo Bashô, foster a quiet intimacy with the natural world through mindfulness, simplicity, and poetic silence.

Through critical reflection and textual analysis, this paper argues that eco-spirituality is not a peripheral concern but a central moral and metaphysical theme in world literature. These texts do not merely narrate ecological consciousness — they *perform* it, functioning as ritual, prophecy, and spiritual map. By examining how eco-spirituality operates across genres and cultures, the study reveals literature's capacity to re-sacralize the Earth and to cultivate a sense of planetary kinship essential for our shared future. Ultimately, this exploration is not only literary but ontological — a return to the sacred interconnectedness of being.

Keywords: Eco-spirituality; sacred Earth; climate fiction; literary ecology; indigenous literature; spiritual ecology; environmental humanities; nature mysticism; eco-feminism; global literature

Introduction

The environmental degradation of the 21st century has given rise not only to political and scientific discourses but also to profound literary responses that blend ecological awareness with spiritual introspection. This fusion — known as eco-spirituality — has increasingly emerged as a critical and expressive mode in contemporary English and world literatures. The term *eco-spirituality* refers to a belief system or worldview that sees the natural world as sacred and interconnected with human and spiritual life. It bridges environmental ethics with transcendental philosophy, suggesting that healing the Earth is inseparable from healing the soul.

According to David Tacey, a scholar of spirituality and literature, “*Eco-spirituality is not a retreat into mysticism but a prophetic call to awaken to the spiritual dimension of nature, which modernity has forgotten or suppressed*” (Tacey, *The Spirituality Revolution*, 2004). This concept reshapes how literature functions — no longer just as aesthetic reflection, but as a moral compass and sacred archive — expressing ecological grief, hope, and cosmic reverence.

In the field of English literary criticism, eco-spirituality intersects with ecocriticism, a critical framework that studies the relationship between literature and the physical environment. However, unlike secular ecocriticism, eco-spirituality emphasizes the metaphysical and symbolic dimensions of nature. Scholars like Lawrence Buell, a pioneer of ecocriticism, observe that “*the environmental imagination in literature often draws upon mythic and spiritual motifs to evoke reverence and ethical response*” (Buell, *The Environmental Imagination*, 1995).

Historically, English literature has reflected eco-spiritual themes through movements like Romanticism, where poets such as William Wordsworth envisioned nature as a divine moral teacher. In his seminal poem “*Lines Composed a Few Miles Above Tintern Abbey*”, Wordsworth writes of “*a motion and a spirit that impels all thinking things*,” attributing spiritual vitality to nature itself — a theme central to eco-spirituality. Similarly, Samuel Taylor Coleridge, in “*The Rime of the Ancient Mariner*”, links ecological crime (the killing of the albatross) with spiritual curse, implying a sacred bond between nature and moral order.

In modern and postmodern English literature, this relationship intensifies as ecological crises multiply. Writers such as Margaret Atwood and Doris Lessing reframe the environment as not just endangered but ensouled. Atwood’s MaddAddam trilogy integrates hymn-like passages and rituals from the fictional eco-religion “God’s Gardeners,” revealing how eco-spirituality can function as both resistance and renewal in dystopian times (Atwood, *The Year of the Flood*, 2009). Similarly, Octavia E. Butler, though American, is widely studied in English departments for her genre-defying speculative fiction. Her *Earthseed* religion in *Parable of the Sower* (1993) redefines God as “Change,” linking environmental instability with spiritual adaptation — a distinctly eco-spiritual vision.

Moreover, feminist literary theorists like Susan Griffin and Carolyn Merchant argue that the desacralization of nature in Western thought — particularly during the Enlightenment — paralleled the subjugation of women. In *Woman and Nature: The Roaring Inside Her* (1978), Griffin lyrically restores the voice of both the Earth and the feminine, portraying the natural world as living, speaking, and spiritually potent. These views align with the eco-spiritual reimagining of Earth as Mother, an archetype found in many English literary texts, from Mary Oliver’s poetry to Virginia Woolf’s symbolic landscapes.

In contemporary literary pedagogy, eco-spirituality is increasingly seen as a framework that brings moral urgency and metaphysical depth to literary studies. It revitalizes classical themes like the pastoral, the sublime, and the natural world — infusing them with posthuman ethics, indigenous cosmologies, and ecological grief.

Thus, this paper positions eco-spirituality as a vital and growing dimension of English literary studies — one that reconnects literature with sacred ecology, and the reader with a deeper spiritual awareness of the Earth. Through a transhistorical and transcultural lens, it surveys how nature, when treated not as a resource but as revered presence, transforms both narrative structure and moral imagination. In doing so, eco-spiritual literature invites us not merely to observe nature, but to *commune* with it — to read the Earth as text and temple.

1. Indigenous Earth Wisdom and Literary Cosmologies

Eco-spirituality finds one of its most rooted and enduring expressions in indigenous worldviews, where the Earth is not seen as an object but as a living, relational presence — ancestral, sacred, and animate. These cultures do not separate the spiritual from the ecological; rather, they envision the natural world as intrinsically ensouled, forming a web of life where every plant, stone, river, and wind has voice and meaning. Literature emerging from these traditions, or shaped by their philosophy, transforms the act of storytelling into ritual, memory, and sacred dialogue.

At the heart of indigenous eco-spiritual literature lies the concept of land as identity and narrative as ceremony. As Robin Wall Kimmerer explains in her seminal work *Braiding Sweetgrass*, “*In indigenous ways of knowing, land is not a machine but a being, a teacher*” (Kimmerer, 2013). Stories, then, are not fictional constructs but acts of continuity, ways to remember, honour, and sustain the relationships that define a community’s spiritual ecology.

A profound example of this literary cosmology can be seen in Leslie Marmon Silko’s *Ceremony* (1977), often regarded as a foundational text in Native American literature. In this novel, Silko crafts a circular, non-linear narrative where myth, memory, and landscape coalesce into a spiritual healing journey. The protagonist, Tayo, a mixed-race Laguna Pueblo man traumatized by war, is guided toward psychological and spiritual healing not through modern therapy but through *ceremonial return to the land*, ancestral stories, and ecological rituals. Silko weaves traditional Pueblo cosmology into the very structure of the novel, presenting storytelling as sacred performance. As critic Kenneth Lincoln observes, “*Silko’s narrative pulses with ecological intimacy and spiritual depth that revive the sacred bond between people and place*” (Lincoln, 1983).

Similarly, Linda Hogan, a Chickasaw poet and novelist, explores eco-spiritual themes in her essay collection *Dwellings: A Spiritual History of the Living World* (1995). Hogan’s writing is rooted in eco-relational consciousness, where the Earth is a sentient community, not a resource. In essays such as “*The Bats*” and “*Walking*,” she meditates on the ethical and spiritual obligations of humans as co-inhabitants of the Earth. Her prose is both lyrical and philosophical, portraying nature as ceremonial space, where even silence becomes sacred. Hogan writes, “*We are part of a whole, a system of life in which water, air, and animals are part of our flesh*” (Hogan, 1995). Her eco-spirituality is grounded not in abstract theology but in physical and mystical intimacy with the Earth.

Outside the Americas, similar indigenous literary cosmologies emerge in the global south. In Maori literature, for instance, writers like Patricia Grace articulate land as both ancestor

and spiritual compass. Her novel *Potiki* (1986) resists colonial development narratives by emphasizing the sacred relationship between the sea, land, and tribal stories, wherein spiritual wellbeing is linked to ecological sovereignty. According to Alice Te Punga Somerville, “*For Maori writers, writing the land is an act of spiritual recovery, reclaiming both language and belonging*” (Somerville, 2012).

In Australian Aboriginal writing, Kim Scott’s *That Deadman Dance* (2010) reimagines early contact narratives by giving voice to the Noongar cosmology, where the Earth and ancestors speak through language, wind, and birdsong. Scott’s characters inhabit an interwoven spiritual and ecological reality, undermining colonial binaries of land/culture and human/nature. His narrative strategy itself mimics indigenous storytelling—circular, elemental, and deeply place-conscious.

These diverse indigenous literatures share common spiritual motifs:

- The land is not owned but is kin.
- Memory is inscribed in the Earth and passed down through stories.
- The ecological and spiritual are mutually sustaining.

In all these texts, the Earth is not a silent backdrop but a participant in the narrative, a character with agency and voice. The oral tradition, foundational to many of these cultures, elevates storytelling to ritualized eco-witnessing — a practice of remembering, re-membering, and re-rooting.

From a literary studies perspective, these works challenge the Western anthropocentric canon. As scholar Joni Adamson argues in *American Indian Literature, Environmental Justice, and Ecocriticism*, “*Indigenous literature invites readers into a spiritual ecology where environmental justice is inseparable from cultural survival and sacred geographies*” (Adamson, 2001). This call to spiritual and ecological interbeing transforms the reader’s role — no longer passive observer, but ethical participant.

Thus, indigenous eco-spiritual literature reclaims narrative as ceremony, land as scripture, and language as ecological stewardship. It not only critiques the environmental alienation wrought by colonialism and capitalism, but also offers a vision of sacred belonging, where literature becomes a bridge between the seen and the unseen, the material and the spiritual, the personal and the planetary.

2. Romantic and Mystical Nature: Poetic Visions of the Divine

The Romantic movement in English literature emerged not merely as an artistic shift but as a profound spiritual and philosophical response to the alienation of the Enlightenment and the mechanization of the Industrial Age. Romantic poets turned toward nature not only as a site of aesthetic beauty but as a sacred realm where the divine was perceived to be immanent. Their vision of nature was not detached or utilitarian but deeply emotional, moral, and spiritual, giving rise to what critics have described as a form of nature mysticism. Through the language of reverence, introspection, and moral imagination, Romantic poetry opened a new literary space for what may now be termed eco-spirituality.

William Wordsworth stands at the center of this revival. In his poem “Lines Composed a Few Miles Above Tintern Abbey” (1798), Wordsworth reflects on the healing and transcendent qualities of the natural world. Nature, for him, is not merely a physical presence but a spiritual companion and moral guide. He writes of a “presence that disturbs me with the joy / Of elevated thoughts; a sense sublime / Of something far more deeply interfused.” This

“something” speaks to a cosmic force, a divine immanence within the natural world that awakens ethical and emotional sensibility. Wordsworth’s entire poetic vision, as articulated in his “Preface to Lyrical Ballads” (1802), centers on the idea that poetry must reflect the human heart’s intimate communion with nature, fostering a quietism that is both spiritual and ecological.

Samuel Taylor Coleridge, Wordsworth’s contemporary and philosophical companion, expands the Romantic vision of the divine in nature through metaphysical symbolism. In “The Eolian Harp,” Coleridge contemplates the natural world as a medium through which divine energy flows into human consciousness. He imagines the breeze playing the harp strings as a metaphor for the divine breath animating creation. Coleridge’s concept of “one life,” articulated in his notebook entries and prose writings, expresses a mystical unity between the self, nature, and the divine. Nature becomes a theological space—dynamic, breathing, communicative.

John Clare, often considered a “green Romantic,” brings a more localized and ecologically sensitive dimension to nature poetry. His poems do not seek the sublime in vast landscapes but find spiritual meaning in hedgerows, birdsong, and rural customs. Clare’s ecological intimacy with the land—rooted in his experience as a laboring-class poet—offers a spirituality grounded in the daily rhythms of rural life. In “The Nightingale’s Nest,” Clare writes with such reverent care for the nesting bird that the poem becomes an act of moral restraint, a prayer of co-existence. His work mourns the loss of common lands and biodiversity with a prophetic tone, anticipating modern ecological concerns.

Gerard Manley Hopkins, though writing later in the Victorian era, continues the Romantic tradition with an even more overtly theological voice. A Jesuit priest and poet, Hopkins sees the natural world as a radiant manifestation of God’s glory. His concept of “inscape” refers to the unique inner essence of every living thing, and his poetry is a celebration of this divine singularity. In “God’s Grandeur,” he writes: “The world is charged with the grandeur of God. / It will flame out, like shining from shook foil.” Hopkins combines spiritual exultation with ecological observation, making his poetry a luminous example of eco-spiritual devotion.

A key Romantic idea underpinning these poetic visions is the concept of the sublime. The sublime, as developed by Edmund Burke and later expanded by Immanuel Kant, is the experience of awe, terror, and transcendence in the face of vast natural forces. In Romantic poetry, however, the sublime takes on an ethical and spiritual dimension—where the human self, rather than dominating nature, is humbled and awakened by it. This humility fosters a sense of reverence and interconnectedness that aligns closely with eco-spiritual values.

What binds these poets together is not merely their love of landscape, but their belief that the natural world is a living symbol of spiritual truth. Their poetic language is charged with theological undertones, philosophical reflection, and ecological insight. Nature, in their works, is not a resource to be used, but a divine interlocutor—one that speaks, listens, and transforms.

In this Romantic vision, literature becomes not only a mirror to nature but a sacred practice—a form of spiritual ecology where the soul and the Earth reflect one another. This tradition deeply influences later ecological writing, setting a foundation for the eco-spiritual strands in both modern and postmodern literature. It is through this mystical engagement with nature that Romanticism continues to shape the moral imagination of readers confronting ecological dislocation today.

3. *Dystopian Futures and Spiritual Reawakening*

As the climate crisis intensifies, speculative fiction has emerged as a powerful site for articulating eco-spiritual concerns. In contemporary climate fiction (commonly referred to as *Cli-Fi*), writers blend ecological catastrophe with spiritual reimagining, offering dystopian visions not only of ecological collapse but also of moral and metaphysical rebirth. Margaret Atwood's *The Year of the Flood* (2009) exemplifies this synthesis. Set in a future devastated by genetic engineering and corporate exploitation, the novel introduces the "God's Gardeners," a spiritual sect that fuses ecological ethics with a quasi-monastic lifestyle. The group's sermons, hymns, and rituals reveal a spirituality deeply entwined with biodiversity, sustainability, and sacred stewardship of the Earth. As scholars like Ursula Heise (2016) argue, Atwood's work embodies "speculative ethics"—a literary practice that imagines alternative ontologies grounded in planetary care.

Similarly, Octavia E. Butler's *Parable of the Sower* (1993) presents a dystopian future marked by environmental degradation, social collapse, and moral decay. Yet amid this bleakness, Butler introduces Earthseed, a spiritual philosophy developed by the protagonist Lauren Olamina. Earthseed posits "God is Change," advocating adaptability, communal resilience, and an ecological consciousness. According to Patricia Melzer (2006), Butler's speculative theology offers a decolonized and eco-feminist redefinition of spiritual agency, where the divine is not external but emergent within the processes of ecological transformation and human responsibility.

These texts function as literary prophecies—warning of the consequences of environmental neglect—while simultaneously offering an ethical call to reframe human-nature relations through spiritual humility. They do not merely depict environmental apocalypse; they offer a path toward spiritual awakening that is responsive to the moral dimensions of climate justice.

4. *Eco-Feminist Visions: The Sacred Mother and the Gendered Earth*

Eco-spirituality finds profound expression in eco-feminist literature, where the feminine body and the Earth are depicted as deeply interconnected. This vision challenges patriarchal paradigms that have historically justified the domination of both women and nature. In Susan Griffin's *Woman and Nature: The Roaring Inside Her* (1978), poetic prose interweaves the biological, the ecological, and the mystical, tracing how Western epistemologies have desacralized both female bodies and the natural world. Griffin reclaims both as sacred, arguing for a reawakening of embodied knowledge and intuitive wisdom. Her work, as Greta Gaard (1993) notes, is foundational to eco-feminist thought, blending lyrical language with a philosophical interrogation of dualism.

Vandana Shiva's writings—though more theoretical—have become widely cited within feminist literary and postcolonial studies. In *Staying Alive: Women, Ecology and Survival in India* (1988), Shiva critiques the mechanistic worldview of modern science and global capitalism, arguing that ecological degradation and gender oppression stem from the same root ideologies. Her notion of "Earth Democracy" posits the planet as a living, spiritual entity and celebrates indigenous women's ecological knowledge as a form of resistance and renewal.

Literature shaped by eco-feminism often meditates on the cycles of menstruation, birth, decay, and renewal—reclaiming these processes as sacred, rather than abject. This is evident in works like Linda Hogan's *Solar Storms* (1995), where female protagonists engage with

land-based spiritualities that are restorative and ancestral. Hogan, a Chickasaw poet and novelist, portrays nature not only as maternal but as ancestral memory—bearing the scars of colonization and the promise of healing.

By centering the feminine and the sacred in ecological discourse, these authors construct an eco-spiritual paradigm that is cyclical, nurturing, and ethically grounded. They resist binaries and invite readers into a cosmology where spirit, soil, and self are inseparable.

5. Asian Poetics and the Contemplative Ecology of the East

Asian literary and philosophical traditions have long embraced a contemplative engagement with nature, where the natural world is not only a physical entity but also a spiritual mirror. In English literature influenced by Eastern thought, eco-spirituality is articulated through poetics that emphasize stillness, mindfulness, and the non-duality of human and nature. These works offer meditative landscapes where ecological awareness is inseparable from spiritual insight.

Thich Nhat Hanh's *Love Letter to the Earth* (2013), though originally written in Vietnamese, has become a key spiritual and ecological text in global English departments. The work offers an intimate conversation between the self and the Earth, encouraging a practice of “interbeing”—a Buddhist notion that all existence is interconnected. Nhat Hanh's ecological spirituality is not activism in the conventional sense but a deep inner transformation where reverence for life becomes a daily mindfulness practice. His idea of breathing with the Earth transforms environmental concern into a ritual of spiritual belonging.

The minimalist nature of traditional Japanese Haiku, especially as written by Matsuo Bashô (translated and circulated globally), embodies the principles of Zen Buddhism—impermanence, simplicity, and oneness with the natural world. Bashô's nature-oriented Haiku, such as “The old pond / a frog jumps in— / the sound of water,” subtly encapsulate moments of ecological awareness in a spiritual key. English translations of Bashô, R.H. Blyth's commentaries, and adaptations by contemporary poets in English demonstrate how this contemplative ecology has enriched world literature's eco-spiritual vocabulary.

Han Kang's *The Vegetarian* (2007), translated into English and widely studied in eco-literary courses, is another significant example. The novel explores themes of ecological withdrawal, bodily transcendence, and silent resistance through the protagonist's decision to abandon meat, speech, and even human society. While not explicitly Buddhist, the novel draws from spiritual themes such as detachment, renunciation, and an intuitive reconfiguration of life beyond human violence. The vegetarianism in the novel becomes a form of spiritual ecology—a bodily expression of non-violence and return to primal innocence.

This Asian contemplative tradition offers a distinct contrast to Western environmentalism rooted in activism and moral urgency. The Eastern mode, through silence, meditation, and poetic vision, invites a gentle spiritual transformation that integrates care for the Earth with inner awakening. The concept of dhyana (meditative absorption), which permeates much of Eastern poetics, aligns with a deep ecological awareness that does not see the Earth as “other” but as the ground of shared being.

Eastern eco-spiritual texts thus create a poetics of stillness, cyclical renewal, and interior harmony with nature. These themes increasingly resonate with post-anthropocentric literary theories in English studies, where ecological belonging is seen not merely as political resistance but as sacred remembrance.

Conclusion

In synthesizing Western Romanticism, ecofeminism, Indigenous cosmologies, and Eastern contemplative ecology, this paper underscores a profound convergence: literature's evolving role as a medium of spiritual and ecological consciousness. Across traditions and genres, from Wordsworth's sublime reverence for natural landscapes to Silko's ritualized land-memory and Bashô's meditative haiku, literature manifests as a form of sacred witnessing — one that invites humanity to perceive the Earth not as a passive resource, but as an active spiritual presence.

This convergence reveals that eco-spiritual literature operates as both a moral compass and a contemplative practice — fostering empathy, interconnection, and reverence for the non-human world. As contemporary ecological crises threaten not only biodiversity but also the cultural and spiritual integrity of human life, these literary visions serve as ethical interventions. They urge a reorientation from dominion to reciprocity, from fragmentation to wholeness.

Ultimately, eco-literature emerges as a form of sacred activism — not rooted in polemic, but in poetic invocation. It re-enchants the world by restoring depth, stillness, and sacred meaning to the human-Earth relationship. In doing so, it contributes to a vital shift in consciousness — one that is urgently needed in the Anthropocene age.

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Pakistan and Israel Factor in India-Iran Relations

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Abstract-

There is not denying the fact that India and Iran have deep cultural and historical ties. After India's Independence, India signed a 'Treaty of Friendship' with Iran in 1950 to establish good relations. The fact cannot be denied that India has always given importance to its bilateral relations with Iran. Iran is continuously challenge American hegemony in West Asian region. Iran is a country in West Asia that has always refused to accept the American-dominated global order. India also advocates a world order in which no single country can have dominance. India-Iran political relations have long been influenced by energy ties between the two countries. Today, energy security, connectivity and security are the basis of India's Iran policy. Iran is India's second largest oil supplier. With its aspirations to become a global economic superpower, India attaches great importance to energy security. If pressure on the Strait of Hormuz increases and there is a shortage of oil, India may face oil deficiency. Iran also provides India with vital strategic connectivity with Afghanistan, Central Asia, Russia and Europe. Iran's strategic position has always impressed India. The roles of Pakistan and Israel have a significant impact on India-Iran relations, creating a complex geo-political scenario. The Iran-Pakistan relationship is a strategic paradox – on the surface, they are Islamic allies with historical ties, but in reality, they are geopolitical competitors, deeply divided over sectarian, regional and global strategic alliances. Iran is essential for India as a strategic partner, as it provides connectivity especially through the Chabahar port and the International North-South Transport Corridor. Pakistan's relations with Iran are marked by both cooperation and rivalry, while India's growing strategic partnership with Israel adds another layer of complexity to this dynamic. India is more closely aligned with Israel than Iran in combating terrorism. India's growing strategic and defence ties with Israel have had a negative impact on India-Iran bilateral relations. Over the past decade, India has strengthened ties with Israel, particularly in the fields of defence and technology. Iran sponsors terrorist groups in the Middle East, as does Pakistan in South Asian region. Over the past three decades, especially under the government of Narendra Modi, Israel has become one of India's most important strategic partners. India is well aware that a weak Iran could pose a threat to India's presence in the Indo-Pacific region, while it would benefit its arch rival Pakistan. This article attempts to analyse the role of Pakistan and Israel in India-Iran relations.

Key Words: Pakistan, Israel, India, Iran.

Introduction

The fact cannot be denied that Pakistan and Israel factor has impacted India-Iran relations. India and Iran have had a history of interaction for centuries. India-Iran traditional relations have always been good. Sometimes the Islamic factor has affected

Indo-Iran relations. India is inclined towards Israel and on the other hand Iran is inclined towards Pakistan, which has caused tension in India-Iran relations. Israel's time-tested friendship with India has also influenced India-Iran relations. India-Iran contemporary relations are based on the strength of these historical and civilizational ties. India has long-standing relations with Iran and having sharing deep cultural and civilizational ties with it. Historically, India's policy towards Iran has been to strike a balance between safeguarding its strategic interests as a counterweight to Pakistan and ensuring its continued partnership with the United States and other regional powers. India maintains cordial relations with both Israel and Iran, a result of a delicate balance struck over many years.

India is changing its policy towards the Middle East region. Due to various geo-political and strategic factors, India-Iran relations have become tense and India's relations with Israel are getting stronger. Similarly, India's relations with Israel have deepened significantly in the last decade, especially in the defense, security and technology sectors. Pakistan has complicated relations with Iran, as the two countries compete for influence in Afghanistan region. Iran is dependent on food imports, so overland trade routes are vital to Iran's survival. Pakistan could play a role for the US in isolating Iran in the event of a conflict with Israel. Pakistan's relations with Iran are complex. The two countries compete for influence in Afghanistan. Pakistan is proud to be the only Muslim-majority country to possess nuclear weapons and does not like the idea of losing this status. There have also been attacks on Iranian security personnel by Pakistan-based groups. Since US sanctions, India has stopped importing crude oil from Iran and is turning to Russia to meet its energy needs.

The "Israel factor" significantly impacts India's relations with Iran, creating a complex dynamic. Although India maintains strong ties with Iran due to its energy needs and historical ties, its growing strategic partnership with Israel, especially in the areas of defence and technology, brings a layer of tension. Pakistan plays an important, often complex, role in India-Iran relations. Their relationship is a complex interweaving of shared interests, regional dynamics and historical ties, with Pakistan often at the centre of conflict. Pakistan's efforts to forge closer ties with Iran while simultaneously resolving disputes with India add another layer of complexity. Pakistan's role in India-Iran relations is multifaceted, involving competition, cooperation and historical burdens. To understand the complexities of India-Iran relations and their future direction, it is important to understand the dynamics of bilateral relations.

The Iran-Israel conflict highlights India's delicate Eurasian diplomacy, which balances relations with both countries. Iran acts as a counterweight to Pakistan and supports India's regional ambitions, including the Chabahar port and INSTC. Historically, Iran has helped India to circumvent UN sanctions on Kashmir in the early 1990s. More recently, India expressed concern over attacks on Iranian nuclear sites, confirming their complex relationship. Iran remains an important factor in India's regional diplomacy, serving as a counterweight to Pakistan while New Delhi continues its partnership with Tel-Aviv. India's extended neighbourhood policy focuses on enhancing relations with Iran and Israel.

Pakistan and Israel Factor in India-Iran Relations

Until August 1947, Iran and India shared a 905 kilometer long border. After the partition of India, this border started touching Pakistan. India and Iran have had deep ties at the

level of culture and tradition. The two countries bilateral diplomatic relations were established on 15 March 1950 after India's Independence. But India-Iran bilateral relations scenario changed rapidly after the Islamic Revolution in Iran in 1979. In September 1993, the then Prime Minister of India P. V. Narasimha Rao visited Iran to enhance bilateral ties. A year before this, i.e. in 1992, Narasimha Rao had decided to establish diplomatic relations with Israel. India and Iran have common strategic interests in defence and security parameters, including maintaining stability in Central Asia and fighting terrorist groups in the Indo-Pacific region. Recently, India has attempted to improve relations with Iran, revive trade ties and launch new schemes. However, the growing India-Iran ties are a worrying sign for Islamabad, which is attempting to resolve pending disputes as well as enhance ties with Tehran. Both India and Pakistan desire a politically and economically viable relationship with Iran. Nevertheless, India's bilateral political calculations and current economic challenges have given rise to a nuanced policy based on a careful balance between geo-economics and geopolitics.

India maintains complex relations with both Iran and Israel, dealing with tensions and attempting to balance its strategic interests in the region. Although India has historically strong relations with Iran, recent geopolitical changes and the growing conflict between Israel and Iran have prompted a re-evaluation of India's foreign policy approach. India has close and friendly relations with both the countries and is ready to provide all possible assistance. India's ties with Israel have grown stronger in recent years, particularly in areas such as defense and technology. Israel is India's third-largest source of arms, with a share of 7.2% of imports between 2012 and 2024, second only to the United States (14%) and Russia (60%). However, India also recognizes the importance of maintaining ties with Iran, particularly for energy security and regional connectivity.

Both Iran and Israel are important neighbours of India, and any bilateral tensions between them could have an impact on India's energy security. Iran is a vital supplier of oil supply to India, and disruptions in the region could impact oil prices and supplies. India may need to maintain a balance in its relations with both Iran and Israel. The tension between these two countries might put India in a situation where it will face diplomatic challenges in maintaining friendly relations with these two concerned parties. As conflict escalates in the Middle East, India faces tough choices - balancing energy security, economic stability and the delicate diplomacy between Israel and Iran. It has been proven that there are many contradictions in India's stance on the Iran-Israel conflict. During the recent Iran-Israel conflict, India did not adopt any clear policy. India's balanced and neutral stance has raised suspicions in the minds of Iran and Israel. India did not play the role of an effective peace-maker amid the Iran-Israel conflict. Iranian policy-makers always criticize India's pro-Israel policies. India needs to tackle effectively both the rival countries Iran and Israel on different fronts. India wants defence cooperation with Israel and energy cooperation with Iran.

The India-Iran Chabahar Port deal will have a strategic impact on Pakistan's strategic interests in Iran. Bypassing Pakistan's ports in Karachi and Gwadar, India can access the land-locked areas of Central Asia and Afghanistan through the Chabahar port. As a result, Pakistan's strategic influence in the region could weaken. The growing power of Indian proxies near the Pakistani border with Iran, particularly around the Chabahar port, has long been a matter of complaint for Pakistan. India-Iran trade can flourish given the

need for energy security to sustain its economic growth. India appears to maintain delicate relationship with Iran and Israel, both conventional and unconventional. India is highly dependent on Iran for energy, so India has to assess the risks involved in building relations with Iran. No one can deny the reality that Iran's voice on Kashmir issue has always influenced the Indian political leadership. It is easy to understand that close ties with Pakistan have had a negative impact on India-Iran relations. Iran's proximity to Pakistan has always bothered Indian policymakers. Moreover, India's close ties with Israel have always bothered Iran's political leadership. Iran has always been upset with India-Israel's growing defence and security ties. It can be said that India's close relations with Israel and Pakistan's close relations with Iran have always created tensions in India-Iran bilateral relations.

Conclusion:

Over the past ten years, India's friendship with Israel has grown and India's relations with Iran have remained limited. India's official stance is that the conflict between Israel and Iran should be resolved through diplomacy and peaceful measures. India's traditional policy on the global south and non-alignment is changing. There is no clarity in India's stand on the Iran-Israel war. India started reducing bilateral trade with Iran since Trump's first term and now it has fallen below one billion dollars. India has made it clear that it will give more importance to relations with America. At present, there is nothing concrete in the relations between India and Iran that can be talked about. India buys neither oil nor gas from Iran. India-Iran has no joint ventures. There has been no progress in Chabahar port. The message to Iran is clear that India is not particularly interested in it. There are many reasons why India is giving more importance to Israel than Iran. The fact cannot be denied that the non-Islamic character of Israel attracts India. India's bilateral relations with Israel are more important. Israel has been supporting India in military and defense matters. Israel has become an important defense partner of India. Iran is the biggest challenge to India's foreign policy. Iran is strategically important to India. It is extremely important for trade routes, especially to reach Central Asia and Afghanistan bypassing Pakistan. Israel is not a challenge for India in foreign policy, but a help.

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Role of IoT in Building Sustainable and Energy-efficient Smart Cities

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Introduction

The rapid pace of urbanization across the globe has created unprecedented challenges for cities in terms of energy demand, resource utilization, environmental sustainability, and quality of life. According to the United Nations, more than two-thirds of the world's population will live in urban areas by 2050, thereby exerting immense pressure on existing infrastructure and natural resources. To address these challenges, the concept of *smart cities* has emerged, focusing on the integration of advanced technologies to make urban living more sustainable, efficient, and livable.

Among these technologies, the Internet of Things (IoT) plays a pivotal role in transforming cities into intelligent, connected ecosystems. IoT refers to a network of physical devices embedded with sensors, software, and connectivity that enables real-time data collection, communication, and decision-making. By leveraging IoT, urban systems can be monitored, analyzed, and optimized to improve efficiency and reduce wastage. For instance, smart grids can balance energy supply and demand, smart transportation systems can reduce congestion and emissions, and IoT-enabled buildings can minimize energy consumption through intelligent automation.

In the context of sustainability, IoT contributes significantly to energy efficiency, renewable energy integration, waste reduction, and environmental monitoring. It enables cities to transition toward low-carbon economies by optimizing resource use and reducing greenhouse gas emissions. Furthermore, IoT enhances citizen engagement by providing real-time data on energy consumption, pollution levels, and mobility options, thus encouraging responsible urban behavior.

However, despite its potential, the deployment of IoT in smart cities faces challenges such as high implementation costs, lack of interoperability among devices, data privacy and security concerns, and the need for skilled human resources. Therefore, understanding the role of IoT in building sustainable and energy-efficient smart cities is crucial for policymakers, urban planners, and researchers to design effective frameworks and strategies.

This study aims to explore how IoT can be harnessed to promote sustainability and energy efficiency in urban environments while addressing the challenges associated with its implementation.

Review of Literature

The role of the Internet of Things (IoT) in smart cities has been widely studied, with particular emphasis on sustainability and energy efficiency. Researchers agree that IoT-enabled systems provide innovative solutions to the growing challenges of urbanization.

Smart Energy Management:

Gubbi et al. (2013) highlighted that IoT-based smart grids enable real-time energy monitoring, demand-side management, and renewable energy integration, contributing significantly to energy efficiency. Similarly, Alahakoon and Yu (2016) noted that smart meters and sensors help reduce unnecessary energy consumption in households and industries.

Smart Buildings and Infrastructure:

According to Zanella et al. (2014), IoT supports automation in buildings through intelligent lighting, heating, and cooling systems, which reduce carbon footprints. Studies by Perera et al. (2017) further show that building energy management systems (BEMS) driven by IoT can save 20–30% of total energy consumption.

Transportation and Mobility:

IoT applications in transportation have also been well-documented. Hussain et al. (2019) discussed how IoT-enabled traffic management systems reduce congestion, optimize fuel use, and lower greenhouse gas emissions. In addition, smart parking solutions enhance urban mobility while minimizing energy waste from vehicles searching for spaces.

Environmental Monitoring:

Research by Kumar et al. (2020) emphasized that IoT sensors play a crucial role in monitoring air quality, water usage, and waste management, thus helping cities meet sustainability targets. These studies suggest that IoT contributes to both ecological preservation and efficient resource utilization.

Challenges and Barriers:

Despite its benefits, IoT adoption faces barriers. Roman et al. (2013) stressed issues of data security, privacy, and interoperability. Others, like Borgia (2014), highlighted cost and policy challenges, especially in developing nations.

Overall, the literature indicates that IoT has strong potential to make cities energy-efficient and sustainable, but successful implementation requires addressing technological, economic, and governance-related challenges.

Objectives of the Study

1. To examine the role of IoT-based technologies in enhancing sustainability and energy efficiency in smart cities.
2. To identify key areas of urban infrastructure (transportation, buildings, energy grids, waste, and water management) where IoT can contribute to resource optimization.
3. To analyze the effectiveness of IoT-enabled systems in reducing energy consumption and carbon emissions.
4. To evaluate real-world case studies of IoT implementation in smart cities at national and international levels.

5. To explore the challenges and limitations of integrating IoT for sustainable city development (such as cost, data security, and interoperability issues).
6. To propose a framework or set of recommendations for policymakers and urban planners to implement IoT solutions for energy-efficient smart cities.

Results and Discussion

The review of existing studies and case examples indicates that IoT plays a significant role in enhancing sustainability and energy efficiency in urban environments:

1. Energy Savings in Buildings:

IoT-enabled Building Energy Management Systems (BEMS) have demonstrated reductions of 15–30% in energy consumption by integrating smart lighting, HVAC systems, and occupancy-based controls.

2. Smart Grids and Renewable Energy Integration:

Cities adopting IoT-based smart grids report improved load balancing and integration of renewable sources. For example, pilot projects in Europe and Asia show enhanced demand-response capabilities and reduced reliance on non-renewable energy.

3. Transportation Efficiency:

IoT-enabled traffic management and smart parking systems have reduced congestion, resulting in up to 20% decrease in travel time and measurable fuel savings. This has directly contributed to reduced greenhouse gas emissions in several pilot projects.

4. Environmental Monitoring and Waste Management:

Smart waste bins and water monitoring systems optimized collection schedules, reducing fuel consumption of municipal vehicles by 10–15%, while air quality monitoring provided actionable insights for urban planning and public health.

5. Citizen Engagement:

Mobile applications linked with IoT platforms have encouraged citizens to monitor their own energy consumption, promoting behavioral shifts toward sustainable practices.

The findings suggest that IoT is a transformative technology for building sustainable and energy-efficient smart cities. However, its impact varies across sectors and is influenced by factors such as infrastructure readiness, governance, and citizen participation.

1. Contribution to Sustainability Goals:

IoT-enabled solutions contribute directly to global sustainability targets, particularly the United Nations' Sustainable Development Goal 11 (Sustainable Cities and Communities) and Goal 7 (Affordable and Clean Energy). By optimizing energy use and integrating renewable sources, IoT supports the transition to low-carbon cities.

2. Economic and Environmental Benefits:

Cities adopting IoT technologies experience a dual benefit: reduced operational costs and improved environmental outcomes. For instance, smart grids lower energy bills for households and industries, while reducing greenhouse gas emissions at the system level.

3. Challenges and Limitations:

Despite the benefits, several challenges persist:

- High initial investment for IoT infrastructure.

- Data privacy and security concerns due to large-scale data collection.
- Interoperability issues between different IoT devices and platforms.
- Policy and governance gaps, especially in developing nations, where smart city initiatives often face financial and institutional constraints.

4. Future Implications:

The discussion points toward the need for:

- Standardized frameworks for IoT deployment across cities.
- Public-private partnerships to overcome financial constraints.
- Integration of AI and edge computing for real-time decision-making.
- Citizen-centric approaches, ensuring that communities are active participants in IoT-driven sustainability programs.

The results confirm that IoT has significant potential to reduce energy consumption, optimize resource use, and promote sustainability in smart cities. However, to fully realize these benefits, cities must address challenges of scalability, interoperability, and governance. With proper planning, IoT can serve as a cornerstone of future urban sustainability strategies.

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Principle of Thermoluminescence

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Abstract

Thermoluminescence (TL) is a luminescence phenomenon in which a material emits light upon being heated, following prior exposure to ionizing radiation or other energy sources. The principle of thermoluminescence is based on the trapping and release of charge carriers within the crystal lattice of insulating or semiconducting materials. When a material is irradiated, electrons and holes are excited and subsequently captured in defect-related trap states present in the lattice. These trapped carriers remain stable at room temperature until thermal stimulation is applied. Upon heating, the trapped carriers gain sufficient energy to escape and recombine at luminescence centers, releasing the stored energy in the form of visible or near-visible light. The intensity of the emitted light as a function of temperature produces a thermoluminescence glow curve, which provides valuable information about the trap depth, concentration of charge carriers, and defect structure of the material. This principle has been widely applied in radiation dosimetry, archaeological and geological dating, and material defect analysis. The ability of thermoluminescent materials to store and release energy in a controlled manner makes TL a powerful tool for both scientific research and practical applications in measuring radiation doses and determining the age of ancient artifacts.

Keywords: Thermoluminescence, Material, Mechanism, Band Model

Introduction

Thermoluminescence (TL) is a fascinating physical phenomenon in which a material emits light when it is heated after being exposed to radiation. The term itself comes from the Greek roots “thermo,” meaning heat, and “luminescence,” meaning emission of light without combustion. Unlike ordinary incandescence, which arises due to blackbody radiation from a hot material, thermoluminescence is not a direct product of the material’s temperature but rather the delayed release of energy previously stored within the lattice of a solid. When ionizing radiation such as X-rays, gamma rays, or charged particles interacts with certain insulating or semiconducting crystals, it excites electrons from the valence band into the conduction band. Some of these excited charge carriers become trapped at defects or impurities in the crystal lattice, remaining in a metastable state even after the radiation source is removed. Upon subsequent heating, thermal energy provides the necessary activation for these trapped carriers to escape and recombine with holes, releasing their stored energy as visible or near-visible light. The principle of thermoluminescence thus involves the sequential processes of radiation-induced excitation, trapping, storage, and thermally stimulated release of light, forming the scientific foundation for a wide array of

practical applications ranging from archaeological dating to radiation dosimetry and geological research.

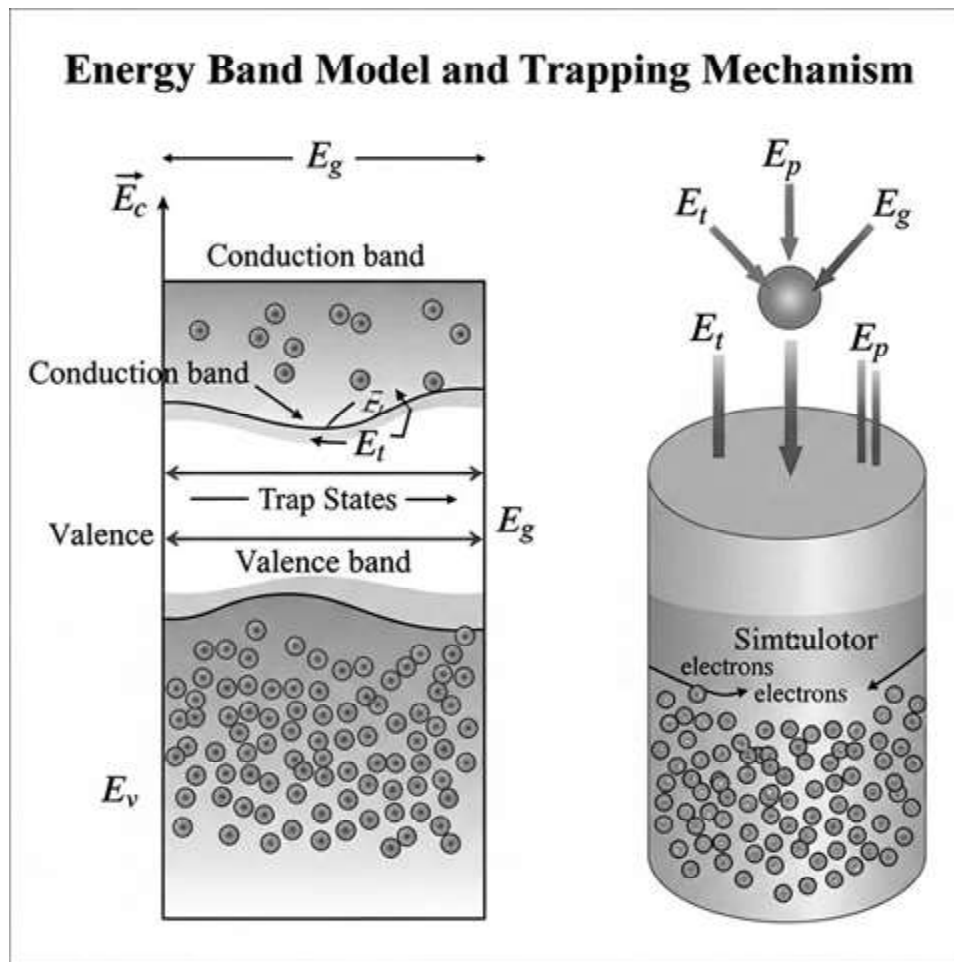
Historical Background and Discovery

The origins of thermoluminescence research trace back to the seventeenth century when Robert Boyle observed that diamonds exposed to sunlight emitted a faint glow upon heating. Over the following centuries, scientists recognized that a number of minerals exhibited this peculiar property of delayed luminescence. The real scientific exploration of thermoluminescence, however, gained momentum in the twentieth century with advances in solid-state physics and radiation detection. In the 1950s and 1960s, researchers systematically investigated the phenomenon in alkali halides, quartz, feldspar, and various dosimetric phosphors, laying the groundwork for modern thermoluminescence theory. By the mid-twentieth century, the principle of TL had been applied to the dating of archaeological pottery, as firing traps electrons in defects that accumulate radiation dose over time. Similarly, TL dosimetry emerged as a reliable method for measuring accumulated radiation exposure in medical, environmental, and industrial contexts. The discovery of the glow curve—a graphical representation of thermoluminescence intensity as a function of temperature—revolutionized understanding by revealing discrete peaks corresponding to different trap depths in the material. These milestones collectively marked the evolution of thermoluminescence from a curious observation to a well-defined physical principle with far-reaching implications.

Basic Principle of Thermoluminescence

The principle of thermoluminescence rests on the interactions between radiation and the electronic structure of crystalline or amorphous solids. In normal conditions, electrons reside in the valence band, leaving the conduction band largely empty. When a material is irradiated with high-energy photons or particles, electrons are excited into the conduction band, creating free carriers. Ideally, many of these excited electrons would recombine immediately with holes, releasing prompt fluorescence or scintillation. However, in real solids, structural imperfections, impurities, or defects create localized energy states within the forbidden bandgap. These states, known as electron or hole traps, can capture and hold the charge carriers for extended periods. The traps are metastable because thermal energy at ambient temperatures is insufficient to release the carriers, allowing the material to “store” a record of past radiation exposure. When the material is heated, thermal vibrations supply enough activation energy to free the carriers. They then migrate through the lattice, eventually recombining at luminescence centers. This recombination results in the emission of photons, which is observed as thermoluminescence. Thus, the principle combines three steps: (1) trapping of charge carriers during irradiation, (2) storage in defect states, and (3) thermal stimulation leading to radiative recombination.

Energy Band Model and Trapping Mechanism



A clear understanding of thermoluminescence requires examining the energy band model of solids. In an ideal crystal, electrons are restricted to either the valence band (filled states) or the conduction band (empty states), separated by a bandgap where no electron states exist. Real materials, however, invariably contain structural defects such as vacancies, dislocations, interstitial atoms, or impurity ions. These imperfections introduce localized electronic states within the forbidden bandgap. Depending on their energy position relative to the conduction or valence band, these defect states act as traps for electrons or holes. Shallow traps lie close to the conduction band (or valence band) and can be easily emptied at room temperature, leading to quick recombination. Deep traps, in contrast, are located farther from the band edges and require significant thermal energy to liberate carriers, allowing long-term storage of charge. The luminescence centers are separate defects or impurity states that facilitate radiative recombination by releasing energy in the form of photons instead of phonons. When heating provides sufficient energy, trapped carriers are excited into the conduction band and migrate to luminescence centers, leading to emission. The probability of release follows an Arrhenius-type relationship, dependent on the trap depth, temperature, and attempt-to-escape frequency. This band model elegantly explains why TL occurs only after prior irradiation and subsequent heating, highlighting the dual necessity of stored excitation and thermal stimulation.

Glow Curve and Its Interpretation

One of the central experimental manifestations of thermoluminescence is the glow curve, which is obtained by gradually heating an irradiated sample while recording the emitted light intensity as a function of temperature. A typical glow curve consists of a series of peaks, each corresponding to a distinct set of traps with characteristic activation energies. The position of a peak on the temperature axis reflects the trap depth, since deeper traps require higher thermal energy to release their carriers. The area under a peak is proportional to the number of trapped electrons and hence to the absorbed radiation dose. The shape of the peak contains information about the kinetics of carrier release—whether it follows first-order kinetics (no retrapping) or second-order kinetics (significant retrapping before recombination). Analysis of glow curves allows researchers to extract trap depth (activation energy), frequency factor (attempt-to-escape frequency), and kinetic order, which together form the fundamental parameters of thermoluminescent materials. These analyses not only provide insights into the defect structure of solids but also underpin practical applications, as accurate dosimetry and dating depend on quantitative interpretation of glow curves.

Kinetics of Thermoluminescence

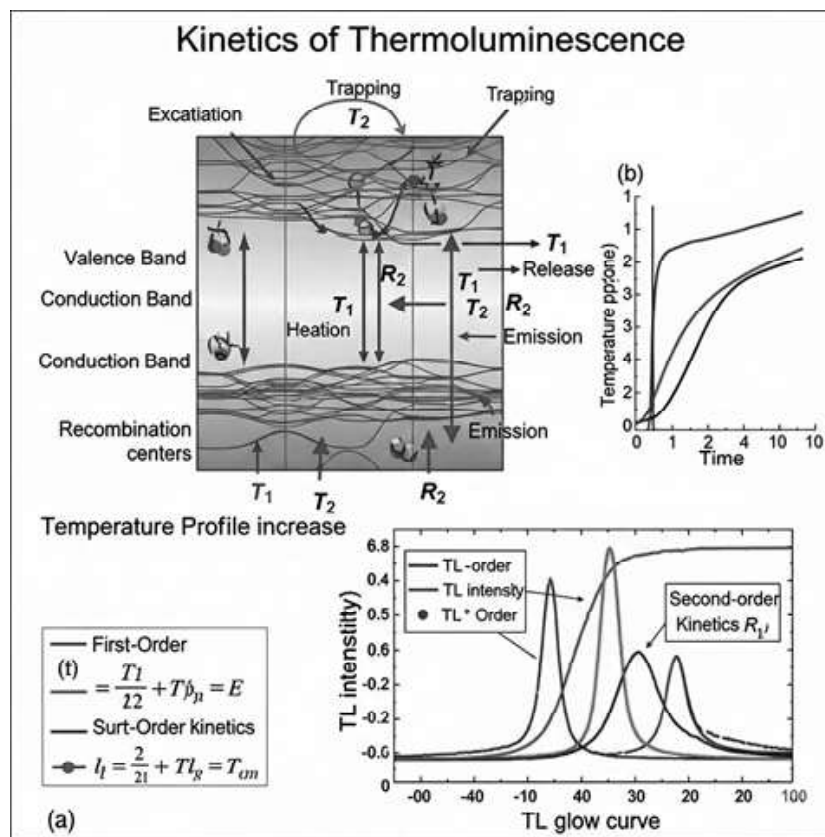
The study of thermoluminescence kinetics seeks to describe mathematically the probability of carrier release and the resulting emission intensity as a function of time and temperature. The simplest case is first-order kinetics, where an electron once released immediately recombines without retrapping. In this case, the TL intensity is proportional to the rate of thermal release from traps, which is expressed by an Arrhenius equation:

$$I(T) = n_0 s \exp(-EkT) \exp\left(-\frac{s}{\beta} \int_{T_0}^T \exp(-E/kT') dt'\right)$$

Hence n_0 is the initial trap population, s is the frequency factor, E the trap depth, k Boltzmann's constant, T the temperature, and β the heating rate. For second-order kinetics, where released carriers may be retrapped before recombination, the mathematical description becomes more complex but still follows thermally activated processes. The shape and symmetry of glow peaks are diagnostic of kinetic order. The general-order kinetic models further refine this classification, providing flexibility to describe real materials that exhibit intermediate behavior. Understanding TL kinetics is not only crucial for basic physics but also for calibrating TL dosimeters, as the accurate determination of radiation dose depends on the reliability of these kinetic parameters.

Factors Affecting Thermoluminescence

Several factors influence the efficiency, stability, and reproducibility of thermoluminescence in a material. First, the type and concentration of defects or impurities determine the availability of traps and luminescence centers. Controlled doping with rare-earth ions such as europium, cerium, or dysprosium is often employed to optimize TL response. Second, the thermal history of the sample plays a critical role, as previous heating cycles can empty certain traps, alter defect distributions, or induce annealing. Third, the radiation type and dose determine the initial population of traps, with different radiations producing distinct spatial distributions of electron–hole pairs.



Fourth, environmental conditions such as humidity, pressure, and chemical interactions may degrade the lattice or quench luminescence centers. Fifth, the heating rate during readout affects the glow curve shape and peak position; faster heating shifts peaks to higher temperatures and can reduce resolution, while slower heating yields better-defined peaks but requires longer measurement times. Collectively, these factors underscore the complex interplay between material properties, radiation environment, and experimental conditions in governing thermoluminescence.

Applications of Thermoluminescence

The principle of thermoluminescence has been harnessed in a wide spectrum of practical applications, each exploiting the ability of materials to store and release radiation information. In archaeological and geological dating, TL is used to determine the age of pottery, sediments, and minerals. When these materials are last heated or exposed to sunlight, their TL signal is reset, and subsequent radiation exposure accumulates charge in traps. By measuring the accumulated TL and comparing it with known radiation dose rates, scientists can estimate the time elapsed since the last resetting event. In radiation dosimetry, TL materials such as LiF:Mg,Ti (TLD-100) are widely used for monitoring radiation exposure of medical staff, nuclear workers, and patients undergoing radiotherapy. These dosimeters provide sensitive, accurate, and reusable detection of doses ranging from milligrays to kilograys. In geological studies, TL helps track natural radiation environments, tectonic processes, and thermal histories of rocks. Additional applications include space research (measuring cosmic radiation), food irradiation dosimetry (ensuring sterilization), security screening, and environmental monitoring of radioactive contamination. The versatility and reliability of thermoluminescence as a recording and reporting mechanism of past radiation exposure make it indispensable in science and technology.

Advantages and Limitations

Thermoluminescence offers several advantages as a radiation detection and dating method. It is highly sensitive, capable of detecting minute doses of radiation that accumulate over long periods. The non-destructive nature of TL allows repeated readouts of the same sample, provided traps are not completely emptied. The portability and compactness of TL dosimeters make them practical for widespread occupational and medical monitoring. Furthermore, TL provides integrated dose information, reflecting cumulative exposure rather than instantaneous levels, which is valuable in long-term assessments. However, the method is not without limitations. TL signals can fade over time due to thermal or quantum tunneling processes, leading to underestimation of dose or age. The requirement of controlled heating complicates field deployment compared to passive detectors. Materials may show variability in response due to impurities, defects, or environmental degradation. Absolute dating by TL requires careful calibration of environmental dose rates, which may introduce uncertainties. Additionally, TL dating is generally limited to timescales of up to about half a million years, beyond which trap saturation or fading compromises accuracy. Despite these challenges, careful material selection, calibration, and methodological refinements continue to enhance the reliability of thermoluminescence.

1. Fundamental Concepts and the TL Phenomenon

Thermoluminescence (TL) is a luminescent phenomenon that occurs when certain crystalline materials emit light upon being heated, following prior exposure to ionizing radiation or other energy sources. At the heart of TL lies the principle that energy absorbed by a material from radiation can be temporarily stored in the form of trapped charge carriers within its crystal lattice. These materials, usually insulators or wide-bandgap semiconductors, contain naturally occurring or radiation-induced defects such as vacancies, interstitials, or impurity sites, which act as traps for electrons and holes. When radiation interacts with the material, electrons are excited from the valence band to the conduction band, leaving holes behind. Some of these electrons and holes are captured by traps and can remain in these metastable states for extended periods, sometimes years, at room temperature. The ability to store this energy is fundamental to the TL phenomenon, as it enables the delayed emission of light that occurs only when thermal energy is applied.

Mechanism of Thermoluminescence

The TL phenomenon is primarily governed by the processes of excitation, trapping, and recombination. Upon irradiation, energy absorbed by the crystal excites electrons into the conduction band, where a fraction of these electrons gets trapped at defect sites. The depth and nature of these traps determine the stability and retention time of the trapped charges. During controlled heating, the thermal energy supplied to the material allows electrons to escape from the traps. These electrons then recombine with holes at luminescent centers, resulting in the emission of photons. The emitted light intensity as a function of temperature generates a thermoluminescence glow curve, which provides insight into the trap distribution, trap depth, and energy required for release. The peak position of the glow curve corresponds to the most probable trap depth, while the area under the curve is related to the total number of trapped carriers and hence the absorbed radiation dose. The sharpness and shape of TL peaks can be influenced by the type of material, the irradiation conditions, and the thermal stimulation rate.

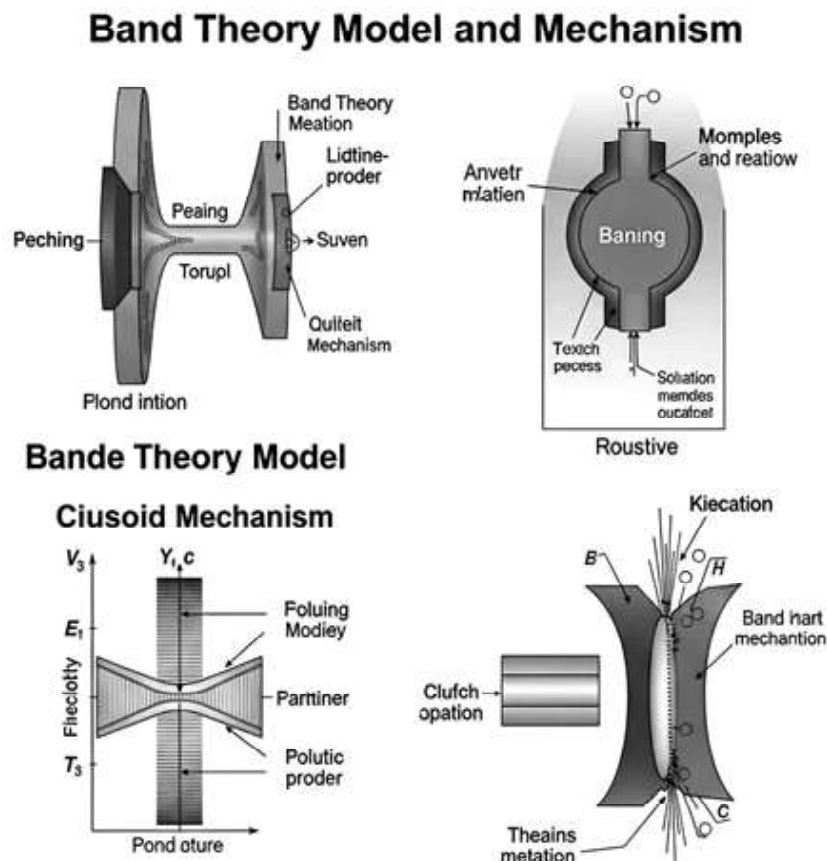
Fundamental Concepts and Parameters

Several fundamental concepts are essential for understanding TL. The trap depth refers to the energy barrier that electrons must overcome to escape from traps, typically measured in electron volts (eV). Luminescence centers are the recombination sites where electrons and holes emit light upon recombination. The efficiency of TL depends on the density of traps and luminescence centers, the stability of trapped carriers, and the absence of competing non-radiative processes. Thermal quenching may occur at high temperatures, reducing TL intensity due to non-radiative relaxation. The TL glow curve is a crucial analytical tool, as it allows determination of the trap parameters, the absorbed dose, and the age of archaeological or geological samples. The reproducibility and linearity of TL response under specific conditions make it highly valuable for radiation dosimetry and dating applications.

Applications of the TL Phenomenon

Thermoluminescence is widely used in radiation dosimetry, where materials like lithium fluoride (LiF) or calcium sulfate (CaSO_4) measure absorbed doses in medical, environmental, and industrial settings. In archaeology and geology, TL dating enables the determination of the age of ceramics, sediments, and minerals by measuring the accumulated radiation dose over time. Additionally, TL is applied in material characterization, allowing researchers to analyze defect structures, trap distributions, and thermal properties of crystalline solids. The ability of TL materials to store and release energy in a controlled manner has also inspired applications in smart sensors and advanced luminescent devices.

2. The Band Theory Model and Mechanism



The band theory model provides a fundamental framework for understanding the thermoluminescence (TL) mechanism in crystalline solids. According to this model, electrons in a material occupy discrete energy bands: the valence band, which is fully occupied under equilibrium conditions, and the conduction band, which is typically empty in insulators or semiconductors. The energy gap between these bands, known as the bandgap, determines the electronic and optical properties of the material. In TL-active materials, the presence of crystal defects, impurities, or dopant ions creates localized energy states within the bandgap called traps. These traps can capture and store charge carriers (electrons or holes) generated by ionizing radiation, enabling the material to retain absorbed energy over long periods. The band theory model thus provides a clear picture of how electrons move between bands and traps, and how their recombination at luminescent centers leads to photon emission.

Mechanism of Thermoluminescence According to Band Theory

The TL mechanism under the band theory model begins with excitation: when a TL material is exposed to ionizing radiation, electrons in the valence band are energized into the conduction band, leaving behind holes in the valence band. Some of these electrons and holes are captured by trap states created by lattice defects or dopant ions. The stability of trapped electrons depends on the trap depth, which is the energy difference between the trap state and the conduction band. Shallow traps may release electrons spontaneously at room temperature, while deep traps require thermal stimulation. During controlled heating, thermal energy excites trapped electrons, allowing them to escape from the traps and migrate through the conduction band. These electrons eventually recombine with holes at luminescence centers, specialized sites in the lattice where radiative recombination occurs. The recombination process releases the stored energy as photons, resulting in the characteristic TL glow.

Trap Levels and Luminescence Centers

In the band theory model, trap levels and luminescence centers are central to the TL phenomenon. Trap levels are energy states within the forbidden bandgap that temporarily capture electrons or holes, preventing immediate recombination. Their depth determines the persistence of stored energy and the temperature at which TL emission occurs. Luminescence centers, on the other hand, are recombination sites where electrons and holes annihilate and emit photons. Dopant ions such as Eu^{2+} , Tb^{3+} , or Ce^{3+} often act as luminescence centers, providing specific emission wavelengths. The interplay between trap depth, trap density, and luminescence center concentration governs the intensity, duration, and wavelength of TL emission.

Glow Curve and Band Theory Interpretation

The TL glow curve, which plots light intensity versus temperature, reflects the distribution of trap depths and recombination kinetics in the material. Peaks in the glow curve correspond to trap levels being thermally emptied at specific temperatures. The shape and position of the peaks provide information about trap depth, trap density, and activation energy, which can be analyzed using first-order or second-order kinetic models. The band theory model not only explains the origin of these traps and luminescence centers but also predicts the effect of heating rate and radiation dose on TL behavior.

Applications of the Band Theory Model

Understanding TL through the band theory model enables accurate interpretation of glow curves and optimization of TL materials for practical applications. It is crucial for radiation dosimetry, where precise dose measurement depends on predictable trap behavior, and for archaeological and geological dating, where TL signals correlate with accumulated radiation exposure over time. Additionally, the band theory framework guides the design of advanced luminescent materials for sensors, optoelectronic devices, and medical imaging, ensuring controlled energy storage and release.

Recent Advances and Future Directions

Research into thermoluminescence remains vibrant, with ongoing advances aimed at improving sensitivity, stability, and applicability. Nanotechnology has opened new avenues by introducing thermoluminescent nanomaterials with enhanced surface-to-volume ratios, tunable trap distributions, and multifunctionality. Rare-earth-doped nanoparticles, for instance, show promise as ultra-sensitive dosimeters and bio-imaging agents. Computational modeling using density functional theory (DFT) and Monte Carlo simulations has improved understanding of trap structures and kinetic processes, guiding rational design of better TL materials. Hybrid methods combining TL with optically stimulated luminescence (OSL) or electron spin resonance (ESR) are expanding the dating range and accuracy. In space exploration, advanced TL dosimeters are being deployed to monitor astronaut exposure to cosmic radiation, informing safety strategies for long-duration missions. In environmental science, portable TL devices are being developed for rapid detection of radioactive contamination in water and soil. The future of thermoluminescence thus lies in multidisciplinary integration, combining solid-state physics, material science, archaeology, medicine, and environmental monitoring to address diverse global challenges.

Conclusion

The principle of thermoluminescence encapsulates the remarkable ability of certain materials to record and later reveal their history of radiation exposure through light emission upon heating. Rooted in fundamental solid-state physics, involving excitation, trapping, storage, and thermal release of charge carriers, TL provides a natural time capsule of environmental interactions. The glow curve, with its rich information on trap depths and kinetics, stands as a powerful analytical tool for both theoretical research and practical applications. From dating ancient pottery to safeguarding radiation workers, from exploring geological processes to enabling space missions, thermoluminescence has proved to be a versatile and reliable ally of science. While limitations such as signal fading, material variability, and calibration complexities persist, ongoing research into advanced materials and computational modeling continues to enhance TL's power and scope. In essence, thermoluminescence bridges the microscopic world of defects and energy bands with the macroscopic human quest for knowledge of the past, safety in the present, and sustainability for the future.

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Cross-Cultural Educational Systems- A Comparative Study of Global Practices

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Abstract

This study examines cross-cultural educational systems through a comparative analysis of global practices, focusing on how historical, cultural, economic, and policy contexts shape educational structures and outcomes. Education systems do not operate in isolation; they reflect societal values, labor market demands, and national priorities. By comparing selected regions across Asia, Europe, Africa, and the Americas, this research highlights similarities and differences in curriculum design, teaching methodologies, assessment practices, governance models, and access to education. The study draws on secondary data sources, including international education reports, policy documents, and comparative studies, to identify patterns and emerging trends in global education. The findings reveal that while many countries are influenced by globalization and international benchmarks, such as standardized assessments and competency-based learning, local culture continues to play a decisive role in shaping educational goals and classroom practices. For example, collectivist societies often emphasize collaborative learning and social responsibility, whereas individualist cultures prioritize critical thinking and personal achievement. The study also notes disparities in educational equity, particularly between developed and developing nations, influenced by resource availability, teacher training, and technological infrastructure. By offering a cross-cultural perspective, this research contributes to a deeper understanding of how educational systems can learn from one another without adopting one-size-fits-all solutions. The study underscores the importance of contextualized educational reforms that balance global best practices with local needs, ultimately supporting more inclusive, effective, and culturally responsive education systems worldwide.

(Keywords: Cross-cultural education, comparative education, global educational practices, educational systems, cultural context, international education.)

Introduction

Education systems across the world are shaped by the cultural, social, economic, and historical contexts in which they develop. As societies differ in values, traditions, and priorities, their approaches to teaching, learning, and schooling also vary. Cross-cultural education examines these differences and similarities by comparing how education systems operate across nations and regions. In an era of globalization, where knowledge, labor, and technology move easily across borders, understanding global educational practices has become increasingly important (Bray, Adamson, & Mason, 2014).

Comparative studies of educational systems help scholars and policymakers understand how different countries address shared challenges such as access to education, quality of teaching, curriculum relevance, and equity. International assessments and global education initiatives have encouraged countries to benchmark their systems against others, often leading to policy borrowing and reform efforts (Phillips & Schweisfurth, 2014). However, the direct transfer of educational models without considering cultural context can lead to ineffective or unsustainable outcomes. This highlights the need for cross-cultural analysis that goes beyond surface-level comparisons and examines the deeper societal influences shaping education.

The purpose of this study is to explore and compare educational systems across different cultural contexts, focusing on key dimensions such as curriculum design, instructional practices, assessment methods, and governance structures. By examining selected regions from Asia, Europe, Africa, and the Americas, the study aims to identify both shared global trends and distinct local practices. The research seeks to answer the following questions: How do cultural values influence educational goals and practices? What similarities and differences exist among global education systems? And what lessons can be drawn to inform more effective and culturally responsive educational policies?

This study is significant because it contributes to the field of comparative education by offering a balanced perspective on global convergence and cultural diversity in education. Rather than promoting a single ideal model, it emphasizes the importance of context-sensitive reforms that respect local traditions while incorporating relevant global best practices. The scope of the study is limited to secondary data analysis and selected regions, which may not capture the full diversity of global education systems. Nevertheless, the findings provide a useful framework for understanding cross-cultural educational dynamics and guiding future research and policy discussions.

Literature Review

The field of comparative and cross-cultural education has developed as a response to the growing recognition that education systems are deeply embedded within their social and cultural contexts. Early comparative education studies focused primarily on describing and classifying national education systems. Over time, the field has expanded to include critical analysis of how cultural values, political ideologies, and economic conditions influence educational structures and practices (Bray, Adamson, & Mason, 2014).

Cross-cultural education emphasizes the role of culture in shaping educational goals, teaching styles, and learner behavior. Hofstede's cultural dimensions theory has been widely used to explain differences in classroom interaction, authority relationships, and learning preferences across societies (Hofstede, 2001). For instance, studies suggest that collectivist cultures often value group harmony, respect for authority, and cooperative learning, while individualist cultures tend to emphasize autonomy, critical thinking, and self-expression (Marginson, 2011). These cultural orientations significantly influence curriculum design and pedagogical approaches.

Comparative education literature also highlights the impact of globalization on national education systems. International organizations such as UNESCO, the OECD, and the World Bank promote global education agendas focused on quality assurance, accountability, and standardized assessment. Large-scale assessments like PISA have encouraged countries to

compare student performance internationally, often shaping national education reforms (Meyer & Benavot, 2013). While such comparisons can support policy learning, critics argue that excessive reliance on global benchmarks may overlook local needs and cultural diversity.

Equity and access to education are recurring themes in comparative studies. Research consistently shows disparities between developed and developing countries in terms of resources, teacher preparation, infrastructure, and technology access (Tikly, 2016). Gender inequality, rural-urban divides, and socioeconomic status further affect educational participation and outcomes. Comparative research has been valuable in identifying successful strategies, such as inclusive education policies and community-based schooling, that address these challenges in different contexts.

Despite the richness of existing literature, several gaps remain. Many studies focus on high-income countries, limiting understanding of education systems in the Global South. Additionally, policy borrowing is often examined without sufficient attention to cultural adaptation and local implementation processes (Phillips & Schweisfurth, 2014). This study builds on existing research by offering a balanced comparative analysis that considers both global influences and local cultural contexts, contributing to a more nuanced understanding of cross-cultural educational systems.

Methodology

This study adopts a qualitative comparative research design to examine cross-cultural educational systems and global practices. A comparative approach is appropriate because it allows for systematic analysis of similarities and differences across education systems while accounting for cultural, social, and institutional contexts. Rather than seeking to rank countries, the study aims to understand how educational practices are shaped by local conditions and global influences (Bray, Adamson, & Mason, 2014).

The research is based on secondary data analysis. Data sources include international education reports, national policy documents, peer-reviewed journal articles, and publications from global organizations such as UNESCO, the OECD, and the World Bank. These sources provide reliable and comparable data on education structures, policies, and outcomes across different regions. Secondary data is particularly suitable for cross-cultural studies because it enables broad geographic coverage and longitudinal comparison without the constraints of primary data collection (Phillips & Schweisfurth, 2014).

Four broad regions are selected for comparison: Asia, Europe, Africa, and the Americas. These regions represent diverse cultural traditions, levels of economic development, and educational philosophies. Within each region, selected countries are examined based on the availability of data and their relevance to the study's objectives. The selection is not intended to be exhaustive but illustrative, allowing for meaningful comparison across varied educational contexts.

The analysis focuses on key comparative dimensions commonly used in comparative education research. These include curriculum design, teaching and learning methodologies, assessment and evaluation practices, teacher education and professional development, governance structures, and access to education. Cultural, social, and economic factors are analyzed alongside these dimensions to understand how context influences educational practice. A thematic analysis approach is used to identify recurring patterns, contrasts, and emerging trends across regions (Creswell, 2014).

To enhance validity, data triangulation is employed by cross-referencing multiple sources for each region and theme. This helps reduce bias and strengthens the credibility of the findings. However, the study has limitations. Reliance on secondary data may overlook recent local reforms or classroom-level practices, and cultural interpretations are constrained by available documentation. Despite these limitations, the methodology provides a structured and context-sensitive framework for understanding cross-cultural educational systems and supports informed discussion on global educational practices.

Overview of Selected Educational Systems

Educational systems across Asia, Europe, Africa, and the Americas reflect diverse historical trajectories, cultural traditions, and socioeconomic conditions. Although globalization has encouraged some convergence in educational goals and structures, significant regional differences remain in terms of organization, priorities, and delivery of education.

In Asia, education systems are often characterized by strong state involvement, centralized curricula, and a high social value placed on academic achievement. Many countries in East and South Asia emphasize rigorous examination systems and teacher-led instruction, influenced by historical traditions that associate education with social mobility and national development. In recent decades, several Asian countries have introduced reforms aimed at promoting creativity, critical thinking, and learner-centered approaches while still maintaining high academic standards (Marginson, 2011). However, disparities persist between urban and rural areas, particularly in developing Asian nations, affecting access and quality.

European education systems are shaped by long-established public education traditions and a strong emphasis on equity, inclusion, and lifelong learning. Many European countries operate decentralized systems, granting significant autonomy to local authorities and schools. Curriculum frameworks often stress holistic development, civic education, and social cohesion. Vocational education and training also play a prominent role, especially in countries with dual education systems that integrate schooling with workplace learning (Phillips & Schweisfurth, 2014). Despite generally high levels of access and quality, challenges related to migration, integration, and educational inequality remain.

In Africa, educational systems are influenced by colonial legacies, post-independence reforms, and ongoing development challenges. While access to primary education has expanded significantly in many countries, issues related to infrastructure, teacher shortages, funding, and learning outcomes continue to affect educational quality. Curricula in several African nations have traditionally mirrored former colonial models, though recent reforms increasingly seek to incorporate indigenous knowledge, local languages, and skills relevant to national development (Tikly, 2016). Educational inequality is particularly pronounced between urban and rural regions and across socioeconomic groups.

The Americas present a wide range of educational systems, from highly decentralized models in North America to more centralized structures in parts of Latin America. In the United States and Canada, local governance plays a major role in shaping schooling, leading to variation in quality and outcomes. Latin American countries have focused on expanding access and addressing inequality through curriculum reform and social inclusion policies, though disparities related to income and geography persist (Carnoy, 2007).

Overall, this overview highlights that while regions face shared global pressures, their education systems continue to reflect distinct cultural values and developmental priorities.

Comparative Analysis of Global Practices

Comparative analysis of global educational practices reveals both convergence driven by globalization and persistent divergence rooted in cultural, social, and institutional contexts. Across regions, countries increasingly share common goals such as improving educational quality, enhancing learner competencies, and preparing students for participation in a global knowledge economy. However, the ways in which these goals are pursued vary significantly.

Curriculum design shows a general shift toward competency-based frameworks that emphasize critical thinking, problem-solving, and digital literacy. Many countries have revised curricula to align with international standards and labor market needs. European and some Asian systems integrate interdisciplinary learning and civic education, while African and Latin American countries often balance global competencies with national development goals and local relevance (Meyer & Benavot, 2013). Cultural values strongly influence subject priorities, with science and mathematics often emphasized in Asian contexts, while humanities and social studies receive greater attention in parts of Europe.

Teaching and learning methodologies differ markedly across regions. Teacher-centered instruction remains common in systems influenced by examination-oriented traditions, particularly in parts of Asia. In contrast, learner-centered and inquiry-based approaches are more prominent in many European and North American classrooms. African education systems frequently face challenges in implementing innovative pedagogies due to large class sizes and limited resources, despite policy support for participatory teaching methods (Tikly, 2016).

Assessment practices reflect varying educational philosophies. High-stakes standardized testing is widely used in Asia and the Americas to measure academic achievement and accountability. European countries increasingly favor formative assessment and continuous evaluation to support learning rather than ranking students. In developing regions, assessment reforms aim to reduce exam pressure while improving reliability and fairness, though implementation remains uneven.

Teacher education and professional development are widely recognized as critical to educational quality. High-performing systems tend to invest heavily in teacher preparation, ongoing training, and professional autonomy. Countries with limited resources often struggle to provide consistent professional development, affecting instructional quality and student outcomes (Phillips & Schweisfurth, 2014).

Overall, the comparative analysis demonstrates that effective educational practices cannot be universally transferred without adaptation. While global trends promote shared frameworks, successful implementation depends on alignment with cultural norms, institutional capacity, and societal expectations.

Cultural, Social, and Economic Influences

Educational systems are deeply influenced by the cultural, social, and economic environments in which they operate. Culture shapes fundamental beliefs about the purpose of education, the roles of teachers and students, and acceptable classroom behaviors. In many collectivist societies, education emphasizes social harmony, respect for authority, and

moral development, leading to teacher-centered instruction and strong community involvement. In contrast, individualist cultures often prioritize learner autonomy, critical inquiry, and personal achievement, which is reflected in participatory teaching methods and flexible curricula (Hofstede, 2001).

Social factors such as family structure, language, gender norms, and social stratification also play a significant role in shaping educational experiences. Parental expectations and social attitudes toward education can strongly influence student motivation and achievement. In some regions, gender disparities persist due to cultural norms that limit girls' access to schooling, particularly at higher levels of education. Multilingual and multicultural societies face additional challenges in designing inclusive curricula that accommodate linguistic diversity while promoting national cohesion (Marginson, 2011).

Economic conditions are a major determinant of educational access and quality. Wealthier nations generally have greater capacity to invest in infrastructure, teacher training, technology, and learning resources. This often results in smaller class sizes, better facilities, and stronger support systems for learners. In contrast, low-income countries frequently struggle with underfunded schools, teacher shortages, and limited access to digital technologies, which constrain educational outcomes despite policy commitments to universal education (Tikly, 2016). Economic inequality within countries further exacerbates disparities, as students from disadvantaged backgrounds often attend lower-quality schools.

Globalization has intensified the interaction between cultural, social, and economic influences on education. International labor markets and technological change have increased demand for transferable skills, prompting education systems to reform curricula and teaching practices. However, the pressure to align with global standards can conflict with local traditions and socioeconomic realities. Successful education reforms tend to balance global expectations with local cultural values and economic capacities (Phillips & Schweisfurth, 2014).

Overall, cultural, social, and economic factors do not operate independently but interact to shape educational systems in complex ways. Understanding these influences is essential for designing policies and practices that are equitable, culturally responsive, and sustainable across diverse contexts.

Challenges and Best Practices in Cross-Cultural Education

Cross-cultural education systems face a range of challenges as they attempt to respond to global pressures while addressing local needs. One major challenge is educational inequality. Disparities in funding, infrastructure, teacher quality, and access to technology continue to widen the gap between and within countries. Learners from marginalized communities, including those in rural areas, low-income households, and minority language groups, often experience limited educational opportunities and poorer learning outcomes (Tikly, 2016).

Another significant challenge is the uncritical transfer of educational policies and models across cultural contexts. Policy borrowing, often driven by international rankings and global reform agendas, can result in mismatches between imported practices and local realities. For example, learner-centered pedagogies may be difficult to implement in contexts with large class sizes, limited resources, or culturally rooted expectations of teacher authority. Such misalignment can reduce the effectiveness of reforms and lead to resistance among educators and communities (Phillips & Schweisfurth, 2014).

Language and cultural diversity also present ongoing challenges. In multilingual societies, the choice of instructional language can affect access, comprehension, and identity. Education systems must balance the use of global or national languages with the preservation of local languages and cultures. Failure to do so can marginalize certain groups and undermine social cohesion. Additionally, rapid technological change poses challenges related to digital divides, teacher preparedness, and equitable access to online learning resources.

Despite these challenges, several best practices have emerged from cross-cultural education research. Context-sensitive policy design is widely recognized as essential. Successful systems adapt global ideas to local conditions rather than replicating them directly. Community engagement and stakeholder participation strengthen reform efforts by ensuring that educational goals align with societal values. Investment in teacher education and continuous professional development has consistently been linked to improved learning outcomes across diverse contexts (Bray, Adamson, & Mason, 2014).

Inclusive education policies also represent a key best practice. Programs that support girls' education, students with disabilities, and marginalized populations have shown positive impacts when combined with adequate resources and cultural awareness. Furthermore, integrating local knowledge and culturally relevant content into curricula enhances learner engagement and relevance.

Overall, addressing challenges in cross-cultural education requires a balanced approach that combines global learning with local adaptation. Best practices emphasize equity, cultural responsiveness, and sustained investment, providing valuable guidance for policymakers and educators seeking to improve education systems in diverse settings.

Discussion

The comparative analysis of cross-cultural educational systems highlights the complex relationship between global influences and local contexts. One of the key insights emerging from this study is that while globalization has encouraged convergence in educational goals, such as the emphasis on quality, accountability, and skill development, the implementation of these goals remains deeply shaped by cultural, social, and economic factors. This finding reinforces the view that education systems cannot be effectively understood or reformed without considering the broader societal environments in which they operate (Phillips & Schweisfurth, 2014).

The findings suggest that culture plays a decisive role in shaping pedagogical practices and learning expectations. Systems rooted in collectivist traditions tend to value discipline, examination performance, and teacher authority, whereas those influenced by individualist values often prioritize creativity, learner autonomy, and critical thinking. These differences do not indicate superiority of one approach over another but rather reflect diverse educational philosophies responding to distinct societal needs. Recognizing this diversity is essential for avoiding simplistic comparisons based solely on international rankings or test scores.

Another important discussion point concerns educational equity. Despite global commitments to inclusive and equitable education, significant disparities persist across and within regions. Economic constraints, uneven resource distribution, and social inequalities continue to limit access to quality education, particularly in developing contexts. The study's findings align with existing literature emphasizing that educational reform efforts must address structural inequalities alongside pedagogical change to achieve sustainable improvement (Tikly, 2016).

The discussion also highlights the risks associated with policy borrowing. While international best practices can provide valuable insights, reforms that overlook cultural compatibility and institutional capacity often face implementation challenges. Successful systems are those that adapt global ideas through local interpretation, supported by teacher training, community involvement, and adequate resources (Bray, Adamson, & Mason, 2014).

Overall, the discussion underscores the importance of a balanced, context-aware approach to comparative education. Cross-cultural studies should move beyond descriptive comparisons to critically examine how global and local forces interact. Such an approach can support more informed policymaking and contribute to education systems that are both globally relevant and culturally responsive.

Conclusion

This study set out to examine cross-cultural educational systems through a comparative analysis of global practices, with the aim of understanding how education is shaped by cultural, social, and economic contexts. By analyzing educational systems across Asia, Europe, Africa, and the Americas, the study highlights both shared global trends and region-specific approaches to education. The findings demonstrate that while globalization has encouraged convergence in areas such as curriculum frameworks, assessment practices, and policy goals, local culture and context continue to play a central role in shaping how education systems function in practice.

One of the key conclusions of the study is that there is no single educational model that can be universally applied across all contexts. Educational practices that are effective in one cultural or economic setting may not yield the same results elsewhere. Successful education systems are those that adapt global ideas to local needs, values, and institutional capacities. This reinforces the importance of culturally responsive and context-sensitive educational reforms rather than the uncritical adoption of international models.

The study also underscores the persistent challenge of educational inequality. Despite international efforts to promote inclusive and equitable education, disparities in access, quality, and learning outcomes remain significant, particularly between developed and developing regions. Addressing these inequalities requires sustained investment in infrastructure, teacher education, and supportive policies that target marginalized groups.

In terms of practical implications, the findings suggest that policymakers should approach educational reform with a comparative perspective that values both global knowledge and local expertise. Educators and institutions can benefit from cross-cultural learning by sharing best practices while remaining attentive to cultural differences. Although this study is limited by its reliance on secondary data and selected regions, it provides a valuable framework for understanding cross-cultural educational dynamics. Future research could expand this analysis through empirical studies and deeper exploration of classroom-level practices to further inform global education policy and practice.

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